

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 20-F

(Mark One)

☐ REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934 FOR THE FISCAL YEAR
ENDED DECEMBER 31, 2020

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

OR

☐ SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

DATE OF EVENT REQUIRING THIS SHELL COMPANY REPORT

FOR THE TRANSACTION PERIOD FROM TO

COMMISSION FILE NUMBER 1-15138

中国石油化工股份有限公司
CHINA PETROLEUM & CHEMICAL CORPORATION

(Exact name of Registrant as specified in its charter)

The People's Republic of China

(Jurisdiction of incorporation or organization)

22 Chaoyangmen North Street
Chaoyang District, Beijing, 100728
The People's Republic of China

(Address of principal executive offices)

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(Name, Telephone, Email and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act.

Title of Each Class	Trading Symbol(s)	Name of Each Exchange On Which Registered
American Depositary Shares, each representing 100 H Shares of par value RMB 1.00 per share	SNP	New York Stock Exchange, Inc.
H Shares of par value RMB 1.00 per share		New York Stock Exchange, Inc.*

* Not for trading, but only in connection with the registration of American Depositary Shares.

Securities registered or to be registered pursuant to Section 12(g) of the Act.

None

(Title of Class)

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act.

None

(Title of Class)

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report.

H Shares, par value RMB 1.00 per share	25,513,438,600
A Shares, par value RMB 1.00 per share	95,557,771,046

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

☒ Yes ☐ No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934.

☐ Yes ☒ No

Note — Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days.

☒ Yes ☐ No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files).

☒ Yes ☐ No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of “large accelerated filer,” “accelerated filer,” and “emerging growth company” in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☒

Accelerated filer ☐

Non-accelerated filer ☐

Emerging growth company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards† provided pursuant to Section 13(a) of the Exchange Act. ☐

† The term “new or revised financial accounting standard” refers to any update issued by the Financial Accounting Standards Board to its Accounting Standards Codification after April 5, 2012.

Indicate by check mark whether the registrant has filed a report on and attestation to its management’s assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ☐

International Financial Reporting Standards as issued
by the International Accounting Standards Board ☒

Other ☐

If “Other” has been checked in response to the previous question, indicate by check mark which financial statement item the registrant has elected to follow.

☐ Item 17 ☐ Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

☐ Yes ☒ No

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Section 12, 13 or 15(d) of the Securities Exchange Act of 1934 subsequent to the distribution of securities under a plan confirmed by a court. *

☐ Yes ☐ No

* This requirement does not apply to the registrant in respect of this filing.

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CERTAIN TERMS AND CONVENTIONS

Definitions

Unless the context otherwise requires, references in this annual report to:

- “Sinopec Corp.,” “Company,” “we,” “our” and “us” are to China Petroleum & Chemical Corporation, a PRC joint stock limited company, and its subsidiaries;
- “Sinopec Group Company” are to our controlling shareholder, China Petrochemical Corporation, a PRC limited liability company;
- “Sinopec Group” are to the Sinopec Group Company and its subsidiaries other than Sinopec Corp. and its subsidiaries;
- “provinces” are to provinces and to provincial-level autonomous regions and municipalities in China which are directly under the supervision of the central PRC government;
- “RMB” are to Renminbi, the currency of the PRC;
- “HK\$” are to Hong Kong dollar, the currency of the Hong Kong Special Administrative Region of the PRC; and
- “US\$” are to US dollars, the currency of the United States of America.

Conversion Conventions

Unless otherwise specified, conversion of crude oil from tonnes to barrels are made at a rate of one tonne to 7.10 barrels for crude oil we produced domestically and one tonne to 7.21, 7.21 and 7.20 barrels for the years ended December 31, 2018, 2019 and 2020, respectively, for crude oil we produced overseas. Conversions of natural gas from cubic meters to cubic feet are made at a rate of one cubic meter to 35.31 cubic feet; and 6,000 cubic feet of natural gas is converted to one BOE.

Glossary of Technical Terms

Unless otherwise indicated in the context, references to:

- “BOE” are to barrels-of-oil equivalent.
- “primary distillation capacity” are to the crude oil throughput capacity of a refinery’s crude oil distillation units, calculated by estimating the number of days in a year that such crude oil distillation units are expected to operate, excluding downtime for regular maintenance, and multiplying that number by the amount equal to the units’ optimal daily crude oil throughput.
- “rated capacity” are to the output capacity of a given production unit or, where appropriate, the throughput capacity, calculated by estimating the number of days in a year that such production unit is expected to operate, excluding downtime for regular maintenance, and multiplying that number by an amount equal to the unit’s optimal daily output or throughput, as the case may be.

CURRENCIES AND EXCHANGE RATES

We publish our financial statements in Renminbi. Unless otherwise indicated, all translations from Renminbi to US dollars in this annual report were made at RMB6.8976 to US\$1.00, the average of mid-point exchange rates of Renminbi as published by the PRC State Administration of Foreign Exchange (SAFE) for the year of 2020. We do not suggest that the Renminbi or US dollar amount can be converted to US dollars or Renminbi, as appropriate, at this exchange rate or any specific exchange rate.

FORWARD-LOOKING STATEMENTS

This annual report includes “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, included in this annual report that address activities, events or developments which we expect or anticipate will or may occur in the future are hereby identified as forward-looking statements for the purpose of the safe harbor provided by Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. The words such as believe, intend, expect, anticipate, project, estimate, predict, plan and similar expressions are also intended to identify forward-looking statements. These forward-looking statements address, among others, such issues as:

- amount and nature of future exploration and development,
- future prices of and demand for our products,
- future earnings and cash flow,
- development projects and drilling prospects,
- future plans and capital expenditures,
- estimates of proved oil and gas reserves,
- exploration prospects and reserves potential,
- expansion and other development trends of the petroleum and petrochemical industry,
- production forecasts of oil and gas,
- expected production or processing capacities, including expected rated capacities and primary distillation capacities, of units or facilities not yet in operation,
- expansion and growth of our business and operations, and
- our prospective operational and financial information.

These statements are based on assumptions and analyses made by us in light of our experience and perception of historical trends, current conditions and expected future developments, as well as other factors we believe are appropriate in particular circumstances. However, whether actual results and developments will meet our expectations and predictions depends on a number of risks and uncertainties which could cause actual results to differ materially from our expectations, including the risks set forth in “Item 3. Key Information—D. Risk Factors” and the following:

- fluctuations in crude oil and natural gas prices,
- fluctuations in prices of our refined oil and chemical products,
- failures or delays in achieving production from development projects,
- failures to receive oil and gas storage and transportation services subject to terms we desire,
- potential acquisitions and other business opportunities,
- general economic, market and business conditions, and
- other risks and factors beyond our control.

Consequently, all of the forward-looking statements made in this annual report are qualified by these cautionary statements and readers are cautioned not to place undue reliance on these forward-looking statements. These forward-looking statements should be considered in light of the various important factors set forth above and elsewhere in this Form 20-F. In addition, we cannot assure you that the actual results or developments anticipated by us will be realized or, even if substantially realized, that they will have the expected effect on us or our business or operations.

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. SELECTED FINANCIAL DATA

The selected consolidated statement of income data (except per ADS data) and consolidated cash flows data for the years ended December 31, 2018, 2019 and 2020, and the selected consolidated balance sheet data as of December 31, 2019 and 2020 are derived from, and should be read in conjunction with, the audited consolidated financial statements included elsewhere in this annual report. The selected consolidated statement of income data (except per ADS data) and consolidated cash flows data for the years ended December 31, 2016 and 2017 and the selected consolidated balance sheet data as of December 31, 2016, 2017 and 2018 are derived from our consolidated financial statements as restated as indicated hereinafter which are not included elsewhere in this annual report.

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Moreover, the selected financial data should be read in conjunction with our consolidated financial statements and “Item 5. Operating and Financial Review and Prospects” included elsewhere in this annual report. Our consolidated financial statements are prepared and presented in accordance with International Financial Reporting Standards, or IFRS, as issued by the International Accounting Standards Board.

	Year Ended December 31,				
	2016	2017	2018	2019	2020
	(RMB in millions, except per share, per ADS data and number of shares)				
Consolidated Statement of Income Data ⁽¹⁾⁽⁴⁾⁽⁵⁾ :					
Operating revenues	1,923,273	2,348,932	2,882,077	2,959,799	2,105,984
Operating expenses	(1,845,609)	(2,277,115)	(2,799,513)	(2,873,425)	(2,092,791)
Operating income	77,664	71,817	82,564	86,374	13,193
Earnings before income tax	80,544	86,964	99,339	90,022	48,143
Income tax expense	(20,715)	(16,291)	(20,278)	(17,939)	(6,219)
Net income attributable to owners of the Company	46,884	51,384	61,708	57,493	33,096
Basic earnings per share ⁽³⁾	0.387	0.424	0.510	0.475	0.273
Basic earnings per ADS ⁽³⁾	38.72	42.44	50.97	47.49	27.34
Diluted earnings per share ⁽³⁾	0.387	0.424	0.510	0.475	0.273
Diluted earnings per ADS ⁽³⁾	38.72	42.44	50.97	47.49	27.34
Declared cash dividend per share	0.249	0.500	0.420	0.310	0.200
Segment Operating Income/(Loss)					
Exploration and production	(36,641)	(45,944)	(10,107)	9,284	(16,476)
Refining	56,265	65,007	54,827	30,632	(5,555)
Marketing and distribution	32,153	31,569	23,464	29,107	20,828
Chemicals	21,094	27,324	27,307	17,327	10,372
Corporate and others	3,212	(4,484)	(9,293)	64	(393)
Elimination of inter-segment sales	1,581	(1,655)	(3,634)	(40)	4,417
Operating income	77,664	71,817	82,564	86,374	13,193
Shares					
Basic weighted average number of A and H shares	121,071,209,646	121,071,209,646	121,071,209,646	121,071,209,646	121,071,209,646
Diluted weighted average number of A and H shares	121,071,209,646	121,071,209,646	121,071,209,646	121,071,209,646	121,071,209,646

	As of December 31,				
	2016	2017	2018	2019	2020
	(RMB in millions, except per share, per ADS data and number of shares)				
Consolidated Balance Sheet Data ⁽¹⁾⁽⁴⁾ :					
Cash and cash equivalents	124,513	113,389	111,927	60,438	87,559
Total current assets	413,322	530,610	505,471	447,310	455,395
Total non-current assets	1,089,911	1,069,984	1,091,930	1,312,976	1,278,410
Total assets	1,503,233	1,600,594	1,597,401	1,760,286	1,733,805
Total current liabilities	(488,292)	(582,711)	(568,611)	(579,978)	(522,190)
Short-term debts and loans from Sinopec Group Company and fellow subsidiaries (including current portion of long-term debts)	(76,819)	(82,649)	(63,127)	(83,810)	(29,033)
Long-term debts and loans from Sinopec Group Company and fellow subsidiaries (excluding current portion of long-term debts)	(117,502)	(99,174)	(93,581)	(58,834)	(83,815)
Total equity attributable to owners of the Company	(711,954)	(727,000)	(718,077)	(738,946)	(741,494)
Total equity	(833,000)	(854,509)	(857,998)	(877,304)	(882,858)

	Year Ended December 31,				
	2016	2017	2018	2019	2020
	(RMB in millions, except per share, per ADS data and number of shares)				
Statement of Cash Flow and Other Financial Data ⁽¹⁾⁽⁴⁾ :					
Net cash generated from operating activities	214,341	191,166	175,937	153,619	167,518
Net cash used in financing activities	(92,880)	(56,562)	(111,269)	(84,204)	(36,955)
Net cash used in investing activities	(66,254)	(145,375)	(66,648)	(121,051)	(102,203)
Capital expenditure Exploration and production					
Exploration and production	32,187	31,344	42,155	61,739	56,416
Refining	14,347	21,075	27,908	31,372	24,722
Marketing and distribution	18,493	21,539	21,429	29,566	25,403
Chemicals	8,849	23,028	19,578	22,438	26,202
Corporate and others	2,580	2,398	6,906	1,979	2,312
Total	76,456	99,384	117,976	147,094	135,055

- (1) The acquisition of 55% equity interest of Shanghai Gaoqiao Petrochemical Co., Ltd. (“Gaoqiao”) in 2016 from Sinopec Group Company were considered as “combination of entities under common control” and accounted in a manner of predecessor value accounting. Accordingly, the acquired assets and liabilities have been accounted for at historical cost and the consolidated financial statements for periods prior to the combinations have been restated to include the financial condition and results of operation of these acquired business on a combined basis.
- (2) In 2020, the Company entered into an Agreement with Sinopec Assets Management Corporation (“SAMC”) in relation to the formation of Sinopec Baling Petrochemical Co. Ltd (“Baling Petrochemical”). After the capital injection, the Company remained to hold 55% of Baling Petrochemical’s voting rights and was still able to control Baling Petrochemical. As Sinopec Group Company controls both the Company and SAMC, the transaction described above between Sinopec and SAMC has been accounted as business combination under common control. Accordingly, the assets and liabilities of which SAMC subscribed have been accounted for at historical cost, and the consolidated financial statements of the Company prior to these acquisitions have been restated to include the results of operation and the assets and liabilities of Baling Branch of SAMC on a combined basis. Such acquisition shall be deemed as business reorganization.
- (3) Basic earnings per share have been computed by dividing net income attributable to equity shareholders of our company by the weighted average number of shares in issue. Basic and diluted earnings per ADS have been computed as if all of our issued and authorized ordinary shares, including domestic shares and H shares, are represented by ADSs during each of the years presented. Each ADS represents 100 ordinary shares.
- (4) We have adopted IFRS Standard 16 “Leases” from January 1, 2019, but has not restated comparative amounts for the 2018 reporting period, as permitted under the specific transition provision in the standard. The reclassifications and the adjustments arising from such standard were therefore recognized in the opening balance sheet on January 1, 2019.
- (5) The Company and Sinomart KTS Development Limited, Sinopec Natural Gas Limited Company and Sinopec Marketing Company Limited (“Marketing Company”), the subsidiaries of the Company entered into the Agreement on Cash Payment to Purchase Equity in Sinopec Yu Ji Pipeline Company Limited, the Agreement on Additional Issuance of Equity and Cash Payment to Purchase Assets, the Agreement on Cash Payment to Purchase Assets and the Agreement on Additional Issuance of Equity to Purchase Assets with China Oil & Gas Pipeline Network Corporation (“PipeChina”), on July 21, 2020 and on July 23, 2020 respectively, pursuant to which the Company and its subsidiaries proposed to dispose target business, including equity interests in the relevant companies, oil and gas pipeline and ancillary facilities, to PipeChina. The above transactions were considered and approved by the 15th Session of 7th Directorate Meeting on July 23, 2020 and the second Extraordinary General Meeting on September 28, 2020. The transaction consideration was mainly additional issuance of equity and/or cash payment by PipeChina and the gain on above transactions was RMB 37,731 million.

B. CAPITALIZATION AND INDEBTEDNESS

Not applicable.

C. REASONS FOR THE OFFER AND USE OF PROCEEDS

Not applicable.

D. RISK FACTORS

Risks Relating to Our Business Operation

We are exposed to risks associated with price fluctuations of crude oil and refined oil products and petrochemical products.

We consume a large amount of crude oil to produce our refined oil products and petrochemical products. Increases in crude oil prices may result in cost inflation, and high prices may also reduce demand for our products which might adversely affect our profitability. Decreases in prices of crude oil, refined oil products and petrochemical products may cause us to incur impairment to our investment and assets. A prolonged period of low oil prices may impact our profit and ability to maintain our long-term investment projects. We use financial derivatives, including commodity futures, to hedge risks of the volatility in the crude oil price. The use of such financial derivatives may not successfully hedge all risks. The fair value of derivatives fluctuates due to the volatility of crude oil price, which in turn impacts our financial performance. In addition, while we try to adjust the sale prices of our products to reflect international crude oil price fluctuations, our ability to pass on the increased cost resulting from crude oil price increases to our customers may be limited, and is dependent on international and domestic market conditions as well as the PRC government's price control policies over refined oil products. For instance, the PRC government could exercise price control over refined oil products when international crude oil prices experience a sustained rise or become significantly volatile. As a result, our results of operations and financial condition may be materially affected by the fluctuation of prices of crude oil, refined oil products and petrochemical products.

Our continued business success depends in part on our ability to replace reserves and develop newly discovered reserves.

Our ability to achieve our growth objectives is dependent in part on our level of success in discovering or acquiring additional oil and natural gas reserves. Our exploration and development activities for additional reserves also expose us to inherent risks associated with drilling, including the risk that no proved oil or natural gas reserves might be discovered. Exploring for, developing and acquiring reserves is highly risky and capital intensive. The fluctuation in the prices of crude oil and natural gas will impact the amount of our proved oil or natural gas reserves. In the low oil price environment, only large scale, high quality reserves meet our development criteria, and some exploration projects may not be viable and thus cannot be carried forward, potentially leading to failure in supplementing our oil and natural gas reserves with additional reserves through future exploration. Without reserve additions through further exploration and development or acquisition activities, or if the prices of crude oil and natural gas fall sharply, our reserves and production will decline over time, which may adversely affect our results of operations and financial condition.

We rely heavily on outside suppliers for crude oil and other raw materials, and we may even experience disruption of our ability to obtain crude oil and other raw materials.

We purchased a significant portion of crude oil and other feedstock from outside suppliers located in different countries and regions in the world, of which certain amount of the crude oil processed by our refinery business was sourced from countries or regions that were on the sanction list published and administered by the Office of Foreign Assets Control, or OFAC, of the U.S. Department of Treasury, including Iran and Sudan region. In addition, our business growth requires us to source an increasing amount of crude oil from outside suppliers. While we purposely source our crude oil from a diversified portfolio of outside suppliers to avoid any potential disruptions to our normal business operations, we are subject to the political, geographical and economic risks associated with these countries and areas. If our contractual relationships with one or more outside suppliers were terminated or disrupted due to any natural disasters or political events, it is possible that we would not be able to find sufficient alternative sources of supply in a timely manner or on commercially reasonable terms. As a result, our business and financial condition would be materially and adversely affected.

Starting from January 2016, the United States suspended most secondary sanctions (i.e., those covering non-U.S. persons) pursuant to the terms of the Joint Comprehensive Plan of Action (the "JCPOA"). In May 2018, the United States withdrew from the JCPOA. Effective on November 5, 2018, all U.S. sanctions on Iran including those on the crude oil and petrochemical sectors were re-imposed, with eight countries and regions including China granted temporary "significant reduction exceptions" as exemptions to such sanctions to allow the importation of crude oil from Iran, which expired on May 2, 2019. As U.S. sanctions on Iran have been resumed, we may be unable to source crude oil from Iran or be subject to secondary sanctions resulting from importing crude oil from Iran, which may have further adverse impact on us, including but not limited to being prohibited from conducting certain business and financing activities that relate to the United States, and in turn materially and adversely impact our ADS trading price, results of operations and financial condition.

We rely on our collaboration relationship with PipeChina for the use of certain oil and gas storage and pipeline facilities. Any adverse change to our collaboration with PipeChina may materially impact our business operation and financial status.

In September 2020, we closed the transaction with PipeChina, pursuant to which we sold certain oil and gas storage and pipeline facilities to PipeChina in exchange for approximately 14% of registered capital of, and cash paid by, PipeChina as consideration. We have entered into long-term service agreement with respect to the use of oil and gas storage and pipeline facilities with PipeChina, pursuant to which PipeChina shall provide us with oil and gas transportation and storage services on the agreed terms including, among others, that PipeChina shall meet our demand of service following the agreed service specifications and standards.

Due to the special nature of our business operations, especially our production, refining and distribution activities, the successful execution of our business operation plan will depend on our access to long-term and high-quality performance of oil and gas storage and transportation services that are satisfactory to us, through investing in self-operated storage and pipeline facilities as we did prior to the transaction with PipeChina, and/or through purchasing storage and transportation services from PipeChina and other third parties. Considering the difficulty of the construction of the oil and gas pipeline, storage and other ancillary facilities, which involves time-consuming construction of major capital expenditure projects that are subject to regulatory approvals, we expect that, in the foreseeable future, it would be hard for us to promptly construct, develop and commission oil and gas pipeline, storage and other ancillary facilities, and our main production sites will be connected with and supported by pipelines and storage facilities owned by PipeChina. As a result, the smooth operation of our business in the future will partially depend upon our harmonious collaboration relationship with PipeChina based on service agreement(s) between us and PipeChina. We do not have control over PipeChina, and all key terms of service agreements between us and PipeChina shall be determined based on the applicable laws and regulations as well as the result of arm's-length commercial negotiations between us and PipeChina, as a result of which we cannot guarantee that we will continue to secure service from PipeChina on current or desirable terms. If we cannot continue to receive service from PipeChina at terms we desire, the operation of our business may be interrupted, and the results of our operations and our financial condition may be materially impacted.

Our business faces operation risks and natural disasters that may cause significant property damages, personal injuries and interruption of operations, and we may not have sufficient insurance coverage for all the financial losses incurred by us.

Exploring for, producing and transporting crude oil and natural gas and producing and transporting refined oil products and petrochemical products involve a number of operating hazards. Our operations are subject to significant hazards and risks inherent in refining operations and in transporting and storing crude oil, intermediate products, refined oil products and chemical products. These hazards and risks include, but are not limited to, natural disasters, fires, explosions, pipeline ruptures and spills, third-party interference and mechanical failure of equipment at our or third-party facilities, any of which could result in production and distribution difficulties and disruptions, environmental pollution, personal injury or wrongful death claims and other damage to our properties and the property of others. There is also risk of mechanical failure and equipment shutdowns both in general and subsequent unforeseen events. In certain situations, undamaged refinery processing units may be dependent on or interact with damaged process units and, accordingly, are also subject to being shut down. Even though we have a strong institutional focus on the safety of our operations and have implemented health, safety, security and environment (HSSE) management system within our company and developed an integral risk evaluation and management platform, "PHAMS," to conduct dynamical and quantitative management and control of relevant risks with the view to preventing accidents, and reducing personal injuries, property losses and environment pollution, our preventative measures may not be effective. We also maintain insurance coverage on our property, plant, equipment, inventory and potential third party liability, but our insurance coverage may not be sufficient to cover all the financial losses caused by the operation risks and natural disasters. Significant operating hazards and natural disasters may cause interruption to our operations, property or environmental damages as well as personal injuries, and each of these incidents could have a material adverse effect on our financial condition and results of operations.

The oil and natural gas reserves data in this annual report are only estimates, and our actual production, revenues and expenditures with respect to our reserves may differ materially from these estimates.

There are numerous uncertainties inherent in estimating quantities of proved oil and natural gas reserves, and in the timing of development expenditures and the projection of future rates of production. Adverse changes in economic conditions, such as a prolonged period of low oil prices, may render it uneconomical to develop certain reserves and lead to downward revisions in our reserves. Our actual production, revenues, taxes and fees payable and development and operating expenditures with respect to our reserves may likely vary from these estimates.

The estimate of reserves is affected by, among other things:

- the quality and quantity of technical and economic data;
- the prevailing oil and gas prices applicable to our production;
- the production performance of the reservoirs; and
- the production plans.

In addition, new drilling, testing and production results achieved following completion of the estimates may cause substantial upward or downward revisions in the estimates.

Oilfield exploration and drilling involves numerous risks, including risks that no commercially productive crude oil or natural gas reserves can be discovered and risks of failure to acquire or retain reserves.

Our oil and gas business is currently involved in exploration activities in various regions, including in some areas where natural conditions may be challenging and where the costs of such exploration activities may be high. As a result, our oil and gas business may incur cost overruns or may be required to curtail, delay or cancel drilling operations because of many factors, including, but not limited to, the following:

- disruption caused by unexpected stratigraphic factors;
- irregularities in geological formations pressure;
- equipment failures;
- oil/gas well blowouts;
- adverse weather conditions or natural disasters;
- compliance with existing or enhanced environmental regulations;
- governmental requirements and standards; or
- delays in the availability of drilling rigs and delivery and maintenance of equipment.

The future production of our oil and gas business depends significantly upon our success in finding or acquiring additional reserves and retaining and developing such reserves. If our oil and gas business fails to conduct successful exploration activities or to acquire or retain assets holding proved reserves, it may not meet its production or growth targets, and its proved reserves will decline as it extracts crude oil and natural gas from the existing reservoirs, which could adversely affect our business, financial condition and results of operations.

We have been actively pursuing business opportunities outside China to supplement our domestic resources. However, there can be no assurance that we can successfully locate sufficient alternative sources of crude oil supply or at all due to the complexity of the international political, economic and other conditions. If we fail to obtain sufficient alternative sources of crude oil supply, our results of operations and financial condition may be adversely affected.

Our exploration, development and production activities and our refining and petrochemical business require substantial expenditure and investments and our plans for and ability to make such expenditures and investments are subject to various risks.

Exploring for, developing and producing crude oil and natural gas fields are capital-intensive activities involving a high degree of risk. Our ability to undertake exploration, development and production activities and make the necessary capital expenditures and investments is subject to many risks, contingencies and other uncertainties, which may prevent our oil and gas business from achieving the desired results, or which may significantly increase the expenditures and investments that our oil and gas business makes, including, but not limited to, the following:

- ability to generate sufficient cash flows from operations to finance our expenditures, investments and other requirements, which are affected by changes in crude oil and natural gas prices and sales volumes, and other factors;
- availability and terms of external financing;
- mix of exploration and development activities conducted on an independent basis and those conducted jointly with other partners;
- extent to which our ability to influence or adjust plans for exploration and development related expenditures is limited under joint operating agreements for those projects in which we have partners;
- government approvals required for exploration and development-related expenditures and investments in jurisdictions in which we conduct business; and
- economic, political and other conditions in jurisdictions in which we conduct business.

From time to time, we may construct new and/or revamp existing refining and petrochemical facilities, which require substantial capital expenditures and investments. There can be no assurance that the cash generated by our operations will be sufficient to fund these development plans or that our actual future capital expenditures and investments will not significantly exceed our current planned amounts. Our inability to obtain sufficient funding for development plans could adversely affect our business, financial condition and results of operations.

Our development projects and production activities involve many uncertainties and operating risks that can prevent us from realizing profits and cause substantial losses.

Our development projects and production activities may be curtailed, delayed or cancelled for many reasons, including equipment shortages or failures, natural hazards, unexpected drilling conditions, mechanical and technical difficulties caused by complex geological conditions and operating errors by our employees. These projects and activities, which include projects focused on non-conventional oil and gas exploration and development, will also often require the use of new and advanced technologies that may be expensive to develop, purchase and implement, and may not function as expected. There is a risk that any development project that we undertake may not yield expected returns. In addition, our development projects and production activities, particularly those in remote areas, could become less profitable, or unprofitable, if we experience a prolonged period of low oil or gas prices or cost overruns.

Our business may be adversely affected by actions and regulations prompted by global climate changes.

Many nations in the world have reached consensus on the importance and urgency of addressing climate change. The oil and gas industry in which we operate is drawing increasing concerns about global climate change in recent years. A number of international, national and regional measures to limit greenhouse gas emissions have been enacted. The Paris Agreement on climate change adopted in December 2015 has placed binding commitments on nations that have ratified it since November 2016, which may lead to more stringent national and regional measures in the near future. Compliance with these measures could result in substantial impact on capital expenditure, profit and strategic growth opportunities. In addition, China has undertaken to strive to peak the CO₂ emissions by 2030 or earlier and strive hard to achieve carbon neutrality by 2060, if possible, and to increase the non-fossil fuel share of all energy to around 25% by 2030 while reducing the CO₂ emissions by no less than 65% as compared with 2005. China has also implemented a national carbon emissions trading scheme in 2017, with power generation industry included initially, and will gradually expand the industry coverage after the market matures. As most of our domestic subsidiaries may be recognized as emission-control enterprises, such change could have certain effect on our business operations.

Our overseas businesses may be adversely affected by changes of overseas government policies and business environment.

We have operations and assets and may seek new opportunities in various countries and regions, including countries in Africa, South America, Central Asia, Russia and certain other regions, some of which are deemed to be subject to a high degree of political risk. The operations in these countries and regions may experience debt divergence, changes in taxation and foreign exchange controls, legal litigations, deterioration in compliance management environments or public security, market fluctuations and oil and gas price fluctuations, changes in political situations and sanctions rules and policies, investment decision risk, safety production and equipment integrity risk. Occurrence of any of these conditions could disrupt or curtail our operations or development activities. These events may also limit our ability to pursue new opportunities, affect the recoverability of our assets or cause us to incur additional costs, particularly due to the long-term nature of many of our projects and the significant capital expenditure required by those projects.

We may be classified as a passive foreign investment company for United States federal income tax purposes, which could result in adverse United States federal income tax consequences to United States investors in the H shares or ADSs.

A non-United States corporation, such as our company, will be a “passive foreign investment company” (PFIC), for United States federal income tax purposes for any taxable year, if either (a) 75% or more of its gross income for such year consists of certain types of “passive” income or (b) 50% or more of the value of our assets (generally based on the average quarterly value of our assets during the taxable year) produce or are held for the production of passive income. Depending upon the value of our assets, which may be determined based, in part, on the market price of our H shares or ADSs, and the nature of our assets and income over time, we could be classified as a PFIC for United States federal income tax purposes. Based on our income and assets and the market price of our H shares or ADSs, we do not believe that we were a PFIC for the taxable year ended December 31, 2020 and do not anticipate becoming a PFIC in the current taxable year or in the foreseeable future. Because PFIC status is a factual determination made annually after the close of each taxable year on the basis of the composition of our income and the value of our active versus passive assets for that year, there can be no assurance that we will not be a PFIC for any future taxable year. The overall level of our passive assets will be affected by how, and how quickly, we expend our liquid assets. Under circumstances where gross income from activities that produce passive income significantly increase relative to our gross income from activities that produce non-passive income or where we determine not to deploy significant amounts of cash for active purposes, our risk of becoming classified as a PFIC may substantially increase. If we were to be or become classified as a PFIC, a US Holder (as defined in “Item 10. Additional Information—E. Taxation—United States Federal Income Tax Considerations”) may incur significantly increased United States income tax on gains recognized on the sale or other disposition of the H shares or ADSs and on the receipt of distributions on the H shares or ADSs to the extent such gains or distributions are treated as an “excess distribution” under the United States federal income tax rules. For more information see “Item 10. Additional Information—E. Taxation—United States Federal Income Tax Considerations.”

Our operations may be adversely affected by cyber-attacks or similar disruptions.

We have established cybersecurity control schemes and operation and maintenance schemes for our information infrastructure and application system, built a cybersecurity risk management and control information platform, and devoted significant resources to protecting our digital infrastructure and information system against cyber-attacks. If our systems against cyber-security risk prove to be ineffective, we could be adversely affected by, among other things, disruptions to our business operations, and loss of proprietary information, including intellectual property, financial information and employer and customer data, injury to people, property, environment and reputation. As cyber-security attacks continue to evolve, we may be required to expend additional resources to enhance our protective measures against cyber-security breaches.

COVID-19 pandemic could materially and adversely affect our business.

In 2020, the global pandemic of COVID-19 and public prevention measures have had and may continue to have certain adverse impacts for a period of time on the demand for our end products and on our normal operating activities, including disruptions from the temporary closure of offices, suspension of business travel or other disruptions on our normal working schedules, which, in aggregate, may have significant impacts on our business, financial condition and results of operations. We have taken measures in response to the outbreak, including the adoption of more stringent workplace sanitation measure. At present, domestic COVID-19 is generally under control within China, and vaccines are being inoculated within China and abroad. However, unpredictable factors still exist in terms of COVID-19 global trend. The extent to which this outbreak impacts our results will depend on future developments of COVID-19, including new information which may emerge concerning the severity of the outbreak and the actions to contain the outbreak or treat its impact, among others.

Risks Relating to Our Industry

Our operations may be adversely affected by the global and domestic economic conditions.

Our results of operations are materially affected by economic conditions in China and elsewhere around the world. There are some uncertainty and instability in the current global economy. The Chinese economy has entered a new development stage and is moving forward with high quality development. Our operations may also be adversely affected by factors such as foreign countries' trade protection policies and increase in imports activities facilitated by regional trade agreements.

Our operations may be adversely affected by the cyclical nature of the market.

Most of our revenues are attributable to sales of refined oil products and petrochemical products, and certain of these businesses and related products have historically been cyclical and sensitive to a number of factors that are beyond our control. These factors include the availability and prices of feedstock and macro-economic conditions, such as changes in industry capacity and output levels, cyclical changes in regional and global economic conditions, prices and availability of substitute products and fluctuation in prices and demands of natural gas, refined oil products and chemical products. Although we are an integrated company with upstream, midstream and downstream businesses, we have limited ability to mitigate the adverse influence of the cyclicity of global markets.

We face strong competition from domestic and foreign competitors.

Among our competitors, some are major integrated petroleum and petrochemical companies within and outside China, which have recently become more significant participants in the petroleum and petrochemical industry in China. The PRC government has speeded up the release of restrictions on the right to use imported crude oil. This development may lead to refining overcapacity in China and intensify competition among local refineries. The Chinese crude oil and refined oil product markets are becoming increasingly dynamic and internationalized with implementation of tariff concessions and relaxation of market. In the opened-up wholesale market of refined oil products previously dominated by PetroChina Company Limited and us, we are facing stronger competition from new players and imported products. Our market share of chemical products is also under stronger competitive pressure due to the increasingly active participation of diversified new market players including multinational petroleum and petrochemical companies and domestic private enterprises. In addition, we are also expected to face competition in both domestic and overseas refined oil products and petrochemical product market as a result of our domestic and international competitors' increasing production capacity. Increased competition may have a material adverse effect on our financial condition and results of operations.

Risks Relating to Our Controlling Shareholder

We engage in related party transactions with Sinopec Group from time to time which may create potential conflict of interest.

We have engaged from time to time and will continue to engage in a variety of transactions with Sinopec Group, which provides us with a number of services, including, but not limited to, ancillary supply, engineering, maintenance, transport, lease of land use right, lease of buildings, as well as educational and ancillary services. The nature of our transactions with Sinopec Group is governed by a number of service and other contracts between Sinopec Group and us. We have established various schemes in those agreements so that these transactions, when entered into, are under terms that are at arm's length. However, we cannot assure you that Sinopec Group Company or any of its members would not take actions that may favor its interests or its other subsidiaries' interests over ours.

We are controlled by Sinopec Group Company, our ultimate controlling shareholder, whose interest in certain businesses are likely to compete with our business.

Sinopec Group Company has interests in certain businesses, such as petrochemical and overseas exploration and development, which compete or are likely to compete, either directly or indirectly, with our businesses. To avoid the adverse effects brought by the competition between us and Sinopec Group Company to the maximum extent possible, we and Sinopec Group Company have entered into a non-competition agreement. In 2012, we received from Sinopec Group Company an undertaking to avoid its competition with us. For details, please refer to the descriptions under "Item 7. Major Shareholders and Related Party Transactions—A. Major Shareholders." Notwithstanding the foregoing contractual arrangements, because Sinopec Group Company is our controlling shareholder, Sinopec Group Company may take actions that may conflict with our own interests.

It is possible that the current or future activities of our ultimate controlling shareholder, Sinopec Group Company, or its affiliates in or with certain countries that are the subject of economic sanctions under relevant U.S. laws could result in negative media and investor attention to us and possible imposition of sanctions on Sinopec Group Company, which could materially and adversely affect our shareholders' value and operations.

Sinopec Group Company undertakes, from time to time and without our involvement, overseas investments and operations in the oil and gas industry, including exploration and production of oil and gas, refining and Liquefied Natural Gas or LNG, oilfield services and refining engineering projects. Sinopec Group Company's overseas asset portfolio includes a limited number of projects in countries that are subject to U.S. sanctions administrated by OFAC and by the U.S. Department of State, including Iran, Syria and Sudan. We currently do not believe that any existing investments of Sinopec Group Company will result in any direct sanctions imposed by OFAC. However, we cannot predict the interpretation or implementation of sanction policy at the U.S. federal, state or local levels with respect to any current or future activities by Sinopec Group Company or its affiliates in countries or with individuals or entities that are the subject of U.S. sanctions. Similarly, we cannot predict whether U.S. sanctions will be further tightened in the case of Iran, or whether sanction scope will be modified or updated, or if any other countries or regions will be incorporated into the sanction list, or the impact that such actions may have on Sinopec Group Company and us. If becoming the target of U.S. sanctions, Sinopec Group Company may be prohibited from conducting business activities in the United States or with individuals or entities in the United States, and the transactions involving our securities in the United States will also be significantly affected. In addition, certain U.S. state and local governments and colleges have restrictions on the investment of public funds or endowment funds, respectively, in companies that are members of corporate groups with activities in certain countries that are the subject of U.S. sanctions. These investors may not wish to invest, and may divest their investment, in us because of our relationship with Sinopec Group Company and its investments and activities in those OFAC sanctioned countries. It is possible that, as a result of activities by Sinopec Group Company or its affiliates in countries that are the subject of U.S. sanctions, we may be subject to negative media or investor attention, which may distract management, consume internal resources and affect investors' perception of our Company.

Risks Relating to the PRC

Government regulations may limit our activities and affect our business operations.

The PRC government, though gradually liberalizing its regulations on entry into the petroleum and petrochemical industry, continues to exercise certain controls over the petroleum and petrochemical industry in China. These control mechanisms include granting the licenses to explore for and produce crude oil and natural gas, granting the licenses to market and distribute crude oil and refined oil products, regulating the upper limit of the retail prices for gasoline and diesel; collecting special oil income levies, deciding import and export quotas and procedures, setting safety, environmental and quality standards, and formulating policies to save energy and reduce emission; meanwhile, there could be potential changes to macroeconomic and industry policies such as reforming of the oil and gas industry, and further reforming and improvement of pricing mechanism of refined oil products and natural gas, which could impact the development of the domestic petroleum and petrochemical industry and the production and operations of the domestic enterprises operating in such industry. Such control mechanisms may have material effects on our operations and profitability.

The PRC governmental authorities, from time to time, audit or inspect our ultimate controlling shareholder. We cannot predict the impact, if any, of their outcome on our reputation, business and financial condition as well as the trading prices of our ADSs and H shares.

The PRC governmental authorities, from time to time, perform audits, inspections, inquiries or similar actions on state-owned companies, such as Sinopec Group Company, our ultimate controlling shareholder. Such inspections are not conducted on a regular basis with specific targets, and therefore we cannot predict the outcome of these governmental activities. If, as a result of such audits, inspections or inquiries, (i) material irregularities are found within Sinopec Group Company or us or our employees or (ii) Sinopec Group Company or we become the target of any negative publicity, our reputation, business and financial condition as well as the trading prices of our ADSs and H shares may be materially and negatively impacted.

Our business operations may be adversely affected by present or future environmental regulations.

As an integrated petroleum and petrochemical company, we are subject to extensive environmental protection laws and regulations in China. These laws and regulations permit:

- the government, in accordance with law, to impose fines, to order correction, limitation on production or discharge, and suspend production for pollution discharge exceeding standards;
- the government to impose fines for late payment of environmental tax for the discharge of waste materials;
- the government, in accordance with law, to order correction, suspend production and impose fines for unlicensed or uncertified pollution discharge;

- the government, at its discretion, to seal up or close down any facility which has caused or may cause severe environmental damage and require it to correct or stop operations; and
- litigations and liabilities arising from pollutions and damages to the environment and public interests.

Our production activities produce substantial amounts of liquid, gas and solid waste materials. We have established a system to treat waste materials to prevent and reduce pollution. We may have certain facilities built in regions newly reclassified as ecological preservation areas, and therefore need to be relocated. Also, the PRC government has moved, and may move further, toward more rigorous enforcement of applicable laws, and toward the adoption of more stringent environmental standards.

In recent years, we have commenced exploration and production of unconventional oil and gas resources, such as shale oil and gas and coal bed methane, through the application of relatively advanced technologies. As a result, our unconventional oil and gas operations rely on unproven technology which may expose us to higher environmental compliance standards and requirements, which, in turn, would require us to incur additional expenditures on environmental matters.

Some of our development plans require compliance with state policies and governmental regulation.

We are currently engaged in a number of construction, renovation and expansion projects. Some of our large construction, renovation and expansion projects are subject to governmental confirmation and registration. The timing and cost of completion of these projects will depend on numerous factors, including when we can receive the required confirmation and registration from relevant PRC government authorities and the general economic condition in China. If any of our key projects required for our future growth is not confirmed or registered, or not confirmed or registered in a timely manner, our results of operations and financial condition could be adversely impacted.

Government control of currency conversion and exchange rate fluctuation may adversely affect our operations and financial results.

We receive a significant majority of our revenues in Renminbi. A portion of such revenues will need to be converted into other currencies to meet our foreign currency needs, which include, among other things:

- import of crude oil and other materials;
- debt service on foreign currency-denominated debt;
- purchases of imported equipment;
- payment of the principals and interests of bonds issued overseas; and
- payment of any cash dividends declared in respect of the H shares (including ADS).

The existing foreign exchange regulations have significantly reduced government foreign exchange controls for transactions under the current account, including trade and service related foreign exchange transactions and payment of dividends. Foreign exchange transactions under the capital account, including principal payments in respect of foreign currency-denominated obligations, continue to be subject to significant foreign exchange controls and require the approval of the State Administration of Foreign Exchange. These limitations could affect our ability to obtain foreign exchange through debt or equity financing, or to obtain foreign exchange. The PRC government has stated publicly that it intends to make the Renminbi freely convertible in the future. However, we cannot predict whether the PRC government will continue its existing foreign exchange policy and when the PRC government will allow free conversion of Renminbi.

The exchange rate of the Renminbi against the US dollar and other foreign currencies fluctuates with market and is affected by, among other things, the changes in the PRC's and international political and economic conditions. On July 21, 2005, the PRC government introduced a floating exchange rate system to allow the value of the Renminbi to fluctuate within a regulated band based on market supply and demand and by reference to a basket of foreign currencies. On June 19, 2010 and August 11, 2015, respectively, the People's Bank of China (PBOC) decided to further promote the reform of exchange rate regime and enhance the flexibility of Renminbi exchange rate. The changes in foreign exchange rate will impact our cost in purchasing crude oil given the majority of our crude oil purchases are settled in foreign currencies and priced in US dollar. Besides, prices of refined oil products are guided by the PRC government and are pegged to the exchange rate of the Renminbi against the US dollar. Therefore the impact of Renminbi exchange rate fluctuation on the purchase cost of crude oil could largely be offset by the corresponding fluctuation in the prices of domestic refined oil products and chemical products.

Risks relating to enforcement of shareholder rights; Mandatory arbitration.

Currently, the primary sources of shareholder rights are our articles of association, the PRC Company Law and the Listing Rules of the Hong Kong Stock Exchange, which, among other things, impose certain standards of conduct, fairness and disclosure on us, our directors and our controlling shareholder. In general, their provisions for protection of shareholder's rights and access to information are different from those applicable to companies incorporated in the United States, the United Kingdom and other Western countries. In addition, the mechanism for enforcement of rights under the corporate framework to which we are subject may also be relatively undeveloped and untested. To our knowledge, there has not been any published report of judicial enforcement in the PRC by H share shareholders of their rights under constituent documents of joint stock limited companies or the PRC Company Law or in the application or interpretation of the PRC or Hong Kong regulatory provisions applicable to PRC joint stock limited companies. We cannot guarantee that our shareholders will enjoy protections that they may be entitled in other jurisdictions.

China does not have treaties providing for the reciprocal recognition and enforcement of judgments of courts with the United States, the United Kingdom or most other Western countries, and therefore recognition and enforcement in China of judgments of a court in any of these jurisdictions in relation to any matter not subject to a binding arbitration provision may not be assured. Our articles of association as well as the Listing Rules of the Hong Kong Stock Exchange provide that most disputes between holders of H shares and us, our directors, supervisors, officers or holders of domestic shares, arising out of the articles of association or the PRC Company Law concerning the affairs of our company, are to be resolved through arbitration, at the election of the claimant, by arbitration organizations in Hong Kong or the PRC, rather than through a court of law. On June 18, 1999, an arrangement was made between Hong Kong and the PRC for the mutual enforcement of arbitral awards. This new arrangement was approved by the Supreme People's Court of the PRC and the Hong Kong Legislative Council, and became effective on February 1, 2000. We are uncertain as to the outcome of any action brought in China to enforce an arbitral award granted to shareholders.

Our auditor, like other independent registered public accounting firms operating in China, is not permitted to be subject to inspection by Public Company Accounting Oversight Board, and as such, investors may be deprived of the benefits of such inspection. Our ADSs may be delisted under the Holding Foreign Companies Accountable Act if the PCAOB is unable to inspect auditors who are located in China. The delisting of our ADSs, or the threat of their being delisted, may materially affect the value of your investment.

The Holding Foreign Companies Accountable Act, or the HFCA Act, was enacted on December 18, 2020. The HFCA Act states if the SEC determines that we have filed audit reports issued by a registered public accounting firm that has not been subject to inspection by the PCAOB for three consecutive years beginning in 2021, the SEC shall prohibit our shares or ADSs from being traded on a national securities exchange or in the over the counter trading market in the U.S.

Our auditor, the independent registered public accounting firm that issues the audit report included elsewhere in this annual report, as an auditor of companies that are traded publicly in the United States and a firm registered with the PCAOB, is subject to laws in the United States pursuant to which the PCAOB conducts regular inspections to assess its compliance with the applicable professional standards. Since our auditor is located in China, a jurisdiction where the PCAOB has been unable to conduct inspections without the approval of the Chinese authorities, our auditor is currently not inspected by the PCAOB.

On March 24, 2021, the SEC adopted interim final rules relating to the implementation of certain disclosure and documentation requirements of the HFCA Act. We will be required to comply with these rules if the SEC identifies us as having a “non-inspection” year under a process to be subsequently established by the SEC. The SEC is assessing how to implement other requirements of the HFCA Act, including the listing and trading prohibition requirements described above.

The SEC may propose additional rules or guidance that could impact us if our auditor is not subject to PCAOB inspection. For example, on August 6, 2020, the President's Working Group on Financial Markets, or the PWG, issued a report recommended the SEC implement five recommendations to address companies from jurisdictions that do not provide the PCAOB with sufficient access to fulfil its statutory mandate, some of which were more stringent than the HFCA Act.

The SEC has announced that the SEC staff is preparing a consolidated proposal for the rules regarding the implementation of the HFCA Act and to address the recommendations in the PWG report. It is unclear when the SEC will complete its rulemaking and when such rules will become effective and what, if any, of the PWG recommendations will be adopted. The implications of this possible regulation in addition to the requirements of the HFCA Act are uncertain. Such uncertainty could cause the market price of our ADSs to be affected, and our securities could be delisted or prohibited from being traded “over-the-counter,” which may substantially impair the investors’ ability to sell or purchase our ADSs.

The PCAOB’s inability to conduct inspections in China prevents it from fully evaluating the audits and quality control procedures of our independent registered public accounting firm. As a result, investors may be deprived of the benefits of PCAOB inspections. The inability of the PCAOB to conduct inspections of auditors in China makes it more difficult to evaluate the effectiveness of our independent registered public accounting firm’s audit procedures or quality control procedures as compared to auditors outside of China that are subject to the PCAOB inspections, which could cause investors and potential investors in our stock to lose confidence in our audit procedures and reported financial information and the quality of our financial statements.

In May 2013, the PCAOB announced that it had entered into a Memorandum of Understanding on Enforcement Cooperation with the CSRC and the PRC Ministry of Finance, which establishes a cooperative framework between the parties for the production and exchange of audit documents relevant to investigations undertaken by the PCAOB in the PRC or by the CSRC or the PRC Ministry of Finance in the United States. The PCAOB continues to be in discussions with the CSRC and the PRC Ministry of Finance to permit joint inspections in the PRC of audit firms that are registered with the PCAOB and audit Chinese companies that trade on U.S. exchanges.

Additional remedial measures imposed on certain PRC-based accounting firms, including our independent registered public accounting firm, in proceedings brought by the SEC alleging the firms’ failure to meet specific criteria, could result in financial statements being determined to not be in compliance with the requirements of the Exchange Act.

In December 2012, the SEC brought administrative proceedings against the “Big Four” accounting firms in China, including our independent registered public accounting firm, alleging that these firms had refused to produce audit work papers and other documents related to certain other China-based companies whose securities are publicly traded in the United States. On January 22, 2014, an initial administrative law decision was issued, censuring these accounting firms and barring these firms from practicing before the SEC for a period of six months. The decision is neither final nor legally effective unless and until it is endorsed by the SEC. In February 2015, each of the four PRC-based accounting firms agreed to a censure and to pay a fine to the SEC to settle the dispute and avoid suspension of their ability to practice before the SEC. The settlement required the firms to follow detailed procedures to seek to provide the SEC with access to Chinese firms’ audit documents via the China Securities Regulatory Commission (CSRC) in response to future document requests by the SEC made through the CSRC. We cannot predict if the SEC will further challenge the four China-based accounting firms’ compliance with U.S. law in connection with U.S. regulatory requests for audit work papers or if the results of such a challenge would result in the SEC imposing penalties such as suspensions.

In the event that the Chinese affiliates of the “Big Four” become subject to additional legal challenges by the SEC or PCAOB, listed companies in the United States with PRC operations may find it difficult or impossible to retain auditors in respect of their operations in the PRC, which could result in financial statements being determined to not be in compliance with the requirements of the Exchange Act, and hence face delisting. Moreover, any negative news about the proceedings against these audit firms may give rise to a perception of uncertainty to investors regarding China-based, U.S.-listed companies and the market price of our ADSs may be adversely affected.

If our independent registered public accounting firm was denied, even temporarily, the ability to practice before the SEC and we were unable to timely find another registered public accounting firm to audit and issue an opinion on our financial statements, our financial statements could be determined not to be in compliance with the requirements of the Exchange Act. Such a determination could ultimately lead to delisting of our ADSs from the New York Stock Exchange (NYSE) or deregistration from the SEC, or both, which would substantially reduce or effectively terminate the trading of our ADSs in the United States.

ITEM 4. INFORMATION ON THE COMPANY

A. HISTORY AND DEVELOPMENT OF THE COMPANY

Our legal and commercial name is China Petroleum & Chemical Corporation. Our head office is located at 22 Chaoyangmen North Street, Chaoyang District, Beijing 100728, the People's Republic of China, our telephone number is (8610) 5996-0028 and our fax number is (8610) 5996-0386. We have appointed our representative office in the North America, located at 3050 Post Oak Blvd, Suite 800, Houston, 77056, with telephone number of +1 (713) 544 8888 and fax number of +1 (713) 544 8878, as our agent for service of processes for actions brought under the U.S. securities laws. The SEC maintains an Internet website that contains reports, proxy and information statements, and other information regarding us that have been filed electronically with the SEC, which can be accessed at <http://www.sec.gov>. Information about the Company and documents the Company submitted to the SEC are available on our investor relations website: http://www.sinopec.com/listco/en/investor_centre/corporate_governance/.

We were established as a joint stock limited company on February 25, 2000 under the Company Law of the PRC with Sinopec Group Company as the sole shareholder at our inception. Our principal businesses consist of petroleum and petrochemical businesses transferred to us by Sinopec Group Company pursuant to a reorganization agreement. Such businesses include:

- exploration for, development, production and marketing of crude oil and natural gas;
- refining of crude oil and marketing and distribution of refined oil products, including transportation, storage, trading, import and export of petroleum products; and
- production and sales of petrochemical products.

Sinopec Group's continuing activities primarily consist, among other things, of:

- exploring and developing oil and gas reserves overseas;
- operating certain petrochemical facilities;

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- providing geophysical exploration, and well drilling, survey, logging and downhole operational services;
- manufacturing production equipment and providing equipment maintenance services;
- providing construction services;
- providing utilities, such as electricity and water; and
- providing other operational services including transportation services.

Sinopec Group Company transferred the businesses to us either by transferring its equity holdings in subsidiaries or by transferring their assets and liabilities. Sinopec Group Company also agreed in the reorganization agreement to transfer to us its exploration and production licenses and all rights and obligations under the agreements in connection with its core businesses transferred to us. The employees relating to these assets were also transferred to us.

From July 8, 2015 to July 7, 2016, Sinopec Group Company increased its shareholding in the Company through acquisitions of our ordinary shares on the stock market in its own name or through other concerting parties, by way of acquiring 72,000,000 A shares. Immediately following the shareholding increase, Sinopec Group Company directly and indirectly held 86,345,821,101 shares of the Company.

On October 29, 2015, we entered into a joint venture agreement with Sinopec Assets Management Co., Ltd. (“SAMC”), a wholly-owned subsidiary of Sinopec Group Company, in relation to the formation of Sinopec Shanghai Gaoqiao Petrochemical Co., Ltd. (“Gaoqiao”). We and SAMC subscribed for 55% and 45% of the registered capital of Gaoqiao, respectively, and Gaoqiao became a subsidiary of the Company.

On August 2, 2016, our board of directors unanimously approved the proposal to introduce capitals from potential investors to invest in Sichuan-to-East China gas pipeline project, through our indirectly wholly-owned subsidiary Sinopec Sichuan-to-East China Natural Gas Pipeline Co., Ltd. (“Sichuan-to-East China Pipeline Co.”). On December 12, 2016, Sinopec Natural Gas Limited Company, our wholly-owned subsidiary (“Natural Gas Company”), China Life Insurance Co., Ltd. (“China Life”) and SDIC Communications Holding Co., Ltd. (“SDIC Communications”) entered into the Capital Injection Agreement in relation to Sichuan-to-East China Pipeline Co. and agreed to collectively subscribe for 50% equity interest in Sichuan-to-East China Pipeline Co. for an aggregate amount of RMB 22.8 billion in cash. Upon completion of the capital injection, China Life, SDIC Communications and the Natural Gas Company held 43.86%, 6.14% and 50% equity interest in Sichuan-to-East China Pipeline Co., respectively.

On April 27, 2017, our board of directors unanimously approved the proposal of the acquisition of equity interest in Shanghai SECCO Petrochemical Company Limited (“Shanghai SECCO”) by Gaoqiao. On October 26, 2017, Gaoqiao purchased 50% equity interest in Shanghai SECCO from BP Chemicals East China Investment Limited with a cash consideration of RMB 10,135 million. Before the acquisition, we and one of our subsidiaries held 30% and 20% equity interest in Shanghai SECCO, respectively. Upon completion of the acquisition, we, together with our subsidiaries, hold 100% equity interest of Shanghai SECCO, which became a subsidiary of us.

Following the instruction by the State-owned Assets Supervision and Administration Commission of the State Council, on August 9, 2018, Sinopec Group Company gratuitously transferred 1,241,721,854 A shares of the Company to Beijing Chengtong Financial Control Investment Co., Ltd., and 1,241,721,854 A shares to Guoxin Investment Co., Ltd. Upon the completion of such transfers, Sinopec Group Company directly and indirectly held 83,862,377,393 shares of the Company.

In July 2020, we and certain of our subsidiaries entered into transactions with PipeChina to sell the ownership of certain oil and gas pipeline assets and other facilities to PipeChina in exchange for approximately 14% of registered capital of, and cash paid by, PipeChina as consideration (the "Pipeline Transactions"). The Pipeline Transactions closed on September 30, 2020. In accordance with the arrangements of the Pipeline Transactions, we and PipeChina have entered into agreements for the continuous use of relevant oil and gas pipelines and other facilities in the future on the terms and subject to conditions set forth therein.

B. BUSINESS OVERVIEW

Exploration and Production

Overview

We currently explore for, develop and produce crude oil and natural gas in a number of areas in China and overseas. As of December 31, 2020, we held 238 production licenses in China, with an aggregate acreage of 33,965 square kilometers and with terms ranging from 10 to 80 years. Our production licenses may be renewed upon our application at least 30 days prior to the expiration date, which are renewable for unlimited times. During the term of our production license, we pay an annual production license fee of RMB 1,000 per square kilometer.

As of December 31, 2020, we held 190 exploration licenses in China for various blocks in which we engaged in exploration activities, with an aggregate acreage of approximately 437 thousand square kilometers.

As of December 31, 2020, our overseas subsidiary held one production licenses, with an acreage of 322.57 square kilometers. It currently does not have exploration licenses. Our overseas equity-accounted investments held 74 production licenses, with an aggregate acreage of 4,907.4 square kilometers, and no exploration license.

Properties

We currently operate 248 oil and gas producing fields and blocks.

Shengli production field is our most important crude oil production field. It consists of 75 producing blocks of various sizes extending over an area of 2,523 square kilometers in northern Shandong province, all of which are our net developed acreage. Most of Shengli's blocks are located in the Jiyang trough with various oil producing layers. In 2020, Shengli production field produced approximately 166 million barrels of crude oil and 20.047 billion cubic feet of natural gas, with an average daily production of 463.1 thousand BOE.

As of December 31, 2020, the total acreage of our oil and gas producing fields and blocks in China was 16,770 square kilometers, including 10,230 square kilometers of developed acreage, all of which were net developed acreage; and 6,540 square kilometers of gross undeveloped acreage, all of which were net undeveloped acreage.

As of December 31, 2020, the total acreage of our oil and gas producing fields and blocks of our overseas subsidiary was 322.57 square kilometers, including 169.21 square kilometers of developed acreage, of which 110 square kilometers were net developed acreage; and 153.36 square kilometers of gross undeveloped acreage, of which 31.8 square kilometers were net undeveloped acreage.

As of December 31, 2020, the total acreage of our oil and gas producing fields and blocks of our overseas equity-accounted investments was 1,893.4 square kilometers, including 1,818.4 square kilometers of developed acreage, of which 1,818.4 square kilometers were net developed acreage; and 75.1 square kilometers of gross undeveloped acreage, of which 45.1 square kilometers were net undeveloped acreage.

Oil and Natural Gas Reserves

As of December 31, 2020, our estimated proved reserves of crude oil and natural gas in China were 2,595 million BOE (including 1,232 million barrels of crude oil and 8,181 billion cubic feet of natural gas), and our estimated proved reserves of crude oil and natural gas outside of China, which included a share of the estimated proved reserves of our equity-accounted investments, were 312.6 million BOE. Our estimated proved reserves do not include additional quantities recoverable beyond the term of the relevant production licenses, or that may result from extensions of currently proved areas, or from application of improved recovery processes not yet tested and determined to be economical.

The following tables set forth our proved developed and undeveloped crude oil and natural gas reserves by region as of December 31, 2020.

Crude Oil Proved Reserves		As of December 31, 2020
		(in millions of barrels)
Developed Subsidiaries		
China		1,130
Shengli		821
Others		309
Overseas		15.03
Subtotal		1,145.03
Equity-accounted investments		
China		-
Overseas		244.44
Subtotal		244.44
Total Proved Developed		1,389.47
Undeveloped Subsidiaries		
China		102
Shengli		16
Others		86
Overseas		5.49
Subtotal		107.49
Equity-accounted investments		
China		-
Overseas		45.79
Subtotal		45.79
Total Proved Undeveloped		153.28
Total Crude Oil Proved Reserves		1,542.75
Natural Gas Proved Reserves		As of December 31, 2020
		(in billions of cubic feet)
Developed Subsidiaries		
China		6,357
Puguang		1,675
Fuling		1,491
Others		3,191
Overseas		-
Subtotal		6,357
Equity-accounted investments		
China		-
Overseas		8.34
Subtotal		8.34
Total Proved Developed		6,365.34
Undeveloped Subsidiaries		
China		1,824
Puguang		71
Fuling		119
Others		1,634
Overseas		-
Subtotal		1,824
Equity-accounted investments		
China		-
Overseas		1.33
Subtotal		1.33
Total Proved Undeveloped		1,825.33
Total Natural Gas Proved Reserves		8,190.67

As of December 31, 2020, approximately 101.94 million barrels of our crude oil proved reserves and 1,823.7 billion cubic feet of our natural gas proved reserves were classified as proved undeveloped reserves in China and overseas. 2.23 million barrels of crude oil and 648.04 billion cubic feet natural gas proved reserves in China have been classified as proved undeveloped for more than five years, mainly under Sinopec Shanghai Offshore Petroleum Company, one of our subsidiaries.

During 2020, a total of 374 wells were drilled by us in China and 100 wells were drilled overseas. We converted 48.87 million barrels of proved undeveloped crude oil reserves and 139.14 billion cubic feet of proved undeveloped natural gas reserves into proved developed reserves in 2020. Total capital expenditure incurred in converting proved undeveloped reserves into proved developed reserves amounted to RMB8,205 million, including RMB7,096 million and RMB1,109 million incurred in connection with our operations in China and overseas, respectively, in 2020.

Our reserves estimation is managed by a two-tier management system. The Oil and Natural Gas Reserves Management Committee, or the RMC, at our headquarters level, organizes, coordinates and oversees the overall reserves estimation, and is in charge of the major issues in reserves estimation and approving the reserves estimation report of our company. Each of our Branches has a reserves management committee that manages and coordinates the reserves estimation process, organizes the evaluators to do reserves estimation, reviews and inspects the evaluation materials and results at the branches level, and reports to the RMC of the Company.

Our RMC consists of our senior managements, the senior management of related divisions at our headquarters level, our exploration and production institution and our Branches in each oil field. The current Chairman of our RMC, Mr. Liu Hongbin, Senior Vice President of the company, has over 30 years of experience in the oil and gas industry. A majority of our RMC members hold doctor's or master's degrees and our RMC members have an average of 20 years of technical experience in relevant industry fields, such as geology, development and economics.

Our reserves estimation is guided by procedural manuals and technical guidance. Initial collection and compilation of reserves information are conducted by different working divisions, including exploration, development and financial divisions, at production bureau level. Technical experts in exploration, development and economics divisions of our Branches in each oil field collectively prepare the initial report on reserves estimation. The reserves management committees at production bureau level then review to ensure the qualitative and quantitative compliance with technical guidance and accuracy and reasonableness of the reserves estimation. We also engage outside consultants who assist us to be in compliance with the U.S. Securities and Exchange Commission rules and regulations. Our reserves estimation process is further facilitated by a specialized reserves database which is reviewed and updated periodically.

Oil and Natural Gas Production

In 2020, we produced an average of 1,168.6 thousand BOE per day in China, of which approximately 58.3% was crude oil and 41.7% was natural gas. We produced an average of 85.8 thousand BOE per day overseas, of which 98.05% was crude oil and 1.95% was natural gas.

The following tables set forth our average daily production of crude oil and natural gas for the years ended December 31, 2018, 2019 and 2020. The production of crude oil includes condensate.

	Year Ended December 31,		
	2018	2019	2020
	(in thousands of barrels)		
Average Daily Crude Oil Production			
China	682	683	682
Subsidiaries	682	683	682
Shengli	455	455	454
Others	227	228	228
Overseas	107	95.3	84.1
Subsidiary	30	19.2	17.4
Equity-accounted investments	77	76.1	66.7
Total Crude Oil Production	789	778.3	766.1

	Year Ended December 31,		
	2018	2019	2020
	(in millions of cubic feet)		
Average Daily Natural Gas Production			
China	2,668	2,862	2,921
Subsidiaries	2,668	2,862	2,921
Puguang	615	664	598
Fuling	582	613	647
Others	1,471	1,585	1,676
Overseas	8	8.5	8.8
Equity-accounted investments	8	8.5	8.8
Total Natural Gas Production	2,676	2,870.5	2,929.8

Lifting Cost & Realized Prices

The following table sets forth our average lifting costs per BOE of crude oil produced, average sales prices per barrel of crude oil and average sales prices per thousand cubic meters of natural gas for the years ended December 31, 2018, 2019 and 2020.

	Weighted Average	China (RMB)	Overseas ⁽¹⁾
For the year ended December 31, 2020			
Average petroleum lifting cost per BOE	105.28	101.67	154.41
Average realized sales price			
Per barrel of crude oil	269.85	266.86	294.12
Per thousand cubic meters of natural gas	1,318.1	1,318.1	—
For the year ended December 31, 2019			
Average petroleum lifting cost per BOE	117.0	110.32	164.49
Average realized sales price			
Per barrel of crude oil	406.0	400.37	445.96
Per thousand cubic meters of natural gas	1,326.09	1,326.09	—
For the year ended December 31, 2018			
Average petroleum lifting cost per BOE	112.45	111.75	116.90
Average realized sales price			
Per barrel of crude oil	432.32	426.81	467.11
Per thousand cubic meters of natural gas	1,263.41	1,263.41	—

(1) The exchange rates we used for overseas data in this table were exchange rates for each year ended December 31, 2018, 2019 and 2020, which were RMB 6.6204 to US\$ 1.00, RMB 6.8985 to US\$ 1.00, and RMB 6.8976 to US\$ 1.00, respectively.

Exploration and Development Activities

In 2020, under the environment of low oil prices, we pressed ahead with high quality exploration and profit-oriented development, accelerated the systematic integration of natural gas production, supply, storage and marketing, and achieved tangible results in maintaining oil production, increasing gas output and cutting cost. In exploration, we continued to strengthen risk exploration in strategic areas, oil and gas rich zones and shale resources, which led to new discoveries in Tarim Basin, Sichuan Basin and Bohai Bay Basin. In crude oil development, we efficiently proceeded with the capacity building of Shunbei and other oilfields, strengthened fine development in mature fields, intensified EOR technology breakthrough and application, and consolidated the basis for steady production. In natural gas development, we constantly pushed forward capacity building in Weirong and West Sichuan gas fields, expanded the market and sales, and continuously improved the sales volume with a record high domestic market share. The Company's production of oil and gas reached 459.02 million barrels of oil equivalent, with domestic crude production reaching 249.52 million barrels and natural gas production totalled 1,072.3 billion cubic feet, up by 2.3% year on year.

The following table sets forth the numbers of our exploratory and development wells, including a breakdown of productive wells and dry wells we drilled during the years ended December 31, 2018, 2019 and 2020.

Number of Drilled Wells	As of December 31,											
	2018				2019				2020			
	Exploratory		Development		Exploratory		Development		Exploratory		Development	
	Productive	Dry	Productive	Dry	Productive	Dry	Productive	Dry	Productive	Dry	Productive	Dry
China	286	131	1,941	6	350	174	2,098	5	383	136	2,015	3
Subsidiaries	286	131	1,941	6	350	174	2,098	5	383	136	2,015	3
Shengli	149	71	1,201	5	195	81	1,168	4	204	64	1,080	2
Others	137	60	740	1	155	93	930	1	179	72	935	1
Overseas	—	—	70	—	3	1	99	—	2	—	100	—
Subsidiaries	—	—	—	—	—	—	—	—	—	—	4	—
Equity-accounted investments	—	—	70	—	3	1	99	—	2	—	96	—
Total	286	131	2,011	6	353	175	2,197	5	385	136	2,115	3

The following table sets forth the number of wells being drilled by us as of December 31, 2018, 2019 and 2020:

Number of Drilling Wells	As of December 31,											
	2018				2019				2020			
	Gross		Net		Gross		Net		Gross		Net	
	Exploratory	Development	Exploratory	Development	Exploratory	Development	Exploratory	Development	Exploratory	Development	Exploratory	Development
China	69	277	69	277	117	177	117	176	92	212	92	212
Subsidiaries	69	277	69	277	117	177	117	176	92	212	92	212
Shengli	25	72	25	72	60	20	60	20	29	52	29	52
Others	44	205	44	205	57	157	57	156	63	160	63	160
Overseas	—	10	—	10	—	—	—	—	2	—	2	—
Subsidiaries	—	—	—	—	—	—	—	—	—	—	—	—
Equity-accounted investments	—	10	—	10	—	—	—	—	2	—	2	—
Total	69	287	69	287	117	177	117	176	94	212	94	212

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The following tables set forth our number of productive wells for crude oil and natural gas as of December 31, 2020, as compared to December 31, 2019 and 2018:

Productive Wells for Crude Oil	As of December 31,					
	2018		2019		2020	
	Gross	Net	Gross	Net	Gross	Net
China	51,030	51,030	52,112	52,112	53,240	53,240
Subsidiaries	51,030	51,030	52,112	52,112	53,240	53,240
Shengli	32,805	32,805	33,819	33,819	34,572	34,572
Others	18,225	18,225	18,293	18,293	18,668	18,668
Overseas	7,293	3,939	7,248	2,855	7,055	2,752
Subsidiaries	28	14	28	14	28	10
Equity-accounted investments	7,265	3,925	7,220	2,841	7,027	2,742
Total	58,323	54,969	59,360	54,967	60,295	55,992

Productive Wells for Natural Gas	As of December 31,					
	2018		2019		2020	
	Gross	Net	Gross	Net	Gross	Net
China	5,068	5,028	6,420	6,378	6,976	6,928
Subsidiaries	5,068	5,028	6,420	6,378	6,976	6,928
Puguang	58	58	61	61	67	67
Fuling	368	368	482	482	632	632
Others	4,642	4,602	5,877	5,835	6,277	6,229
Total	5,068	5,028	6,420	6,378	6,976	6,928

Refining

Overview

In 2020, our refinery throughputs were approximately 236.91 million tonnes. We produce a full range of refined oil products. The following table sets forth our production of our principal refined oil products for the years ended December 31, 2018, 2019 and 2020.

	Year Ended December 31,		
	2018	2019	2020
	(in million tonnes)		
Gasoline	61.16	62.77	57.91
Diesel	64.72	66.06	63.21
Kerosene	28.91	31.16	20.38
Light chemical feedstock	38.52	39.78	40.22
Liquefied petroleum gas	13.17	12.57	11.61
Fuel oil	1.68	1.95	7.71

Gasoline and diesel are our largest revenue-generating products, and are sold mostly through Sinopec Marketing Co., Ltd., our subsidiary, through both wholesale and retail channels. We use most of our production of chemical feedstock as feedstock for our own chemical operations. Most of our other refined oil products were sold in China to a wide variety of industrial and agricultural customers, and a small amount is exported.

Refining Facilities

Currently we operate 30 refineries in China. As of December 31, 2020, our total primary distillation capacity of crude oil was 296.9 million tonnes per annum.

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The following table sets forth our total primary distillation capacity per annum of crude oil and refinery throughputs as of and for the years ended December 31, 2018, 2019 and 2020.

	As of and for the Year Ended December 31,		
	2018	2019	2020
Primary distillation capacity of crude oil (million tonnes per annum) ⁽¹⁾	293.5	295.5	296.90
Refinery throughputs (million tonnes) ⁽²⁾	244.0	248.5	236.91

(1) The primary distillation capacity and refinery throughputs of joint ventures are fully included in our statistics.

(2) When calculating refinery throughputs, conversion from tonnes to barrels are made at a rate of one tonne to 7.35 barrels.

In 2020, our gasoline yield was 24.44%, diesel yield was 26.68%, kerosene yield was 8.6%, and light chemical feedstock yield was 16.98%. For the years ended December 31, 2018, 2019 and 2020, our overall yield for all refined oil products at our refineries was 94.93%, 94.98% and 94.77%, respectively.

The following table sets forth the primary distillation capacity per annum as of December 31, 2020 of each of our refineries with the primary distillation capacity of 8 million tonnes or more per annum.

Refinery	Primary Distillation Capacity as of December 31, 2020 (in million tonnes per annum)
Maoming	18.0
Zhenhai	23.0
Jinling	19.0
Zhongke	15.0
Shanghai	14.0
Qilu	12.5
Yangzi	13.5
Fujian	14.0
Tianjin	13.8
Guangzhou	12.8
Gaoqiao	13.0
Qingdao Refining & Chemical	12.0
Changling	11.5
Yanshan	11.0
Shijiazhuang	10.0
Jiujiang	10.0
Hainan	9.2
Anqing	9.0
Wuhan	8.5

In 2020, the newly-built 10 million-ton oil refining project of Zhongke was put into production, and we adjusted the statistical caliber of the primary processing capacity. Newly added hydrogenation refining capacity totaled 14 million tons/year (with new heavy oil hydrogenation projects such as Zhongke, Tianjin, Maoming, etc., totaling 9.6 million tons/year put into production, and Zhongke S Zorb, diesel hydrogenation, etc., totaling 4.4 million tons/year were put into production). Some of the equipment upgrading projects to improve oil quality were completed and put into production.

Source of crude oil

In 2020, approximately 88.6% of the crude oil required for our refinery business was imported.

Marketing and Sales of Refined Oil Products

Overview

We operate the largest sales and distribution network for refined oil products in China. In 2020, we distributed and sold approximately 167.99 million tonnes of gasoline, diesel and kerosene domestically. Most of the refined oil products sold by us are produced internally. In 2020, approximately 67.3% of our gasoline sales volume and approximately 79.5% of our diesel sales volumes were produced internally.

The table below sets forth a summary of key data in the marketing and sales of refined oil products in the years of 2018, 2019 and 2020.

	As of December 31,		
	2018	2019	2020
Total sales volume of refined oil products (in million tonnes)*	237.69	254.95	217.91
Domestic sales volume of refined oil products (in million tonnes)	180.24	184.45	167.99
Retail	121.64	122.54	113.19
Wholesale and Distribution	58.61	61.91	54.80
Average annual throughput of service stations (in tonnes per station)	3,979	3,992	3,686

* The total sales volume of refined oil products includes the amount of refined oil marketing and trading sales volume.

	As of December 31,		
	2018	2019	2020
Total number of service stations under Sinopec brand	30,661	30,702	30,713
Self-operated service stations	30,655	30,696	30,707

Retail

All of our retail sales are made through a network of service stations and petroleum shops operated under the Sinopec brand. Through this unified network we are able to implement consistent pricing policies, maintain both product and service quality standards and more efficiently deploy our retail network.

In 2020, we sold approximately 113.19 million tonnes of gasoline, diesel and kerosene through our retail network, representing approximately 67.4% of our total domestic gasoline, diesel, jet fuel and kerosene sales volume. Our retail network mainly consists of service stations that are wholly-owned and operated by us, and jointly-owned and generally operated or leased by us, all of which are operated under the Sinopec brand. We also franchised the Sinopec brand to third parties services stations. As of December 31, 2020, we had 6 franchised service stations that are owned and operated by third parties.

Wholesale and Distribution

In 2020, we sold approximately 54.8 million tonnes of refined oil products, including 13.15 million tonnes of gasoline, 26.83 million tonnes of diesel and 14.82 million tonnes of kerosene, through wholesale and distribution to independent distributors such as domestic industrial enterprises, hotels, restaurants and agricultural producers and long-term large-scale end users such as railways, airlines, shipping and public utilities.

We operate 330 storage facilities with a total capacity of approximately 18.0 million cubic meters, substantially all of which are wholly-owned by us. These storage facilities and our wholesale centers are connected to our refineries by railway, waterway and pipelines. We also own some dedicated railways, oil wharfs and oil barges, as well as a number of rail tankers and oil trucks.

Chemicals

Overview

We are the largest petrochemicals producer and distributor in China, with our petrochemical production plants located in economically developed regions such as central, eastern and southern China. We produce and distribute a full range of chemical products including intermediate petrochemicals, synthetic resins, synthetic fiber monomer and polymers, synthetic fibers and synthetic rubber. Synthetic resins, synthetic fibers, and synthetic rubber comprise a significant majority of our external sales. Synthetic fiber monomer and polymers and intermediate petrochemicals, on the other hand, are mostly internally consumed as feedstock for the production of other chemical products. Our chemical operations are integrated upstream and downstream with our refining businesses, which supply a significant portion of our naphtha and light hydrocarbons feedstock. Due to the high demand in China, we sell most of our chemical products in China.

Products

Intermediate Petrochemicals

We are the largest ethylene producer in China. Our rated ethylene capacity as of December 31, 2020 was 12.548 million tonnes per annum. In 2020, we produced 12.06 million tonnes of ethylene. Nearly all of our olefins production is used as feedstock for our petrochemical operations.

We produce aromatics mainly in the forms of benzene and para-xylene, which are used primarily as feedstock for purified terephthalic acid, or PTA, the preferred raw material for polyester.

Chemicals extracted from olefins and aromatics are mainly used to produce synthetic resins, synthetic rubber and synthetic fibers, as well as intermediate petrochemicals.

The following table sets forth our rated capacity per annum, production volume and major plants of production as of or for the year ended December 31, 2020 for our principal intermediate chemical products.

	Our Rated Capacity (thousand tonnes per annum)	Our Production (thousand tonnes)	Major Plants of Production
Ethylene	12,548	12,060	Yanshan, Shanghai, Yangzi, Qilu, Maoming, Guangzhou, Tianjin, Zhongyuan, Shanghai SECCO, BASF-YPC*, Fujian*, Sinopec Sabic (Tianjin)*, Zhongke, Zhenhai, Sino-Korean (Wuhan) and Great Wall EC
Propylene	11,066	10,536	Yanshan, Shanghai, Yangzi, Qilu, Maoming, Guangzhou, Tianjin, Zhongyuan, Shanghai SECCO, Zhongke, BASF-YPC*, Jinling, Anqing, Qingdao, Hainan, Fujian*, Sinopec Sabic (Tianjin)*, Zhenhai, Sino-Korean (Wuhan) and Great Wall EC
Benzene	5,762	4,324	Yanshan, Shanghai, Yangzi, Qilu, Guangzhou, Zhenhai, Tianjin, Luoyang, Shanghai SECCO, Zhongke, BASF-YPC*, Fujian*, Maoming, Hainan and Sino-Korean (Wuhan), Jinling
Styrene	2,530	2,287	Zhenhai, Yanshan, Qilu, Guangzhou, Maoming, Shanghai SECCO, Anqing, Hainan and BASF-YPC*
Para-xylene	5,834	4,940	Shanghai, Yangzi, Qilu, Tianjin, Luoyang, Zhenhai, Jinling, Fujian* and Hainan
Phenol	757	723	Yanshan, Gaoqiao and Sinopec Sabic (Tianjin)*

* Joint ventures, of which the production capacities and outputs are fully included in our statistics.

Synthetic Resins

We are the largest producer of polyethylene, polypropylene and polystyrene and supplier of major synthetic resins products in China.

The following table sets forth our rated capacity per annum, production volumes and major plants of production for each of our principal synthetic resins as of or for the year ended December 31, 2020.

	Our Rated Capacity (thousand tonnes per annum)	Our Production (thousand tonnes)	Major Plants of Production
Polyethylene	8,439	8,013	Yanshan, Shanghai, Yangzi, Qilu, Maoming, Guangzhou, Tianjin, Zhongyuan, Shanghai SECCO, Zhongke, BASF-YPC*, Fujian*, Sinopec Sabic (Tianjin)*, Zhenhai, Sino-Korean (Wuhan) and Great Wall EC
Polypropylene	8,304	7,925	Yanshan, Shanghai, Yangzi, Qilu, Guangzhou, Maoming, Tianjin, Zhongyuan, Shanghai SECCO, Zhongke, Jingmen Branch, Fujian*, Sinopec Sabic (Tianjin)*, Zhenhai, Sino-Korean (Wuhan), Great Wall EC, Luoyang, Jiujiang, Jingmen, Hainan, Beihai and Shijiazhuang
Polyvinyl chloride	600	331	Qilu
Polystyrene	583	620	Maoming, Guangzhou, Shanghai SECCO and BASF-YPC*
Acrylonitrile butadiene styrene	200	181	Gaoqiao

* Joint ventures, of which the production capacities and outputs are fully included in our statistics.

Synthetic Fiber Monomers and Polymers

Our principal synthetic fiber monomers and polymers are purified terephthalic acid, ethylene glycol, acrylonitrile, caprolactam, polyester, polyethylene glycol and polyamide fiber.

The following table sets forth our rated capacity per annum, our production volume and major plants of production as of or for the year ended December 31, 2020 for each type of our principal synthetic fiber monomers and polymers.

	Our Rated Capacity (thousand tonnes per annum)	Our Production (thousand tonnes)	Major Plants of Production
Purified terephthalic acid	2,819	2,382	Shanghai, Yangzi, Yizheng, Tianjin and Luoyang
Ethylene glycol	3,699	2,029	Yanshan, Shanghai, Yangzi, Tianjin, Maoming, Zhongke, Fujian*, BASF-YPC*, Sinopec Sabic (Tianjin)*, Zhenhai
Acrylonitrile	1,070	861	Anqing, Qilu Koruhr* and Shanghai SECCO
Caprolactam	909	809	Baling
Polyester	3,378	2,772	Shanghai, Yizheng, Tianjin and Luoyang

* Joint ventures, of which the production capacities and outputs are fully included in our statistics.

Synthetic Fibers

Our principal synthetic fiber products are polyester fiber and acrylic fiber.

The following table sets forth our rated capacity per annum, production volume and major plants of production for each type of our principal synthetic fibers as of or for the year ended December 31, 2020.

	Our Rated Capacity (thousand tonnes per annum)	Our Production (thousand tonnes)	Major Plants of Production
Polyester fiber	1,206	1,120	Yizheng, Shanghai, Tianjin and Luoyang
Acrylic fiber	265	184	Shanghai, Anqing and Qilu

Synthetic Rubbers

Our principal synthetic rubbers are cis-polybutadiene rubber, styrene butadiene rubber, or SBR, styreneic block copolymers (SBCs) thermoplastic elastomer, isobutadiene isoprene rubber, or IIR, and ethylene propylene rubber. Based on our 2020 production, we are the largest producer of SBR, cis-polybutadiene rubber and SBCs thermoplastic elastomer in China.

The following table sets forth our rated capacity per annum, production volume and major plants of production as of or for the year ended December 31, 2020 for each of our principal synthetic rubbers.

	Our Rated Capacity (thousand tonnes per annum)	Our Production (thousand tonnes)	Major Plants of Operation
Cis-polybutadiene rubber	420	445	Yanshan, Qilu, Maoming, Yangzi and Gaoqiao
Styrene butadiene rubber	430	412	Qilu, Yangzi, Gaoqiao and Yanshan
Styrene-butadiene-styrene thermoplastic elastomers	140	124	Yanshan and Maoming
Isobutylene isoprene rubber	125	26	Yanshan
Ethylene propylene rubber	75	60	Gaoqiao*

* Joint ventures, of which the production capacities and outputs are fully included in our statistics.

Marketing and Sales of Petrochemicals

The central, eastern and southern regions in China, where most of our petrochemical plants are located, constitute the major petrochemical market in China. Our proximity to the major petrochemical market gives us a geographic advantage over our competitors.

The prices of petrochemical products in China have become market-oriented. Our principal sales channels consist of (i) direct sales to domestic and foreign large- and medium-sized manufacturing enterprises, which account for more than 76% of our direct sales, (ii) sales to distributors, who are responsible for sales and distribution to a portion of our smaller and scattered customers or specific customers, and (iii) sales of chemical products through our e-commerce platform “Chem E-Mall,” which effectively launched an e-commerce channel of petrochemical products and improved customer experience.

Competition

According to the Measures for the Administration of Overseas Investment of Enterprises (Decree No. 11 of 2017 of the National Development and Reform Commission), when an investment entity conducts overseas investment, it shall undergo the formalities for the confirmation or recordation of overseas investment projects, report relevant information, and cooperate in supervision and inspection. The scope of implementation of confirmation management is sensitive projects conducted by investors directly or through overseas enterprises controlled by them, including projects involving sensitive countries and regions, and projects involving sensitive industries. The scope of the implementation of recordation management is non-sensitive projects that are directly conducted by investors, namely, non-sensitive projects that involve investors’ direct contribution of assets or rights and interests or provision of financing or security. The confirmation or recordation authority is the National Development and Reform Commission (NDRC).

Pursuant to the Anti-Monopoly Law of the PRC which became effective on August 1, 2008, when market concentration by business carriers through merger, acquisition of control through shares or assets acquisition, or acquisition of control or the ability to exercise decisive influence over other business carriers by contract or by other means reaches a threshold of declaration level prescribed by the State Council, the business carriers shall declare in advance to the Anti-monopoly Law enforcement agency, otherwise, the business carriers shall not implement such market concentration.

Refining and Marketing of Refined Oil Products

Market participants compete primarily on the basis of wide-established sales network and logistics system, quality of products and service, efficiency of operations including proximity to customers, awareness of brand name and price. While we constantly face competition from other market participants, we believe that we have a competitive advantage in our principal market against our competitors.

Chemicals

We compete with domestic and foreign chemicals producers and distributors in the chemicals market. We adopt the strategy of “one product one policy, one customer one case” to meet customers’ needs, coordinate production, sales, research and application, produce targeted solutions based on client’s needs, provide customized services, and strive to create value for customers. Our petrochemical production facilities’ proximity to customers has given us significant regional advantages over our competitors, resulting in lower transportation costs and better competitiveness of our products.

Patents and Trademarks

In 2020, we were granted 4,254 patents in China and overseas. As of December 31, 2020, we owned a total of 38,695 patents in China and overseas.

In 2020, we had 391 material trademarks approved internally.

Business Operations Relating to Iran Threat Reduction and Syria Human Rights Act of 2012

In 2020, we did not source any of our refinery throughputs of crude oil from Iran. Based on our internal reports and statistics, no revenue or net profit was recorded from trading activity with Iranian companies.

Based on feedback to our inquiries to Sinopec Group Company, our controlling shareholder, Sinopec Group Company engaged in a small amount of business activities in Iran such as providing engineering services and designs. Sales revenue from these business activities accounted for 0.014% of its total unaudited sales revenue, with a minor net loss incurred from these business.

Regulatory Matters

Overview

China's petroleum and petrochemical industry has seen significant deregulation in the past ten years. However, the exploration, production, marketing and distribution of crude oil and natural gas, as well as the production, marketing and distribution of certain refined oil products are still subject to regulation of many government agencies including:

National Development and Reform Commission (NDRC)

NDRC is responsible for formulating and implementing key policies in respect of petroleum and petrochemical industry, including:

- Formulating guidance plan for annual production, import and export amount of crude oil, natural gas and petroleum products nationwide based on its forecast on macro-economic conditions in China;
- Setting the pricing policy for refined oil products;
- Approving certain domestic and overseas resource investment projects which are subject to NDRC's approval as required by the Catalogue of Investment Projects Approved by the Government in effect; and

National Energy Administration (NEA)

NEA is primarily responsible for the formulation of energy development plans and annual directive plans, approving major energy-related projects and facilitating the implementation of sustainable development of energy strategies, coordinating the development and utilization of renewable energies and new energies, and organizing matters relating to energy conservation and comprehensive utilization as well as environmental protection for the energy industry.

The Ministry of Commerce (MOFCOM)

MOFCOM is responsible for the record-filing of Sino-foreign equity joint venture contracts and Sino-foreign cooperation joint venture contracts, and monitoring the foreign investors' oil and gas exploration projects in the PRC. It is responsible for approving or filing of the overseas investment by PRC enterprises and issuing the enterprise overseas investment certificate and quotas and licenses for import and export of crude oil and refined oil products. According to the law, MOFCOM is also responsible for supervising, approving and record-filing of foreign investment (excluding financial investment) of domestic enterprises.

Ministry of Natural Resources (MNR)

The MNR (formerly known as the Ministry of Land and Resources, or MLR) is responsible for issuing the licenses that are required to explore and produce crude oil and natural gas in China. In March 2018, according to the Institutional Reform Plan of the State Council, the responsibilities of the Ministry of Land and Resources were integrated to form the Ministry of Natural Resources of the People's Republic of China.

Regulation of Exploration and Production

Exploration and Production Rights

The PRC Constitution provides that all mineral and oil resources belong to the state. In 1986, the Standing Committee of the National People's Congress passed the Mineral Resources Law which authorizes MNR, to exercise administrative authority over the exploration and production of the mineral and oil resources within the PRC, including its territorial waters. The Mineral Resources Law and its supplementary regulations provide the basic legal framework under which exploration licenses and production licenses are granted. The MNR has the authority to grant exploration licenses and production licenses on a competitive bidding or other basis it considers appropriate. Applicants for these licenses must be companies approved by the State Council to engage in oil and gas exploration and production activities. Currently, we are one of the few companies that have received such exploration licenses and production licenses in oil and gas industry.

Applicants for exploration licenses must first submit applications to the MNR with respect to blocks in which they intend to engage in exploration activities. The holder of an exploration license is obligated to make an annual minimum exploration investment and pay annual exploration license fees, ranging from RMB 100 to RMB 500 per square kilometer, relating to the exploration blocks in respect of which the license is issued. The maximum term of an oil and gas exploration license is 7 years. Such exploration license may be renewed upon application by the holder at least 30 days prior to expiration date, with each renewal for a maximum two-year term. Under the PRC laws and regulations, we are entitled for reductions and exemptions of exploration license fees for exploration in the western, offshore and northeastern regions of China.

At the exploration stage, an applicant can also apply for a progressive exploration and production license that allows the holder to test and develop reserves not yet fully proved. The progressive oil and gas exploration and production license has a maximum term of 15 years. When the reserves become proved for a block, the holder must apply for a full production license in order to undertake production.

The MNR issues full production licenses to applicants on the basis of the reserve reports approved by relevant authorities. The maximum term of a full production license is 30 years unless a special dispensation is given by the State Council. Due to a special dispensation granted to us by the State Council, the maximum term of our full production licenses is 80 years. The full production license is renewable upon application by the holder at least 30 days prior to expiration of the original term. A holder of the full production license has to pay an annual full production right usage fee of RMB 1,000 per square kilometer.

Exploration and production licenses do not grant the holders the right to enter upon any land for the purpose of exploration and production. Holders of exploration and production licenses must separately obtain the right to use the land covered by the licenses, and if permissible under applicable laws, current owners of the rights to use such land may transfer or lease the land to the license holder.

Incentives for Shale Gas Development

In order to incentivize the exploration, discovery and development of China's shale gas reserves, to increase the supply of natural gas and to relieve the imbalance between supply and demand of natural gas, the Ministry of Finance of China and China National Energy Administration issued the Notice on Subsidy for Shale Gas Development and Utilization (Ministry of Finance No. 847 [2012]), pursuant to which the central government will subsidize shale gas production companies at a rate of RMB 0.4 per cubic meter of shale gas produced from 2012 to 2015.

China National Energy Administration issued the Shale Gas Industry Policy (NEA No. 5 [2013]) in October 2013, which classifies shale gas as a “national strategic new industry” and calls for more fiscal support for exploration and development of shale gas. In particular, subsidies should be given directly to a shale gas production company according to the amount of its shale gas development and utilization. Local governments are also encouraged to provide subsidies to shale gas production companies, with the subsidy amount to be determined by local fiscal authorities. The Policy also reduces or waives compensatory fee for mineral resources, license and royalty fees for shale gas production companies. For encouraged projects like shale gas exploration and discovery, the policy also waives customs duty for imported equipment and machineries that cannot be manufactured domestically in accordance with relevant regulations.

In April 2015, to facilitate the development of the shale gas industry, the Ministry of Finance of China and China National Energy Administration issued the Notice on Fiscal Subsidies for Shale Gas Development and Utilization (Ministry of Finance No. 112 [2015]) to further implement the policy of fiscally subsidizing the shale gas industry during the period of the thirteenth “five-year” plan, and the subsidy will be RMB 0.3 per cubic meter of shale gas produced and RMB 0.2 per cubic meter of shale gas produced from 2016 to 2018 and from 2019 to 2020, respectively.

In March 2018, in order to promote the development and utilization of shale gas, the Ministry of Finance and the State Administration of Taxation jointly issued the Notice on the Reduction of Resource Tax on Shale Gas (Ministry of Finance No. 26 [2018]) which provides that from April 1, 2018 to March 31, 2021, a 30% reduction shall be applied to the 6% tax rate applicable to shale gas.

In June 2019, the Ministry of Finance issued the Supplemental Notice on Interim Measures for the Management of Special Funds for Renewable Energy Development (Ministry of Finance No. 298 [2019]), which cancels the fixed-rate subsidy on shale gas industry, and provides that the increased gradient subsidy shall be granted to enterprises if their production of shale gas increases over the last year, while only reduced subsidy shall be granted if the production decreases over the last year. The Notice also provides increased subsidy for the incremental production of unconventional natural gas in winter.

Price Controls on Crude Oil

According to Measures for Administration of Petroleum Products Price issued by NDRC on January 13, 2016, the crude oil price shall be determined by reference to the international market price.

Price Controls on Natural Gas

In recent years, the pace of market-oriented natural gas price reforms has accelerated significantly. In April 2015, according to the change in the price of alternative energy, NDRC unified the stock natural gas and incremental natural gas prices. In November 2015, NDRC to further liberalized the pricing of natural gas by replacing the reference ceiling price for city-gate prices of non-residential natural gas with a reference base rate. In October 2016, NDRC has relaxed the control over service prices for gas prices used for fertilizer production, determined that the relevant prices of gas storage facilities were market-oriented, and launched a trial reform of the marketization of city-gate prices in Fujian Province.

In August 2017, based on the results of the supervision and review of the pricing of natural gas pipelines, NDRC adjusted the pipeline transportation prices, in conjunction with the adjustment of the natural gas value-added tax rate. The non-residential natural gas reference city-gate prices have been reduced by RMB 0.1 per cubic meter. NDRC encouraged the natural gas production and operation enterprises and users to actively enter the natural gas trading platform, and the prices of natural gas that have been openly traded on trading platforms such as the Shanghai Oil and Gas Exchange Center and Chongqing Oil and Gas Exchange Center are formed by the market. In May 2018, NDRC adjusted the price of natural gas for civil use, improved price mechanism, replaced the reference ceiling price for city-gate prices of residential natural gas with a reference base rate, and thus brought the price of residential gas in line with the price of non-resident gas.

In March 2019, NDRC issued the Notice on Adjusting the City-Gate Price (NDRC Pricing Circular No. 562 [2019]) to adjust the city-gate price based on adjustments on value-added tax applicable to natural gas with effective date on April 1, 2019. We have adjusted the sales price of natural gas to grant the benefits of the lower value-added tax rate to our customers.

Regulation of Pipelines Networks

In October 2016, NDRC issued the Interim Provisions for Management Measures of Natural Gas Pipeline Transmission Prices and the Interim Provisions for Supervision and Review of Natural Gas Pipeline Transmission Cost (for Trial Implementation) (NDRC Pricing Circular 2142[2016]) (the “Interim Provisions”).

In August 2017, according to the Interim Provisions, after the supervision and review of the pricing of natural gas interprovincial pipelines, NDRC adjusted the prices of 13 natural gas interprovincial pipelines. Since September 1, 2017, based on the pipeline transmission prices (traffic price rate) of the Sichuan-East Gas Pipeline and Yulin-Jinan Pipeline published by the NDRC, along the transportation distance of the natural gas inlet and export, we have calculated and determined the prices of the gas transmission points for Sichuan-East Gas Pipeline and the Yulin-Jinan Pipeline and published the list of prices on our official website. We have updated the information disclosure on our website regarding the cost of operation and the maintenance expense on annual basis.

In March 2019, the NDRC issued the Notice on Adjusting the Prices of Trans-provincial Pipeline Transportation of Natural Gas (NDRC Pricing Circular No.561 [2019]) to adjust the trans-provincial pipeline transportation price of natural gas based on adjustments on the value-added tax rate applicable to natural gas with effective date on April 1, 2019. We have adjusted our trans-provincial pipeline transportation price.

In 2020, we sold certain pipeline assets to PipeChina. Pursuant to the oil and gas pipeline transportation service price policy specified by the NDRC, (i) if there exists government-specified price, such price shall be applied, and (ii) if there exists no government-specified price, the supply and demand parties shall negotiate and determine a price, or refer to the existing similar pipeline transportation rates. We negotiated with PipeChina to determine the pipeline transportation service price, among which, the natural gas and crude oil pipeline transportation service fee and LNG receiving terminal usage fee shall be priced pursuant to government policy, and refined oil pipeline transportation service fee shall be negotiated by both Parties with reference to the pricing principle applicable to natural gas pipeline transportation service fee.

Regulation of Refining and Marketing of Refined Oil Products

Gasoline and Diesel Prices

Gasoline and diesel prices are government-guided.

In March 2013, NDRC released Circular on Establishment of Sound Price Formation Mechanism of Refined Oil Products (NDRC Pricing Circular 624[2013]), which specified that a reformed refined oil product price formation mechanism shall include shortening of the refined oil product price adjustment period to 10 working days. To save social resources, if the assessed adjustment in domestic refined oil product prices is less than RMB 50 per tonne, the adjustment will be postponed to next period. In cases of special conditions such as significant increase in domestic CPI, significant emergencies or significant fluctuations of crude oil price on international market which may trigger adjustment of domestic refined oil price, NDRC may implement ad hoc suspension, delay or narrowing of price adjustment upon the approval by the State Council. Upon elimination of the special conditions, the price formation mechanism may resume operation after NDRC obtains the State Council’s for approval.

On January 13, 2016, NDRC made further adjustments to the pricing mechanism for refined oil products, effective immediately. When benchmark crude oil price falls below US\$ 40/bbl, NDRC will not further adjust oil product prices, the unadjusted portion would be transferred into a risk fund, which can be used for energy conservation and emission reduction, refined oil product quality upgrading and security of crude oil and gas supply upon approval by relevant departments.

Jet Fuels Price

The ex-factory price of the jet fuels will be determined by the buyers and the sellers, with reference to the price in the Singapore market.

Regulation of Crude Oil and Refined Oil Products Market

On December 4, 2006, Ministry of Commerce of the PRC promulgated the “Administrative Rules for Crude Oil Market” and “Administrative Rules for Refined Oil Products Market.”

Starting in 2015, qualified refineries has been allowed to use, and conduct business in connection with, imported crude oil. On December 4, 2019, Ministry of Commerce issued the Notice of Reform of “Release-Management-Service” on Crude Oil and Refined Oil Products to further open up the domestic oil and refined oil products market. Ministry of Commerce formally abolished the “Administrative Rules for Crude Oil Market” and “Administrative Rules for Refined Oil Products Market” on July 1, 2020, and promulgated the “Guidelines for the Administration of Petroleum Refined Oil Circulation Industry” on December 31, 2020. In September 2020, the State Council issued the “Decision on the Cancellation and Decentralization of a Batch of Administrative Licensing Items”, clarifying that “the approval of the wholesale and warehousing operation qualifications for petroleum refined oil will be cancelled, and the approval for the retail operation qualification of refined oil products will be delegated to the formulation department of the municipal people’s government with local governments to implement territorial supervision responsibilities.” The domestic crude oil and refined oil product markets are increasingly open.

Investment

Overseas investments by Chinese enterprises involving sensitive countries or regions or sensitive industries shall be submitted to NDRC and MOFCOM for approval, and other overseas investments by Chinese enterprises will only need to submit a filing with NDRC and MOFCOM or its regional branches.

According to Measures for the Administration of Overseas Investment of Enterprises (NDRC No.11 [2017]), promulgated on December 26, 2017, investments made directly, or indirectly through offshore entities controlled by the investor, involving sensitive countries or regions or sensitive industries shall be approved by the NDRC. For non-sensitive direct investments, namely investments for which the investor provide financing or guarantee, or make asset or interest investment directly, filings with NDRC or its local branches shall be made.

According to the Measures for Supervision and Administration of Overseas Investment by Central Enterprises (SASAC Decree No. 35[2017]) promulgated by the State-owned Assets Supervision and Administration Commission of the State Council, central enterprises shall establish a negative list for overseas investment under which prohibited investments and specially supervised investments shall be administered separately. Central enterprises shall not make any investments categorized as prohibited ones. The foreign investment projects listed in the special supervision category of the negative list shall be submitted to the SASAC for approval.

In accordance with the Administrative Measures for Overseas Investments (MOFCOM Order No. 3 [2014]) issued by MOFCOM, overseas investment shall be subject to approval or filing requirements of MOFCOM or its provincial counterparts based on its investment category. Overseas investments involving sensitive countries (regions) or sensitive industries shall be approved by MOFCOM. All other investments will require only a filing with MOFCOM.

Taxation, Fees and Royalty

Companies which operate petroleum and petrochemical businesses in China are subject to a variety of taxes, fees and royalties.

Effective from December 1, 2014, the rate of mineral resource compensation charges on crude oil and natural gas is reduced to zero, and the applicable resource tax rate is correspondingly increased from 5% to 6%.

Effective from January 1, 2015, the threshold of the special oil income levy is increased from US\$55 to 65 per barrel, and a five-level progressive rate is applied to special oil income levy collection based on the sale prices.

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From November 29, 2014 to January 12, 2015, the unit tax amount of consumption tax on gasoline, naphtha, solvent and lubricant have been adjusted three times and the current applicable consumption tax rates are set forth in the table below. For further information about consumption tax rates, see Note 7 to our consolidated financial statements.

Effective from May 1, 2016, business tax has been completely replaced by value-added tax to cover all the business sectors that used to fall under the business tax regime.

In April 2017, the State Council issued a notice to implement the reform of the existing mineral resources income levy system, in which the existing license fees of exploration rights and production rights will be integrated into mining rights occupancy fees, and will be dynamically adjusted based on the changes in mineral product prices and economic development needs. Collection methods and standards have not yet been released.

Starting on January 1, 2018, environmental tax has been levied, with the original sewage charges being cancelled.

Starting in April 2019, the value-added tax rate has been further lowered.

Applicable tax, fees and royalties on refined oil products and other refined oil products generally payable by us or by other companies in similar industries are shown below.

Tax Item	Tax Base	Tax Rate/Fee Rate
Enterprise income tax	Taxable income	25% effective from January 1, 2008.
Value-added tax	Revenue	9% for liquefied petroleum gas, natural gas, low-density polyethylene for production of agricultural film and fertilizers, 13% for other commodities and 6% for the taxable service. On behalf of the tax authorities, we collect value-added tax from users other than the selling price of the products when settling payments with users. The value-added tax paid by us when purchasing raw materials for production, and the payment of drilling and other engineering service fees may be deducted from the value-added tax collected by us from users.
Consumption tax	Aggregate volume sold or self-consumed	Effective from January 13, 2015, RMB 1.52 per liter for gasoline, naphtha, solvent oil and lubricant, and RMB 1.2 per liter for diesel, fuel oil and jet kerosene.
Import tariff	CIF China price	5% for gasoline, 6% for diesel, 9% for jet kerosene and 6% for fuel oil. In 2017, the applicable tax rate for motor gasoline and aviation gasoline, No. 5-7 fuel oil and diesel is 1%, and 0% for jet kerosene and naphtha.
Resource tax	Aggregate Sales Revenue	Effective from December 1, 2014, for domestic production of crude oil and natural gas, the applicable tax rate is increased from 5% to 6% of the sales revenue, exemption or deduction may apply if qualified.
Resource compensation tax	Sales revenue of crude oil and natural gas	Effective from December 1, 2014, the applicable tax rate is reduced from 1% to zero.
Exploration license fee	Area	RMB 100 to RMB 500 per square kilometer per annum.
Production license fee	Area	RMB 1,000 per square kilometer per annum.
Royalty fee(1)	Production volume	Progressive rate of 0-12.5% for crude oil and 0-3% for natural gas.
City construction tax	Total payment of value-added tax and consumption tax	1%, 5% and 7%.
Education surcharge and local education surcharge	Total payment of value-added tax and consumption tax	3% for education surcharge and 2% for local education surcharge.
Special Oil Income Levy	Any revenue derived from sale of domestically produced crude oil when the realized crude oil price exceeds US\$65 per barrel.	Progressive rate of 20% to 40% for revenues derived from crude oil with realized price in excess of US\$65 per barrel.

- (1) Sino-foreign oil and gas exploration and development cooperative projects whose contracts were signed prior to November 1, 2011 and have not yet expired are still subject to royalty fee, and the project companies of those cooperative projects are not subject to any other resource taxes or fees. Sino-foreign oil and gas exploration cooperative projects whose contracts are signed after November 1, 2011 are not subject to royalty fee, but are subject to resource taxes.

C. ORGANIZATIONAL STRUCTURE

For a description of our relationship with Sinopec Group Company, see “Item 4. Information on the Company—A. History and Development of the Company” and “Item 7. Major Shareholders and Related Party Transactions.” For a description of our significant subsidiaries, see Note 39 to our consolidated financial statements.

D. PROPERTY, PLANT AND EQUIPMENT

We own substantially all of our properties, plants and equipment relating to our business activities. See “Item 4. Information on the Company—B. Business Overview” for description of our property, plant and equipment.

Environmental Matters

We are subject to various national environmental laws and regulations and also environmental regulations promulgated by the local governments in those jurisdictions we have operations, and we must pay the environmental tax for pollutant emissions. Usually the environmental tax increases for each incremental amount of discharge up to a certain level. Above a certain level prescribed by the pollutant discharge permits or other standards, the PRC regulations permit the local government to order any of our facilities to cure certain behavior causing environmental damage and subject to the central government’s approval, the local government may also issue orders to close any of our facilities that fail to comply with the existing regulations. In addition, we have incurred capital expenditure specifically in compliance with the various environmental protection objectives set by the PRC government for the petroleum and chemical industry, to promote energy saving and environmental protection.

Our Energy Management and Environmental Protection Department is responsible for environmental management functions such as energy saving, emission reduction, environmental protection, water saving, comprehensive utilization of resources and clean production. Each of our production subsidiaries has implemented policies to control its pollutant emissions and discharge and to oversee compliance with the PRC environmental regulations.

Most of our production facilities have their own environmental protection facilities, and the rest of our production facilities utilize available social resources, to guarantee the effective treatment of waste water, solid waste and waste gases, to ensure the compliance with applicable emission standard for our emission of waste water and waste gas, and to follow applicable disposal procedures for our disposal of solid waste.

Environmental regulations also require companies to file an environmental impact evaluation report to the Ministry of Ecology and Environment or local ecology and environment department for approval before undertaking any project with negative impact on the environment. When carrying out such projects, companies shall construct and implement environmental protection facilities and measures as required by the environmental bureau. After the completion of the construction, the projects shall be assessed according to the relevant requirements of environmental assessment, and the projects will only be permitted to operate after the assessment of its discharge treatment facilities, measures and pollutant discharge satisfactory environmental assessment and approval requirements and reporting on the national information platform for completion-based environmental protection check and acceptance of construction projects.

We believe our environmental protection systems and facilities are adequate for us to comply with current applicable national and local environmental protection regulations. The PRC government, however, may impose stricter regulations which may require additional expenditure on compliance with environmental regulations. In addition, to actively undertake our social responsibility, we may adopt and implement stricter internal policies with respect to environmental protections.

Our environmental protection expenditures were approximately RMB 7.9 billion in 2018, RMB 9.3 billion in 2019 and RMB 11.4 billion in 2020.

Insurance

In respect of our refining, petrochemical production, and marketing and sales operations, we currently maintain with Sinopec Group Company, under the terms of its Safety Production Insurance Fund (SPI Fund), approximately RMB 954.3 billion of coverage on our property and plants and approximately RMB 123.5 billion of coverage on our inventory. In 2020, we paid an insurance premium of approximately RMB 2.282 billion to Sinopec Group Company for such coverage.

Transportation vehicles and products in transit are not covered by Sinopec Group Company and we maintain insurance policies for those assets with insurance companies in the PRC.

The insurance coverage under SPI Fund applies to all domestic enterprises controlled by Sinopec Group Company under regulations published by the Ministry of Finance. We believe that, in the event of a major accident, we will be able to recover most of our losses from insurance proceeds paid under the SPI Fund or by insurance companies.

Pursuant to an approval of the Ministry of Finance, Sinopec Group Company entered into an agreement with PICC Property and Casualty Company Limited on January 29, 2002 to purchase a property and casualty policy which would also cover our assets. The policy provides for an annual maximum cumulative claim amount of RMB 4 billion and a maximum of RMB 2.36 billion per occurrence.

ITEM 4A. UNRESOLVED STAFF COMMENTS

None.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

A. GENERAL

The following discussion and analysis should be read in conjunction with our audited consolidated financial statements. Our consolidated financial statements have been prepared in accordance with IFRS. Certain financial information presented in this section is derived from our audited consolidated financial statements. Unless otherwise indicated, all financial data presented on a consolidated basis or by segment, are presented net of inter-segment transactions (i.e., inter-segment and other intercompany transactions have been eliminated).

Critical Accounting Policies

Our reported consolidated financial condition and consolidated results of operations are sensitive to accounting methods, assumptions and estimates that underlie the preparation of our financial statements. We base our assumptions and estimates on historical experience and on various other assumptions that we believe to be reasonable and which form the basis for making judgments about matters that are not readily apparent from other sources. On an on-going basis, our management evaluates its estimates. Actual results may differ from those estimates as facts, circumstances and conditions change.

The selection of critical accounting policies, the judgments and other uncertainties affecting application of those policies and the sensitivity of reported results to changes in conditions and assumptions are factors to be considered when reviewing our financial statements. Our principal accounting policies are set forth in Note 2 to the consolidated financial statements. We believe the following critical accounting policies involve the most significant judgments and estimates used in the preparation of our financial statements.

Oil and gas properties and reserves

The accounting for the exploration and production activities of oil and gas is subject to accounting rules that are unique to the oil and gas industry. There are two methods to account for oil and gas business activities, the successful efforts method and the full cost method. We have elected to use the successful efforts method. The successful efforts method reflects the volatility that is inherent in exploring for mineral resources in that costs of unsuccessful exploratory efforts are charged to expense as they are incurred. These costs primarily include dry hole costs, seismic costs and other exploratory costs. Under the full cost method, these costs are capitalized and written-off or depreciated over time.

Engineering estimates of our oil and gas reserves are inherently imprecise and represent only approximate amounts because of the subjective judgements involved in developing such information. There are authoritative guidelines regarding the engineering criteria that have to be met before estimated oil and gas reserves can be designated as “proved.” Proved and proved developed reserves estimates are updated at least annually and take into account recent production and technical information about each field. In addition, as prices and cost levels change from year to year, the estimate of proved and proved developed reserves also changes. This change is considered a change in estimate for accounting purposes and is reflected on a prospective basis in relation to depreciation rates. Oil and gas reserves have a direct impact on the assessment of the recoverability of the carrying amounts of oil and gas properties reported in the financial statements. If proved reserves estimates are revised downwards, earnings could be affected by changes in depreciation expense or an immediate write-down of the property’s carrying amount.

Future dismantlement costs for oil and gas properties are estimated with reference to engineering estimates after taking into consideration the anticipated method of dismantlement required in accordance with industry practices in similar geographic area, including estimation of economic life of oil and gas properties, technology and price level. The present values of these estimated future dismantlement costs are capitalized as oil and gas properties with equivalent amounts recognized as provisions for dismantlement costs.

Despite the inherent imprecision in these engineering estimates, these estimates are used in determining depreciation expense, impairment loss and future dismantlement costs. Capitalized costs of proved oil and gas properties are amortized on a unit-of-production method based on volumes produced and reserves.

Impairment for long-lived assets

If circumstances indicate that the net book value of a long-lived asset may not be recoverable, the asset may be considered “impaired,” and an impairment loss may be recognized in accordance with IAS 36 “Impairment of Assets.” The carrying amounts of long-lived assets are reviewed periodically in order to assess whether the recoverable amounts have declined below the carrying amounts. These assets are tested for impairment whenever events or changes in circumstances indicate that their recorded carrying amounts may not be recoverable. When such a decline has occurred, the carrying amount is reduced to recoverable amount. For goodwill, the recoverable amount is estimated annually. The recoverable amount is the greater of the net selling price and the value in use. It is difficult to precisely estimate selling price because quoted market prices for our assets or cash-generating units are not readily available. In determining the value in use, expected cash flows generated by the asset or the cash-generating unit are discounted to their present value, which requires significant judgement relating to level of sale volume, selling price, amount of operating costs and discount rate. Management uses all readily available information in determining an amount that is a reasonable approximation of recoverable amount, including estimates based on reasonable and supportable assumptions and projections of sale volume, selling price, amount of operating costs and discount rate.

Impairment losses recognized for each of the three years ended December 31, 2018, 2019 and 2020 in our statement of income on long-lived assets are summarized as follows:

	Year ended December 31,		
	2018	2019	2020
	(RMB in millions)		
Exploration and production	4,274	3	8,495
Refining	353	245	1,923
Marketing and distribution	264	80	536
Chemicals	1,379	17	3,606
Corporate and others	16	-	-
Total*	6,286	345	14,560

* Information relating to the detailed analysis of the change in impairment losses is presented in Note 8 to the consolidated financial statements.

Depreciation

Property, plant and equipment, other than oil and gas properties, are depreciated on a straight-line basis over the estimated useful lives of the assets, after taking into account the estimated residual value. Management reviews the estimated useful lives of the assets at least annually in order to determine the amount of depreciation expense to be recorded during any reporting period. The useful lives are based on our historical experience with similar assets and take into account anticipated technological changes. The depreciation expense for future periods is adjusted if there are significant changes from previous estimates.

Measurement of expected credit losses

We measure and recognize expected credit losses, considering reasonable and supportable information about the relevant past events, current conditions and forecasts of future economic conditions. We regularly monitor and review the assumptions used for estimating expected credit losses. The changes in the impairment losses for bad and doubtful accounts of bills receivable and accounts receivable are as follows:

	Year ended December 31,		
	2018	2019	2020
	(RMB in millions)		
Balance as of January 1	612	606	1,848
Impairment losses recognized for the year	83	1,566	2,173
Reversal of impairment losses	(77)	(283)	(68)
Written off	(19)	(41)	(23)
Others	7	-	(70)
Balance as of December 31	606	1,848	3,860

Allowance for diminution in value of inventories

If the costs of inventories become higher than their net realizable values, an allowance for diminution in value of inventories is recognized. Net realizable value represents the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale. Management bases the estimates on all available information, including the current market prices of the finished goods and raw materials, and historical operating costs. If the actual selling prices were to be lower or the costs of completion were to be higher than estimated, the actual allowance for diminution in value of inventories could be higher than estimated. Allowance for diminution in value of inventories is analyzed as follows:

	Year ended December 31,		
	2018	2019	2020
	(RMB in millions)		
Balance as of January 1	1,165	6,389	2,585
Allowance for the year	5,538	1,616	11,689
Reversal of allowance on disposal	(114)	(199)	(328)
Written off	(217)	(5,233)	(10,795)
Others	17	12	(51)
Balance as of December 31	6,389	2,585	3,100

Recently Pronounced International Financial Reporting Standards

Information relating to the recently pronounced IFRS is presented in Note 1 to the consolidated financial statements.

Overview of Our Operations

We are the largest integrated petroleum and petrochemical company in China and one of the largest in Asia in terms of operating revenues. We engage in exploring for, developing and producing crude oil and natural gas, operating refineries and petrochemical facilities and marketing crude oil, natural gas, refined oil products and petrochemical products. We have reported our consolidated financial results according to the following four principal business segments and the corporate and others segment.

- *Exploration and Production Segment*, which consists of our activities related to exploring for and developing, producing and selling crude oil and natural gas;
- *Refining Segment*, which consists of purchasing crude oil from our exploration and production segment and from third parties, processing of crude oil into refined oil products, selling refined oil products principally to our marketing and distribution segment;
- *Marketing and Distribution Segment*, which consists of purchasing refined oil products from our refining segment and third parties, and marketing, selling and distributing refined oil products by wholesale to large customers and independent distributors and retail through our retail network;
- *Chemicals Segment*, which consists of purchasing chemical feedstock principally from the refining segment and producing, marketing, selling and distributing chemical products; and
- *Corporate and Others Segment*, which consists principally of trading activities of the import and export subsidiaries and our research and development activities.

B. CONSOLIDATED RESULTS OF OPERATIONS

Year Ended December 31, 2020 Compared with Year Ended December 31, 2019

In 2020, our total operating revenues were RMB 2,106.0 billion, representing a decrease of 28.8% over 2019. Our operating income was RMB 13.2 billion, representing a decrease of 84.7% over 2019.

The following table sets forth major revenue and expense items in the consolidated statement of income for the years ended December 31, 2019 and 2020.

	Year Ended December 31,		Change from 2019 to 2020 (%)
	2019 ⁽¹⁾	2020 ⁽²⁾	
	(RMB in millions)		
Operating revenues	2,959,799	2,105,984	(28.8)
Sales of goods	2,899,682	2,049,456	(29.3)
Other operating revenues	60,117	56,528	(6.0)
Operating expenses	(2,873,425)	(2,092,791)	(27.2)
Purchased crude oil, products and operating supplies and expenses	(2,370,699)	(1,594,130)	(32.8)
Selling, general and administrative expenses	(55,438)	(55,315)	(0.2)
Depreciation, depletion and amortization	(109,172)	(106,965)	(2.0)
Exploration expenses, including dry holes	(10,510)	(9,716)	(7.6)
Personnel expenses	(82,743)	(86,006)	3.9
Taxes other than income tax	(244,517)	(234,947)	(3.9)
Other operating expenses, net	(346)	(5,712)	1,550.9
Operating income	86,374	13,193	(84.7)
Net finance costs	(10,048)	(9,506)	(5.4)
Investment income and share of profits less losses from associates and joint ventures	13,696	44,456	224.6
Earnings before income tax	90,022	48,143	(46.5)
Income tax expense	(17,939)	(6,219)	(65.3)
Net income	72,083	41,924	(41.8)
Attributable to:			
Owners of the Company	57,493	33,096	(42.4)
Non-controlling interests	14,590	8,828	(39.5)

(1) We have adopted IFRS Standard 16 “Leases” from January 1, 2019, but has not restated comparative amounts for the 2018 reporting period, as permitted under the specific transition provision in the standard. The reclassifications and the adjustments arising from such standard were therefore recognized in the opening balance sheet on January 1, 2019.

(2) Information relating to the detailed information of gain on sale is presented in Note 10 to the consolidated financial statements.

Operating revenues

In 2020, our sales of goods were RMB 2,049.5 billion, representing a decrease of 29.3% over 2019. This was mainly due to decreased price and sales volume of refined oil products, decreased price of chemical products, and shrank international trading scale of crude oil and refined oil products, which was impacted by the COVID-19 outbreak and the slump in international crude oil price.

The following table sets forth our external sales volume, average realized prices and the respective rates of change from 2019 to 2020 for our major products:

	Sales Volume		Change from 2019 to 2020	Average Realized Price		Change from 2019 to 2020
	2019	2020		2019	2020	
	(thousand tonnes)		(%)	(RMB per tonne)		(%)
Crude oil	6,034	7,422	23.0	3,000	2,029	(32.4)
Natural gas	27,073 ⁽¹⁾	26,280 ⁽¹⁾	(2.9)	1,562 ⁽²⁾	1,352 ⁽²⁾	(13.4)
Gasoline	92,233	86,193	(6.5)	7,387	6,298	(14.7)
Diesel	87,083	77,280	(11.3)	5,811	4,792	(17.5)
Kerosene	27,041	20,828	(23.0)	4,298	2,635	(38.7)
Basic chemical feedstock	41,022	36,683	(10.6)	4,599	3,635	(21.0)
Monomer and polymer for synthetic fiber	14,019	9,691	(30.9)	5,714	4,297	(24.8)
Synthetic resins	16,103	17,112	6.3	7,804	7,148	(8.4)
Synthetic fiber	1,370	1,402	2.3	8,438	6,381	(24.4)
Synthetic rubber	1,280	1,361	6.3	9,583	7,982	(16.7)
Chemical fertilizer	924	1,177	27.4	2,110	1,955	(7.3)

(1) million cubic meters

(2) RMB per thousand cubic meters

Sales of crude oil and natural gas

Most of crude oil and a small portion of natural gas we produced were used internally for refining and chemical production and the remaining were sold to external customers. In 2020, the total revenue from crude oil, natural gas and other upstream products that were sold externally amounted to RMB 104.5 billion, representing a decrease of 5.9% over 2019. The change was mainly due to decreases in crude oil and natural gas prices.

Sales of refined petroleum products

In 2020, our refining segment and marketing and distribution segment sell petroleum products (mainly consisting of gasoline, diesel and kerosene which are referred to as the refined oil products and other refined petroleum products) to external parties. The external sales revenue realized by these two segments were RMB 1,164.7 billion, accounting for 55.3% of our operating revenues and representing a decrease of 24.1% over 2019. The change was mainly due to the decrease in prices and volume of major products, such as gasoline, diesel and kerosene, resulting from the impact of COVID-19 and slump of international crude oil price. The sales revenue of gasoline, diesel and kerosene was RMB 968.0 billion, accounting for 83.1% of the total revenue of other refined petroleum products and representing a decrease of 25.7% over 2019. The sales revenue of other refined petroleum products was RMB 196.6 billion, accounting for 16.9% of the total revenue of petroleum products and representing a decrease of 15.1% over 2019.

Sales of chemical products

Our external sales revenue of chemical products was RMB 322.1 billion, accounting for 15.3% of our operating revenues and representing a decrease of 24.9% over 2019. This was mainly attributable to the decrease in price of chemical products.

Revenue from corporate and others

In 2020, our corporate and others realized operating revenue of RMB 890.3 billion (including an operating revenue of RMB 886.4 billion in import and export trade business), representing a decrease of 39.9% over 2019. This was mainly because sales volume and prices of crude oil and refined oil products plunged as a result of COVID-19 impact.

Operating expenses

In 2020, our operating expenses were RMB 2,092.8 billion, representing a decrease of 27.2% over 2019. Among the operating expenses:

Purchased crude oil, products and operating supplies and expenses were RMB 1,594.1 billion, representing a decrease of 32.8% over 2019, accounting for 76.2% of the total operating expenses, of which:

- crude oil purchase expenses were RMB 479.1 billion, representing a decrease of 29.7% over 2019. In 2019, the total throughput of crude oil that was purchased externally was 222.79 million tonnes (excluding the volume processed for third parties), representing a decrease of 2.6% over 2019; the average unit processing cost for crude oil purchased externally was RMB 2,380 per tonne, representing a decrease of 28.4% over 2019;
- refined oil purchase expenses were RMB 257.6 billion, representing a decrease of 29.4% over 2019;
- trade purchase expenses were RMB 421.2 billion, representing a decrease of 42.6% over 2019; and
- other purchasing expenses were RMB 436.3 billion, representing a decrease of 26.1% over 2019.

Selling, general and administrative expenses totaled RMB 55.3 billion, representing a decrease of 0.2% over 2019.

Depreciation, depletion and amortization was RMB 107.0 billion, representing a decrease of 2.0% over 2019. This was mainly due to the depletion ratio of oil and gas assets decreased.

Exploration expenses, including dry holes were RMB 9.7 billion, representing a decrease of 7.6% over 2019. That was mainly due to optimization of investment scale and structure in upstream and improvement of success rate in exploration.

Personnel expenses were RMB 86.0 billion, representing an increase of 3.9% over 2019.

Taxes other than income tax were RMB 234.9 billion, representing a decrease of 3.9% over 2019. That was mainly due to the decrease of consumption tax resulting from the decrease of production volume in gasoline and diesel.

Other operating expenses, net were RMB 5.7 billion, representing an increase of RMB 5.4 billion over the same period of 2019. That was mainly due to the increased impairment in fixed and long-term assets.

Operating income

In 2020, our operating income was RMB 13.2 billion, representing a decrease of 84.7% over 2019, mainly due to the decrease of processing volume, sales volume, and products margin affected by the COVID-19 outbreak, slump of crude oil prices, and drop of market demand.

Net finance costs

In 2020, our net finance costs were RMB 9.5 billion, representing a decrease of RMB 0.5 billion over 2019.

Earnings before income tax

In 2020, our earnings before income tax were RMB 48.1 billion, representing a decrease of 46.5% over 2019.

Income tax expense

In 2020, we recognized income tax expense of RMB 6.2 billion, representing a decrease of 65.3% over 2019. That was mainly due to decrease of profit before taxation, resulting in a decrease of RMB 10.5 billion in income tax.

Net income attributable to non-controlling interests

In 2020, our net income attributable to non-controlling interests was RMB 8.8 billion, representing a decrease of RMB 5.8 billion over 2019.

Net income attributable to owners of the Company

In 2020, our net income attributable to our owners was RMB 33.1 billion, representing a decrease of 42.4% over 2019.

Year Ended December 31, 2019 Compared with Year Ended December 31, 2018

In 2019, our total operating revenues were RMB 2,959.8 billion, representing an increase of 2.7% over 2018. Our operating income was RMB 86.4 billion, representing an increase of 4.6% over 2018.

The following table sets forth major revenue and expense items in the consolidated statement of income for the years ended December 31, 2018 and 2019.

	Year Ended December 31,		Change from 2018 to 2019 (%)
	2018	2019 ⁽¹⁾	
	(RMB in millions)		
Operating revenues	2,882,077	2,959,799	2.7
Sales of goods	2,822,375	2,899,682	2.7
Other operating revenues	59,702	60,117	0.7
Operating expenses	(2,799,513)	(2,873,425)	2.6
Purchased crude oil, products and operating supplies and expenses	(2,279,844)	(2,370,699)	4.0
Selling, general and administrative expenses	(65,770)	(55,438)	(15.7)
Depreciation, depletion and amortization	(110,344)	(109,172)	(1.1)
Exploration expenses, including dry holes	(10,744)	(10,510)	(2.2)
Personnel expenses	(78,967)	(82,743)	4.8
Taxes other than income tax	(248,587)	(244,517)	(1.6)
Other operating expenses, net	(5,257)	(346)	(93.4)
Operating income	82,564	86,374	4.6
Net finance costs	930	(10,048)	—
Investment income and share of profits less losses from associates and joint ventures	15,845	13,696	(13.6)
Earnings before income tax	99,339	90,022	(9.4)
Income tax expense	(20,278)	(17,939)	(11.5)
Net income	79,061	72,083	(8.8)
Attributable to:			
Owners of the Company	61,708	57,493	(6.8)
Non-controlling interests	17,353	14,590	(15.9)

(1) We have adopted IFRS Standard 16 “Leases” from January 1, 2019, but has not restated comparative amounts for the 2018 reporting period, as permitted under the specific transition provision in the standard. The reclassifications and the adjustments arising from such standard were therefore recognized in the opening balance sheet on January 1, 2019.

Operating revenues

In 2019, our sales of goods were RMB 2,899.7 billion, representing an increase of 2.7% over 2018. This was mainly attributable to the expansion of business scale and trading volume.

The following table sets forth our external sales volume, average realized prices and the respective rates of change from 2018 to 2019 for our major products:

	Sales Volume		Change from 2018 to 2019 (%)	Average Realized Price		Change from 2018 to 2019 (%)
	2018 (thousand tonnes)	2019		2018 (RMB per tonne)	2019	
Crude oil	6,595	6,034	(8.5)	3,100	3,000	(3.2)
Natural gas	24,197 ⁽¹⁾	27,073 ⁽¹⁾	11.9	1,400 ⁽²⁾	1,562 ⁽²⁾	11.6
Gasoline	88,057	92,233	4.7	7,870	7,387	(6.1)
Diesel	84,630	87,083	2.9	5,996	5,811	(3.1)
Kerosene	25,787	27,041	4.9	4,562	4,298	(5.8)
Basic chemical feedstock	40,520	41,022	1.2	5,488	4,599	(16.2)
Monomer and polymer for synthetic fiber	11,127	14,019	26.0	6,971	5,714	(18.0)
Synthetic resins	14,433	16,103	11.6	8,634	7,804	(9.6)
Synthetic fiber	1,314	1,370	4.3	9,712	8,438	(13.1)
Synthetic rubber	1,114	1,280	14.9	10,619	9,583	(9.8)
Chemical fertilizer	794	924	16.4	2,096	2,110	0.7

(1) million cubic meters

(2) RMB per thousand cubic meters

Sales of crude oil and natural gas

Most of crude oil and a small portion of natural gas we produced were used internally for refining and chemical production and the remaining were sold to external customers. In 2019, the total revenue from crude oil, natural gas and other upstream products that were sold externally amounted to RMB 111.1 billion, representing an increase of 18.8% over 2018. The change was mainly due to increases in natural gas sales volume and prices as the result of promoting natural gas production-supply-storage-sale system, and actively expanding market share.

Sales of refined petroleum products

In 2019, our refining segment and marketing and distribution segment sell petroleum products (mainly consisting of gasoline, diesel and kerosene which are referred to as the refined oil products and other refined petroleum products) to external parties. The external sales revenue realized by these two segments were RMB 1,535.2 billion, accounting for 51.8% of our operating revenues and representing a decrease of 1.5% over 2018. The change was mainly due to the decrease in petroleum products' prices. The sales revenue of gasoline, diesel and kerosene was RMB 1,303.6 billion, accounting for 85% of the total revenue of other refined petroleum products and representing a decrease of 1.1% over 2018. The sales revenue of other refined petroleum products was RMB 231.6 billion, accounting for 15% of the total revenue of petroleum products and representing a decrease of 3.4% over 2018.

Sales of chemical products

Our external sales revenue of chemical products was RMB 428.8 billion, accounting for 14.5% of our operating revenues and representing a decrease of 7% over 2018. This was mainly attributable to the decrease in price of chemical products, which resulted from the increase of supply in chemical market.

Revenue from corporate and others

In 2019, our corporate and others realized operating revenue of RMB 1,480.7 billion (including an operating revenue of RMB1,478.4 billion in import and export trade business), representing an increase of 8.7% over 2018. This was mainly attributable to the increase in trading volumes of crude oil and refined oil products outside China, as well as the rapid development of our Epec platform, especially on facilities and chemical products segments.

Operating expenses

In 2019, our operating expenses were RMB 2,873.4 billion, representing an increase of 2.6 % over 2018. Among the operating expenses:

Purchased crude oil, products and operating supplies and expenses were RMB 2,370.7 billion, representing an increase of 4.0 % over 2018, accounting for 82.5% of the total operating expenses, of which:

- crude oil purchase expenses were RMB 681.2 billion, representing a decrease of 2.9% over 2018. In 2019, the total throughput of crude oil that was purchased externally was 228.74 million tonnes (excluding the volume processed for third parties), representing an increase of 0.7% over 2018; the average unit processing cost for crude oil purchased externally was RMB 3,326 per tonne, representing a decrease of 3.6% over 2018;
- refined oil purchase expenses were RMB 364.9 billion, representing an increase of 2.6% over 2018;
- trade purchase expenses were RMB 738.3 billion, representing an increase of 12.6% over 2018; and
- other purchasing expenses were RMB 586.2 billion, representing an increase of 2.7% over 2018.

Selling, general and administrative expenses totaled RMB 55.4 billion, representing a decrease of 15.7% over 2018, mainly because the company significantly reduced non-operating costs, and adjusted accounting of some of the service station, land and other rental expenses to depreciation and interests expense as required by the New Lease Standard.

Depreciation, depletion and amortization was RMB 109.2 billion, representing a 1.1% decrease over 2018. This was mainly due to the depletion of oil and gas assets decreased as a result of the Company's proved reserves of crude oil and natural gas increased.

Exploration expenses, including dry holes were RMB 10.5 billion, representing a decrease of 2.2% over 2018.

Personnel expenses were RMB 82.7 billion, representing an increase of 4.8% over 2018.

Taxes other than income tax were RMB 244.5 billion, representing a decrease of 1.6% over 2018. That was mainly due to the decrease of RMB 3.2 billion in urban maintenance and construction tax and education surcharges resulting from the decrease of value added tax rate.

Other operating expenses, net were RMB 0.35 billion.

Operating income

In 2019, our operating income was RMB 86.4 billion, representing an increase of 4.6% over 2018, mainly due to a significant increase of profit in upstream business.

Net finance costs

In 2019, our net finance costs were RMB 10 billion, representing an increase of RMB 11 billion over 2018. This decrease in finance costs was mainly attributable to the adoption of the New Lease Standard.

Earnings before income tax

In 2019, our earnings before income tax were RMB 90.0 billion, representing a decrease of 9.4% over 2018, mainly due to the narrower margin of our refining segment.

Income tax expense

In 2019, we recognized income tax expense of RMB 17.9 billion, representing a decrease of 11.5% over 2018.

Net income attributable to non-controlling interests

In 2019, our net income attributable to non-controlling interests was RMB 14.6 billion, representing a decrease of RMB 2.8 billion over 2018.

Net income attributable to owners of the Company

In 2019, our net income attributable to our owners was RMB 57.5 billion, representing an decrease of 6.8% over 2018.

C. DISCUSSIONS ON RESULTS OF SEGMENT OPERATIONS

We divide our operations into four business segments (exploration and production segment, refining segment, marketing and distribution segment and chemicals segment, and corporate and others). Unless otherwise specified, the inter-segment transactions have not been eliminated in the financial data discussed in this section. In addition, the operating revenue data of each segment have included the “other operating revenues” of this segment.

The following table sets forth the operating revenues by each segment, the contribution of external sales and inter-segment sales as a percentage of operating revenues before elimination of inter-segment sales, and the contribution of external sales as a percentage of consolidated operating revenues (i.e. after elimination of inter-segment sales) for the periods indicated.

	Year Ended December 31,			As a Percentage of Consolidated Operating Revenues Before Elimination of Inter-segment Sales		As a Percentage of Consolidated Operating Revenues After Elimination of Inter-segment Sales	
	2018	2019	2020	2019	2020	2019	2020
	(RMB in billions)			(%)	(%)	(%)	(%)
Exploration and production							
External sales ⁽¹⁾	104	122	110	2.5	3.2	4.1	5.2
Inter-segment sales	96	89	58	1.8	1.7		
Total operating revenue	200	211	168	4.3	4.9		
Refining							
External sales ⁽¹⁾	154	147	119	3.0	3.4	5.0	5.6
Inter-segment sales	1,109	1,077	826	22.2	23.7		
Total operating revenue	1,263	1,224	945	25.2	27.1		
Marketing and distribution							
External sales ⁽¹⁾	1,441	1,427	1,097	29.3	31.6	48.2	51.9
Inter-segment sales	5	4	5	0.1	0.1		
Total operating revenue	1,447	1,431	1,102	29.4	31.7		
Chemicals							
External sales ⁽¹⁾	471	438	331	9.0	9.5	14.8	15.4
Inter-segment sales	101	78	41	1.6	1.2		
Total operating revenue	572	516	372	10.6	10.7		
Corporate and others							
External sales ⁽¹⁾	711	827	460	17.0	13.2	27.9	21.9
Inter-segment sales	651	654	430	13.5	12.4		
Total operating revenue	1,362	1,481	890	30.5	25.6		
Total operating revenue before inter-segment eliminations	4,844	4,863	3,477	100.0	100.0		
Elimination of inter-segment sales	(1,962)	(1,903)	(1,371)				
Consolidated operating revenues	2,882	2,960	2,106			100.0	100.0

(1) include other operating revenues.

The following table sets forth the operating revenues, operating expenses and operating income/(loss) by each segment before elimination of the inter-segment transactions for the periods indicated, and the changes from 2019 to 2020.

	Year Ended December 31,			Change from
	2018	2019	2020	2019 to 2020
	(RMB in billions)			(%)
Exploration and production				
Total operating revenues	200	211	168	(20.4)
Total operating expenses	(210)	(201)	(184)	(8.5)
Total operating (loss)/income	(10)	9	(16)	-
Refining				
Total operating revenues	1,263	1,224	945	(22.8)
Total operating expenses	(1,209)	(1,194)	(950)	(20.4)
Total operating income	54	31	(6)	
Marketing and distribution				
Total operating revenues	1,446	1,431	1,102	(23.0)
Total operating expenses	(1,423)	(1,402)	(1,081)	(22.9)
Total operating income	23	29	21	(27.6)
Chemicals				
Total operating revenues	572	516	372	(28.0)
Total operating expenses	(544)	(499)	(361)	(27.6)
Total operating income	27	17	10	(40.2)
Corporate and others				
Total operating revenues	1,362	1,481	890	(39.9)
Total operating expenses	(1,371)	(1,481)	(891)	(39.8)
Total operating (loss)/income	(9)	0.1	(0.39)	-
Elimination of inter-segment income	(4)	(0.04)	4.42	-

Exploration and Production Segment

Most of the crude oil and a small portion of the natural gas produced by the exploration and production segment were used for our refining and chemicals operations. Most of our natural gas and a small portion of crude oil were sold to other customers.

Year Ended December 31, 2020 Compared with Year Ended December 31, 2019

In 2020, the operating revenues of this segment were RMB 167.8 billion, representing a decrease of 20.4% over 2019. This was mainly attributed to the decrease of realized price in crude oil, natural gas and LNG.

This segment sold 34.52 million tonnes of crude oil and 27.8 billion cubic meters of natural gas in 2020, representing an increase of 0.5% and a decrease of 3.6% over 2019, respectively; 15.7 billion cubic meters of gasified LNG, representing an increase of 40.3% over 2019; and 6.17 million tonnes of LNG, representing an increase of 30.2% over 2019. The average realized price of crude oil and natural gas was RMB 1,902 per tonne and RMB 1,360 per thousand cubic meters, respectively, representing a decrease of 33.6% and a decrease of 13.2%, respectively, over 2019, and the average realized price of gasified LNG and LNG was RMB 1,774 per thousand cubic meters and RMB 2,543 per tonne, respectively, representing a decrease of 13.0% and a decrease of 23.1%, respectively.

In 2020, the operating expenses of this segment were RMB 184.2 billion, representing a decrease of 8.5% over 2019. This was mainly due to:

- Procurement cost decreased by RMB 12.0 billion year on year, as a result of decrease of LNG price;
- Depreciation, depletion and amortization decreased by RMB 4.5 billion year on year;
- Cost of power fuel and purchased materials decreased by RMB 2.1 billion year on year;
- Resource Tax and special oil income levy decreased by RMB 2.0 billion year on year; and
- Impairment losses on long-lived assets increased by RMB 7.9 billion year on year.

The lifting cost for oil and gas was RMB 729.59 per tonne in 2020, representing a decrease of 6.7% over 2019, mainly attributable to the decrease in the cost of purchased material, fuels, and power since the upstream segment proactively reinforced the cost control to cope with the low oil price environment.

In 2020, the operating loss of the exploration and production segment was RMB 16.5 billion, representing a decrease of RMB 25.8 billion compared with 2019, mainly attributable to decrease of international oil price.

Year Ended December 31, 2019 Compared with Year Ended December 31, 2018

In 2019, the operating revenues of this segment were RMB 210.7 billion, representing an increase of 5.3% over 2018. This was mainly attributed to the rise of realized price of, and sales volume in, natural gas as a result of the expansion of natural gas business.

This segment sold 34.35 million tonnes of crude oil and 28.78 billion cubic meters of natural gas in 2019, representing a decrease of 1.3% and an increase of 9.7% over 2018, respectively; 11.16 billion cubic meters of gasified LNG, representing an increase of 33.9% over 2018; and 4.74 million tonnes of LNG, representing an increase of 65.9% over 2018. The average realized price of crude oil and natural gas was RMB 2,862 per tonne and RMB 1,566 per thousand cubic meters, respectively, representing a decrease of 6.0% and an increase of 11.1%, respectively, over 2018, and the average realized price of gasified LNG and LNG was RMB 2,040 per thousand cubic meters and RMB 3,305 per tonne, respectively, representing an increase of 5.5% and a decrease of 12.6%, respectively.

In 2019, the operating expenses of this segment were RMB 201.4 billion, representing a decrease of 4.2% over 2018. This was mainly due to:

- Depreciation, depletion and amortization decreased by RMB 9.6 billion;
- Payment of land use right and community services expenses decreased by RMB 5.7 billion year on year;
- Impairment losses on long-lived assets decreased by RMB 4.3 billion year on year;
- Resource tax and special oil income levy decreased by RMB 2.0 billion year on year;
- Procurement cost increased by RMB 10.6 billion year on year, as a result of expansion of LNG business scale; and
- Personnel expenses increased by RMB 1.7 billion year on year.

The lifting cost for oil and gas was RMB 782 per tonne in 2019, representing a decrease of 1.8% over 2018.

In 2019, the operating profit of the exploration and production segment was RMB 9.3 billion, representing an increase of RMB 19.4 billion compared with 2018. The segment reinforced efficient exploration and profit-oriented development, enhanced stable production of crude oil, accelerated construction of natural gas production-supply-storage-sale system and actively expanded market and promoted sales, strengthened cost control, and effectively improved profitability.

Refining Segment

Business activities of the refining segment consist of purchasing crude oil from third parties and from our exploration and production segment, processing crude oil into refined oil products, selling gasoline, diesel and kerosene to the marketing and distribution segment, selling a portion of chemical feedstock to our chemicals segment, and selling other refined oil products to the domestic and overseas customers.

Year Ended December 31, 2020 Compared with Year Ended December 31, 2019

In 2020, the operating revenues of this segment was RMB 944.5 billion, representing a decrease of 22.8% over 2019. This was mainly attributed to the decrease in products prices and crude oil throughput compared with the same period of last year as a result of recession in market demand which was impacted by the COVID-19 pandemic.

The table below sets forth sales volume and average realized prices by product for 2020 and 2019, as well as the percentage changes in sales volume and average realized prices for the periods shown.

	Sales volume		Change from	Average realized prices		Change from
	2019	2020	2019 to 2020	2019	2020	2019 to 2020
	(thousand tonnes)		(%)	(RMB per tonne)		(%)
Gasoline	60,750	56,259	(7.4)	7,057	5,813	(17.6)
Diesel	63,509	61,167	(3.7)	5,477	4,354	(20.5)
Kerosene	23,890	17,309	(27.6)	4,252	2,673	(37.2)
Chemical feedstock	39,720	39,872	0.4	3,531	2,596	(26.5)
Other refined oil products	61,890	65,353	5.6	3,237	3,011	(7.0)

In 2020, our sales revenues of gasoline were RMB 327.0 billion, representing a decrease of 23.7% over 2019; the sales revenues of diesel were RMB 266.3 billion, representing a decrease of 23.4% over 2019; the sales revenues of kerosene were RMB 46.3 billion, representing a decrease of 54.5% over 2019; the sales revenues of chemical feedstock were RMB 103.5 billion, representing a decrease of 26.2% over 2019; and the sales revenues of other refined oil products other than gasoline, diesel, kerosene and chemical feedstock were RMB 196.8 billion, representing a decrease of 1.8% over 2019.

This segment's operating expenses were RMB 950.1 billion in 2020, representing a decrease of 20.4% over 2019, which is mainly attributable to the decrease in procurement cost of crude oil resulted from the slump of international crude oil price.

In 2020, the average processing cost of crude oil was RMB 2,456 per tonne, representing a decrease of 27.8% over 2019. Refining throughput were 245.92 million tonnes (excluding the volume processed for third parties), representing a decrease of 2.6% over 2019. In 2020, the total costs of crude oil processed were RMB 603.9 billion, representing a decrease of 29.7% over 2019, which was accounted for 63.6% of the segment's operating expenses, a decrease of 8.4 percentage points year on year.

The refining margin was RMB 240 per tonne in 2020, representing a decrease of RMB 126 per tonne compared with 2019. This is mainly due to the significant shrink of margin in kerosene and other refined petroleum products which was impacted by the COVID-19 outbreak and market demand recession as well as inventory losses of crude oil and refined products due to crude oil price slump.

In 2020, the refining cash operating cost (defined as operating expenses less the processing cost of crude oil and refining feedstock, depreciation and amortization, taxes other than income tax and other operating expenses, then divided by the throughput of crude oil and refining feedstock) was RMB 181.48 per tonne, an increase of 2.1% over 2019, which was mainly because the unit cost increased as a result of the throughput decreased compared with last year.

In 2020, the operating loss of the segment totaled RMB 5.6 billion, representing a decline of RMB 36.2 billion compared with 2019.

Year Ended December 31, 2019 Compared with Year Ended December 31, 2018

In 2019, the operating revenues of this segment were RMB 1,224.2 billion, representing a decrease of 3.1% over 2018. This was mainly attributable to the decrease in products prices compared with the same period of last year.

The table below sets forth sales volume and average realized prices by product for 2019 and 2018, as well as the percentage changes in sales volume and average realized prices for the periods shown.

	Sales volume		Change from 2018 to 2019 (%)	Average realized prices		Change from 2018 to 2019 (%)
	2018 (thousand tonnes)	2019		2018 (RMB per tonne)	2019	
Gasoline	59,746	60,750	1.7	7,386	7,057	(4.5)
Diesel	62,676	63,509	1.3	5,766	5,477	(5.0)
Kerosene	22,418	23,890	6.6	4,515	4,252	(5.8)
Chemical feedstock	38,524	39,720	3.1	3,910	3,531	(9.7)
Other refined oil products	61,439	61,890	0.7	3,312	3,237	(2.3)

In 2019, our sales revenues of gasoline were RMB 428.7 billion, representing a decrease of 2.9% over 2018; the sales revenues of diesel were RMB 347.8 billion, representing a decrease of 3.7% over 2018; the sales revenues of kerosene were RMB 101.6 billion, representing an increase of 0.4% over 2018; the sales revenues of chemical feedstock were RMB 140.2 billion, representing a decrease of 6.9% over 2018; and the sales revenues of other refined oil products other than gasoline, diesel, kerosene and chemical feedstock were RMB 200.3 billion, representing a decrease of 1.6% over 2018.

This segment's operating expenses were RMB 1,193.5 billion in 2019, representing a decrease of 1.2% over 2018, which is mainly attributable to the decrease in procurement cost of crude oil.

In 2019, the average processing cost of crude oil was RMB 3,403 per tonne, representing a decrease of 4.1% over 2018. Refining throughput were 252.5 million tonnes (excluding the volume processed for third parties), representing an increase of 1.7 % over 2018. In 2019, the total costs of crude oil processed were RMB 859.3 billion, representing a decrease of 2.4% over 2018.

The refining margin was RMB 366 per tonne in 2019, representing a decrease of RMB 96 per tonne, or 20.8%, compared with 2018. This is mainly due to the fluctuation of price spread between heavy and light crude oil, increase of freight and insurance costs for overseas shipments, as well as the narrowed gross margin of refined petroleum products other than gasoline, diesel and kerosene.

In 2019, the unit refining cash operating cost (defined as operating expenses less the processing cost of crude oil and refining feedstock, depreciation and amortization, taxes other than income tax and other operating expenses, then divided by the throughput of crude oil and refining feedstock) was RMB 178 per tonne, a decrease of RMB 2 per tonne, or 1.1%, over 2018.

This segment's operating profit of the segment was RMB 30.6 billion in 2019, representing a decrease of RMB 24.2 billion as compared with 2018.

Marketing and Distribution Segment

The business activities of the marketing and distribution segment include purchasing refined oil products from our refining segment and third parties, making wholesale and distribution to domestic customers, and retail of the refined oil products through this segment's retail distribution network, as well as providing related services.

Year Ended December 31, 2020 Compared with Year Ended December 31, 2019

In 2020, the operating revenues of this segment was RMB 1,102.2 billion, down by 23.0% year-on-year. This was mainly because demand and sales volume of refined oil products decreased as a result of COVID-19 impact and reduced oil prices. The sales revenues of gasoline totaled RMB 549.2 billion, down by 19.4% year-on-year; the sales revenues of diesel were RMB 377.0 billion, down by 25.7% year-on-year; and the sales revenues of kerosene was RMB 54.9 billion, down by 52.8% year-on-year.

The following table sets forth the sales volumes, average realized prices and the respective rates of changes of the four major product categories in 2020 and 2019, including breakdown in retail, wholesale and distribution of gasoline and diesel.

	Sales Volume		Change from	Average Realized Prices		Change from
	2019	2020	2019 to 2020	2019	2020	2019 to 2020
	(thousand tonnes)		(%)	(RMB per tonne)		(%)
Gasoline	92,261	86,216	(6.6)	7,387	6,370	(13.8)
Retail sale	66,440	61,446	(7.5)	7,968	6,940	(12.9)
Wholesale and distribution	25,820	24,770	(4.1)	5,892	4,955	(15.9)
Diesel	87,335	77,507	(11.3)	5,812	4,865	(16.3)
Retail sale	43,503	36,757	(15.5)	6,227	5,351	(14.1)
Wholesale and distribution	43,832	40,750	(7.0)	5,399	4,426	(18.0)
Kerosene	27,068	20,828	(23.1)	4,297	2,634	(38.7)
Fuel oil	21,772	23,331	7.2	3,072	2,536	(17.4)

In 2020, the operating expenses of the segment were RMB 1,081.4 billion, representing a decrease of RMB 320.5 billion year-on-year, down by 22.9%. This was mainly due to the decrease of sales volumes and procurement costs.

In 2020, the operating revenues of nonfuel business was RMB 33.9 billion, up by RMB 1.8 billion year-on-year and the profit of non-fuel business was RMB 3.7 billion, up by RMB 0.5 billion. This was mainly because the Company vigorously promoted company-owned brands and innovated marketing model to boost the increase of volume and profit of non-fuel business.

In 2020, the segment's marketing operating cash cost (defined as the operating expenses less the purchase costs, taxes other than income tax, depreciation and amortization, divided by sales volume) was RMB 189.86 per tonne, up by 4.0% year-on-year, which was mainly because the unit cost increased as a result of the decreased sales volume.

In 2020, the segment's operating profit was RMB 20.8 billion, down by 28.4% year-on-year. This was mainly because sales volume decreased as a result of shrinking demand of refined oil product.

Year Ended December 31, 2019 Compared with Year Ended December 31, 2018

In 2019, the operating revenues of this segment were RMB 1,431.0 billion, representing a decrease of 1.1% compared with 2018.

In 2019, the sales revenues of gasoline, diesel and kerosene were RMB 681.5 billion, RMB 507.5 billion and RMB 116.3 billion, representing a decrease of 1.7%, 0.3% and 1.1%, respectively, over 2018.

The following table sets forth the sales volumes, average realized prices and the respective rates of changes of the four major product categories in 2019 and 2018, including breakdown in retail, wholesale and distribution of gasoline and diesel.

	Sales Volume		Change from 2018 to 2019 (%)	Average Realized Prices		Change from 2018 to 2019 (%)
	2018	2019		2018	2019	
	(thousand tonnes)			(RMB per tonne)		
Gasoline	88,076	92,261	4.8	7,870	7,387	(6.1)
Retail sale	66,855	66,440	(0.6)	8,296	7,968	(4.0)
Wholesale and distribution	21,221	25,820	21.7	6,524	5,892	(9.7)
Diesel	84,865	87,335	2.9	5,998	5,812	(3.1)
Retail sale	43,327	43,503	0.4	6,435	6,227	(3.2)
Wholesale and distribution	41,537	43,832	5.5	5,541	5,399	(2.6)
Kerosene	25,787	27,068	5.0	4,562	4,297	(5.8)
Fuel oil	23,372	21,772	(6.8)	2,974	3,072	3.3

In 2019, the operating expenses of the segment were RMB 1,401.9 billion, representing a decrease of RMB 21.3 billion or 1.5% as compared with that of 2018. This was mainly due to the decrease in refined oil products procured price which resulting in the decrease of procurement cost for RMB 22 billion.

In 2019, the segment's non-petroleum business income was RMB 32.2 billion with the profit of RMB 3.2 billion.

In 2019, the segment's marketing cash operating cost (defined as the operating expenses less purchase costs, taxes other than income tax, depreciation and amortization, and then divided by the sales volume) was RMB 183 per tonne, representing a decrease of 11.6% compared with that of 2018, due to the adjusted accounting of some of the service stations, land and other right of use assets as required by the New Lease Standard.

In 2019, the segment exerted advantages of integrated business and distribution network into full play, reinforced the coordination of internal and external resources, promoted targeted marketing and differentiated marketing to improve service quality, and constantly increased profits and sales volume. Meanwhile, we enhanced the development and sales of company-owned brand and put efforts to expand non-fuel business scale and profitability. The operating income of this segment in 2019 was RMB 29.1 billion, representing an increase of 24% compared with 2018.

Chemicals Segment

The business activities of the chemicals segment include purchasing chemical feedstock from the refining segment and third parties, producing, marketing and distributing petrochemical and inorganic chemical products.

Year Ended December 31, 2020 Compared with Year Ended December 31, 2019

In 2020, the operating revenues of this segment was RMB 371.9 billion, down by 28.0% year-on-year. This was mainly due to the decrease in chemical products prices and sales volume of some products because of COVID-19 impact.

In 2020, the sales revenue generated by the segment's six major categories of chemical products (namely basic organic chemicals, synthetic resin, synthetic fiber monomer and polymer, synthetic fiber, synthetic rubber, and chemical fertilizer) was RMB 354.4 billion, down by 24.3%, accounting for 95.3% of the operating revenues of the segment.

The following table sets forth the sales volume, average realized price and the respective rates of changes for each of these six categories of chemical products of this segment from 2019 to 2020.

	Sales Volume		Change from 2019 to 2020 (%)	Average Realized Prices		Change from 2019 to 2020 (%)
	2019 (thousand tonnes)	2020		2019 (RMB per tonne)	2020	
Basic organic chemicals	52,007	47,109	(9.4)	4,534	3,564	(21.4)
Synthetic fiber monomers and polymers	14,089	9,743	(30.8)	5,722	4,302	(24.8)
Synthetic resins	16,131	17,124	6.2	7,804	7,150	(8.4)
Synthetic fiber	1,370	1,403	2.4	8,438	6,407	(24.1)
Synthetic rubber	1,284	1,364	6.3	9,595	7,986	(16.8)
Chemical fertilizer	925	1,181	27.8	2,109	1,950	(7.5)

In 2020, the operating expenses of the segment was RMB 361.5 billion, down by 27.6% year-on-year.

In 2020, the segment's operating profit was RMB 10.4 billion, down by RMB 7 billion year-on-year. This was mainly due to the decrease in chemical product prices and narrowed gross margin as a result of COVID-19 impact.

Year Ended December 31, 2019 Compared with Year Ended December 31, 2018

The operating revenues of the chemicals segment in 2019 were RMB 516.3 billion, representing a decrease of 9.8% over 2018, which was mainly attributable to sharp decrease in prices of chemical products as a result of the concentrated release of new capacity, as well as the change of supply-demand structure.

The sales revenues generated by the segment's six major categories of chemical products (namely basic organic chemicals, synthetic resins, synthetic fiber monomer and polymer, synthetic fiber, synthetic rubber, and chemical fertilizer) totaled RMB 468.1 billion, representing a decrease of 9.7% as compared with 2018, and accounted for 90.7% of the operating revenues of the segment.

The following table sets forth the sales volume, average realized price and the respective rates of changes for each of these six categories of chemical products of this segment from 2018 to 2019.

	Sales Volume		Change from 2018 to 2019 (%)	Average Realized Prices		Change from 2018 to 2019 (%)
	2018 (thousand tonnes)	2019		2018 (RMB per tonne)	2019	
Basic organic chemicals	52,450	52,007	(0.8)	5,281	4,534	(14.1)
Synthetic fiber monomers and polymers	11,252	14,089	25.2	6,978	5,722	(18.0)
Synthetic resins	15,325	16,131	5.3	8,646	7,804	(9.7)
Synthetic fiber	1,314	1,370	4.3	9,712	8,438	(13.1)
Synthetic rubber	1,278	1,284	0.5	10,750	9,595	(10.7)
Chemical fertilizer	796	925	16.2	2,093	2,109	0.8

In 2019, the operating expenses of the chemicals segment were RMB 498.9 billion, representing a decrease of 8.4% over 2018, mainly because of the decrease in the price of externally procured raw materials as compared with the same period in 2018.

In 2019, confronted with the business cycle correction and decreased chemical margin, the Company strengthened the coordination among research, development, production and marketing, continuously reinforced the profit prediction based on the market, optimized the structures of feedstock, product and facilities, intensified allocation of resources, pushed ahead with targeted marketing and precise service strategy, and achieved steadily growing sales volume of petrochemicals. The operating income of this segment was RMB 17.3 billion.

Corporate and Others

The business activities of corporate and others mainly consist of the import and export business activities of our subsidiaries, research and development activities of us and managerial activities of our headquarters.

Year Ended December 31, 2020 Compared with Year Ended December 31, 2019

In 2020, the operating revenues generated from corporate and others was RMB 890.3 billion (of which the operating revenues of trading companies was RMB 886.4 billion), down by 39.9% year-on-year. This was mainly because sales volume and prices of crude oil and refined oil products plunged as a result of COVID-19 impact.

In 2020, the operating expenses for corporate and others was RMB 890.7 billion (of which the operating expenses of trading companies was RMB 882.2 billion), down by 39.8% year-on-year.

In 2020, the segment's operating loss was RMB 0.4 billion, of which trading companies realized an operating profit of RMB 4.1 billion.

Year Ended December 31, 2019 Compared with Year Ended December 31, 2018

In 2019, the operating revenue generated from corporate and others was RMB 1,480.7 billion, representing an increase of 8.7% over 2018, which was mainly attributable to the increase in value of trade from crude oil and overseas refined oil products, as well as the rapid growth of the equipment and petrochemicals business transaction scale through Epec platform.

In 2019, the operating expenses of this segment was RMB 1,480.6 billion, representing an increase of 8.0% over 2018.

In 2019, the operating income of this segment was RMB 0.1 billion.

D. LIQUIDITY AND CAPITAL RESOURCES

Our primary sources of funding have been cash provided by our operating activities, along with short-term and long-term loans. Our primary uses of cash have been for working capital, capital expenditures and repayment of short-term and long-term loans. We arrange and negotiate financing with financial institutions to finance our capital resource requirement, and maintain a certain level of standby credit facilities to reduce liquidity risk. We believe that our current cash on hand, expected cash flows from operations and available standby credit facilities from financial institutions will be sufficient to meet our working capital requirements and repay our short-term debts and obligations when they become due.

The following table sets forth a summary of our consolidated statements of cash flow data for the years ended December 31, 2018, 2019 and 2020.

Statement of cash flow data	Year Ended December 31,		
	2018	2019 ⁽¹⁾	2020
	(RMB in millions)		
Net cash generated from operating activities	175,937	153,619	167,518
Net cash used in investing activities	(66,648)	(121,051)	(102,203)
Net cash used in financing activities	(111,269)	(84,204)	(36,955)
Net decrease in cash and cash equivalents	(1,980)	(51,636)	28,360

(1) We have adopted IFRS Standard 16 “Leases” from January 1, 2019, but has not restated comparative amounts for the 2018 reporting period, as permitted under the specific transition provision in the standard. The reclassifications and the adjustments arising from such standard were therefore recognized in the opening balance sheet on January 1, 2019.

In 2020, the net cash generated from operating activities of the Company was RMB 167.5 billion, representing an increase in cash of RMB 13.9 billion year on year. This was mainly due to the strengthened management of inventories and receivables and payables and sharp decrease of occupation of funds.

In 2019, the net cash generated from operating activities of the company was RMB 153.6 billion, representing a decrease of RMB 22.3 billion as compared with 2018, of which: profit before taxation decreased by RMB 9.3 billion, loss from assets impairment decreased by RMB 9.8 billion, interest expenses increased by RMB 9.7 billion, exchange rate and derivatives financial instruments loss/(gain) increased by 5.5 billion, net change of accounts receivable and other current assets decreased by RMB 10.9 billion, net change of inventory decreased by RMB 7.1 billion, net change of accounts payable and other current liabilities decreased by RMB 15.7 billion, and the paid income tax decreased by RMB 13.6 billion as compared with 2018.

The net cash generated from our operating activities in 2018 was RMB 175.9 billion, representing a decrease of RMB 15.2 billion over 2017, among which, profit before taxation increased by RMB 12.4 billion, depreciation, depletion and amortization and assets impairment loss decreased by RMB 15.5 billion, accounts receivable and net change for other current assets decreased by RMB 30.1 billion, net change for inventory decreased by RMB 27.0 billion, accounts payable and net change for other current liabilities decreased by RMB 58.7 billion, and the paid income tax increased by RMB 13.0 billion as compared with 2017.

In 2020, the net cash used in investing activities was RMB 102.2 billion, representing a year on year decrease of RMB 18.8 billion, mainly because capital expenditures decreased by RMB 12.2 billion.

In 2019, the net cash used in investing activities was RMB 121.1 billion, representing an increase of cash outflow of RMB 54.4 billion over 2018, of which: capital expenditure and wildcat expenditure increased by RMB 38.4 billion, purchasing investment and associates and joint ventures investments decreased by RMB 6.6 billion, cash inflow from changes of financial assets at fair value through profit or loss decreased by RMB 3.0 billion, outcome from time deposit with maturities over three months increased by RMB 9.2 billion.

The net cash used in our investing activities in 2018 was RMB 66.6 billion, representing a decrease of RMB 78.7 billion over 2017, which was mainly due to an increase in capital expenditure of RMB 31.2 billion, an increase of RMB 76.6 billion in proceeds from matured financial assets at fair value through profit or loss, and an increase of RMB 30.5 billion in gains from the time deposits with maturities over three months.

In 2020, the net cash used in financing activities were RMB 37.0 billion, representing a year on year decrease of RMB 47.2 billion, mainly because proceeds from bank and other loans decreased by RMB 43.8 billion, repayments of bank and other loans decreased by RMB 74.1 billion, dividends paid by the Company decreased by RMB 14.5 billion, distributions by subsidiaries to non-controlling shareholders decreased by RMB 3.2 billion.

In 2019, the net cash used in financing activities was RMB 84.2 billion, representing a decrease of cash outflow by RMB 27.1 billion over 2018. This was mainly due to the cash outflow from the changes of loans increased to RMB 13.8 billion, cash paid for dividends decrease by RMB 21.8 billion, subsidiary companies allocated to non-controlling shareholders reduced by RMB 6.3 billion, investments from non-controlling shareholders increased by RMB 1.9 billion, and repayment for lease liabilities increased by RMB 16.8 billion.

The net cash used in the Company's financing activities in 2018 was RMB 111.3 billion, representing an increase of cash out flow by RMB 54.7 billion over 2017, among which, the dividend payment increased by RMB 35.1 billion, the net repayments of bank and other loans increased by RMB 13.9 billion and the distributions by subsidiaries to non-controlling shareholders increased by RMB 6.2 billion.

In respect of our cash flow situation of 2020, we further strengthened the centralized management of funds, strictly controlled the scale of monetary funds and interest-bearing debts, reduced capital precipitation, accelerated capital turnover, and maintained stable operating cash flow throughout the year.

In respect of our debts and borrowings in 2020, due to our stable cash flow, we decreased our debts to RMB 112.8 billion at the end of 2020 from RMB 142.6 billion from the beginning of 2020. Among which, our short-term debts decreased by RMB 54.8 billion as compared to the beginning of 2020, representing a decrease from 59% at the beginning of 2020 to 26% at the end of 2020 of the debts, primarily because of repayment of matured debts. Our long-term debts increased by RMB 25.0 billion from the beginning of 2020, representing an increase from 41% at the beginning of 2020 to 74% at the end of 2020 of the debts, which was mainly due to increase in imported crude oil loans and project loans from companies such as Sino-SK. Our short-term debts consist of revolving loans borrowed according to our business plan and operation needs and overdrawing agreements entered into on the corporate bank account with our strategic-alliance banks to meet our intra-day payment requirements.

Contractual Obligations and Commercial Commitments

The following table sets forth our obligations and commitments to make future payments under contracts and commercial commitments as of December 31, 2020.

	As of December 31, 2020				
	Total	less than 1 year	1-3 years	4-5 years	After 5 years
	(RMB in millions)				
Contractual obligations⁽¹⁾					
Short-term debt	45,912	45,912	-	-	-
Long-term debt	93,865	2,176	62,080	21,125	8,484
Total contractual obligations	139,777	48,088	62,080	21,125	8,484
Other commercial commitments					
Capital commitments	205,277	165,700	38,443	1,134	-
Exploration and production licenses	1,498	390	165	119	824
Guarantees ⁽²⁾	14,840	14,840	-	-	-
Total commercial commitments	221,615	180,930	38,608	1,253	824

(1) Contractual obligations include the contractual obligations relating to interest payments.

(2) Guarantee is not limited by time, therefore specific payment due period is not applicable. As of December 31, 2020, with respect to guarantees in relation to banking facilities granted to certain parties, we have not entered into any off-balance sheet arrangements. As of December 31, 2020, the maximum amount of potential future payments under the guarantees was RMB 14.8 billion. As of December 31, 2019, the maximum amount of potential future payments under the guarantees was RMB 17.2 billion. See Note 34 to the consolidated financial statements for further information of the guarantees.

Historical and Planned Capital Expenditure

The following table sets forth our capital expenditure by segment for the years of 2018, 2019 and 2020 and the capital expenditure in each segment as a percentage of our total capital expenditure for such year.

	2018		2019		2020		Total	
	RMB	Percent	RMB	Percent	RMB	Percent	RMB	Percent
	(in billions, except percentage data)							
Exploration and production	42.16	35.73%	61.74	41.97%	56.42	42%	160.32	38%
Refining	27.91	23.66%	31.37	21.33%	24.72	18%	84.00	20%
Marketing and distribution	21.43	18.16%	29.57	20.10%	25.40	19%	76.40	18%
Chemicals	19.58	16.59%	22.44	15.26%	26.20	19%	68.22	16%
Corporate and others	6.90	5.86%	1.97	1.34%	2.31	2%	11.18	7%
Capital Expenditure	117.98	100.00%	147.09	100.00%	135.05	100%	400.12	100%

In 2020, focusing on quality and profitability of investment, the Company optimized its investment management system, with total capital expenditures of RMB 135.1 billion, among which:

- *Exploration and production.* RMB 56.4 billion, mainly for Shengli and Northwest crude oil capacity building projects, Fuling and Weirong shale gas projects, phase II of Tianjin LNG project, and phase II of Shandong LNG project.
- *Refining.* RMB 24.7 billion, mainly for Zhongke Refining and Petrochemical project, Zhenhai, Tianjin, Maoming, Luoyang and Sinopec-SK refining upgrading projects.
- *Marketing and distribution.* RMB 25.4 billion, mainly for construction of service stations, oil products depots and nonfuel business.
- *Chemicals.* RMB 26.2 billion, mainly for Zhongke, Zhenhai and Gulei projects, Amur gas chemical complex project, Sinopec-SK ethylene revamping projects, Jiujiang aromatics project and meltblown fabric capacity building.
- *Corporate and others.* RMB 2.3 billion, mainly for R&D facilities and information technology projects.

Capital expenditures for the year 2021 are budgeted at RMB 167.2 billion, among which,

- *Exploration and production.* The planned capital expenditure in 2021 for this segment is approximately RMB 66.8 billion, with focuses on the production capacity building of Fuling and Weirong shale gas fields, Shengli and Northwest crude oil development projects, and the Phase II LNG project in Tianjin and Phase II LNG project in Shandong.
- *Refining.* The planned capital expenditure in 2021 for this segment is RMB 20.1 billion, mainly on the structural adjustment projects of Yangzi and Anqing, as well as the expansion of Zhenhai.
- *Marketing and distribution.* The planned capital expenditure in 2021 for this segment is RMB 26.5 billion with emphasis on service stations, gas stations, hydrogen stations, depots and non-fuel business.

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- *Chemicals.* The planned capital expenditure in 2021 for this segment is RMB 48.6 billion, mainly on projects such as Zhenhai, Gulei, Hainan and Tianjin Nangang, Sinopec-SK and the Amur ethylene projects, Jiujiang aromatics, Baling caprolactam project, Shanghai large-tow carbon fiber, Yizheng PTA and other projects.
- *Corporate and others.* The planned capital expenditure in 2021 for this segment is RMB 5.2 billion, mainly for R&D facilities and information technology projects.

Research and Development

Our expenditures for research and development were RMB 12.9 billion in 2018, RMB 15.5 billion in 2019 and RMB 15.2 billion in 2020, among which, the research expenses were RMB 8.0 billion, RMB 9.5 billion and RMB 10.1 billion for each of the three years, respectively.

Consumer Price Index

According to the data provided by the National Bureau of Statistics, the consumer price index (CPI) in the PRC increased by 2.5% in 2020 over 2019 (CPI increased by 2.9% in 2019) and increased by 5.4% over 2018.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. DIRECTORS, SUPERVISORS AND SENIOR MANAGEMENT

Directors

The table and discussion below set forth certain information concerning our directors. The current term for all of our directors of the seventh session of the Board of Directors will expire in May 2021.

Name	Age	Position with the Company
Zhang Yuzhuo	59	Chairman
Ma Yongsheng	59	Director, President
Yu Baocai	56	Director, Senior Vice President
Liu Hongbin	58	Director, Senior Vice President
Ling Yiqun	58	Director, Senior Vice President
Zhang Shaofeng	49	Director
Tang Min	67	Independent Director
Cai Hongbin	53	Independent Director
Ng, Kar Ling Johnny	60	Independent Director

Zhang Yuzhuo, aged 59, Chairman of the Board of Directors of Sinopec Corp. Mr. Zhang is a Research Fellow, Ph.D. in engineering and Academician of the Chinese Academy of Engineering. Mr. Zhang is an alternate member of the 19th Central Committee of the Communist Party of China (“CPC”). In January 1997, he was appointed as Vice President of China Coal Research Institute; in February 1998, he temporarily served as Deputy General Manager of Yankuang Group Co. Ltd.; in July 1998, he was appointed as Vice President of China Coal Research Institute, Director and Deputy General Manager of China Coal Technology Corporation; in March 1999, he served as President of China Coal Research Institute and Chairman of China Coal Technology Corporation; in June 1999, he was appointed as President and Deputy Secretary of CPC Committee of China Coal Research Institute, and Chairman and Deputy Secretary of CPC Committee of China Coal Technology Corporation; in January 2002, he was appointed as Deputy General Manager of Shenhua Group Corporation Limited, and served concurrently as Chairman and General Manager of China Shenhua Coal Liquefaction Company Limited; in August 2003, he was appointed as Deputy General Manager and Member of the Leading Party Member Group of Shenhua Group Corporation Limited, and served concurrently as Chairman of China Shenhua Coal Liquefaction Company Limited; in December 2008, he was appointed as Director, General Manager and Member of the Leading Party Member Group of Shenhua Group Corporation Limited; in July 2009, he served concurrently as Vice Chairman of All-China Federation of Returned Overseas Chinese; in May 2014, he was appointed as Chairman and Secretary of the Leading Party Member Group of Shenhua Group Corporation Limited, and served concurrently as Chairman of China Shenhua Energy Company Limited; in March 2017, he served as a member of the Standing Committee of the CPC Tianjin Municipal Committee and Secretary of the CPC Binhai New Area Committee; in July 2017, he served concurrently as Chairman of Sino-Singapore Tianjin Eco-City Investment & Development Co., Ltd.; in May 2018, he served concurrently as Director of China (Tianjin) Pilot Free Trade Zone Administration; in January 2020, he was appointed as Chairman and Secretary of the Leading Party Member Group of China Petrochemical Corporation. In March 2020, he was elected as Chairman of the Board of Directors of Sinopec Corp.

Ma Yongsheng, aged 59, Director and President of Sinopec Corp. Mr. Ma is a professor level senior engineer with a Ph.D. degree and an academician of the Chinese Academy of Engineering. Mr. Ma is a member of the 13th National Committee of Chinese People's Political Consultative Conference ("CPPCC"). In April 2002, he was appointed as Chief Geologist of Sinopec Southern Exploration and Production Company; in April 2006, he was appointed as Executive Deputy Manager (in charge of overall management), Chief Geologist of Sinopec Southern Exploration and Production Company; in January 2007, he was appointed as General Manager and Party Secretary of CPC Committee of Sinopec Southern Exploration and Production Company; in March 2007, he served as General Manager and Deputy Party Secretary of CPC Committee of Sinopec Exploration Company; in May 2007, he was appointed as Deputy Commander of Sichuan-East China Gas Pipeline Project Headquarter of Sinopec Corp., General Manager and Deputy Secretary of CPC Committee of Sinopec Exploration Company; in May 2008, he was appointed as Deputy Director General of Exploration and Production Department of Sinopec Corp. (Director General Level) and Deputy Commander of Sichuan-East China Gas Pipeline Project Headquarter; in July 2010, he served as Deputy Chief Geologist of Sinopec Corp.; in August 2013, he was appointed as Chief Geologist of Sinopec Corp.; in December 2015, he served as Vice President of China Petrochemical Corporation and was appointed as Senior Vice President of Sinopec Corp.; in January 2017, he was appointed as Member of the Leading Party Member Group of China Petrochemical Corporation; in April 2019, he was appointed as Director, President and Vice Secretary of the Leading Party Member Group of China Petrochemical Corporation. In February 2016, he was elected as Director of Sinopec Corp.; in October 2018, he was appointed as President of Sinopec Corp.

Yu Baocai, aged 56, Director and Senior Vice President of Sinopec Corp. Mr. Yu is a senior engineer with a master's degree in economics. In September 1999, Mr. Yu was appointed as Deputy General Manager of Daqing Petrochemical Company; in December 2001, he was appointed as General Manager and Deputy Secretary of CPC Committee of Daqing Petrochemical Company; in September 2003, he was appointed as General Manager and Secretary of CPC Committee of Lanzhou Petrochemical Company; in June 2007, he was appointed as General Manager and Deputy Secretary of CPC Committee of Lanzhou Petrochemical Company and General Manager of Lanzhou Petroleum & Chemical Company; in September 2008, he was appointed as a member of the Leading Party Member Group and Deputy General Manager of China National Petroleum Corporation ("CNPC") and since May 2011, he acted concurrently as Director of PetroChina Company Limited; in June 2018, he was appointed as a Member of the Leading Party Member Group and Vice President of China Petrochemical Corporation. In October 2018, Mr. Yu was elected as Director of Sinopec Corp.; in September 2020, he was appointed as Senior Vice President of Sinopec Corp.

Liu Hongbin, aged 58, Director and Senior Vice President of Sinopec Corp. Mr. Liu is a senior engineer with a bachelor's degree. In June 1995, he was appointed as Chief Engineer of Tuha Petroleum Exploration & Development Headquarters; in July 1999, he was appointed as Deputy General Manager of PetroChina Tuha Oilfield Company; in July 2000, he was appointed as Commander and Deputy Secretary of CPC Committee of Tuha Petroleum Exploration & Development Headquarters; in March 2002, he served as General Manager of the Planning Department of PetroChina Company Limited; in September 2005, he served as Director of the Planning Department of CNPC; in June 2007, he was appointed as Vice President of PetroChina Company Limited, and in November 2007, he served concurrently as General Manager and Secretary of CPC Committee of the Marketing Branch of PetroChina Company Limited; in June 2009, he served concurrently as General Manager and Deputy Secretary of CPC Committee of the Marketing Branch of PetroChina Company Limited; in July 2013, he was appointed as Member of the Leading Party Member Group and Deputy General Manager of CNPC and in August 2013, he served concurrently as an Executive Director and General Manager of Daqing Oilfield Company Limited, Director of Daqing Petroleum Administration Bureau and Deputy Secretary of CPC Committee of Daqing Oilfield; in May 2014, he served concurrently as Director of PetroChina Company Limited; in November 2019, he was appointed as a member of the Leading Party Member Group of China Petrochemical Corporation; in December 2019, he was appointed as Vice President of China Petrochemical Corporation. In March 2020, he was appointed as Senior Vice President of Sinopec Corp.; in May 2020, he was elected as Director of Sinopec Corp.

Ling Yiqun, aged 58, Director and Senior Vice President of Sinopec Corp. Mr. Ling is a professor level senior engineer with a Ph.D. degree. From 1983, he worked in the refinery of Beijing Yanshan Petrochemical Company and the Refining Department of Beijing Yanshan Petrochemical Company Ltd.; in February 2000, he was appointed as Deputy Director General of Refining Department of Sinopec Corp.; in June 2003, he was appointed as Director General of Refining Department of Sinopec Corp.; in July 2010, he was appointed as Vice President of Sinopec Corp.; in May 2012, he was appointed concurrently as Executive Director, President and Secretary of CPC Committee of Sinopec Refinery Product Sales Company Limited; in August 2013, he was appointed concurrently as President and Secretary of CPC Committee of Sinopec Qilu Petrochemical Company, and President of Sinopec Qilu Company; in March 2017, he was appointed as Vice President of China Petrochemical Corporation; since April 2019, he has been a member of the Leading Party Member Group of China Petrochemical Corporation. In February 2018, he was appointed as Senior Vice President of Sinopec Corp.; in May 2018, he was elected as Director of Sinopec Corp.

Zhang Shaofeng, aged 49, Director of Sinopec Corp., Mr. Zhang is a professor level senior accountant with a master's degree in business administration. In December 2008, he was appointed as Chief Accountant and Member of the CPC Committee of Trans-Asia Gas Pipeline Company Limited of CNPC; in July 2017, he was appointed as General Manager of Finance Department of CNPC and served concurrently as General Manager of Finance Department of PetroChina Company Limited; in December 2017, he was appointed as General Manager of Finance Department of CNPC and served concurrently as General Manager of Finance Department of PetroChina Company Limited; in July 2020, he was appointed as Member of the Leading Party Member Group and Chief Accountant of China Petrochemical Corporation. In September 2020, he was elected as Director of Sinopec Corp.

Tang Min, aged 67, Independent Director of Sinopec Corp. Mr. Tang has a Ph.D. degree in economics. He presently acts as Counsellor of the State Council of the PRC and Executive Vice Chairman of YouChange China Social Entrepreneur Foundation. He was an economist and senior economist at the Economic Research Centre of the Asian Development Bank between 1989 and 2000; chief economist at the Representative office of the Asian Development Bank in China between 2000 and 2004; Deputy Representative at the Representative Office of the Asian Development Bank in China between 2004 and 2007 and Deputy Secretary-General of the China Development Research Foundation between 2007 and 2010. In May 2015, he was appointed as Independent Director of Sinopec Corp.

Cai Hongbin, aged 53, Independent Director of Sinopec Corp. Mr. Cai is Dean of Faculty of Business and Economics and Professor of Economics of the University of Hong Kong. Mr. Cai has a Ph.D. degree in Economics. From 1997 to 2005, Mr. Cai taught at the University of California, Los Angeles. Since 2005, he served as a professor and Ph.D. supervisor in Applied Economics Department at Guanghua School of Management at Peking University, and he once served as Director, Assistant to the Dean and Vice Dean of the Applied Economics Department. From December 2010 to January 2017, he served as Dean of Guanghua School of Management at Peking University. In June 2017, he joined the Faculty of Business and Economics of the University of Hong Kong. Mr. Cai once served as a member of the 12th National People's Congress, a member of Beijing Municipal Committee of CPPCC, a member of the 11th Central Committee of China Democratic League, Deputy Chairman of Beijing Municipal Committee of China Democratic League and a Special Auditor of the National Audit Office. He currently serves as an Independent Director of CCB International (Holdings) Limited and Ping An Bank Co., Ltd. In May 2018, he was elected as Independent Director of Sinopec Corp.

Ng, Kar Ling Johnny, aged 60, Independent Director of Sinopec Corp. Mr. Ng currently is a practicing Certified Public Accountant in Hong Kong, a practicing auditor and Certified Public Accountant in Macau, a Fellow of the Hong Kong Institute of Certified Public Accountants (FCPA), a Fellow of the Association of Chartered Certified Accountant (FCCA), and a Fellow of the Institute of Chartered Accountants in England and Wales (FCA). Mr. Ng obtained a bachelor's degree and a master's degree in business administration from the Chinese University of Hong Kong in 1984 and 1999, respectively. Mr. Ng joined KPMG (Hong Kong) in 1984 and became a Partner in 1996. He acted as a Managing Partner from June 2000 to September 2015 and Vice Chairman of KPMG China from October 2015 to March 2016. Mr. Ng currently serves as Independent Non-executive Director of China Vanke Co., Ltd., Fangdd Network Group Ltd. and Metallurgical Corporation of China Ltd. In May 2018, he was elected as Independent Director of Sinopec Corp.

Supervisors

The table and discussion below set forth certain information concerning our supervisors. The current term for all of our supervisors of the seventh session of the Board of Supervisors will expire in May 2021.

Name	Age	Position with the Company
Zhao Dong	50	Chairman of Board of Supervisors
Jiang Zhenying	56	Supervisor
Li Defang	59	Employee Representative Supervisor
Lv Dapeng	59	Employee Representative Supervisor
Chen Yaohuan	57	Employee Representative Supervisor

Zhao Dong, aged 50, Chairman of Board of Supervisors of Sinopec Corp. Mr. Zhao is a professor level senior accountant with a Ph.D. degree. In July 2002, he was appointed as Chief Accountant and General Manager of Financial Assets Department of CNPC International (Nile) Ltd.; in January 2005, he was appointed as Deputy Chief Accountant and Executive Deputy Director of Financial and Capital Operation Department of China National Oil and Gas Exploration and Development Corporation; in April 2005, he was appointed as Deputy Chief Accountant and General Manager of Financial and Capital Operation Department of China National Oil and Gas Exploration and Development Corporation; in June 2008, he was appointed as Chief Accountant of China National Oil and Gas Exploration and Development Corporation; in October 2009, he was appointed as Chief Accountant of China National Oil and Gas Exploration and Development Corporation and Chief Financial Officer of PetroChina International Investment Company Limited; in September 2012, he was appointed as Deputy General Manager of CNPC Nile Company; in August 2013, he was appointed as General Manager of CNPC Nile Company; in November 2015, he was appointed as Chief Financial Officer of PetroChina Company Limited. In November 2016, he was appointed as a Member of the Leading Party Member Group and Chief Accountant of China Petrochemical Corporation; in May 2020, he was appointed as Director and Deputy Secretary of the Leading Party Member Group of China Petrochemical Corporation. In June 2017, he was elected as Chairman of Board of Supervisors of Sinopec Corp.

Jiang Zhenying, aged 56, Supervisor of Sinopec Corp. Mr. Jiang is a professor level senior economist with a Ph.D. degree in management. In December 1998, he was appointed as Vice President of China Petrochemical Supplies & Equipment Co., Ltd.; in February 2000, he was appointed as Deputy Director General of Sinopec Procurement Management Department; in December 2001, he was appointed as Director General of Sinopec Procurement Management Department; in November 2005, he concurrently held the positions of Chairman of Board of Directors, President and Secretary of CPC Committee of China Petrochemical International Co., Ltd.; in March 2006, he was appointed as Director General (General Manager), Executive Director and Secretary of the CPC Committee of Sinopec Procurement Management Department (Sinopec International Co. Ltd.); in April 2010, he was appointed as Director General (General Manager), Executive Director and Deputy Secretary of the CPC Committee of Sinopec Procurement Management Department (Sinopec International Co. Ltd.); in November 2014, he was appointed as Director of Safety Supervisory Bureau of China Petrochemical Corporation and Director General of Safety Supervisory Department of Sinopec Corp.; in May 2017, he was appointed as Deputy Director General (Director General level) of the Office of Leading Party Member Group Inspection Work of China Petrochemical Corporation; in December 2018, he was appointed as Director of Audit Bureau of China Petrochemical Corporation, and Director of Audit Department of Sinopec Corp.; in December 2019, he was appointed as President of Audit Bureau of Sinopec Corp. and Director of the Office of Audit Committee of Leading Party Member Group of China Petrochemical Corporation. In December 2010, he was elected as Employee's Representative Supervisor of Sinopec Corp.; in May 2018, he was elected as Supervisor of Sinopec Corp.

Li Defang, aged 59, Employee's Representative Supervisor of Sinopec Corp. Mr. Li is a professor level senior engineer with a Ph.D. degree. In May 2001, he was appointed as Deputy Secretary of CPC Committee and Trade Union Chairman of Sinopec Engineering Incorporation; in December 2001, he was appointed as Director General of Information System Management Department of Sinopec Corp.; in September 2013, he was appointed as Director General of Informatization Management Department of Sinopec Corp.; in October 2014, he was appointed as Chairman of Petro-CyberWorks Information Technology Co., Ltd.; in January 2018, he was elected as Employee Supervisor of China Petrochemical Corporation; in March 2019, he was appointed as Secretary of CPC Committee of Sinopec Management Institute (Sinopec Communist Party School); in November 2020, he was appointed as the Secretary of CPC Committee of Sinopec Management Institute and Executive Vice Principal of Sinopec Communist Party School. In May 2020, he was elected as Employee's Representative Supervisor of Sinopec Corp.

Lv Dapeng, aged 59, Employee's Representative Supervisor of Sinopec Corp. Mr. Lv is a professor level senior administration engineer with a Master's degree of business administration. In December 2001, he was appointed as Deputy Director General of China Petrochemical News; in March 2003, he was appointed as Deputy Director General and Chief Editor of China Petrochemical News; in June 2004, he was appointed as Director General and Chief Editor of China Petrochemical News; in December 2004, he was appointed as Director General, Secretary of CPC Committee and Chief Editor of China Petrochemical News; in March 2011, he was appointed as Director General of Corporate Culture Department of Sinopec Corp., and Director General of the Political Work Department of and Deputy Secretary of the CPC Committee directly under China Petrochemical Corporation; in June 2012, he was appointed concurrently as Deputy Director General of Working Committee of Trade Union and Deputy Director of the Youth Working Committee of China Petrochemical Corporation; in March 2015, he was appointed as Director General of Corporate Culture Department of Sinopec Corp. and Director General of Communications Department (Press Office) of China Petrochemical Corporation; in December 2019, he was appointed as Director General of Corporate Culture Department of Sinopec Corp., Director General of Communication Department and Director General of Press Office of China Petrochemical Corporation. In January 2021, he was elected as Employee's Representative Supervisor of Sinopec Corp.

Chen Yaohuan, aged 57, Employee's Representative Supervisor of Sinopec Corp. Mr. Chen is a professor level senior engineer with a Master's degree awarded by Central Party School of the CPC. In October 2008, he was appointed as Deputy Director General of Refining Department of Sinopec Corp.; in March 2015, he was appointed as Executive Director, General Manager and Deputy Secretary of the CPC Committee of Sinopec Beihai Refining and Chemical Limited Liability Company; in May 2015, he was appointed as a member of the Standing Committee of the CPC Beihai Municipal Committee; in June 2018, he was appointed as General Manager and Deputy Secretary of the CPC Committee of Guanzhou Branch of Sinopec Corp. and General Manager of Guangzhou Branch of Sinopec Assets Management Corporation; in July 2019, he was appointed as Deputy Director General (Director General Level) and Chief Engineer of Refining Department of Sinopec Corp.; in October 2019, he was appointed concurrently as Chairman of Sinopec Kantons International Limited and Sinopec Kantons Holdings Limited; in December 2019, he was appointed as General Manager and Chief Engineer of Refining Department of Sinopec Corp.; in December 2019, he was appointed concurrently as Vice Chairman and Chairman of Audit Committee of Yanbu Aramco Sinopec Refining Company Ltd.; in August 2020, he was appointed concurrently as Executive Director and Secretary of CPC Committee of Sinopec Petroleum Marketing Company Limited and Chairman of Sinopec Petroleum Storage and Reserve Limited. In January 2021, he was elected as Employee's Representative Supervisor of Sinopec Corp.

Other Executive Officers

Name	Age	Positions with Sinopec Corp.
Chen Ge	58	Senior Vice President
Yu Xizhi	58	Vice President
Shou Donghua	51	CFO
Zhao Rifeng	58	Vice President
Huang Wensheng	54	Vice President/Secretary to the Board of Directors

Chen Ge, aged 58, Senior Vice President of Sinopec Corp. Mr. Chen is a senior economist with a Master's degree. In February 2000, he was appointed as Deputy Director General of the Board Secretariat of Sinopec Corp.; in December 2001, he was appointed as Director General of the Board Secretariat of Sinopec Corp.; in April 2003, he was appointed as Secretary to the Board of Directors of Sinopec Corp.; from April 2005 to August 2013, he was appointed concurrently as Director General of Corporate Reform & Management Dept. of Sinopec Corp.; in July 2010, he was appointed as Assistant to President of China Petrochemical Corporation; from December 2013 to December 2015, he was appointed temporarily as Deputy Secretary-General of Guizhou Provincial People's Government and a member of the Leading Party Member Group of Guizhou Provincial General Office; in November 2015, he was appointed as Employee's Representative Director of China Petrochemical Corporation; in December 2017, he was appointed concurrently as Director General of Corporate Reform & Management Dept. of Sinopec Corp.; in October 2018, he was appointed as Senior Vice President of Sinopec Corp.

Yu Xizhi, aged 58, Vice President of Sinopec Corp. Mr. Yu is a professor-level senior engineer with a Ph.D. degree in engineering. In August 1997, he was appointed as Deputy General Manager of Anqing Petrochemical General Plant and concurrently as General Manager of Fertilizer Plant; in September 1999, he became a member of the CPC Standing Committee of Anqing Petrochemical General Plant; in February 2000, he was appointed as Deputy General Manager of Sinopec Anqing Company and in September 2000, he was appointed as General Manager of Sinopec Anqing Company; in January 2005, he was appointed as General Manager of Anqing Petrochemical General Plant and from May 2009 to July 2010, he temporarily served as a member of the Standing Committee of the CPC Anqing Municipal Committee; in July 2010, he became General Manager and Deputy Secretary of the CPC Committee of Maoming Petrochemical Company and General Manager of Sinopec Maoming Company; in July 2016, Mr. Yu was appointed as head of Maoming-Zhanjiang Integration Leading Group; in December 2016, he became Executive Director, General Manager and Deputy Secretary of the CPC Committee of Zhongke (Guangdong) Refining and Petrochemical Co., Ltd.; in April 2017, Mr. Yu was appointed as Director General of Human Resources Department of Sinopec Corp.; in June 2017, he was elected as Employee's Representative Supervisor of Sinopec Corp.; in December 2019, he was appointed as President of Human Resource Department of Sinopec Corp. and the Director General of Organization Department of China Petrochemical Corporation; in January 2020, he was elected as Director of China Petrochemical Corporation. In July 2020, he was appointed as Vice President of Sinopec Corp.

Shou Donghua, aged 51, Chief Financial Officer of Sinopec Corp. Ms. Shou is a professor level senior accountant with a Master's degree of business administration. In July 2010, she was appointed as the Chief Financial Officer of Sinopec Zhenhai Refining & Chemical Company; in October 2014, she was appointed as Deputy Director General of Human Resource Department of Sinopec Corp.; in August 2017, she was appointed as the Secretary of CPC Committee of Sinopec Zhenhai Refining & Chemical Company and Deputy General Manager of Sinopec Zhenhai Refining & Chemical Company; in August 2018, she was appointed as the Director General of Finance Department of China Petrochemical Corporation and concurrently served as the Chairman of Sinopec Century Bright Capital Investment Limited; in December 2019, she was appointed as General Manager of Finance Department of Sinopec Corp. and concurrently served as the Chairman of Sinopec Century Bright Capital Investment Limited; in January 2020, she was appointed as Chief Financial Officer of Sinopec Corp.

Zhao Rifeng, aged 58, Vice President of Sinopec Corp. Mr. Zhao is a professor level Senior Engineer with a Master's degree. In July 2000, he was appointed as Deputy General Manager of Sinopec Jinling Petrochemical Co., Ltd. and Deputy Manager of Sinopec Jinling Company; in October 2004, he was appointed as General Manager of Sinopec Jinling Company; in October 2006, he was appointed as Vice Chairman and General Manager of Sinopec Jinling Petrochemical Co., Ltd.; in November 2010, he was appointed as Chairman, General Manager, Deputy Secretary of CPC Committee of Sinopec Jinling Petrochemical Co., Ltd.; in August 2013, he was appointed as Director General of Refining Department of Sinopec Corp.; in December 2017, he was appointed as the Director General of the Marketing Department of Sinopec Corp. and Chairman and Secretary of CPC Committee of Sinopec Marketing Company Limited; in December 2019, he was appointed as the President of the Marketing Department of Sinopec Corp. and Chairman and Secretary of CPC Committee of Sinopec Marketing Company Limited. In February 2018, he was appointed as Vice President of Sinopec Corp.

Huang Wensheng, aged 54, Vice President of Sinopec Corp., Secretary to the Board of Directors. Mr. Huang is a professor level senior economist with a university diploma. In March 2003, he was appointed as Deputy Director General of the Board Secretariat of Sinopec Corp.; in May 2006, he was appointed as Representative on Securities Matters of Sinopec Corp.; in August 2009, he was appointed as the Deputy Director General of President's office of Sinopec Corp.; in September 2009, he was appointed as Director General of the Board Secretariat of Sinopec Corp.; in May 2012, he was appointed as Secretary to the Board of Directors of Sinopec Corp.; in June 2018, he was appointed concurrently as Director General of Department of Capital Management and Financial Services of China Petrochemical Corporation; in July 2018, he was appointed concurrently as Chairman, and Secretary of CPC Committee of Sinopec Capital Co., Ltd.; in December 2019, he was appointed as President of Department of Capital Management and Financial Services of China Petrochemical Corporation. In May 2014, he was appointed as Vice President of Sinopec Corp.

B. COMPENSATION

Salaries of Directors, Supervisors and Members of the Senior Management

Our directors and supervisors who hold working posts with us and other senior management members receive all their compensation from us in cash. Our compensation committee, with assistances from relevant administrative departments, determines the appropriate level of annual compensation for each of our directors and supervisors who hold working posts with us and other senior management members in two components: a base salary component and a performance rewards component. The base salary component is a fixed amount that will be paid on monthly basis. The performance rewards component is paid in one lump sum at about year end and the exact amounts of the performance rewards to be paid will be based on the completion by the Company of certain performance targets (key performance indicators, or KPIs) which are set at the beginning of the year and reviewed at year end. The KPIs cover areas such as profitability, workplace safety and environmental protection. Based on the annual review by our compensation committee, with the assistances from relevant administrative departments, of the Company's completion of various KPIs, our directors and supervisors who hold working posts with us and other senior management members will receive full or partial payments as their performance rewards.

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The following table sets forth the compensation on individual basis for our directors, supervisors and executive officers who received compensation from us in 2020.

Name	Position with the Company	Remuneration paid by the Company in 2020 (RMB in ten thousands before tax)
<u>Directors</u>		
Zhang Yuzhuo	Chairman	—
Ma Yongsheng	Director, President	101.31
Yu Baocai	Director, Senior Vice President	—
Liu Hongbin ⁽¹⁾	Director, Senior Vice President	—
Ling Yiqun	Director, Senior Vice President	—
Zhang Shaofeng ⁽²⁾	Director	—
Tang Min	Independent Director	35.00
Cai Hongbin	Independent Director	35.00
Ng, Kar Ling Johnny	Independent Director	35.00
Fan Gang ⁽³⁾	Former Independent Director	N/A
Li Yong ⁽⁴⁾	Former Director	N/A
<u>Supervisors</u>		
Zhao Dong	Chairman of the Board of Supervisors	—
Jiang Zhenying	Supervisor	115.94
Li Defang ⁽⁵⁾	Employee Representative Supervisor	—
Lv Dapeng ⁽⁶⁾	Employee Representative Supervisor	—
Chen Yaohuan ⁽⁷⁾	Employee Representative Supervisor	—
Yang Changjiang ⁽⁸⁾	Former Supervisor	—
Zhang Baolong ⁽⁹⁾	Former Supervisor	—
Zou Huiping ⁽¹⁰⁾	Former Supervisor	88.51
Yu Xizhi ⁽¹¹⁾	Former Employee Representative Supervisor	76.19
Zhou Hengyou ⁽¹²⁾	Former Employee Representative Supervisor	76.00
Yu Renming ⁽¹³⁾	Former Employee Representative Supervisor	—
Sun Huanquan ⁽¹⁴⁾	Former Employee Representative Supervisor	46.63
<u>Other Executive officers</u>		
Chen Ge	Senior Vice President	151.06
Yu Xizhi ⁽¹⁵⁾	Vice President	31.73
Shou Donghua	CFO	80.54
Zhao Rifeng	Vice President	162.21
Huang Wensheng	Vice President/Secretary to the Board of Directors	125.24
Lei Dianwu ⁽¹⁶⁾	Former Senior Vice President	N/A

Note: (1) Mr. Liu Hongbin was elected on May 19, 2020.
(2) Mr. Zhang Shaofeng was elected on September 28, 2020.
(3) Mr. Fan Gang resigned on August 28, 2020.
(4) Mr. Li Yong resigned on September 22, 2020.
(5) Mr. Li Defang was appointed on May 18, 2020.
(6) Mr. Lv Dapeng was appointed on January 11, 2021.
(7) Mr. Chen Yaohuan was appointed on January 11, 2021.
(8) Mr. Yang Changjiang resigned on September 9, 2020.
(9) Mr. Zhang Baolong resigned on September 9, 2020.
(10) Mr. Zou Huiping resigned on January 28, 2021.
(11) Mr. Yu Xizhi resigned on May 18, 2020.
(12) Mr. Zhou Hengyou resigned on May 18, 2020.
(13) Mr. Yu Renmin resigned on January 11, 2021.
(14) Mr. Sun Huanquan was appointed on May 18, 2020, and resigned on January 11, 2021.
(15) Mr. Yu Xizhi was appointed on July 23, 2020.
(16) Mr. Lei Dianwu resigned on August 12, 2020.

C. BOARD PRACTICE

We have nine directors. We have five special board committees, namely the strategic committee, the audit committee, the remuneration and evaluation committee, the nominating committee and social responsibility management committee. All members of the audit committee and the majority of the members of the remuneration and evaluation committee and the nominating committee are independent directors. In addition, there is at least one independent director who is a financial expert in the audit committee.

The main responsibilities of the strategy committee are to conduct research and put forward proposals on the long-term development strategy and significant investments.

The members of our strategy committee are Zhang Yuzhuo, Ma Yongsheng, Ling Yiqun, and Cai Hongbin.

The main responsibilities of the audit committee include:

- to propose the appointment or replacement of the independent auditor;
- to oversee the internal auditing system and its implementation;
- to coordinate the communication between the internal auditing department and the independent auditor;
- to examine and approve financial information and its disclosure; and
- to examine the financial policies, internal auditing, internal control and risk management system.

The members of our audit committee are Ng, Kar Ling Johnny, Tang Min and Cai Hongbin, all of whom are our Independent Non-executive Directors. Our Board has determined that Ng, Kar Ling Johnny qualifies as an audit committee financial expert.

The main responsibilities of the remuneration and appraisal committee (remuneration committee) include:

- to review evaluation standards on the performance of directors and senior management, to conduct their evaluations and make suggestions to the Board; and
- to review compensation policies and scheme in respect of the remuneration of directors, supervisors and executive officers, and make suggestions to the Board.

The members of our remuneration committee are Tang Min, Ma Yongsheng and Ng, Kar Ling Johnny.

The main responsibilities of the nominating committee include:

- to advise the Board on the size and composition of the Board based on the company's business activities, asset size and shareholding structure;
- to review the selection criteria and procedures for directors and senior management, and to make suggestions to the Board; and
- to search in the domestic and overseas talent market and within the Company for qualified candidates, review the director and president candidates, senior vice president candidates, chief financial officer and vice president candidates as suggested by the president, and secretary to the Board as proposed by the chairman, and make recommendations to the Board.

The members of nominating committee are Zhang Yuzhuo, Tang Min and Ng, Kar Ling Johnny.

The main responsibilities of the social responsibility management committee are to research on the policy, governance, strategy and planning for the Company's social responsibility and put forward proposals to the Board.

The members of social responsibility management committee are Zhang Yuzhuo, Tang Min and Cai Hongbin.

Our directors have entered into directors service contracts with us and under such contracts, there is no severance pay arrangements for our directors.

As a joint stock company incorporated in the PRC, we are required by the PRC law to have in place a board of supervisors. The board of supervisors shall consist of no less than three supervisors, and at least one third of the board of supervisors shall be employee representative supervisors. Employee representative supervisors shall be elected by our employees at a meeting of employee representatives, a general meeting of employees or through other means.

Under our articles of association, the main responsibilities of our board of supervisors include:

- to review the Company's financial affairs;
- to supervise directors and executive officers when they perform their duties, and to propose to our shareholders the dismissal of any director or executive officer who has violated our articles of association and relevant laws and regulation;
- to demand directors or executive officers to rectify their conducts that conflict with our interests;
- to propose the call of any extraordinary general meeting of shareholders to the Board, and to convene and preside over such shareholders' meeting if the Board fails to do so; and
- to initiate legal proceedings against directors and executive officers on behalf of the Company.

Our board of supervisors currently consists of five supervisors including three employee representative supervisors. In 2020, some of the supervisors attended the Company's shareholders' meetings and presented at the Company's board meetings, and made assessment on the work of the Board. The supervisors went to the Company's subsidiaries for research, made suggestions to improve management of the Company.

D. EMPLOYEES

As of December 31, 2018, 2019 and 2020, we had approximately 423,543, 402,206 and 384,065 employees, respectively. The following table sets forth the number of our employees by our business segments, their scope of work and their education as of December 31, 2020.

By Segment	Number of Employees	Percentage of Total Number of Employees (%)
Exploration and production	130,920	34
Refining	56,876	15
Marketing and distribution	122,490	32
Chemicals	62,668	16
Research and Development	6,035	2
Corporate and other	5,076	1
Total	384,065	100

By Employee's Scope of Work	Number of Employees	Percentage of Total Number of Employees (%)
Production	140,004	37
Technical	81,563	21
Sales	110,631	29
Finance	8,607	2
Administration	30,725	8
Others	12,535	3
Total	384,065	100

By Education	Number of Employees	Percentage of Total Number of Employees (%)
Master's degree and above	19,606	5
University	105,705	28
Junior college	86,083	22
Technical secondary school	31,003	8
Senior high school and technical school degree or below	141,668	37
Total	384,065	100

During this report period, there has been no significant change to our core technical team and key technicians.

We have a workers' association that protects employee rights, organizes educational programs, assists in the fulfillment of economic objectives, encourages employee participation in management decisions, and assists in mediating disputes between us and individual employees. We regulate employee behavior through the "Employee Code of Conduct" and build a good working atmosphere. We have not been subject to any strikes or other labor disturbances that have interfered with our operation, and we believe that our relations with our employees are good.

The total remuneration of our employees includes salary, performance bonuses and allowances. Employees also receive certain subsidies in housing, health services, education and other miscellaneous items.

E. SHARE OWNERSHIP

As of December 31, 2020, except our director and senior vice president Ling Yiqun who holds 13,000 shares of our A shares, none of our directors, supervisors and executive officers beneficially own any of our shares.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. MAJOR SHAREHOLDERS

The following table sets forth information regarding our 5% or more shareholders as of April 15, 2021.

Shareholder	Number of Shares Owned (in millions)	Percentage of Ownership (%)
Sinopec Group Company ⁽¹⁾	83,262	68.77

(1) Inclusive of 553,150,000 H shares held by Sinopec Century Bright Capital Investment Ltd. (overseas wholly-owned subsidiary of Sinopec Group Company) under HKSCC Nominees Limited.

As of April 15, 2021, 1,231,644,000 H shares were registered in the name of a nominee of Citibank, N.A., the depository under our ADS deposit agreement. Citibank, N.A. has advised us that, as of April 15, 2021, 12,316,440 ADSs, representing 1,231,644,000 H shares, were held of record by Cede & Co. and 24 other registered shareholders domiciled in and outside of the United States. We have no further information as to our shares held, or beneficially owned, by U.S. persons.

To avoid the adverse effects brought by intra-industry competition to the maximum extent possible, we and Sinopec Group Company have entered into a non-competition agreement whereby Sinopec Group Company has agreed to: refrain from operating new businesses which compete or could compete with us in any of our domestic or international markets; grant us an option to purchase Sinopec Group Company's operations that compete or could compete with our businesses; operate its sales enterprises in a manner uniform to our sales and service operations; and appoint us as sales agent for certain of its products which compete or could compete with our products.

In March 2017, Sinopec Group has earnestly fulfilled its undertaking in eliminating competitions in chemical business with us through: (1) subscribing capital contribution of joint ventures controlled by us, by way of injecting net assets of certain chemical business and cash; (2) authorizing us to be in charge of production plan, management and sales of the remaining chemical business. The competition in chemical business between Sinopec Group and us has been eliminated.

Given that Sinopec Group Company engages in the same or similar businesses as us with regard to the exploration and production of overseas petroleum and natural gas, Sinopec Group Company issued an undertaking on April 28, 2014, granting us an option, in ten years since the issue date of the undertaking, (1) after thorough analysis from political, economic and other perspectives, to require Sinopec Group Company to sell its overseas oil and gas assets owned at the time, to the extent remaining in its possession, to us, (2) to require Sinopec Group Company to sell its overseas oil and gas assets to us, provided that the aforementioned proposed acquisitions comply with the applicable laws and regulations, contractual obligations and other procedural requirements. By then, to the extent in compliance with the applicable law and the requirements of the contract and procedures, Sinopec Group Company will sell the oil and gas assets as mentioned in (1) and (2) to us as required.

B. RELATED PARTY TRANSACTIONS

Sinopec Group Company owned 68.77% of our outstanding equity as of April 15, 2020. Sinopec Group Company is able to exercise all the rights of a controlling shareholder, including the election of directors and voting in respect of amendments to our articles of association. Sinopec Group Company, as our controlling shareholder, is subject to certain non-controlling shareholder protection provisions under our articles of association.

We have engaged from time to time and will continue to engage in a variety of transactions with Sinopec Group Company, which provide a number of services to us, including ancillary supply, transport, educational and community services. The nature of our transactions with Sinopec Group Company is governed by a number of service and other contracts between Sinopec Group Company and us. A discussion of these agreements and arrangements is set forth under the heading "Item 7. Major Shareholders and Related Party Transactions—B. Related Party Transactions" in our annual report on Form 20-F filed with the Securities and Exchange Commission on October 10, 2000, April 13, 2007, May 20, 2009, April 30, 2010, April 11, 2013, April 16, 2014, April 10, 2015, April 20, 2016, April 24, 2017, April 27, 2018, April 29, 2019 and April 10, 2020, respectively.

On July 9, 2018, we entered into the Articles of Association of Sinopec Capital Co., Ltd., or Sinopec Capital, with Sinopec Group Company, pursuant to which, we will establish Sinopec Capital with Sinopec Group Company with a registered capital of RMB 10 billion, of which, we will subscribe capital contribution of RMB 4.9 billion by cash, representing 49% of the registered capital of Sinopec Capital, and Sinopec Group will subscribe capital contribution of RMB 5.1 billion by cash, representing 51% of the registered capital of Sinopec Capital. Upon the establishment of Sinopec Capital, its investments will focus on strategic emerging industries, including new energy, new material, energy conservation and environmental protection, and intelligence manufacturing in relation to the industry chain. In respect of the investment projects which are related to our principal business, we will have the right of first refusal to acquire such projects.

On August 24, 2018, we entered into the Continuing Connected Transaction Fifth Supplemental Agreement with Sinopec Group Company, pursuant to which the terms of Continuing Connected Transactions under the Mutual Supply Agreement and the Cultural, Educational, Hygiene and Auxiliary Agreement (formerly named Cultural, Educational, Hygiene and Community Services Agreement) were renewed as January 1, 2019 to December 31, 2021. On October 23, 2018 the First Extraordinary General Meeting of 2018 of the Company approved the Continuing Connected Transactions for the three years ending December 31, 2021. See Exhibit 4.15.4 herewith for details of the Continuing Connected Transactions.

In 2020, our related connected transactions occurred in accordance with the abovementioned Continuing Connected Transaction agreements amounted to RMB 385.868 billion, among which, our purchase amounted to RMB 252.381 billion, accounting for 11.38% of the amount of similar transactions, including products and services (purchasing, storage and transportation, exploration and development services, and production-related services) of RMB 236.685 billion, auxiliary and community service of RMB 3.126 billion, house rental payment of RMB 565 million, land rental payment of RMB 11.086 billion, and the interest expense of RMB 0.919 billion. The amount of our sales was RMB 133.486 billion, accounting for 5.99% of the transaction amount of similar transactions, including sales of goods of RMB 132.643 billion, agency commission income of RMB 140 million and interest income of RMB 0.704 billion.

On April 29, 2020, Zhongke (Guangdong) Refining and Petrochemical Co., Ltd. (“Zhongke Refining”), a wholly-owned subsidiary of the Company, entered into a merger agreement with Sinopec Zhanjiang Dongxing Petrochemical Company Limited (“Zhanjiang Dongxing”), and the Company entered into a joint venture contract with Sinopec Century Bright Capital Investment Ltd. (“Century Bright Company”), pursuant to which, Zhongke Refining shall absorb and merge Zhanjiang Dongxing and, upon the completion of such transaction, Zhongke Refining will become the owner of all assets and liabilities of Zhanjiang Dongxing and will assume the existing businesses and personnel of Zhanjiang Dongxing with the Company and Century Bright Company holding 90.3% and 9.7% equity interest in Zhongke Refining, respectively.

On October 28, 2020, our board of directors approved the capital increase in Sinopec Baling Petrochemical Company Limited (“Baling Petrochemical”) by the Company with the Sinopec Group Asset Management Co., Ltd. (“Assets Company”) on a pro rata basis. The capital increase in Baling Petrochemical will be contributed by the Company and the Assets Company with an aggregate amount of approximately RMB 6.3 billion, of which, the Company will contribute approximately RMB 3.5 billion by injecting the relevant assets of the Company. Baling Branch and cash, and the Assets Company will contribute approximately RMB 2.8 billion by injecting the relevant assets of Assets Company Baling Branch. Pursuant to the capital increase agreement, the registered capital of Baling Petrochemical will be increased from RMB 100 million to RMB 3 billion. Upon completion of the capital increase, the shareholders of Baling Petrochemical and their respective shareholdings will remain unchanged, while the Company and the Assets Company will continue to hold 55% and 45% equity interest in Baling Petrochemical, respectively. Baling Petrochemical will remain a subsidiary of the Company.

On March 26, 2021, (i) Sinopec Overseas Investment Holding Limited (“Overseas Investment Company”), a subsidiary of the Company, and Century Bright Company entered into the Agreement on Purchasing Equity Interest in Sinopec Hainan Refining and Chemical Company Limited, pursuant to which Overseas Investment Company proposed to purchase the 25% equity interest in Sinopec Hainan Refining and Chemical Company Limited held by Century Bright Company at a consideration of RMB 5,769 million; (ii) the Company and Assets Company entered into the Agreement on Purchasing Equity Interest in Cangzhou Toray Fine Chemical Co., Ltd., pursuant to which the Company proposed to purchase the 40% equity interest in Cangzhou Toray held by Assets Company at a consideration of RMB 20 million; (iii) the Company and Assets Company entered into the Agreement on Purchasing the Polypropylene and Utility Business Assets, pursuant to which the Company proposed to purchase the non-equity assets held by Assets Company, including the polypropylene and utility business assets of Cangzhou branch of Assets Company, at a consideration of RMB 138 million; (iv) the Company and Beijing Orient Petrochemical Industry Co., Ltd. (“Orient Petrochemical”) entered into the Agreement on Purchasing Equipment and Relevant Assets, pursuant to which the Company proposed to purchase the non-equity assets held by Orient Petrochemical, including inventory and equipment, at a consideration of RMB 715 million; and (v) Sinopec Beihai Refining and Chemical Limited Liability Company (“Beihai Refining and Chemical”), a subsidiary of the Company, and Beihai Petrochemical Limited Liability Company of Sinopec Group (“Beihai Petrochemical”) entered into the Agreement on Purchasing Assets of Beihai Petrochemical related to Pier Business, pursuant to which Beihai Refining and Chemical proposed to purchase the non-equity assets held by Beihai Petrochemical, including the pier operation platform, at a consideration of RMB 149 million.

The above-mentioned variety of transactions with Sinopec Group Company are in compliance with the upper limit of the amount of related party transactions approved by the shareholders and the Board.

C. INTERESTS OF EXPERTS AND COUNSEL

Not applicable.

ITEM 8. FINANCIAL INFORMATION

A. CONSOLIDATED STATEMENTS AND OTHER FINANCIAL INFORMATION

See consolidated financial statements included in this annual report following Item 19.

Legal Proceedings

We are involved in certain judicial and arbitral proceedings before Chinese courts or arbitral bodies concerning matters arising in connection with the conduct of our businesses. We believe, based on currently available information, that the results of such proceedings, in the aggregate, will not have a material adverse effect on our financial condition or results of operations.

Dividend Distribution Policy

In 2012, we amended our articles of association based on its original framework. Our dividend distribution policy was amended. According to our amended articles of association:

Our board of directors will determine the payment of dividends, if any, with respect to our shares on a per share basis. Any final dividend for a financial year shall be subject to shareholders' approval. The board may declare interim and special dividends at any time under general authorization by a shareholders' ordinary resolution. A decision to declare or to pay any dividends in the future, and the amount of any dividends, will depend on our results of operations, cash flows, financial condition, the payment by our subsidiaries of cash dividends to us, future prospects and other factors which our directors may determine are important.

For holders of our H shares, cash dividend payments, if any, shall be declared by our board of directors in Renminbi and paid in HK dollars. The depositary will convert the HK dollar dividend payments and distribute them to holders of ADSs in US dollars, less expenses of conversion.

The Company may distribute dividends in the following forms: cash, shares or other forms provided by laws, administrative rules, regulations of competent authorities and regulatory provisions in the place where the Company's shares are listed. The Company shall give priority to the distribution of dividends in cash. The Company may make interim dividends distribution. The Company shall distribute cash dividends when the Company's net profit and retained earnings, in separate financial statement, are positive and the Company has adequate cash inflows over the requirements of cash outflows of operation and sustainable development. The cash dividends per annum should not be less than thirty percent of the net profit of the Company in the current year. Dividends in the form of shares will be distributed to the depositary and, except as otherwise described in the Deposit Agreement, will be distributed by the depositary in the form of additional ADSs, to holders of ADSs.

At the annual general meeting held on May 19, 2020, our shareholders adopted the distribution of a final cash dividend of RMB 0.19 (including tax) per share, combining with an interim distributed dividend of RMB 0.12 (including tax) per share, the total dividend for 2019 is RMB 0.31 (including tax) per share.

At the extraordinary general meeting held on September 28, 2020, our shareholders adopted the distribution of a special dividend of RMB 0.07 (including tax) per share. At the 21st meeting of the seventh session of our board, our board approved the proposal to distribute a final cash dividend of RMB 0.13 (including tax) per share, combining with an interim distributed dividend of RMB 0.07 (including tax) per share, the total dividend for 2020 is RMB 0.20 (including tax) per share. The proposal is subject to the shareholder's approval at the annual general meeting.

B. SIGNIFICANT CHANGES

None.

ITEM 9. THE OFFER AND LISTING

A. OFFER AND LISTING DETAILS

Not applicable, except for Item 9A (4) and Item 9C.

Our H Shares have been listed on the Hong Kong Stock Exchange (Code: 0386), and our ADSs, each representing 100 H Shares, have been listed on the New York Stock Exchange and the London Stock Exchange under the symbol “SNP,” since we completed our initial public offering on October 19, 2000. Prior to that time, there was no public market for our H Shares. The Hong Kong Stock Exchange is the principal non-U.S. trading market for our H Shares. Our publicly traded domestic shares, or A shares, are listed on the Stock Exchange of Shanghai since August 8, 2001 (Code: 600028).

On 14 February 2013, we issued 2,845,234,000 listed H shares with a par value of RMB 1.00 each at the price of HKD 8.45 per share. The aggregate gross proceeds from the placing amounted to approximately HKD 24.0 billion.

On January 26, 2015, the conditional redemption of the 2011 convertible bonds amounting to RMB 23 billion, was triggered. As of February 11, 2015 (the redemption registration date), the cumulative conversion of the 2011 convertible bonds to listed A shares is 4,623,769,047 shares, and the balance of registered 2011 convertible bonds is RMB 52,766,000. On February 17, 2015, we redeemed the balance plus interests payable at the aggregate amount of RMB 53,348,948.28. The 2011 convertible bonds were delisted from the Shanghai Stock Exchange.

ITEM 10. ADDITIONAL INFORMATION

A. SHARE CAPITAL

Not applicable.

B. MEMORANDUM AND ARTICLES OF ASSOCIATION

In 2019, we amended the articles of association.

The following is a summary of certain provisions of our articles of association and its appendices, as amended, the Company Law of the PRC (2018) and certain other applicable laws and regulations of the PRC. You and your advisors should refer to the text of our articles of association, as amended, and to the texts of applicable laws and regulations for further information.

Objects and Purposes

We are a joint stock limited company established in accordance with the Company Law and certain other laws and regulations of the PRC. We are registered with the PRC State Administration of Industry and Commerce with business license number 100000000032985. Article 13 of our articles of association provides that our scope of businesses includes, among other things, the production, storage, pipeline transportation, land transportation, water transportation and sale of non-coal mines (oil and natural gas etc.), dangerous chemicals (ethylene, propylene, butadiene and naphtha etc.), heavy oil, rubber and other chemical raw materials and products; oil refining; wholesaling and retailing (for subsidiaries only) of gasoline, kerosene and diesel oil; the production, storage, transportation and sale of natural gas chemicals and coal chemicals; sale of lubricant, fuel oil, solvent naphtha and asphalt; production of chemical fertilizer; operation of LPG station, sale of CNG, LNG, LPG and city gas; operation of electrical vehicle charging station; production, supervision of manufacturing, installation of oil and petrochemical machinery and equipment; manufacturing of equipment, tools, instruments and gauges in petroleum drilling and production; purchase and sale of oil and petrochemical raw and auxiliary materials, equipment and parts; technology and information, research, development, application and consultation of alternative energy products; production and sale of electricity, steam, water and industrial gases; wholesaling of farm, forestry and pasture products; operation of general merchandise convenience stores; wholesaling and retailing of knitted garments and housewares; wholesaling and retailing of cultural and sports goods and equipment; sale of food, beverages and tobacco products; wholesaling and retailing of pharmaceuticals and medical devices; retailing of automobiles, motorcycles and components; repair and maintenance of and technical training for automobiles and motorcycles; wholesaling and retailing of machineries, hardware products, electronic products and household appliances; retailing of furniture and materials for indoor decoration; stalls, no-store sale and other forms of retail business; general merchandise retail; accommodation and catering services; manufacturing of food and food additives; residents' services; transportation agency services; warehousing; operation of self-owned properties; leasing of natural gas storage facility; leasing of houses, working places, vehicles and equipment; lease of machineries; media, advertising and acting as commission agent; insurance brokerage and agency services; financial trust and management services; E-commerce; self-operation of and acting as agency for the import and export of various commodities and technologies other than those restricted or prohibited by the state from import and export; contractor of overseas mechanical, electronics, petrochemical projects and domestic international bid-inviting projects; export of equipment and materials required for the aforementioned overseas projects; dispatch of labor required for the aforementioned overseas projects; railway transportation; coastal engineering auxiliary operations, port operations, oil spill response, safety guard, ship pollution removal operations; professional technical service industry quality inspection technical services, environmental and ecological monitoring and testing services; edible salt production, wholesale, retail; shale gas, coalbed methane, shale oil, combustible ice, uranium and other resources exploration, development, storage and transportation, pipeline transportation, sales; natural gas power generation, power supply; power installation and maintenance, power technology development and services.

Directors

Our directors shall be elected at our shareholders' general meeting. Cumulative voting shall be adopted for the election of directors if a controlling shareholder controls 30% or more of our shares. Details of the cumulative voting mechanism are set forth in Article 59 of the Rules and Procedures for the Shareholders' General Meetings that is an appendix to, and forms an integral part of, our articles of association. Our directors shall be elected for a term of three years and may serve consecutive terms upon re-election, except that independent directors may only serve a maximum of two terms. Our directors are not required to hold any shares in us, and there is no age limit requirement for the retirement or non-retirement of our directors.

Where a director is materially interested, directly or indirectly, in a contract, transaction or arrangement (including any proposed contract, transaction or arrangement) with us, he or she shall declare the nature and extent of his or her interests to the board of directors at the earliest opportunity, whether or not such contract, transaction or arrangement is otherwise subject to the approval of the board. A director shall not vote, and shall not be counted in the quorum of the meeting, on any resolution concerning any contract, transaction or arrangement where the director owns material rights or interests therein. A director is deemed to be interested in a contract, transaction or arrangement in which his associate (as defined by the Listing Rule of the Hong Kong Stock Exchange) is interested.

Unless the interested director discloses his interests to the board and the contract, transaction or arrangement in which the director is materially interested is approved by the board at a meeting in which the director neither votes nor is not counted in the quorum, such contract, transaction or arrangement shall be voidable by us except with respect to a bona fide party thereto who does not have notice of the director's interests.

We are prohibited from making loans or providing guarantees to our directors and their associates except where such loan or guarantee is to meet expenditure requirement incurred or to be incurred by the director for the purposes of the company or for the purpose of enabling the director to perform his or her duties properly in accordance with the terms of a service contract approved by the shareholders in a general meeting.

The board of directors shall examine and approve the amount of the long-term loans for the current year according to the annual investment plan as approved by the shareholders' general meeting. The chairman of the board of directors is authorized to make adjustments of no more than 10% of the total amount of the long-term loans as approved by the board of directors for the current year. Within the total amount of the long-term loans as approved by the board of directors, the chairman of the board of directors is authorized to approve and execute individual long-term loan agreement with the loan amount exceeding RMB 1 billion, and the president is authorized to approve and execute individual long-term loan agreement with the loan amount not exceeding RMB 1 billion. Within the total amount of the working capital loans for the current year as approved by the board of directors, the chairman of the board of directors is authorized to execute the overall short-term loan facility agreement for raising working capitals as we need.

Matters relating to the remuneration of our directors shall be determined by the shareholders' general meeting.

Dividends

A distribution of final dividends for any financial year is subject to shareholders' approval. Except as otherwise decided by Shareholders' meeting, the board of directors may make decision on the distribution of interim dividends. Except as otherwise provided by laws and regulations, the sum of interim dividends shall not exceed 50 percent of the net profit for the half year interim period. Dividends may be distributed in the forms of cash, shares or other forms provided by laws, administrative rules or regulations of competent authorities and regulatory provisions in the place where the Company's shares are listed. The Company shall give priority to the distribution of dividends in cash. A distribution of shares, however, must be approved by special resolution of the shareholders.

Dividends may only be distributed after allowance has been made for:

- recovery of losses, if any;
- allocations to the statutory surplus reserve fund; and
- allocations to a discretionary surplus reserve fund if approved by the shareholders.

The allocations to the statutory surplus reserve fund shall be 10% of our after-tax profits of the current year determined in accordance with ASBE. In the event that the statutory surplus reserve balance reaches fifty (50) percent of the registered capital of the Company, no allocation is needed.

The articles of association require us to appoint on behalf of the holders of H shares a receiving agent which is registered as a trust corporation under the Trustee Ordinance of Hong Kong to receive dividends declared by us in respect of the H shares on behalf of such shareholders. The articles of association require that cash dividends in respect of H shares be declared in Renminbi and paid by us in HK dollars. The depositary of our ADSs will convert such proceeds into US dollars and will remit such converted proceeds to our holders of ADSs. If we record no profit for the year, we may not normally distribute dividends for the year.

Dividend payments may be subject to PRC withholding tax.

Voting Rights and Shareholders' Meetings

Our board of directors shall convene a shareholders' annual general meeting once every year and within six months from the end of the preceding financial year. Our board shall convene an extraordinary general meeting within two months of the occurrence of any one of the following events:

- where the number of directors is less than the number stipulated in the PRC Company Law or two-thirds of the number specified in our articles of association;
- where our unrecovered losses reach one-third of the total amount of our actually paid-in share capital;
- where shareholder(s) holding 10% or more of our issued and outstanding voting shares request(s) in writing the convening of an extraordinary general meeting;
- whenever our board deems necessary or our board of supervisors so requests; or
- circumstances provided in the articles of association.

Meetings of a special class of shareholders must be called in certain enumerated situations when the rights of the holders of such class of shares may be modified or adversely affected as discussed below. Proposals made by the board of directors, the board of supervisors or shareholder(s) holding 3% or more of the total number of voting shares shall be included in the agenda for the relevant general meeting if they are matters which fall within the scope of the functions and powers of shareholders in general meeting. Shareholder(s) holding 3% or more of the total shares of the Company may put forward interim motions by written proposals to the convener 10 days before the shareholders' general meeting. The convener shall publish supplementary notice to announce the interim motion within two days upon receiving.

All shareholders' meetings must be convened by our board of directors by written notice given to shareholders no less than 45 days before the meeting, by our board of supervisors or certain qualified shareholders in case a shareholders' meeting is not convened by our board of directors and board of supervisors. Shareholder(s) holding 10% or more the total number of shares of the Company have the right to convene and chair the interim shareholders' general meeting or class shareholders' meeting in accordance with the provisions in laws, administrative rules and the articles of association, in the event that the board of directors and the board of supervisors fail to convene and chair such meeting upon demand made by such shareholders. Based on the written replies received by us 20 days before a shareholders' meeting, we shall calculate the number of voting shares represented by shareholders who have indicated that they intend to attend the meeting. Where the number of voting shares represented by those shareholders amount to more than one-half of our total voting shares, we may convene the shareholders' general meeting (regardless of the number of shareholders who actually attend). Otherwise, we shall, within five days, inform the shareholders again of the motions to be considered and the date and venue of the meeting by way of public announcement. After the announcement is made, the shareholders' meeting may be convened. The accidental omission by us to give notice of a meeting to, or the non-receipt of notice of a meeting by, a shareholder will not invalidate the proceedings at that shareholders' meeting.

Shareholders at meetings have the power, among other things, to approve or reject our profit distribution plans, annual budget, financial statements, increase or decrease in share capital, issuance of debentures, merger or liquidation and any amendment to our articles of association. Shareholders of the shares which the Company issues to foreign investors for subscription in foreign currencies possess the same rights and undertake the same obligations as those of the shares which the Company issues to domestic investors for subscription in Renminbi. In addition, the rights of a class of shareholders may not be modified or abrogated, unless approved by a special resolution of all shareholders at a general shareholders' meeting and by a special resolution of shareholders of that class of shares at a separate meeting. Our articles of association enumerate, without limitation, certain amendments which would be deemed to be a modification or abrogation of the rights of a class of shareholders, including increasing or decreasing the number of shares of a class disproportionate to increases or decreases of other classes of shares, removing or reducing rights to receive dividends in a particular currency or creating shares with voting or equity rights superior to shares of such class.

Cumulative voting in accordance with the relevant laws and regulations in effect is adopted for the election of directors and supervisors. For all other matters, each share is entitled to one vote on all such matters submitted to a vote of our shareholders at all shareholders' meetings, except for meetings of a special class of shareholders where only holders of shares of the affected class are entitled to vote on the basis of one vote per share of the affected class.

Shareholders are entitled to attend and vote at meetings either in person or by proxy. Proxies must be in writing and deposited at our legal address, or such other place as is specified in the meeting notice, no less than 24 hours before the time for holding the meeting at which the proxy proposes to vote or the time appointed for the passing of the relevant resolution(s). When the instrument appointing a proxy is executed by the shareholder's attorney-in-fact, such proxy when deposited must be accompanied by a notary certified copy of the relevant power of attorney or other authority under which the proxy was executed.

Except for those actions discussed below which require supermajority votes (special resolutions), resolutions of the shareholders are passed by a simple majority of the voting shares held by shareholders who are present in person or by proxy. Special resolutions must be passed by or more than two-thirds of the voting rights represented held by shareholders who are present in person or by proxy.

The following decisions must be adopted by special resolution:

- an increase or reduction of our share capital or the issue of shares, including stock distributions, of any class, warrants and other similar securities;
- issuance of debentures;
- our division, merger, dissolution and liquidation; (Shareholders who object to a proposed division or merger are entitled to demand that either we or the shareholders who approved the merger purchase their shares at a fair price.)
- amendments to our articles of association and its appendices;
- change of our company form;
- acquisition or disposal of material assets or provision of material guarantee within one year, with the value exceeding 30% of our latest audited total assets;
- any stock incentive plan;
- any other matters required by laws and regulations or our articles of association and its appendices or considered by the shareholders in a general meeting and which they have resolved by way of an ordinary resolution to be of a nature which may have a material impact on us and should be adopted by special resolution.

All other actions taken by the shareholders, including the appointment and removal of our directors and supervisors and the declaration of cash dividend payments, will be decided by an ordinary resolution of the shareholders. The listing agreement between us and the Hong Kong Stock Exchange (Listing Agreement) provided that we may not permit amendments to certain sections of the articles of association which have been mandated by the Hong Kong Stock Exchange. These sections include provisions relating to:

- varying the rights of existing classes of shares;
- voting rights;

- our power to purchase our own shares;
- rights of non-controlling shareholders; and
- procedure on liquidation.

In addition, certain amendments to the articles of association require the approval and consent of the relevant PRC authorities.

Any shareholder resolution which is in violation of any laws or administrative regulations of the PRC will be null and void subject to statutory procedures.

Liquidation Rights

In the event of our liquidation, the H shares will rank pari passu with the domestic ordinary shares, and payment of debts out of our remaining assets shall be made in the order of priority prescribed by applicable laws and regulations or, if no such standards exist, in accordance with such procedure as the liquidation committee which has been appointed either by us or the People's Court of the PRC may consider to be fair and reasonable. After payment of debts, we shall distribute the remaining property to shareholders according to the class and proportion of their shareholders.

Further Capital Call

Shareholders are not liable to make any further contribution to the share capital other than according to the terms, which were agreed by the subscriber of the relevant shares at the time of subscription.

Increases in Share Capital and Preemptive Rights

The articles of association require the approval by a special resolution of the shareholders and by special resolution of holders of domestic ordinary shares and overseas-listed foreign invested shares at separate shareholder class meetings be obtained prior to authorizing, allotting, issuing or granting shares, securities convertible into shares or options, warrants or similar rights to subscribe for any shares or such convertible securities. No such approval is required if, but only to the extent that:

- we issue domestic ordinary shares and/or overseas-listed foreign-invested shares, either separately or concurrently, in numbers not exceeding 20% of the number of domestic ordinary shares and overseas-listed foreign-invested shares then in issue, respectively, in any 12-month period, as approved by a special resolution of the shareholders; or
- if our plans for issuing domestic ordinary shares and overseas-listed foreign-invested shares upon our establishment are implemented within fifteen months of the date of approval by the China Securities Regulatory Commission.

New issues of shares must also be approved by the relevant PRC authorities.

Reduction of Share Capital and Purchase by Us of Our Shares and General Mandate to Repurchase Shares

We may reduce our registered share capital only upon obtaining the approval of the shareholders by a special resolution and, in certain circumstances, of relevant PRC authorities. The number of H shares, which may be purchased is subject to the Hong Kong Takeovers and Share Repurchase Codes.

Restrictions on Large or Controlling Shareholders

Our articles of association provide that, in addition to any obligation imposed by laws and administration regulations or required by the listing rules of the stock exchanges on which our H shares are listed, a controlling shareholder shall not exercise his voting rights in a manner prejudicial to the interests of the shareholders generally or of some part of the shareholders:

- to relieve a director or supervisor from his or her duty to act honestly in our best interests;
- to approve the expropriation by a director or supervisor (for his or her own benefit or for the benefit of another person) of our assets in any way, including, without limitation, opportunities which may benefit us; or
- to approve the expropriation by a director or supervisor (for his or her own benefit or for the benefit of another person) of the individual rights of other shareholders, including, without limitation, rights to distributions and voting rights (save according to a restructuring of our company which has been submitted for approval by the shareholders in a general meeting in accordance with our articles of association and its appendices).

A controlling shareholder, however, will not be precluded by our articles of association or any laws and administrative regulations or the listing rules of the stock exchanges on which our H shares are listed from voting on these matters.

A controlling shareholder is defined by our articles of association as any person who acting alone or in concert with others:

- is in a position to elect half or more of the board of directors;
- has the power to exercise, or to control the exercise of, 30% or more of our voting rights;
- acting separately or in concert with others, holds 30% or more of our issued and outstanding shares; or
- acting separately or in concert with others, has de facto control of us in any other way.

As of the date of this annual report, Sinopec Group Company is and will be our only controlling shareholder.

Disclosure

The Listing Agreement imposes a requirement on us to keep the Hong Kong Stock Exchange, our shareholders and other holders of our listed securities informed as soon as reasonably practicable of any information relating to us and our subsidiaries, including information on any major new developments which are not public knowledge, which:

- is necessary to enable them and the public to appraise the position of us and our subsidiaries;
- is necessary to avoid the establishment of a false market in its securities; and
- might be reasonably expected materially to affect market activity in and the price of its securities.

There are also requirements under the Listing Rules for us to obtain prior shareholders' approval and/or to disclose to shareholders details of certain acquisitions or disposals of assets and other transactions (including transactions with controlling shareholders).

Sources of Shareholders' Rights

The PRC's legal system is based on written statutes and is a system in which decided legal cases have little precedent value. The PRC's legal system is similar to civil law systems in this regard. In 1979, the PRC began the process of developing its legal system by undertaking to promulgate a comprehensive system of laws. In December 1993, the Standing Committee of the 8th National People's Congress adopted the PRC Company Law. On October 27, 2005, the PRC Company law was amended by the Standing Committee of the 10th National People's Congress, and came into force on January 1, 2006. The amended PRC Company Law enhanced the protection of shareholders' rights primarily in the following regards:

- Shareholders holding 10 percent or more of the shares of the Company are entitled to petition the court to dissolve the Company if (i) the Company is in serious operational difficulties; (ii) its continuing existence will seriously prejudice the interests of the shareholders; and (iii) such difficulties cannot be resolved through any other means;
- Shareholders holding 1 percent or more of the shares of the Company for more than 180 consecutive days are entitled to request the board of supervisors (in terms of directors and senior management) or the board of directors (in terms of supervisors) to bring legal proceedings, or bring legal proceedings in their own name on behalf of the Company where it is in emergency and the Company will be subject to irreparable loss if not to do so, against directors, supervisors or senior management who fail to comply with the laws and regulations or the Company's articles of association in the course of performing their duties and cause loss to the Company;
- Shareholders who oppose the Company's decision on merger or separation are entitled to request the Company to repurchase their shares; and
- Shareholders holding 10 percent or more of the voting rights of the Company are entitled to convene a shareholders' meeting.

Currently, the primary sources of shareholder rights are our articles of association, as amended, the PRC Company Law and the Listing Rules of the Hong Kong Stock Exchange, which, among other things, impose certain standards of conduct, fairness and disclosure on us, our directors and our controlling shareholder, i.e., Sinopec Group Company. To facilitate the offering and listing of shares of PRC companies overseas, and to regulate the behavior of companies whose shares are listed overseas, the State Council Securities Committee and the State Commission for Restructuring the Economic System issued on August 27, 1994 the Mandatory Provisions for articles of association of Company Listing Overseas (Mandatory Provisions). These Mandatory Provisions become entrenched in that, once they are incorporated into the articles of association of a PRC company, any amendment to those provisions will only become effective after approval by the SASAC. The Listing Rules require a number of additional provisions to the Mandatory Provisions to be included in the articles of association of PRC companies listing H shares on the Hong Kong Stock Exchange (Additional Provisions). The Mandatory Provisions and the Additional Provisions have been incorporated into our articles of association.

In addition, upon the listing of and for so long as the H shares are listed on the Hong Kong Stock Exchange, we will be subject to those relevant ordinances, rules and regulations applicable to companies listed on the Hong Kong Stock Exchange, including the Listing Rules of the Hong Kong Stock Exchange, the Securities (Disclosure of Interests) Ordinance (SDI Ordinance), the Securities (Insider Dealing) Ordinance and the Hong Kong Codes on Takeovers and Mergers and Share Repurchases (Hong Kong Takeovers and Repurchase Codes).

Unless otherwise specified, all rights, obligations and protections discussed below derive from our articles of association and/or the PRC Company Law.

Enforceability of Shareholders' Rights

There has not been any public disclosure in relation to the enforcement by holders of H shares of their rights under constitutive documents of joint stock limited companies or the PRC Company Law or in the application or interpretation of the PRC or Hong Kong regulatory provisions applicable to PRC joint stock limited companies.

In most states of the United States, shareholders may sue a corporation "derivatively." A derivative suit involves the commencement by a shareholder of a corporate cause of action against persons (including corporate officers, directors or controlling shareholders) who have allegedly wronged the corporation, where the corporation itself has failed to enforce such claim against such persons directly. Such action is brought based upon a primary right of the corporation, but is asserted by a shareholder on behalf of the corporation. The PRC company law as amended in October 2005 and effective in January 2006 has also granted shareholders with the rights to bring such derivative suits.

Our articles of association provide that all differences or claims, arising from any provision of our articles of association, any right or obligation conferred or imposed by the PRC Company Law or any other relevant law or administrative regulation which concerns our affairs:

- between a holder of overseas-listed foreign-invested shares and us;
- between a holder of overseas-listed foreign-invested shares and any of our directors, supervisors, general managers, deputy general managers or other senior officers; or
- between a holder of overseas-listed foreign-invested shares and a holder of domestic ordinary shares

must be referred to arbitration at either the China International Economic and Trade Arbitration Commission in the PRC or the Hong Kong International Arbitration Center, and the laws of the PRC shall apply, save as otherwise provided in the laws and administrative regulations. Our articles of association provide that such arbitration will be final and conclusive. In June 1999, an arrangement was made between the People's Courts of the PRC and the courts of Hong Kong to mutually enforce arbitration awards rendered in the PRC and Hong Kong according to their respective laws. This new arrangement was approved by the Supreme Court of the PRC and the Hong Kong Legislative Council and became effective on February 1, 2000. We have provided an undertaking to the United States Securities and Exchange Commission that, at such time, if any, as all applicable laws and regulations of the PRC and (unless our H shares are no longer listed on the Hong Kong Stock Exchange) all applicable regulations of the Stock Exchange of Hong Kong Ltd. shall not prohibit, and to the extent Section 14 under the United States Securities Act of 1933, as amended, so requires, our board of directors shall propose an amendment to the articles of association which would permit shareholders to adjudicate disputes arising between our shareholders and us, our directors, supervisors or officers by means of judicial proceedings.

The holders of H shares will not be able to bring actions on the basis of violations of the Listing Rules and must rely on the Hong Kong Stock Exchange to enforce its rules. The SDI Ordinance establishes certain obligations in relation to disclosure of shareholder interests in Hong Kong listed companies, the violation of which is subject to prosecution by the Securities and Futures Commission of Hong Kong. The Hong Kong Takeovers and Repurchase Codes do not have the force of law and are only standards of commercial conduct considered acceptable for takeover and merger transactions and share repurchases in Hong Kong as established by the Securities and Futures Commission and the securities and futures industry in Hong Kong.

We have appointed our representative office, located 3050 Post Oak Blvd, Suite 800, Houston, Texas, 77056, as our agent to receive service of process with respect to any action brought against us in certain courts in New York under the United States federal and New York State's securities laws. However, as the PRC does not have treaties providing for the reciprocal recognition and enforcement of judgments of courts within the United States, the United Kingdom, Japan or most other the Organization for Economic Cooperation and Development countries, administrative actions brought by regulatory authorities, such as the Commission, and other actions which result in foreign court judgments, could (assuming such actions are not required by PRC law and the articles of association to be arbitrated) only be enforced in the PRC on a reciprocal basis or according to relevant international treaty to which China is a party if such judgments or rulings do not violate the basic principles of the law of the PRC or the sovereignty, security and public interest of the society of the PRC, as determined by a People's Court of the PRC which has the jurisdiction for recognition and enforcement of judgments. We have been advised by our PRC counsel, Haiwen & Partners, that there is certain doubt as to the enforceability in the PRC of actions to enforce judgments of United States courts arising out of or based on the ownership of H shares or ADSs, including judgments arising out of or based on the civil liability provisions of United States federal or state securities laws.

Restrictions on Transferability and the Share Register

As provided in the articles of associations we may refuse to register a transfer of H shares unless:

- any relevant transfer fee is paid;
- the instrument of transfer is only related to H shares listed in Hong Kong;
- the instrument of transfer is accompanied by the share certificates to which it relates, or such other evidence is given as may be reasonably necessary to show the right of the transferor to make the transfer;
- the stamp duty which is chargeable on the instrument of transfer has already been paid;
- if it is intended that the shares be transferred to joint owners, the maximum number of joint owners shall not be more than four (4); and
- the Company does not have any lien on the relevant shares.

We are required to keep a register of our shareholders which shall be comprised of various parts, including one part which is to be maintained in Hong Kong in relation to H shares to be listed on the Hong Kong Stock Exchange. Shareholders have the right to inspect and, for a nominal charge, to copy the share register. No transfers of ordinary shares shall be recorded in our share register within 30 days prior to the date of a shareholders' general meeting or within 5 days prior to the record date established for the purpose of distributing a dividend.

We have appointed HKSCC Registrars Limited to act as the registrar of our H shares. This registrar maintains our register of holders of H shares at our offices in Hong Kong and enters transfers of shares in such register upon the presentation of the documents described above.

C. MATERIAL CONTRACTS

We have not entered into any material contracts other than in the ordinary course of business and other than those described under “Item 4. Information on the Company,” “Item 7. Major Shareholders and Related Party Transactions” or elsewhere in this Form 20-F.

D. EXCHANGE CONTROLS

The existing foreign exchange regulations have significantly reduced government foreign exchange controls for transactions under the current account, including trade and service related foreign exchange transactions and payment of dividends. We may undertake current account foreign exchange transactions without prior approval from the State Administration of Foreign Exchange by producing commercial documents evidencing such transactions, provided that they are processed through Chinese banks licensed to engage in foreign exchange transactions. The PRC government has stated publicly that it intends to make the Renminbi freely convertible in the future. However, we cannot predict whether the PRC government will continue its existing foreign exchange policy and when the PRC government will allow free conversion of Renminbi to foreign currency.

Foreign exchange transactions under the capital account, including principal payments in respect of foreign currency-denominated obligations, continue to be subject to significant foreign exchange controls and require the approval of the State Administration of Foreign Exchange. These limitations could affect our ability to obtain foreign exchange through debt or equity financing, or to obtain foreign exchange for capital expenditures.

The exchange rate of the Renminbi against the US dollar and other foreign currencies fluctuates and is affected by, among other things, the changes in the PRC's and international political and economic conditions. The PRC government has been gradually promoting the reform of exchange rate regime and enhance the flexibility of Renminbi exchange rate. On August 11, 2015, the PBOC decided to further improve the mechanism of RMB's central parity rate against the US dollar. Any fluctuation of exchange rate of the Renminbi against US dollars and Hong Kong dollars may have an effect on our revenues and financial condition, and the value of, and any dividends payable on, our ADSs in foreign currency terms. We cannot assure you that the fluctuation of exchange rate of the Renminbi against US dollars or other foreign currencies would not have a material and adverse effect on our operation and financial condition in the future. Information relating to the exchange risk, exchange rate and hedging activities is presented in "Item 11. Qualitative and Quantitative Disclosures about Market risk—Foreign Exchange Rate Risk."

E. TAXATION

PRC Taxation

The following discussion addresses the principal PRC tax consequences of investing in the H shares or ADSs.

Taxation of Dividends

Individual Investors

According to the PRC Individual Income Tax Law, as amended, dividends paid by Chinese companies are ordinarily subject to a Chinese withholding tax levied at a flat rate of 20%. For a foreign individual who has no domicile and does not stay in the territory of China or who has no domicile but has stayed in the territory of China for less than 183 days, the receipt of dividends from a company in China is normally subject to a withholding tax of 20% unless reduced or exempted by an applicable tax treaties.

Foreign Enterprises

In accordance with the new Enterprise Income Tax Law and its implementation rules that became effective on January 1, 2008 and amended on February 24, 2017 and December 29, 2018, dividends derived from the revenues accumulated from January 1, 2008 and are paid to non-resident enterprises, which are established under the laws of non-PRC jurisdictions and have no establishment or place of business in China or whose dividends from China do not relate to their establishment or place of business in China, are generally subject to a PRC withholding tax levied at a rate of 10% unless exempted or reduced pursuant to an applicable double-taxation treaty or other exemptions. Dividends paid by PRC companies to resident enterprises, including enterprises established under the laws of non-PRC jurisdictions but whose "de facto management body" is located in the PRC, are not subject to any PRC withholding tax, unless the investment income are derived from the publicly traded shares which have been held continuously by the resident enterprises for less than twelve months. Dividends, bonuses and other return based on equity investment that a non-resident enterprise with establishment or place of business in China receives from a resident enterprise and that have actual connection with such establishment or place of business are also exempted from any PRC withholding tax, except for investment income derived from the publicly traded shares which have been held continuously by the resident enterprises for less than 12 months. Chinese resident enterprises are required to withhold PRC enterprise income tax at the rate of 10% on dividends paid for 2009 and later years' earnings payable to their respective H Shares holders that are "non-resident enterprises," except for those holders whose dividend income is not subject to PRC enterprise income tax pursuant to PRC governmental approval.

Tax Treaties

Holders resident in countries which have entered into avoidance of double taxation treaties or arrangements with the PRC may be entitled to a reduction or exemption of the withholding tax imposed on the payment of dividends.

Under a tax treaty between United States and China, China may tax dividends paid by Sinopec Corp. to eligible US Holders up to a maximum of 10% of the gross amount of such dividend. Under the tax treaty, an eligible US Holder is a person who, by reason of domicile, residence, place of head office, place of incorporation or any other criterion of similar nature is liable to tax in the United States, subject to a detailed “treaty shopping” provision.

Taxation of Capital Gains

In accordance with the new Enterprise Income Tax Law effective from January 1, 2008 and amended on January 8, 2011, February 24, 2017 and December 29, 2018, and its implementation rules, capital gains realized by foreign enterprises which are non-resident enterprises in China upon the sale of overseas-listed shares are generally subject to a PRC withholding tax levied at a rate of 10%, unless exempted or reduced pursuant to an applicable double-taxation treaty or other exemptions. The capital gains realized by resident enterprises, including enterprises established under the laws of non-PRC jurisdictions but whose “de facto management body” is located in the PRC, upon the sales of overseas-listed shares are subject to the PRC enterprise income tax.

PRC Stamp Tax Considerations

Under the Provisional Regulations of The People’s Republic of China Concerning Stamp Tax, which was effective on October 1, 1988 and amended in January 2011, PRC stamp tax should not be imposed on the transfer of shares of H Shares or ADSs of PRC publicly traded companies.

United States Federal Income Tax Considerations

The following is a summary of United States federal income tax considerations relating to the ownership and disposition of our H shares or ADSs by a US Holder (as defined below). This summary is based upon existing United States federal income tax law, which is subject to differing interpretations or change, possibly with retroactive effect. This summary does not discuss all aspects of United States federal income taxation which may be important to particular investors in light of their individual investment circumstances, such as certain investors subject to special tax rules including: financial institutions, regulated investment companies, real estate investment trusts, broker-dealers, cooperatives, pension plans, insurance companies, traders in securities that elect mark-to-market treatment, partnerships and their partners, tax-exempt organizations (including private foundations), non-US Holders, holders who own (directly, indirectly, or constructively) 10% or more of our stock (by vote or value), investors that hold H shares or ADSs as part of a straddle, hedge, conversion, constructive sale, or other integrated transaction for United States federal income tax purposes, holders who acquired their H shares or ADSs pursuant to any employee share option or otherwise as compensation, or US Holders that have a functional currency other than the United States dollar, all of whom may be subject to tax rules that differ significantly from those summarized below. In addition, this summary does not discuss any state, local, non-United States, alternative minimum tax, non-income tax (such as the U.S. federal estate and gift tax) or Medicare considerations. This summary assumes that our H shares or ADSs held by investors are “capital assets” (generally, property held for investment) under the United States Internal Revenue Code of 1986, as amended (Code). US Holders should consult their tax advisors regarding the United States federal, state, local, and non-United States income and other tax considerations relating to their ownership or disposition of our H shares or ADSs.

For purposes of this summary, a US Holder is a beneficial owner of H shares or ADSs that is, for United States federal income tax purposes:

- an individual who is a citizen or resident of the United States;

- a corporation created in or organized under the laws of, the United States or any State thereof or the District of Columbia;
- an estate the income of which is includible in gross income for United States federal income tax purposes regardless of its source; or
- a trust (a) the administration of which is subject to the primary supervision of a United States court and which has one or more United States persons who have the authority to control all substantial decisions of the trust or (b) a trust that has otherwise elected to be treated as a United States person under the Code.

If a partnership (including any entity treated as a partnership for United States federal income tax purposes) is a beneficial owner of H shares or ADSs, the tax treatment of a partner in such partnership will depend upon the status of the partner and the activities of the partnership. Partners in a partnership holding our H shares or ADSs should consult their tax advisors regarding the United States federal income tax considerations relating to the investment in our H shares or ADSs.

For United States federal income tax purposes, it is generally expected that US Holders of ADSs will be treated as the beneficial owners of the underlying H shares represented by the ADSs. The remainder of this discussion assumes that a holder of ADSs will be treated in this manner. Accordingly, deposits or withdrawals of H shares for ADSs will generally not be subject to United States federal income tax.

Passive Foreign Investment Company Considerations

A non-United States corporation, such as our company, will be a “passive foreign investment company” (PFIC), for United States federal income tax purposes for any taxable year, if either (a) 75% or more of its gross income for such year consists of certain types of “passive” income or (b) 50% or more of the value of our assets (generally based on the average quarterly value of our assets during the taxable year) produce or are held for the production of passive income. For this purpose, cash and assets readily convertible into cash are categorized as passive assets and the Company’s goodwill and other unbooked intangibles associated with active business activities may generally be classified as active assets. We will be treated as owning a proportionate share of the assets and earning a proportionate share of the income of any other corporation in which we own, directly or indirectly, 25% or more (by value) of the stock.

We do not believe that we were classified as a PFIC for the taxable year ended December 31, 2020 and we do not expect to be classified as a PFIC for the current taxable year or for the foreseeable future. The determination of whether we will be or become a PFIC will depend, in part, upon the composition of our income and our assets (which are subject to change from year to year) and the market price of our H shares or ADSs (which we cannot control). Although we do not expect that our business plans will change in a manner that will affect our PFIC status, no assurance can be given in this regard. Because there are uncertainties in the application of the relevant rules and PFIC status is a fact-intensive determination made on an annual basis, no assurance can be given that we will not be classified as a PFIC for any taxable year.

The discussion below under “Dividends” and “Sale or Other Disposition” of H shares or ADSs assumes that we will not be classified as a PFIC for United States federal income tax purposes. See the discussion below under the heading “Passive Foreign Investment Company Rules” for a brief summary of the PFIC rules.

Dividends

The gross amount of any cash distributions (including the amount of any tax withheld) paid on our H shares or ADSs out of our current or accumulated earnings and profits, as determined under United States federal income tax principles, will be subject to tax as dividend income on the day actually or constructively received by a US Holder, in the case of H shares, or by the depository bank, in the case of ADSs. Because we do not intend to determine our earnings and profits on the basis of United States federal income tax principles, any distribution paid will generally be reported as a “dividend” for United States federal income tax purposes. A non-corporate recipient of dividend income will generally be subject to tax on dividend income from a “qualified foreign corporation” at a reduced capital gains rate rather than the marginal tax rates generally applicable to ordinary income provided that the holding period requirement is met.

A non-U.S. corporation (other than a corporation that is classified as a PFIC for the taxable year in which the dividend is paid or the preceding taxable year) generally will be considered to be a qualified foreign corporation (i) if it is eligible for the benefits of a comprehensive tax treaty with the United States which the Secretary of Treasury of the United States determines is satisfactory for purposes of this provision and which includes an exchange of information program or (ii) with respect to any dividend it pays on stock which is readily tradable on an established securities market in the United States. There is currently a tax treaty in effect between the United States and the People's Republic of China (U.S.-PRC Treaty) which the Secretary of Treasury of the United States determined is satisfactory for these purposes and we believe that we are eligible for the benefits of such treaty. Additionally, our ADSs trade on the New York Stock Exchange, an established securities market in the United States. Although we presently believe that we are a qualified foreign corporation for purposes of the reduced tax rate, no assurance can be given that we will continue to be treated as a qualified foreign corporation in the future. US Holders should consult their tax advisors regarding the availability of the reduced tax rate on dividends under their particular circumstances. Dividends received on H shares or ADSs will not be eligible for the dividends received deduction allowed to corporations.

Dividends paid in non-United States currency will be includible in income in a United States dollar amount based on the exchange rate prevailing at the time of receipt of such dividends by the depositary, in the case of ADSs, or by the US Holder, in the case of H shares held directly by such US Holder, regardless of whether the non-United States currency is actually converted into United States dollars at that time. Gain or loss, if any, recognized on a subsequent sale, conversion or other disposition of the non-United States currency will generally be United States source income or loss.

Dividends received on H shares or ADSs will be treated, for United States foreign tax credit purposes, as foreign source income. A US Holder may be eligible, subject to a number of complex limitations, to claim a foreign tax credit in respect of any non-United States withholding taxes imposed on dividends received on H shares or ADSs. US Holders who do not elect to claim a foreign tax credit for foreign income tax withheld may instead claim a deduction, for United States federal income tax purposes, in respect of such withholdings, but only for a year in which the US Holder elects to do so for all creditable foreign income taxes. US Holders should consult their tax advisors regarding the availability of the foreign tax credit under their particular circumstances.

Sale or Other Disposition of H shares or ADSs

A US Holder will recognize capital gain or loss upon the sale or other disposition of H shares or ADSs in an amount equal to the difference between the amount realized upon the disposition and the US Holder's adjusted tax basis in such H shares or ADSs. Any capital gain or loss will be long-term if the H shares or ADSs have been held for more than one year and will generally be United States source gain or loss for United States foreign tax credit purposes. If any PRC tax were to be imposed on any gain from the disposition of H shares or ADSs, however, a US Holder that is eligible for the benefits of the U.S.- PRC Treaty may elect to treat the gain as non-United States source gain or loss. The deductibility of a capital loss may be subject to limitations. The rules governing the foreign tax credit are complex and their outcome depends in large part on the US Holder's individual facts and circumstances. Accordingly, US Holders should consult their tax advisors regarding the availability of the foreign tax credit under their particular circumstances.

US Holders that receive currency other than the United States dollar upon the sale or other disposition of H shares will realize an amount equal to the United States dollar value of the non-United States currency on the date of such sale or other disposition, or if the shares are traded on an established securities market, in the case of cash basis and electing accrual basis taxpayers, the settlement date. US Holders will recognize currency gain or loss if the United States dollar value of the currency received on the settlement date differs from the amount realized. US Holders will have a tax basis in the currency received equal to the United States dollar amount at the spot rate on the settlement date. Generally, any gain or loss realized by US Holders on a subsequent conversion or disposition of such currency will be United States source ordinary income or loss.

Passive Foreign Investment Company Rules

If we were to be classified as a PFIC in any taxable year, a special tax regime will apply to both (a) any “excess distribution” by us to a US Holder (generally, the US Holder’s ratable portion of distributions in any year which are greater than 125% of the average annual distribution received by such US Holder in the shorter of the three preceding years or the US Holder’s holding period for our H shares or ADSs) and (b) any gain realized on the sale or other disposition of the H shares or ADSs. Under this regime, any excess distribution and realized gain will be treated as ordinary income and will be subject to tax as if (a) the excess distribution or gain had been realized ratably over the US Holder’s holding period, (b) the amount deemed realized in each year had been subject to tax in each year of that holding period at the highest marginal rate for such year (other than income allocated to the current period or any taxable period before we became a PFIC, which would be subject to tax at the US Holder’s regular ordinary income rate for the current year and would not be subject to the interest charge discussed below), and (c) the interest charge generally applicable to underpayments of tax had been imposed on the taxes deemed to have been payable in those years. In addition, dividends made to a US Holder will not qualify for the lower rates of taxation applicable to long-term capital gains discussed above under “Dividends.”

If a “mark-to-market” election is available and a US Holder validly makes such an election, notwithstanding the foregoing, such a holder generally will be required to take into account the difference, if any, between the fair market value and its adjusted tax basis in H shares or ADSs at the end of each taxable year as ordinary income or ordinary loss (to the extent of any net mark-to-market gain previously included in income). In addition, any gain from a sale or other disposition of H shares or ADSs will be treated as ordinary income, and any loss will be treated as ordinary loss (to the extent of any net mark-to-market gain previously included in income).

Because a mark-to-market election technically cannot be made for any lower-tier PFICs that we may own, a US Holder may continue to be subject to the PFIC rules with respect to such US Holder’s indirect interest in any investments held by us that are treated as an equity interest in a PFIC for United States federal income tax purposes.

We do not intend to provide information necessary for US Holders to make qualified electing fund elections which, if available, would result in tax treatment different from (and generally less adverse than) the general tax treatment for PFICs described above.

Each US Holder is urged to consult its tax advisor concerning the United States federal income tax consequences of holding and disposing H shares or ADSs if we are or become treated as a PFIC, including the possibility of making a mark-to-market election, the “deemed sale” and “deemed dividend” elections and the unavailability of the election to treat us as a qualified electing fund.

F. DIVIDENDS AND PAYING AGENTS

Not applicable.

G. STATEMENT BY EXPERTS

Not applicable.

H. DOCUMENTS ON DISPLAY

This annual report contains exhibits and schedules. Any statement in this annual report about any of our contracts or other documents is not necessarily complete. If the contract or document is filed or incorporated by reference as an exhibit to this annual report, the contract or document is deemed to modify the description contained in this annual report. You must review the exhibits themselves for a complete description of the contracts or documents.

Copies of reports and other information, when so filed, may be inspected without charge and may be obtained at prescribed rates at the public reference facilities maintained by the SEC at Judiciary Plaza, 450 Fifth Street, Room 1024, NW, Washington, D.C. 20549; or at New York (address: 233 Broadway, New York, NY 10279) and Chicago (address: Citicorp Center, 500 West Madison Street, Suite 1400, Chicago, Illinois 60661). Copies of the above materials may also be obtained from the Public Information Department of SEC at 450 Fifth Street, NW, Washington DC 20549, charges as appropriate. You may also view the registration statement (including attachments and schedules) at the New York Stock Exchange at Wall Street, New York, NY 10005. The public may obtain information regarding the Washington, D.C. Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC also maintains a web site at www.sec.gov. As a foreign private issuer, we are exempt from the rules under the Exchange Act prescribing the furnishing and content of quarterly reports and proxy statements, and officers, directors and principal shareholders are exempt from the reporting and short-swing profit recovery provisions contained in Section 16 of the Exchange Act.

I. SUBSIDIARY INFORMATION

Not applicable.

ITEM 11. QUALITATIVE AND QUANTITATIVE DISCLOSURES ABOUT MARKET RISK

Our primary market risk exposures are to fluctuations in oil and gas prices, exchange rates and interest rates. Please also refer to Note 40 to the consolidated financial statements included elsewhere in this annual report for a detailed discussion of other market risks that we have exposure to.

Commodity Price Risk

We engage in oil and gas operations and is exposed to commodity price risk related to price volatility of crude oil, refined oil products and chemical products. The fluctuations in prices of crude oil, refined oil products and chemical products could have significant impact on us. We use derivative financial instruments, including commodity futures and swaps contracts, to manage a portion of such risk.

As of December 31, 2020, we had certain commodity contracts of crude oil, refined oil products and chemical products designated as qualified cash flow hedges and economic hedges. As of December 31, 2020, the fair value of such derivative hedging financial instruments is derivative financial assets of RMB 12,353 million (2019: RMB 788 million) and derivative financial liabilities of RMB 4,808 million (2019: RMB 2,728 million).

As of December 31, 2020, it is estimated that a general increase/decrease of USD 10 per barrel in basic price of derivative financial instruments, with all other variables held constant, would impact the fair value of derivative financial instruments, which would increase/decrease our net income for the year by approximately RMB 3,592 million (2019: increase/decrease RMB 3,134 million), and increase/decrease our other comprehensive income by approximately RMB 10,379 million (2019: decrease/increase RMB 4,289 million). This sensitivity analysis has been determined assuming that the change in prices had occurred at the balance sheet date and the change was applied to our derivative financial instruments at that date with exposure to commodity price risk. The analysis is performed on the same basis for 2019.

Foreign Exchange Rate Risk

The Renminbi is not a freely convertible currency. With the authorization from the PRC government, the PBOC announced that the PRC government reformed the exchange rate regime by moving into a managed floating exchange rate regime based on market supply and demand with reference to a basket of currencies on July 21, 2005. The PRC government has been gradually promoting the Renminbi exchange rate formation mechanism to enhance the flexibility of Renminbi exchange rate. On August 11, 2015, the PBOC decided to further improve the mechanism of RMB's central parity rate against the US dollar. Actions taken by the PRC government could cause future exchange rates to vary significantly from current or historical exchange rates. Fluctuations in exchange rates may adversely affect the value, translated or converted into US dollars or Hong Kong dollars, of our net assets, earnings and any declared dividends. We cannot give any assurance that any future movements in the exchange rate of the Renminbi against the US dollar and other foreign currencies will not adversely affect our results of operations and financial condition.

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The following presents various market risk information regarding market-sensitive financial instruments that we held or issued as of December 31, 2019 and 2020. We conduct our business primarily in Renminbi, which is also our functional and reporting currency.

The following tables provide information regarding instruments that are sensitive to foreign exchange rates as of December 31, 2019 and 2020. For debt obligations, the table presents cash flows and related weighted average rates by expected maturity dates.

	As of December 31, 2020							
	Expected Maturity Date						Total carrying amount	Fair Value
	2021	2022	2023	2024	2025	Thereafter		
	(RMB equivalent in millions, except interest rate)							
Assets								
Cash and cash equivalent								
In US Dollar	27,456	-	-	-	-	-	27,456	27,456
In HK Dollar	1,410	-	-	-	-	-	1,410	1,410
In Japanese Yen	38	-	-	-	-	-	38	38
In Euro	402	-	-	-	-	-	402	402
Others	2,406	-	-	-	-	-	2,406	2,406
Time deposits with financial institutions								
In US Dollar	8,413	-	-	-	-	-	8,413	8,413
Liabilities								
Debts in US Dollar								
Fixed rate	643	13	1	8,140	1	3,247	12,045	12,742
Average interest rate	1.56%	-	-	1.74%	-	1.42%		
Variable rate	2,679	5	5	5	5	1,412	4,111	4,111
Average interest rate ⁽¹⁾	1.12%	-	-	-	-	1.56%		
Debts in HK Dollar								
Fixed rate	-	-	-	-	-	-	-	-
Average interest rate	-	-	-	-	-	-		
Variable rate	31	-	-	-	-	-	31	31
Average interest rate ⁽¹⁾	4.35%	-	-	-	-	-		
Debts in Euro								
Fixed rate	172	-	-	-	-	-	172	172
Average interest rate	0.1%	-	-	-	-	-		
Variable rate	-	-	-	-	-	-	-	-
Average interest rate ⁽¹⁾	-	-	-	-	-	-		

(1) The average interest rates for variable rate debts are calculated based on the rates reported as of December 31, 2020.

	As of December 31, 2019							
	Expected Maturity Date						Total carrying amount	Fair Value
	2020	2021	2022	2023	2024	Thereafter		
	(RMB equivalent in millions, except interest rate)							
Assets								
Cash and cash equivalent								
In US Dollar	15,962	-	-	-	-	-	15,962	15,962
In HK Dollar	28	-	-	-	-	-	28	28
In Japanese Yen	30	-	-	-	-	-	30	30
In Euro	114	-	-	-	-	-	114	114
Others	96	-	-	-	-	-	96	96
Time deposits with financial institutions								
In US Dollar	15,074	-	-	-	-	-	15,074	15,074
Liabilities								
Debts in US Dollar								
Fixed rate	930	31	18	8,700	6	3,504	13,189	13,493
Average interest rate	2.47%	1.39%	1.27%	2.69%	0.74%	1.40%		
Variable rate	1,421	-	-	-	-	-	1,421	1,421
Average interest rate ⁽¹⁾	3.24%	-	-	-	-	-		
Debts in HK Dollar								
Fixed rate	469	-	-	-	-	-	469	469
Average interest rate	3.84%	-	-	-	-	-		
Variable rate	26	-	-	-	-	-	26	26
Average interest rate ⁽¹⁾	4.35%	-	-	-	-	-		
Debts in Euro								
Fixed rate	25	-	-	-	-	-	25	25
Average interest rate	0.8%	-	-	-	-	-		
Variable rate	-	-	-	-	-	-	-	-
Average interest rate ⁽¹⁾	-	-	-	-	-	-		

(1) The average interest rates for variable rate debts are calculated based on the rates reported as of December 31, 2019.

Interest Rate Risk

We are exposed to interest rate risk resulting from fluctuations in interest rates on our short-term and long-term debts. Upward fluctuations in interest rates increase the cost of new debt and the interest cost of outstanding floating rate borrowings.

Our debts consist of fixed and variable rate debt obligations with original maturities ranging from one to thirty years. Fluctuations in interest rates can lead to significant fluctuations in the fair values of our debt obligations.

The following tables present principal cash flows and related weighted average interest rates by expected maturity dates of our interest rate sensitive financial instruments as of December 31, 2019 and 2020.

	As of December 31, 2020						Total carrying amount ⁽²⁾	Fair value
	Expected Maturity Date							
	2021	2022	2023	2024	2025	There- after		
(RMB equivalent in millions, except interest rate)								
Assets								
Cash and cash equivalent								
In RMB	55,847	-	-	-	-	-	55,847	55,847
In US Dollar	27,456	-	-	-	-	-	27,456	27,456
In HK Dollar	1,410	-	-	-	-	-	1,410	1,410
In Japanese Yen	38	-	-	-	-	-	38	38
In Euro	402	-	-	-	-	-	402	402
Others	2,406	-	-	-	-	-	2,406	2,406
Time deposits with financial institutions								
In RMB	92,085	-	-	-	-	-	92,085	92,085
In US Dollar	8,413	-	-	-	-	-	8,413	8,413
Liabilities								
Debts in RMB								
Fixed rate	11,882	7,517	32,160	3,508	12,170	679	67,916	63,567
Average interest rate	2.00%	2.10%	1.39%	1.08%	2.24%	0.59%		
Variable rate	13,547	3,065	7,225	1,897	2,502	337	28,573	28,573
Average interest rate ⁽¹⁾	2.94%	3.03%	2.81%	3.32%	4.32%	4.75%		
Debts in US Dollar								
Fixed rate	643	13	1	8,140	1	3,247	12,045	12,742
Average interest rate	1.56%	-	-	1.74%	-	1.42%		
Variable rate	2,679	5	5	5	5	1,412	4,111	4,111
Average interest rate ⁽¹⁾	1.12%	-	-	-	-	1.56%		
Debts in HK Dollar								
Fixed rate	-	-	-	-	-	-	-	-
Average interest rate	-	-	-	-	-	-	-	-
Variable rate	31	-	-	-	-	-	31	31
Average interest rate ⁽¹⁾	4.35%							
Debts in Euro								
Fixed rate	172	-	-	-	-	-	172	172
Average interest rate	0.1%	-	-	-	-	-	-	-
Variable rate	-	-	-	-	-	-	-	-

(1) The average interest rates for variable rate debts are calculated based on the rates reported as of December 31, 2020.

(2) Carrying amounts are used for loans from Sinopec Group Company and its affiliates as it is not practicable to estimate their fair values because the cost of obtaining discount and borrowing rates for comparable borrowings would be excessive.

	As of December 31, 2019							
	Expected Maturity Date						Total carrying amount ⁽²⁾	Fair value
	2020	2021	2022	2023	2024	Thereafter		
	(RMB equivalent in millions, except interest rate)							
Assets								
Cash and cash equivalent								
In RMB	44,208	-	-	-	-	-	44,208	44,208
In US Dollar	15,962	-	-	-	-	-	15,962	15,962
In HK Dollar	28	-	-	-	-	-	28	28
In Japanese Yen	30	-	-	-	-	-	30	30
In Euro	114	-	-	-	-	-	114	114
Others	96	-	-	-	-	-	96	96
Time deposits with financial institutions								
In RMB	52,540	-	-	-	-	-	52,540	52,540
In US Dollar	15,074	-	-	-	-	-	15,074	15,074
Liabilities								
Debts in RMB								
Fixed rate	59,462	715	7,714	2,587	3,544	7,998	82,020	81,037
Average interest rate	1.64%	1.40%	2.02%	1.58%	1.50%	3.93%		
Variable rate	21,476	4,349	2,078	1,722	1,463	14,406	45,494	45,494
Average interest rate ⁽¹⁾	3.05%	3.22%	3.71%	4.07%	3.96%	4.46%		
Debts in US Dollar								
Fixed rate	930	31	18	8,700	6	3,504	13,189	13,493
Average interest rate	2.47%	1.39%	1.27%	2.69%	0.74%	1.40%		
Variable rate	1,421	-	-	-	-	-	1,421	1,421
Average interest rate ⁽¹⁾	3.24%	-	-	-	-	-		
Debts in HK Dollar								
Fixed rate	469	-	-	-	-	-	469	469
Average interest rate	3.84%	-	-	-	-	-		
Variable rate	26	-	-	-	-	-	26	26
Average interest rate ⁽¹⁾	4.35%	-	-	-	-	-		
Debts in Euro								
Fixed rate	25	-	-	-	-	-	25	25
Average interest rate	0.8%	-	-	-	-	-		
Variable rate	-	-	-	-	-	-	-	-
Average interest rate ⁽¹⁾	-	-	-	-	-	-		

(1) The average interest rates for variable rate debts are calculated based on the rates reported as of December 31, 2019.

(2) Carrying amounts are used for loans from Sinopec Group Company and its affiliates as it is not practicable to estimate their fair values because the cost of obtaining discount and borrowing rates for comparable borrowings would be excessive.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

A. DEBT SECURITIES

Not applicable.

B. WARRANTS AND RIGHTS

Not applicable.

C. OTHER SECURITIES

Not applicable.

D. AMERICAN DEPOSITARY SHARES

Depository Fees and Charges

Under the terms of the Deposit Agreement for China Petroleum & Chemical Corporation's American Depositary Shares (ADSs), an ADS holder may have to pay the following services fees to the Depository:

Services	Fees
Issuance of ADSs	US\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs) issued
Cancellation of ADSs	US\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs) canceled
Distribution of cash dividends or other cash distributions	US\$2.00 (or less) per 100 ADSs (or portion of 100 ADSs) held
Distribution of ADSs pursuant to stock dividends, free stock distributions or exercises of rights	US\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs) held
Distribution of securities other than ADSs or rights to purchase additional ADSs	US\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs) held

An ADS holder will also be responsible to pay certain fees and expenses incurred by the Depository and certain taxes and governmental charges such as:

- Taxes (including relevant interests and fines) and other governmental charges;
- such registration fees as may from time to time be in effect, for the registration of deposited securities in the register of members, or for the registration of transfers of deposited securities to the name of the Depository or its nominee or the Custodian or its nominee on the making of deposits or withdrawals;
- such cable, telex and facsimile transmission expenses as are expressly provided in the Deposit Agreement;
- such expenses as are incurred by the Depository in the conversion of foreign currency;
- such expenses as are incurred with the compliance with the foreign currency control, ADSs and other deposited securities related laws, regulations and rules; and
- any other charge payable by the Depository, any of the Depository's agents, including the Custodian, Depository, or the agents of the Custodian or Depository, in connection with the servicing of deposited securities.

Depository Payments for the Year 2020

In 2020, Citibank, N.A., the Depository for our ADR program, provided reimbursement net of applicable withholding taxes for our expenses related to the listing and investor' relations activities as follows:

- reimbursement of application fees: US\$ 91,472.7
- reimbursement of data infrastructure fees: US\$ 5,055.5
- reimbursement of proxy procedure fees: US\$ 116,768.6
- reimbursement of investor relations expenses (including expenses related to non-deal road show, investor meeting and investor relations agency): US\$ 209,605.6
- the accounting committee and accounting standard committee of public company: US\$ 48,765.3
- Total: US\$ 471,667.5

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

A. MATERIAL MODIFICATIONS TO THE RIGHTS TO SECURITIES HOLDERS

None.

B. USE OF PROCEEDS

Not applicable.

ITEM 15. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure the information required to be disclosed in reports filed by us under the U.S. Securities Exchange Act of 1934 (Exchange Act), as amended, is recorded, processed, summarized and reported within the time periods specified in the Securities and Exchange Commission's rules and forms and that such information is accumulated and communicated to our management, including our principal executive officer and principal financial officer, as appropriate, to allow for timely decisions regarding required disclosure. Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act) as of December 31, 2020 (Evaluation Date), the end of the fiscal year covered by this annual report. Based on this evaluation, our principal executive officer and principal financial officer have concluded that, as of the Evaluation Date, our disclosure controls and procedures were effective.

Management's Annual Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting (as defined in Rules 13a-15(f) of the Securities Exchange Act of 1934). The Company's internal control over financial reporting is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

Internal control over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management assessed the effectiveness of our internal control over financial reporting based upon the criteria established in *Internal Control — Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission as of December 31, 2020. Based on that evaluation, our management has concluded that our internal control over financial reporting was effective as of December 31, 2020 based on these criteria.

PricewaterhouseCoopers Zhong Tian LLP, an independent registered public accounting firm, has audited the consolidated financial statements included in this annual report on Form 20-F and, as part of the audit, has issued a report, included herein, on the effectiveness of our internal control over financial reporting.

Changes in Internal Control over Financial Reporting

During the year ended December 31, 2020, there have been no changes in our internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16. RESERVED

[Reserved]

ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

The board of directors has determined that Mr. Ng, Kar Ling Johnny qualifies as an audit committee financial expert in accordance with the terms of Item 16A. of Form 20-F. Mr. Ng was appointed as an independent non-executive director and a manager of the audit committee of the seventh board of our company in 2018. For Mr. Ng's biographical information, see "Item 6 Directors, Senior Management and Employees—A. Directors, Supervisors and Senior Management."

ITEM 16B. CODE OF ETHICS

Our controlling shareholder, Sinopec Group Company, has adopted a Staff Code to provide disciplines and requirements for its staff's conducts, including legal and ethical matters as well as the sensitivities involved in reporting illegal and unethical matters. The Staff Code covers such areas as HSE, conflict of interests, anti-corruption, protection and proper use of our assets and properties as well as reporting requirements. The Staff Code also applies to all directors, officers and employees of each subsidiary of Sinopec Group Company, including us. We have provided all our directors and senior officers with a copy of the Staff Code and require them to comply with it in order to ensure our operations are proper and lawful. We have posted the Staff Code on our website, <http://www.sinopec.com/listco/en/Resource/Pdf/ygsz2014b.pdf>.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table sets forth the aggregate audit fees, audit-related fees, tax fees of our principal accountants and all other fees billed for products and services provided by our principal accountants other than the audit fees, audit-related fees and tax fees for each of the fiscal years 2019 and 2020.

	Audit Fees	Audit-Related Fees	Tax Fees	Other Fees
2019	RMB 69.77 million	—	—	RMB 5.71 million
2020	RMB 72.96 million	—	—	RMB 7.67 million

We are allowed to engage our principal accountants to render audit or non-audit services, only after the engagement is approved by our audit committee.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Not applicable.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASERS

None.

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING ACCOUNTANT

On March 26, 2021, our board of directors resolved to propose change in our independent registered public accounting firm, PricewaterhouseCoopers Zhong Tian LLP, after the completion of the audit of the December 31, 2020 consolidated financial statements and the audit of the effectiveness of internal control over financial reporting as of December 31, 2020. According to the relevant regulations issued by the Ministry of Finance of the People's Republic of China and the State-owned Assets Supervision and Administration Commission of the State Council of the People's Republic of China (the "SASAC"), there are restrictions in respect of the number of years of audit services that an accounting firm can continuously provide to the Company (the "SASAC Rotation Requirements"). PricewaterhouseCoopers Zhong Tian LLP will retire as the external auditor of the Company due to the SASAC Rotation Requirements. The decision is subject to the approval by the shareholders of the Company at the annual general meeting for the year 2020.

During the two most recent fiscal years and through April 20, 2021, there have been no disagreements (as defined in Item 16F(a)(1)(iv) of Form 20-F and related instructions to Item 16-F of Form 20-F) with PricewaterhouseCoopers Zhong Tian LLP on any matter of accounting principles or practices, financial statement disclosure, or auditing scope or procedure, which disagreements if not resolved to the satisfaction of PricewaterhouseCoopers Zhong Tian LLP would have caused it to make reference thereto in their report on the consolidated financial statements for such years.

During the two most recent fiscal years and through April 20, 2021, there have been no "reportable events" (hereinafter defined) requiring disclosure pursuant to Item 16F(a)(1)(v) of Form 20-F. As used herein, the term "reportable event" means any of the items listed in paragraphs (a)(1)(v)(A)-(D) of Item 16F of Form 20-F.

The audit reports of PricewaterhouseCoopers Zhong Tian LLP on the consolidated financial statements of China Petroleum & Chemical Corporation as of and for the years ended December 31, 2019 and 2020 did not contain any adverse opinion or disclaimer of opinion, nor were they qualified or modified as to uncertainty, audit scope, or accounting principles.

We provided a copy of this disclosure to PricewaterhouseCoopers Zhong Tian LLP and requested that PricewaterhouseCoopers Zhong Tian LLP furnish a letter addressed to the SEC stating whether it agrees with the above statements, and if not, stating the respects in which it does not agree. A copy of the letter from PricewaterhouseCoopers Zhong Tian LLP addressed to the SEC, dated April 20, 2021, is filed as Exhibit 15.1.

On March 26, 2021, our board of directors resolved, as recommended by our audit committee, to propose to appoint KPMG Huazhen LLP as our independent registered public accounting firm, which subject to the approval by the shareholders of the Company at the annual general meeting for the year 2020. During the two most recent fiscal years and through April 20, 2021, neither we nor anyone on our behalf consulted KPMG Huazhen LLP regarding either (i) the application of accounting principles to a specified transaction, either completed or proposed; or the type of audit opinion that might be rendered on the registrant's financial statements, or (ii) any matter that was either the subject of a "disagreement" (as defined in Item 16F(a)(1)(iv) of Form 20-F and related instructions to Item 16-F of Form 20-F) or a "reportable event" (as described in Item 16F(a)(1)(v) of Form 20-F). Also, during the two most recent fiscal years and through April 20, 2021, we have not obtained any written report or oral advice that KPMG Huazhen LLP concluded was an important factor considered by us in reaching a decision as to the accounting, auditing or financial reporting issue.

ITEM 16G. COMPARISON OF NEW YORK STOCK EXCHANGE CORPORATE GOVERNANCE RULES AND CHINA CORPORATE GOVERNANCE RULES FOR LISTED COMPANIES

Under the amended Corporate Governance Rules of the NYSE, foreign issuers (including us) listed on the NYSE are required to disclose a summary of the significant differences between their domestic corporate governance rules and NYSE corporate governance rules that would apply to a U.S. domestic issuer. A summary of such differences is listed below:

NYSE corporate governance rules
Corporate governance guidelines

Listed companies must adopt and disclose corporate governance guidelines, involving director responsibilities, director compensation, director continuing education, annual performance evaluation of the board of directors, etc.

Director Independence

A listed company must have a majority of independent directors on its board of directors. No director qualifies as “independent” unless the board of directors affirmatively determines that the director has no material relationship with the listed company (either directly or as a partner, shareholder or officer of an organization that has a relationship with the Company). In addition, a director must meet certain standards to be deemed independent. For example, a director is not independent if the director is, or has been within the last three years, an employee of the listed company, or an immediate family member is, or has been within the last three years, an executive officer of the listed company, or if the director has received, or has an immediate family member who has received, during any twelve-month period within the last three years, more than US\$120,000 in direct compensation from the listed company, other than director and committee fees and pension or other forms of deferred compensation for prior service (provided such compensation is not contingent in any way on continued service).

To empower non-management directors to serve as a more effective check on management, the non-management directors of each listed company must meet at regularly scheduled executive sessions without management.

Corporate governance rules applicable to the domestically listed companies in China and the Company’s governance practices

PRC corporate governance rules promulgated by China Securities Regulatory Commission and revised in September, 2018 prescribe detailed guidelines on directors of the listed companies, including director selection, duties and responsibilities of directors, director performance evaluation, the structure of the board of directors and rules of procedure for the board of directors, etc.

The Company has complied with the above mentioned laws or rules.

It is required in China that any listed company must establish an independent director system and set forth specific requirements for the qualification of independent directors. For example, an independent director shall not hold any position other than board committee member of the listed company, shall not be related to the listed company and its key shareholders in a way which may hinder his/her independent and objective judgement, and shall not be influenced by the main shareholders or the controlling persons of the listed company, or by any other entities or persons with whom the listed company has a significant relationship.

The Company has complied with the relevant Chinese corporate governance rules and has implemented internal rules governing the independence and responsibilities of independent directors. The Company determines the independence of independent directors every year.

No similar requirements.

Nominating/Corporate Governance Committee

Listed companies must have a nominating/corporate governance committee composed entirely of independent directors.

The nominating/corporate governance committee must have a written charter that addresses the committee's purposes and responsibilities which, at minimum, must be to: search for eligible people for the board of directors, select and nominate directors for the next session of the shareholders' annual meeting, study and propose corporate governance guidelines, supervise the evaluation of the board of directors and management, and evaluate the performance of the committee every year.

Compensation Committee

Listed companies must have a compensation committee composed entirely of independent directors.

The compensation committee must have a written charter that addresses, at least, the following purposes and responsibilities:

- (1) review and approve the corporate goals associated with CEO's compensation, evaluate the performance of the CEO in fulfilling these goals, and, either as a committee or together with the other independent directors (as directed by the board), based on such evaluation, determine and approve the CEO's compensation level;
- (2) make recommendations to the board with respect to non-CEO executive officer compensation, and incentive-compensation and equity-based plans that are subject to board approval;
- (3) produce a committee report on executive compensation as required by the SEC to be included in the annual proxy statement or annual report filed with the SEC.

It is stipulated in China that the board of directors of a listed company may, based on actual needs, establish a nominating committee composed entirely of directors, of which the independent directors shall be the majority and the convener.

Up to now, the Company has set up a nominating committee, and made charters regarding its responsibilities and procedure.

Relevant responsibilities of the nominating/corporate governance committee are similar to those stipulated by the NYSE rules, but the main responsibilities do not include the research and recommendation of corporate governance guidelines, the supervision of the evaluation of the board of directors and management, or the annual evaluation of the committee.

It is stipulated in China that the board of directors of a listed company may, based on actual needs, have a compensation and assessment committee composed entirely of directors, of whom the independent directors are the majority and act as the convener.

It is stipulated in China that the responsibilities of the compensation and assessment committee are:

- (1) to review evaluation standards on the performance of directors and the senior management, make assessment and submit suggestion to the board of directors;
- (2) to review compensation policies on the directors and the senior management.

But the committee is not required to produce a report on the executive compensation or make an annual performance evaluation of the committee.

The board of directors of the Company has established a compensation and performance evaluation committee composed mainly of independent directors who act as the convener, and the committee has established a written charter complying with the domestic corporate governance rules.

The charter must also include the requirement for an annual performance evaluation of the compensation committee.

The compensation committee may, in its sole discretion, retain or consult a compensation consultant, independent legal counsel or other advisor. The compensation committee shall be directly responsible for the appointment, compensation and oversight of the work of such advisor. A listed company must provide for appropriate funding for payment of reasonable compensation to such advisor. The compensation committee may select such advisor to the compensation committee only after taking into consideration all factors relevant to that person's independence from management.

Audit Committee

Listed companies must have an audit committee that satisfies the requirements of Rule 10A-3 of Securities Exchange Act of 1934 (Exchange Act). It must have a minimum of three members, and all audit committee members must satisfy the requirements for independence set forth in Section 303A.02 of NYSE Corporate Governance Rules as well as the requirements of Rule 10A-3(b)(1) of the Exchange Act.

The audit committee must have a written charter that specifies the purpose of the audit committee is, at minimum, to assist the board oversight of the integrity of financial statements, the Company's compliance with legal and regulatory requirements, qualifications and independence of independent auditors and the performance of the listed company's internal audit function and independent auditors.

In addition, the written charter must require the audit committee to prepare an audit committee report as required by the SEC to be included in the listed company's annual proxy statement as well as an annual performance evaluation of the audit committee.

The written charter must also specify the duties and responsibilities of the audit committee, which, at a minimum, must include those set out in Rule 10A-3(b)(2), (3), (4) and (5) of the Exchange Act, as well as other duties and responsibilities such as to obtain and review a report by the independent auditor at least annually, meet to review and discuss the listed company's annual audited financial statements and quarterly financial statements with management and independent auditor.

It is stipulated in China that the board of directors of a listed company shall establish an audit committee composed entirely of competent directors with expertise and business experience, of which the independent directors are the majority and act as the convener, and the convener of the audit committee shall be an accounting professional.

The responsibilities of the audit committee are similar to those stipulated by the NYSE rules. The board of directors shall evaluate the independence and performance of members of the audit committee periodically, and may replace any member who is no longer suitable for the position. The Company shall disclose the performance of the audit committee in its annual report, including meetings convened by the audit committee.

The Board of Directors of the Company has established an audit committee that satisfies relevant domestic and overseas requirements and the audit committee has a written charter.

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The audit committee must have a written charter that specifies the purpose of the audit committee is, at minimum, to assist the board oversight of the integrity of financial statements, the Company's compliance with legal and regulatory requirements, qualifications and independence of independent auditors and the performance of the listed company's internal audit function and independent auditors.

In addition, the written charter must require the audit committee to prepare an audit committee report as required by the SEC to be included in the listed company's annual proxy statement as well as an annual performance evaluation of the audit committee.

The written charter must also specify the duties and responsibilities of the audit committee, which, at a minimum, must include those set out in Rule 10A-3(b)(2), (3), (4) and (5) of the Exchange Act, as well as other duties and responsibilities such as to obtain and review a report by the independent auditor at least annually, meet to review and discuss the listed company's annual audited financial statements and quarterly financial statements with management and independent auditor.

Each listed company must have an internal audit department.

Shareholder approval of equity compensation plan

Shareholders must be given the opportunity to vote on all equity-compensation plans and material revisions thereto, except for, among others, plans that are made available to shareholders generally, such as typical dividend reinvestment plan and certain awards and plans in the context of mergers and acquisitions.

Code of ethics for directors, officers and employees

Listed companies must adopt and disclose a code of business conduct and ethics for directors, officers and employees, and promptly disclose any waivers of the code for directors or executive officers. Each code of business conduct and ethics must require that any waiver of the code for executive officers or directors may be made only by the board or a board committee.

The responsibilities of the audit committee are similar to those stipulated by the NYSE rules. The board of directors shall evaluate the independence and performance of members of the audit committee periodically, and may replace any member who is no longer suitable for the position. The Company shall disclose the performance of the audit committee in its annual report, including meetings convened by the audit committee.

The Board of Directors of the Company has established an audit committee that satisfies relevant domestic and overseas requirements and the audit committee has a written charter.

China has a similar regulatory provision, and the Company has an internal audit department.

It is stipulated in China that the compensation of the directors and supervisors shall be approved by the shareholders' meeting. The compensation plan of executive officers shall be approved by the board of directors, illustrate to the shareholders' meeting and fully disclosed to the public.

The Company has complied with the above mentioned laws or rules.

China does not have such requirement for a code for ethics. But our controlling shareholder, Sinopec Group Company, adopted a Staff Code in 2014 to provide disciplines and requirements for its staff's conducts, including legal and ethical matters as well as the sensitivities involved in reporting illegal and unethical matters. The Staff Code covers such areas as HSE, conflict of interests, anti-corruption, protection and proper use of our assets and properties as well as reporting requirements. The Staff Code also applies to all directors, officers and employees of each subsidiary of Sinopec Group Company, including us. In addition, the directors and officers must perform their legal responsibilities in accordance with the Company Law of PRC, relative requirements of CSRS and Mandatory Provisions to the Charter of Companies Listed Overseas. Meanwhile, the Company establishes The Model Code of Securities Transactions by Corporate Employees and The Rules of The Company's Shares Transactions by Corporate Directors, Superiors and Senior Managements to regulate the above mentioned people when transacting related securities.

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Each listed company CEO must certify to the NYSE each year that he or she is not aware of any violation by the listed company of NYSE corporate governance listing standards and he or she must promptly notify the NYSE in writing of any non-compliance with any applicable provisions of Section 303A.

Board of Supervisors

Listed companies are not required to have a board of supervisors.

No similar requirements.

PRC corporate governance rules promulgated by China Securities Regulatory Commission prescribe that the board of supervisors of listed companies is responsible for supervising the compliance of the Company's financial affairs and the directors, executive officers of the Company, and safeguarding the legitimate rights and interests of the Company and the shareholders. The rules also provided detailed requirements in respect of the selection of supervisors of listed companies, the duties and composition of the board of supervisors and adoptions of its meeting procedures, etc.

The Company has complied with the above rules.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

ITEM 17. FINANCIAL STATEMENTS

Not applicable.

ITEM 18. FINANCIAL STATEMENTS

See consolidated financial statements included in this annual report following Item 19.

ITEM 19. EXHIBITS

- [1](#) [Articles of Association of the Registrant, amended and adopted by the shareholders' meeting on May 9, 2019, incorporated by reference to Exhibit 1 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 10, 2020 \(File Number: 001-15138\).](#)
- [2.1](#) [Description of rights of each class of securities registered under Section 12 of the Securities Exchange Act of 1934, incorporated by reference to Exhibit 2.1 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 10, 2020 \(File Number: 001-15138\).](#)
- [4.1](#) [Forms of Director Service Contracts adopted by the Company on May 11, 2012 \(English translation\), incorporated by reference to Exhibit 4.1 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 11, 2013 \(File Number: 001-15138\).](#)
- [4.2](#) [Forms of Supervisor Service Contracts adopted by the Company on May 11, 2012 \(English translation\), incorporated by reference to Exhibit 4.2 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 11, 2013 \(File Number: 001-15138\).](#)
- 4.3 Agreement for Mutual Provision of Products and Ancillary Services between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated June 3, 2000 (including English translation), incorporated by reference to Exhibit 10.3 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission on October 10, 2000 (File Number: 333-12502).
- 4.4 Agreement for Provision of Cultural, Educational, Hygiene and Community Services between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated June 3, 2000 (including English translation), incorporated by reference to Exhibit 10.4 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission on October 10, 2000 (File Number: 333-12502).
- 4.5 Trademark License Agreement between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated June 3, 2000 (including English translation), incorporated by reference to Exhibit 10.6 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission on October 10, 2000 (File Number: 333-12502).
- 4.6 Patents and Proprietary Technology License Contract between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated June 3, 2000 (including English translation), incorporated by reference to Exhibit 10.7 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission on October 10, 2000 (File Number: 333-12502).
- 4.7 Computer Software License Contract between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated June 3, 2000 (including English translation), incorporated by reference to Exhibit 10.8 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission on October 10, 2000 (File Number: 333-12502).
- 4.8 Land Use Rights Leasing Contract between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated June 3, 2000 (including English translation), incorporated by reference to Exhibit 10.10 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission on October 10, 2000 (File Number: 333-12502).
- 4.9 Property Leasing Contract between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated June 3, 2000 (including English translation), incorporated by reference to Exhibit 10.11 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission on October 10, 2000 (File Number: 333-12502).
- 4.10 Loan Transfer and Adjustment Contract between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated August 16, 2000 (including English translation), incorporated by reference to Exhibit 10.18 to our Registration Statement on Form F-1 filed with the Securities and Exchange Commission on October 10, 2000 (File Number: 333-12502).

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- [4.11](#) [Agreement on Adjustment to Related Party Transactions between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated June 11, 2001 \(English translation\), incorporated by reference to Exhibit 4.15 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 13, 2007 \(File Number: 001-15138\).](#)
- [4.12](#) [Land Use Right Leasing Agreement between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated August 22, 2003 \(English translation\), incorporated by reference to Exhibit 4.16 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 13, 2007 \(File Number: 001-15138\).](#)
- [4.13](#) [2004 Agreement on Adjustment to Related Party Transactions between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated October 31, 2004 \(English translation\), incorporated by reference to Exhibit 4.17 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 13, 2007 \(File Number: 001-15138\).](#)
- [4.14](#) [Memorandum on Adjustment of Rent of Land Use Rights between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated March 31, 2006 \(English translation\), incorporated by reference to Exhibit 4.18 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 13, 2007 \(File Number: 001-15138\).](#)
- [4.14.1](#) [Memorandum on Adjustment of Rent of Land Use Rights between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated August 22, 2008 \(English Translation\), incorporated by reference to Exhibit 4.20 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on May 20, 2009 \(File Number: 001-15138\).](#)
- [4.14.2](#) [Land Use Rights Leasing Agreement Third Amendment Memo between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated August 24, 2012 \(English Translation\), incorporated by reference to Exhibit 4.20.1 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 11, 2013 \(File Number: 001-15138\).](#)
- [4.15](#) [Supplemental Agreement on Related Party Transactions between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated March 31, 2006 \(English translation\), incorporated by reference to Exhibit 4.19 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 13, 2007 \(File Number: 001-15138\).](#)
- [4.15.1](#) [Continuing Connected Transactions Second Supplemental Agreement between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated August 21, 2009 \(English translation\), incorporated by reference to Exhibit 4.21 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 30, 2010 \(File Number: 001-15138\).](#)
- [4.15.2](#) [Continuing Connected Transactions Third Supplemental Agreement between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated August 24, 2012 \(English translation\), incorporated by reference to Exhibit 4.19.2 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 11, 2013 \(File Number: 001-15138\).](#)
- [4.15.3](#) [Continuing Connected Transactions Fourth Supplemental Agreement Between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated August 26, 2015 \(English translation\), incorporated by reference to Exhibit 4.22 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 20, 2016 \(File Number: 001-15138\).](#)

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4.15.4	Continuing Connected Transactions Fifth Supplemental Agreement Between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated August 24, 2018 (English translation).
4.16	Non-Compete Agreement Between China Petrochemical Corporation and China Petroleum & Chemical Corporation dated June 3, 2000 and its related Undertakings (English translation), incorporated by reference to Exhibit 4.21 to our Annual Report on Form 20-F/A filed with the Securities and Exchange Commission on September 26, 2013 (File Number: 001-15138).
4.16.1	Undertakings from China Petrochemical Corporation Regarding Further Avoiding Competition with China Petroleum & Chemical Corporation dated April 28, 2014 (English translation), incorporated by reference to Exhibit 4.21.1 to our Annual Report on Form 20-F filed with the Securities and Exchange Commission on April 10, 2015 (File Number: 001-15138).
4.17*	Agreement on Additional Issuance of Equity to Purchase Relevant Oil and Gas Pipeline Assets, dated July 23, 2020, between China Oil & Gas Pipeline Network Corporation and China Petroleum & Chemical Corporation (English Translation)
4.17.1*	Agreement on Additional Issuance of Equity and Cash Payment to Purchase Relevant Oil and Gas Pipeline Assets, dated July 23, 2020, between China Oil & Gas Pipeline Network Corporation and Sinopec Natural Gas Limited Company (English Translation)
4.17.2*	Agreement on Cash Payment to Purchase Relevant Oil and Gas Pipeline Assets, dated July 23, 2020, between China Oil & Gas Pipeline Network Corporation and Sinopec Marketing Co., Limited (English Translation)
4.17.3*	Agreement on Cash Payment to Purchase 100% Equity in Sinopec Yu Ji Company, dated July 21, 2020, between China Oil & Gas Pipeline Network Corporation and Sinomart KTS Development Limited (English Translation)
4.18*	Framework Agreement regarding Production and Operation of Oil and Gas Pipeline Facilities between China Petroleum & Chemical Corporation and China Oil & Gas Pipeline Network Corporation (English Translation)
8.1*	A list of the Registrant's subsidiaries.
12.1*	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as amended.
12.2*	Certification of Principal Executive Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as amended.
12.3*	Certification of Principal Financial Officer pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as amended.
13**	Certification of CEO and CFO pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, and Rule 13a-14(b) under the Securities Exchange Act of 1934, as amended.
15.1*	Letter from PricewaterhouseCoopers Zhong Tian LLP regarding Item 16F of this annual report.
101.INS*	XBRL Instance Document
101.SCH*	XBRL Taxonomy Extension Schema Document
101.CAL*	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF*	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB*	XBRL Taxonomy Extension Label Linkbase Document
101.PRE*	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed with this annual report on Form 20-F.

** Furnished with this annual report on Form 20-F.

SIGNATURE

The registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on its behalf.

China Petroleum & Chemical Corporation

By: /s/ Huang Wensheng
Name: Huang Wensheng
Title: Vice President and Secretary to the Board of Directors

Date: April 20, 2021

CHINA PETROLEUM & CHEMICAL CORPORATION AND SUBSIDIARIES
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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of China Petroleum & Chemical Corporation

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of China Petroleum & Chemical Corporation and its subsidiaries (the “Company”) as of December 31, 2020 and 2019, and the related consolidated statements of income, comprehensive income, changes in equity and cash flows for each of the three years in the period ended December 31, 2020, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2020 and 2019, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2020 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2020, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in Management’s Annual Report on Internal Control over Financial Reporting appearing under Item 15. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Critical Audit Matters

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Recoverability of the carrying amount of property, plant and equipment relating to oil and gas producing activities

As described in Note 8, Notes 18 and 41 to the consolidated financial statements, the Company's consolidated property, plant and equipment balance was RMB 589,247 million at December 31, 2020. Management identified possible indications of impairment from external and internal sources of information, and considered low crude oil prices gave rise to possible indication that the carrying amount of property, plant and equipment relating to oil and gas producing activities as at December 31, 2020 might be impaired. Management conducted impairment tests and adopted value in use as the respective recoverable amounts of property, plant and equipment relating to oil and gas producing activities, which involved key estimations or assumptions including future crude oil prices, future production profiles, future cost profiles and discount rates.

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The principal considerations for our determination that performing procedures relating to recoverability of the carrying amount of property, plant and equipment relating to oil and gas producing activities is a critical audit matter are there were significant judgements by management in determining their respective recoverable amounts of property, plant and equipment using value in use. This in turn led to a high degree of auditor judgment, subjectivity and audit effort in evaluating management's significant assumptions including future crude oil prices, future production profiles, future cost profiles and discount rates. In addition, the audit effort involved the use of professionals with specialized skill and knowledge to assist in performing these procedures and evaluating the audit evidence obtained.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included evaluating and testing the effectiveness of key controls in respect of the preparation of the discounted cash flow projections of property, plant and equipment relating to oil and gas producing activities. These procedures also included, among others, testing management's process for determining the recoverable amount of property, plant and equipment relating to oil and gas producing activities, evaluating the appropriateness of the methodology adopted in the discounted cash flow projections, testing the completeness, accuracy, and relevance of underlying data used in the discounted cash flow projections, evaluating the reasonableness of key estimates and significant assumptions used by management in developing the discounted cash flow projections including future crude oil prices, future production profiles, future cost profiles and discount rates, and testing the mathematical accuracy of the discounted cash flow projections. Evaluating the significant assumptions relating to the key estimates in discounted cash flow projections also involved (i) comparing the estimates of future crude oil prices adopted by the management against a range of published crude oil price forecasts; (ii) comparing the estimates of future production profiles against the oil and gas reserve estimation report approved by the management;; (iii) evaluating the competence, capability and objectivity of the management's experts engaged in estimating the oil and gas reserves; (iv) evaluating key estimates or assumptions used in the reserve estimation against historical data, management plans and/or relevant external data in the market; (v) comparing the future cost profiles against historical costs and relevant budgets; (vi) using professionals with specialized skill and knowledge to assist in the evaluation of the appropriateness of discount rates; and (vii) evaluating the sensitivity analysis prepared by the management and assessing the potential impacts of a range of possible outcomes.

/s/ PricewaterhouseCoopers Zhong Tian LLP

PricewaterhouseCoopers Zhong Tian LLP

Shanghai, the People's Republic of China

March 26, 2021

We have served as the Company's auditor since 2013.

CHINA PETROLEUM & CHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF INCOME
FOR THE YEARS ENDED DECEMBER 31, 2018, 2019 AND 2020
(Amounts in million, except per share data)

	Notes	Years ended December 31,		
		2018	2019	2020
		RMB	RMB	RMB
Operating revenues				
Sales of goods	3	2,822,375	2,899,682	2,049,456
Other operating revenues	4	59,702	60,117	56,528
		<u>2,882,077</u>	<u>2,959,799</u>	<u>2,105,984</u>
Operating expenses				
Purchased crude oil, products and operating supplies and expenses		(2,279,844)	(2,370,699)	(1,594,130)
Selling, general and administrative expenses	5	(65,770)	(55,438)	(55,315)
Depreciation, depletion and amortization		(110,344)	(109,172)	(106,965)
Exploration expenses, including dry holes		(10,744)	(10,510)	(9,716)
Personnel expenses	6	(78,967)	(82,743)	(86,006)
Taxes other than income tax	7	(248,587)	(244,517)	(234,947)
Other operating expense, net	8	(5,257)	(346)	(5,712)
Total operating expenses		<u>(2,799,513)</u>	<u>(2,873,425)</u>	<u>(2,092,791)</u>
Operating income		<u>82,564</u>	<u>86,374</u>	<u>13,193</u>
Finance costs				
Interest expense	9	(7,396)	(17,088)	(15,194)
Interest income		7,730	7,210	4,803
Foreign currency exchange gains/(losses), net		596	(170)	885
Net finance costs		<u>930</u>	<u>(10,048)</u>	<u>(9,506)</u>
Investment income	10	1,871	919	37,744
Share of profits less losses from associates and joint ventures	22,23	13,974	12,777	6,712
Earnings before income tax		<u>99,339</u>	<u>90,022</u>	<u>48,143</u>
Income tax expense	11	(20,278)	(17,939)	(6,219)
Net income		<u>79,061</u>	<u>72,083</u>	<u>41,924</u>
Attributable to:				
Owners of the Company		61,708	57,493	33,096
Non-controlling interests		17,353	14,590	8,828
Net income		<u>79,061</u>	<u>72,083</u>	<u>41,924</u>
Earnings per share:				
Basic	13	0.51	0.48	0.27
Diluted	13	0.51	0.48	0.27

See accompanying notes to consolidated financial statements.

CHINA PETROLEUM & CHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME
FOR THE YEARS ENDED DECEMBER 31, 2018, 2019 AND 2020
(Amounts in million)

	Notes	Years ended December 31,		
		2018	2019	2020
		RMB	RMB	RMB
Net income		79,061	72,083	41,924
Other comprehensive (loss)/income:	12			
<i>Items that may not be reclassified subsequently to profit or loss</i>				
Equity investments at fair value through other comprehensive income		(53)	(31)	(22)
Total items that may not be reclassified subsequently to profit or loss		(53)	(31)	(22)
<i>Items that may be reclassified subsequently to profit or loss</i>				
Fair value hedges		-	-	162
Share of other comprehensive loss of associates and joint ventures		(229)	(810)	(2,441)
Cash flow hedges		(9,741)	4,941	7,073
Foreign currency translation differences		3,399	1,480	(4,457)
Total items that may be reclassified subsequently to profit or loss		(6,571)	5,611	337
Total other comprehensive (loss)/income		(6,624)	5,580	315
Total comprehensive income for the year		<u>72,437</u>	<u>77,663</u>	<u>42,239</u>
Attributable to:				
Owners of the Company		54,090	62,908	34,490
Non-controlling interests		18,347	14,755	7,749
Total comprehensive income for the year		<u>72,437</u>	<u>77,663</u>	<u>42,239</u>

See accompanying notes to consolidated financial statements.

CHINA PETROLEUM & CHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED BALANCE SHEET
AS OF DECEMBER 31, 2019 AND 2020
(Amounts in million)

ASSETS	Notes	December 31,	
		2019 RMB	2020 RMB
Current assets			
Cash and cash equivalents		60,438	87,559
Time deposits with financial institutions		67,614	100,498
Financial assets at fair value through profit or loss		3,319	1
Derivative financial assets	14	837	12,528
Trade accounts receivable	15	54,375	35,587
Financial assets at fair value through other comprehensive income	24	8,661	8,735
Inventories	16	194,142	151,895
Prepaid expenses and other current assets	17	57,924	58,592
Total current assets		447,310	455,395
Non-current assets			
Property, plant and equipment, net	18	625,692	589,247
Construction in progress	19	173,872	124,765
Right-of-use assets	20	267,937	266,368
Goodwill	21	8,697	8,620
Interest in associates	22	95,737	136,163
Interest in joint ventures	23	56,467	52,179
Financial assets at fair value through other comprehensive income	24	1,521	1,525
Deferred tax assets	25	17,616	25,054
Long-term prepayments and other assets	26	65,437	74,489
Total non-current assets		1,312,976	1,278,410
Total assets		1,760,286	1,733,805
LIABILITIES AND EQUITY			
Current liabilities			
Short-term debts	27	40,521	23,769
Loans from Sinopec Group Company and fellow subsidiaries	27	43,289	5,264
Lease liabilities	28	15,198	15,292
Derivative financial liabilities	14	2,729	4,826
Trade accounts payable and bills payable	29	200,023	161,656
Contract liabilities	30	126,833	126,160
Other payables	31	148,118	178,637
Income tax payable		3,267	6,586
Total current liabilities		579,978	522,190
Non-current liabilities			
Long-term debts	27	49,208	72,037
Loans from Sinopec Group Company and fellow subsidiaries	27	9,626	11,778
Lease liabilities	28	177,674	172,306
Deferred tax liabilities	25	6,809	8,124
Provisions	32	43,163	45,552
Other long-term liabilities		16,524	18,960
Total non-current liabilities		303,004	328,757
Total liabilities		882,982	850,947
Equity			
Share capital	33	121,071	121,071
Reserves	43	617,875	620,423
Total equity attributable to owners of the Company		738,946	741,494
Non-controlling interests		138,358	141,364
Total equity		877,304	882,858
Total liabilities and equity		1,760,286	1,733,805

See accompanying notes to consolidated financial statements.

CHINA PETROLEUM & CHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY
FOR THE YEARS ENDED DECEMBER 31, 2018, 2019 AND 2020
(Amounts in million)

	Share capital RMB	Capital reserve RMB	Share premium RMB	Statutory surplus reserve RMB	Discretionary surplus reserve RMB	Other reserves RMB	Retained earnings RMB	Total equity attributable to owners of the Company RMB	Non- controlling interests RMB	Total equity RMB
Balance as of December 31, 2017	121,071	26,326	55,850	82,682	117,000	(2,934)	326,125	726,120	126,770	852,890
Change in accounting policy	-	-	-	-	-	(12)	12	-	-	-
Contribution from SAMC in the										
Acquisition of Baling Branch of										
SAMC (Note 35)	-	905	-	-	-	-	(25)	880	739	1,619
Balance as of January 1, 2018	121,071	27,231	55,850	82,682	117,000	(2,946)	326,112	727,000	127,509	854,509
Net income	-	-	-	-	-	-	61,708	61,708	17,353	79,061
Other comprehensive (loss)/income										
(Note 12)	-	-	-	-	-	(7,618)	-	(7,618)	994	(6,624)
Total comprehensive income for the										
year	-	-	-	-	-	(7,618)	61,708	54,090	18,347	72,437
Amounts transferred to initial										
carrying amount of hedged items	-	-	-	-	-	5,269	-	5,269	-	5,269
Transactions with owners, recorded										
directly in equity:										
Contributions by and distributions to										
owners:										
Final dividend for 2017	-	-	-	-	-	-	(48,428)	(48,428)	-	(48,428)
Interim dividend for 2018	-	-	-	-	-	-	(19,371)	(19,371)	-	(19,371)
Appropriation	-	-	-	3,996	-	-	(3,996)	-	-	-
Distributions to non-controlling										
interests	-	-	-	-	-	-	-	-	(7,476)	(7,476)
Contributions to subsidiaries from										
non-controlling interests	-	-	-	-	-	-	-	-	2,060	2,060
Total contributions by and										
distributions to owners	-	-	-	3,996	-	-	(71,795)	(67,799)	(5,416)	(73,215)
Transaction with non-controlling										
interests	-	(12)	-	-	-	-	-	(12)	(299)	(311)
Total transactions with owners	-	(12)	-	3,996	-	-	(71,795)	(67,811)	(5,715)	(73,526)
Others	-	(431)	-	-	-	818	(858)	(471)	(220)	(691)
Balance as of December 31, 2018	121,071	26,788	55,850	86,678	117,000	(4,477)	315,167	718,077	139,921	857,998

See accompanying notes to consolidated financial statements.

CHINA PETROLEUM & CHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (CONTINUED)
FOR THE YEARS ENDED DECEMBER 31, 2018, 2019 AND 2020
(Amounts in million)

	Share capital RMB	Capital reserve RMB	Share premium RMB	Statutory surplus reserve RMB	Discretionary surplus reserve RMB	Other reserves RMB	Retained earnings RMB	Total equity attributable to owners of the Company RMB	Non- controlling interests RMB	Total equity RMB
Balance as of January 1, 2019	121,071	26,788	55,850	86,678	117,000	(4,477)	315,167	718,077	139,921	857,998
Net income	-	-	-	-	-	-	57,493	57,493	14,590	72,083
Other comprehensive income (Note 12)	-	-	-	-	-	5,415	-	5,415	165	5,580
Total comprehensive income for the year	-	-	-	-	-	5,415	57,493	62,908	14,755	77,663
Amounts transferred to initial carrying amount of hedged items	-	-	-	-	-	1,038	-	1,038	55	1,093
Transactions with owners, recorded directly in equity:										
Contributions by and distributions to owners:										
Final dividend for 2018	-	-	-	-	-	-	(31,479)	(31,479)	-	(31,479)
Interim dividend for 2019	-	-	-	-	-	-	(14,529)	(14,529)	-	(14,529)
Appropriation (Note 43 (c))	-	-	-	3,745	-	-	(3,745)	-	-	-
Distributions to non-controlling interests	-	-	-	-	-	-	-	-	(18,989)	(18,989)
Contributions to subsidiaries from non-controlling interests	-	-	-	-	-	-	-	-	5,495	5,495
Total contributions by and distributions to owners	-	-	-	3,745	-	-	(49,753)	(46,008)	(13,494)	(59,502)
Transaction with non-controlling interests	-	2,933	-	-	-	-	-	2,933	(2,933)	-
Total transactions with owners	-	2,933	-	3,745	-	-	(49,753)	(43,075)	(16,427)	(59,502)
Others	-	9	-	-	-	(35)	24	(2)	54	52
Balance as of December 31, 2019	121,071	29,730	55,850	90,423	117,000	1,941	322,931	738,946	138,358	877,304

See accompanying notes to consolidated financial statements.

CHINA PETROLEUM & CHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY (CONTINUED)
FOR THE YEARS ENDED DECEMBER 31, 2018, 2019 AND 2020
(Amounts in million)

	Share capital RMB	Capital reserve RMB	Share premium RMB	Statutory surplus reserve RMB	Discretionary surplus reserve RMB	Other reserves RMB	Retained earnings RMB	Total equity attributable to owners of the Company RMB	Non- controlling interests RMB	Total equity RMB
Balance as of January 1, 2020	121,071	29,730	55,850	90,423	117,000	1,941	322,931	738,946	138,358	877,304
Net income	-	-	-	-	-	-	33,096	33,096	8,828	41,924
Other comprehensive income (Note 12)	-	-	-	-	-	1,406	(12)	1,394	(1,079)	315
Total comprehensive income for the year	-	-	-	-	-	1,406	33,084	34,490	7,749	42,239
Amounts transferred to initial carrying amount of hedged items	-	-	-	-	-	(47)	-	(47)	48	1
Transactions with owners, recorded directly in equity:										
Contributions by and distributions to owners:										
Final dividend for 2019	-	-	-	-	-	-	(23,004)	(23,004)	-	(23,004)
Interim dividend for 2020	-	-	-	-	-	-	(8,475)	(8,475)	-	(8,475)
Appropriation (Note 43 (c))	-	-	-	1,857	-	-	(1,857)	-	-	-
Distributions to non-controlling interests	-	-	-	-	-	-	-	-	(6,726)	(6,726)
Contributions to subsidiaries from non-controlling interests	-	-	-	-	-	-	-	-	3,325	3,325
Distribution to SAMC in the Acquisition of Baling Branch of SAMC (Note 35)	-	(972)	-	-	-	-	-	(972)	972	-
Total contributions by and distributions to owners	-	(972)	-	1,857	-	-	(33,336)	(32,451)	(2,429)	(34,880)
Transaction with non-controlling interests	-	(138)	-	-	-	-	-	(138)	13	(125)
Total transactions with owners	-	(1,110)	-	1,857	-	-	(33,336)	(32,589)	(2,416)	(35,005)
Others	-	812	-	-	-	200	(318)	694	(2,375)	(1,681)
Balance as of December 31, 2020	121,071	29,432	55,850	92,280	117,000	3,500	322,361	741,494	141,364	882,858

See accompanying notes to consolidated financial statements.

CHINA PETROLEUM & CHEMICAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENT OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2018, 2019 AND 2020
(Amounts in million)

	Note	Years ended December 31,		
		2018	2019	2020
		RMB	RMB	RMB
Net cash generated from operating activities	(a)	175,937	153,619	167,518
Investing activities				
Capital expenditure		(94,848)	(130,057)	(117,874)
Exploratory wells expenditure		(8,261)	(11,497)	(13,315)
Purchase of investments, investments in associates and investments in joint ventures		(10,116)	(3,483)	(6,040)
Payment for financial assets at fair value through profit or loss		(29,550)	(12,851)	(6,700)
Proceeds from sale of financial assets at fair value through profit or loss		55,000	35,292	10,000
Payment for acquisition of subsidiary, net of cash acquired		(3,188)	(1,031)	(340)
Proceeds from disposal of investments and investments in associates		1,557	704	51,520
Proceeds from disposal of property, plant, equipment and other non-current assets		9,671	709	2,656
Increase in time deposits with maturities over three months		(81,708)	(103,231)	(84,689)
Decrease in time deposits with maturities over three months		78,401	90,710	54,950
Interest received		5,810	7,094	2,305
Investment and dividend income received		10,720	10,272	11,510
Repayments of other investing activities		(136)	(3,682)	(6,186)
Net cash used in investing activities		(66,648)	(121,051)	(102,203)
Financing activities				
Proceeds from bank and other loans		749,155	602,467	558,680
Repayments of bank and other loans		(774,572)	(614,108)	(540,015)
Contributions to subsidiaries from non-controlling interests		1,989	3,919	4,219
Dividends paid by the Company		(67,799)	(46,008)	(31,479)
Distributions by subsidiaries to non-controlling interests		(13,702)	(7,357)	(4,157)
Interest paid		(6,064)	(6,250)	(7,508)
Payments made to acquire non-controlling interests		(160)	(8)	(1,121)
Repayments of lease liabilities (2018: Finance lease payment)		(86)	(16,859)	(15,327)
Proceeds from other financing activities		-	320	514
Repayments of other financing activities		(30)	(320)	(761)
Net cash used in financing activities		(111,269)	(84,204)	(36,955)
Net (decrease)/increase in cash and cash equivalents		(1,980)	(51,636)	28,360
Cash and cash equivalents as of January 1		113,389	111,927	60,438
Effect of foreign currency exchange rate changes		518	147	(1,239)
Cash and cash equivalents as of December 31		111,927	60,438	87,559

See accompanying notes to consolidated financial statements.

CHINA PETROLEUM & CHEMICAL CORPORATION AND SUBSIDIARIES

NOTES TO CONSOLIDATED STATEMENT OF CASH FLOWS
FOR THE YEARS ENDED DECEMBER 31, 2018, 2019 AND 2020
(Amounts in million)

(a) Reconciliation of earnings before income tax to net cash generated from operating activities

	Years ended December 31,		
	2018 RMB	2019 RMB	2020 RMB
Operating activities			
Earnings before income tax	99,339	90,022	48,143
Adjustment for:			
Depreciation, depletion and amortization	110,344	109,172	106,965
Dry hole costs written off	6,921	5,831	5,928
Income from associates and joint ventures	(13,974)	(12,777)	(6,712)
Investment income	(1,871)	(919)	(37,744)
Interest income	(7,730)	(7,210)	(3,433)
Interest expense	7,396	17,088	14,449
(Gain)/loss on foreign currency exchange rate changes and derivative financial instruments	(1,835)	3,624	2,003
Loss/(gain) on disposal of property, plant, equipment and other non-current assets, net	1,501	1,829	(398)
Impairment losses on assets	11,613	1,779	26,018
Credit impairment losses	140	1,264	2,066
	<u>211,844</u>	<u>209,703</u>	<u>157,285</u>
Net changes from:			
Accounts receivable and other current assets	(1,008)	(11,915)	(17,623)
Inventories	(2,670)	(9,748)	22,703
Accounts payable and other current liabilities	844	(14,898)	14,175
	<u>209,010</u>	<u>173,142</u>	<u>176,540</u>
Income tax paid	(33,073)	(19,523)	(9,022)
Net cash generated from operating activities	<u>175,937</u>	<u>153,619</u>	<u>167,518</u>

See accompanying notes to consolidated financial statements.

1 PRINCIPAL ACTIVITIES, ORGANIZATION AND BASIS OF PREPARATION

Principal activities

China Petroleum & Chemical Corporation (the “Company”) is an energy and chemical company that, through its subsidiaries (hereinafter collectively referred to as the “Group”), engages in oil and gas and chemical operations in the People’s Republic of China (the “PRC”). Oil and gas operations consist of exploring for, developing and producing crude oil and natural gas; transporting crude oil and natural gas by pipelines; refining crude oil into finished petroleum products; and marketing crude oil, natural gas and refined petroleum products. Chemical operations include the manufacture and marketing of a wide range of chemicals for industrial uses.

Organization

The Company was established in the PRC on February 25, 2000 as a joint stock limited company as part of the reorganization (the “Reorganization”) of China Petrochemical Corporation (“Sinopec Group Company”), the ultimate holding company of the Group and a ministry-level enterprise under the direct supervision of the State Council of the PRC. Prior to the incorporation of the Company, the oil and gas and chemical operations of the Group were carried on by oil administration bureaux, petrochemical and refining production enterprises and sales and marketing companies of Sinopec Group Company.

As part of the Reorganization, certain of Sinopec Group Company’s core oil and gas and chemical operations and businesses together with the related assets and liabilities were transferred to the Company. On February 25, 2000, in consideration for Sinopec Group Company transferring such oil and gas and chemical operations and businesses and the related assets and liabilities to the Company, the Company issued 68.8 billion domestic state-owned ordinary shares with a par value of RMB 1.00 each to Sinopec Group Company. The shares issued to Sinopec Group Company on February 25, 2000 represented the entire registered and issued share capital of the Company as of that date. The oil and gas and chemical operations and businesses transferred to the Company were related to (i) the exploration, development and production of crude oil and natural gas, (ii) the refining, transportation, storage and marketing of crude oil and petroleum products, and (iii) the production and sales of chemicals.

Basis of preparation

The accompanying consolidated financial statements have been prepared in accordance with all applicable International Financial Reporting Standards (“IFRS”) as issued by the International Accounting Standards Board (“IASB”). IFRS includes International Accounting Standards (“IAS”) and related interpretations (“IFRIC”). A summary of the significant accounting policies adopted by the Group are set out in Note 2. The accompanying financial statements were authorized for issue by the Board of Directors on March 26, 2021.

The accounting policies adopted are consistent with those of the previous financial year, except for the adoption of new and amended standards as set out below.

(a) New and amended standards and interpretations adopted by the Group

On 28 May 2020, the IASB published IFRS 16 COVID-19-Related Rent Concessions Amendment, which has no material impact on the Group for 31 December 2020 reporting periods.

A number of new or amended standards became applicable for the current reporting period. The Group did not have to change its accounting policies or make retrospective adjustments as a result of adopting these standards.

1 PRINCIPAL ACTIVITIES, ORGANIZATION AND BASIS OF PREPARATION (Continued)

Basis of preparation (Continued)

(a) New and amended standards and interpretations adopted by the Group (Continued)

The Group had changed its accounting policies as a result of adopting IFRS 16 Leases in 2019.

IFRS 16 Leases - Impact of adoption

The Group has adopted IFRS 16 Leases from January 1, 2019, but has not restated comparative amounts for the 2018 reporting period, as permitted under the specific transition provision in the standard. The reclassifications and the adjustments arising from IFRS 16 Leases are therefore recognized in the opening balance sheet on January 1, 2019.

Lease accounting policy applied until December 31, 2018 is disclosed in Note 2(x)(iii).

On adoption of IFRS 16 Leases, the Group recognized lease liabilities in relation to leases which had previously been classified as 'operating leases'. These liabilities were measured at the present value of the remaining lease payments, discounted using the lessee's incremental borrowing rate as of January 1, 2019. The lessee's incremental borrowing rates applied to the lease liabilities on January 1, 2019 ranged from 4.35% to 4.90%.

(i) Practical expedients applied

In applying IFRS 16 Leases for the first time, the Group has used the following practical expedients permitted by the standard:

- the use of a single discount rate to a portfolio of leases with reasonably similar characteristics,
- the accounting for operating leases with a remaining lease term of less than 12 months as of January 1, 2019 as short-term leases.

The Group has also elected not to reassess whether a contract is, or contains a lease at the date of initial application.

(ii) Measurement of lease liabilities

	RMB
Operating lease commitments disclosed as of December 31, 2018	352,794
Discounted using the lessee's incremental borrowing rate of at the date of initial application	200,867
(Less): short-term leases and low-value leases recognized on a straight-line basis as expense	(2,303)
Lease liabilities recognized as of January 1, 2019	198,564
Of which are:	
Current lease liabilities	13,894
Non-current lease liabilities	184,670
	198,564

1 PRINCIPAL ACTIVITIES, ORGANIZATION AND BASIS OF PREPARATION (Continued)

Basis of preparation (Continued)

(a) New and amended standards and interpretations adopted by the Group (Continued)

(iii) Measurement of right-of-use assets

Right-of-use assets were measured at the amount equal to the lease liabilities, adjusted by the amount of any prepaid or accrued lease payments relating to that lease recognized in the balance sheet as of December 31, 2018.

The recognized right-of-use assets relate to the following types of assets:

	January 1, 2019	December 31, 2019
	RMB	RMB
Land	244,588	239,374
Others	27,381	28,486
Total right-of-use assets	271,969	267,860

(iv) Adjustments recognized in the balance sheet on January 1, 2019

The change in accounting policy affected the following items in the balance sheet on January 1, 2019:

- right-of-use assets – increase by RMB 271,969
- lease prepayments – decrease by RMB 64,514
- prepaid expenses and other current assets – decrease by RMB 766
- long-term prepayments and other assets – decrease by RMB 8,125
- lease liabilities – increase by RMB 198,564

(v) Impact on segment disclosures

Segment assets and segment liabilities for December 31, 2019 all increased as a result of the changes in accounting policy. The following segments were affected by the changes in accounting policy:

	Increase in	
	Segment assets	Segment liabilities
	RMB	RMB
Exploration and production	79,263	78,041
Refining	32,839	26,094
Marketing and distribution	120,983	62,237
Chemicals	19,124	12,252
Corporate and others	15,651	14,248
	267,860	192,872

Comparative segment information has not been restated. As a consequence, the segment information disclosure for the items noted above is not entirely comparable to the information disclosed for the prior year.

1 PRINCIPAL ACTIVITIES, ORGANIZATION AND BASIS OF PREPARATION (Continued)

Basis of preparation (Continued)

(b) New and amended standards and interpretations not yet adopted by the Group

Certain new accounting standards and interpretations have been published that are not mandatory for December 31, 2020 reporting periods and have not been early adopted by the Group. These standards are not expected to have a material impact on the entity in the current or future reporting periods and on foreseeable future transactions.

The preparation of the consolidated financial statements in accordance with IFRS requires management to make judgements, estimates and assumptions that affect the application of policies and reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the period. The estimates and associated assumptions are based on historical experience and various other factors that are believed to be reasonable under the circumstances, the results of which form the basis of making the judgements about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results could differ from those estimates.

The estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimate is revised if the revision affects only that period, or in the period of the revision and future periods if the revision affects both current and future periods.

Key assumptions and estimation made by management in the application of IFRS that have significant effect on the consolidated financial statements and the major sources of estimation uncertainty are disclosed in Note 41.

2 SIGNIFICANT ACCOUNTING POLICIES

(a) Basis of consolidation

The consolidated financial statements comprise the Company and its subsidiaries, and interest in associates and joint ventures.

(i) Subsidiaries and non-controlling interests

Subsidiaries are those entities controlled by the Group. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

The financial statements of subsidiaries are included in the consolidated financial statements from the date that control effectively commences until the date that control effectively ceases.

Non-controlling interests at the balance sheet date, being the portion of the net assets of subsidiaries attributable to equity interests that are not owned by the Company, whether directly or indirectly through subsidiaries, are presented in the consolidated balance sheet and consolidated statement of changes in equity within equity, separately from equity attributable to the owners of the Company. Non-controlling interests in the results of the Group are presented on the face of the consolidated statement of income and the consolidated statement of comprehensive income as an allocation of the total profit or loss and total comprehensive income for the year between non-controlling interests and the owners of the Company.

Changes in the Group's interests in a subsidiary that do not result in a loss of control are accounted for as equity transactions, whereby adjustments are made to the amounts of controlling and non-controlling interests within consolidated equity to reflect the change in relative interests, but no adjustments are made to goodwill and no gain or loss is recognized.

If a business combination involving entities not under common control is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is remeasured to fair value at the acquisition date. Any gains or losses arising from such remeasurement are recognized in the consolidated statement of income.

When the Group loses control of a subsidiary, it is accounted for as a disposal of the entire interest in that subsidiary, with a resulting gain or loss being recognized in profit or loss. Any interest retained in that former subsidiary at the date when control is lost is recognized at fair value and this amount is regarded as the fair value on initial recognition of a financial asset (Note 2(j)) or, when appropriate, the cost on initial recognition of an investment in an associate or joint venture (Note 2(a)(ii)).

In the Company's balance sheet, investments in subsidiaries are stated at cost less impairment losses (Note 2(n)).

The particulars of the Group's principal subsidiaries are set out in Note 39.

2 SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

(a) Basis of consolidation *(Continued)*

(ii) Associates and joint ventures

An associate is an entity, not being a subsidiary, in which the Group exercises significant influence over its management. Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies.

The investments in joint arrangements are classified as either joint operations or joint ventures depending on the contractual rights and obligations each investor has rather than the legal structure of the joint arrangement. A joint venture is a joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the arrangement.

Investments in associates and joint ventures are accounted for in the consolidated financial statements using the equity method from the date that significant influence or joint control commences until the date that significant influence or joint control ceases. Under the equity method, the investment is initially recorded at cost and adjusted thereafter for the post acquisition change in the Group's share of the investee's net assets and any impairment loss relating to the investment (Notes 2(i) and (n)).

The Group's share of the post-acquisition, post-tax results of the investees and any impairment losses for the year are recognized in the consolidated statement of income, whereas the Group's share of the post-acquisition, post-tax items of the investees' other comprehensive income is recognized in the consolidated statement of comprehensive income.

When the Group ceases to have significant influence over an associate or joint control over a joint venture, it is accounted for as a disposal of the entire interest in that investee, with a resulting gain or loss being recognized in profit or loss. Any interest retained in that former investee at the date when significant influence or joint control is lost is recognized at fair value and this amount is regarded as the fair value on initial recognition of a financial asset (see Note 2(j)) or, when appropriate, the cost on initial recognition of an investment in an associate.

(iii) Transactions eliminated on consolidation

Inter-company balances and transactions and any unrealized gains arising from inter-company transactions are eliminated on consolidation. Unrealized gains arising from transactions with associates and joint ventures are eliminated to the extent of the Group's interest in the entity. Unrealized losses are eliminated in the same way as unrealized gains, but only to the extent that there is no evidence of impairment.

(iv) Merger accounting for common control combination

The consolidated financial statements incorporate the financial statements of the combining entities or businesses in which the common control combination occurs as if they had been combined from the date when the combining entities or businesses first came under the control of the controlling party. The net assets of the combining entities or businesses are combined using the existing book values from the controlling parties' perspective. No amount is recognized as consideration for goodwill or excess of acquirers' interest in the net fair value of acquiree's identifiable assets, liabilities and contingent liabilities over cost at the time of common control combination, to the extent of the continuation of the controlling party's interest.

The consolidated statement of income includes the results of each of the combining entities or businesses from the earliest date presented or since the date when the combining entities or businesses first came under the common control, where there is a shorter period, regardless of the date of the common control combination. The comparative amounts in the consolidated financial statements are presented as if the entities or businesses had been combined at the previous balance sheet date or when they first came under common control, whichever is shorter.

2 SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

(a) Basis of consolidation *(Continued)*

(iv) Merger accounting for common control combination *(Continued)*

A uniform set of accounting policies is adopted by those entities. All intra-group transactions, balances and unrealized gains on transactions between combining entities or businesses are eliminated on consolidation. Transaction costs, including professional fees, registration fees, costs of furnishing information to shareholders, costs or losses incurred in combining operations of the previously separate businesses, etc., incurred in relation to the common control combination that is to be accounted for by using merger accounting is recognized as an expense in the period in which it is incurred.

(b) Translation of foreign currencies

The presentation currency of the Group is Renminbi. Foreign currency transactions during the year are translated into Renminbi at the applicable rates of exchange quoted by the People's Bank of China ("PBOC") prevailing on the transaction dates. Foreign currency monetary assets and liabilities are translated into Renminbi at the PBOC's rates at the balance sheet date.

Exchange differences, other than those capitalized as construction in progress, are recognized as income or expense in the "finance costs" section of the consolidated statement of income.

The results of foreign operations are translated into Renminbi at the applicable rates quoted by the PBOC prevailing on the transaction dates. Balance sheet items, including goodwill arising on consolidation of foreign operations are translated into Renminbi at the closing foreign exchange rates at the balance sheet date. The income and expenses of foreign operations are translated into Renminbi at the spot exchange rates or an exchange rate that approximates the spot exchange rates on the transaction dates. The resulting exchange differences are recognized in other comprehensive income and accumulated in equity in the other reserves.

On disposal of a foreign operation, the cumulative amount of the exchange differences relating to that foreign operation is reclassified from equity to the consolidated statement of income when the profit or loss on disposal is recognized.

(c) Cash and cash equivalents

Cash equivalents consist of time deposits with financial institutions with an initial term of less than three months when purchased. Cash equivalents are stated at cost, which approximates fair value.

(d) Trade, bills and other receivables

Trade, bills and other receivables are recognized initially at their transaction price, unless they contain significant financing components when they are recognized at fair value. They are subsequently measured at amortized cost using the effective interest method, less impairment losses for bad and doubtful debts (Note 2(j)). Trade, bills and other receivables are derecognized if the Group's contractual rights to the cash flows from these financial assets expire or if the Group transfers these financial assets to another party without retaining control or substantially all risks and rewards of the assets.

(e) Inventories

Inventories are stated at the lower of cost and net realizable value. Cost mainly includes the cost of purchase computed using the weighted average method and, in the case of work in progress and finished goods, direct labor and an appropriate proportion of production overheads. Net realizable value is the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale.

2 SIGNIFICANT ACCOUNTING POLICIES (Continued)**(f) Property, plant and equipment**

An item of property, plant and equipment is initially recorded at cost, less accumulated depreciation and impairment losses (Note 2(n)). The cost of an asset comprises its purchase price, any directly attributable costs of bringing the asset to working condition and location for its intended use. The Group recognizes in the carrying amount of an item of property, plant and equipment the cost of replacing part of such an item when that cost is incurred, when it is probable that the future economic benefits embodied with the item will flow to the Group and the cost of the item can be measured reliably. All other expenditure is recognized as an expense in the consolidated statement of income in the year in which it is incurred.

Gains or losses arising from the retirement or disposal of an item of property, plant and equipment, other than oil and gas properties, are determined as the difference between the net disposal proceeds and the carrying amount of the item and are recognized as income or expense in the consolidated statement of income on the date of retirement or disposal.

Depreciation is provided to write off the cost amount of items of property, plant and equipment, other than oil and gas properties, over its estimated useful life on a straight-line basis, after taking into account its estimated residual value, as follows:

	Estimated usage period	Estimated residuals rate
Buildings	12 to 50 years	3%
Equipment, machinery and others	4 to 30 years	3%

Where parts of an item of property, plant and equipment have different useful lives, the cost of the item is allocated on a reasonable basis between the parts and each part is depreciated separately. Both the useful life of an asset and its residual value, if any, are reassessed annually.

(g) Oil and gas properties

The Group uses the successful efforts method of accounting for its oil and gas producing activities. Under this method, costs of development wells, the related supporting equipment and proved mineral interests in properties are capitalized. The cost of exploratory wells is initially capitalized as construction in progress pending determination of whether the well has found proved reserves. The impairment of exploratory well costs occurs upon the determination that the well has not found proved reserves. The exploratory well costs are usually not carried as an asset for more than one year following completion of drilling, unless (i) the well has found a sufficient quantity of reserves to justify its completion as a producing well if the required capital expenditure is made; (ii) drilling of the additional exploratory wells is under way or firmly planned for the near future; or (iii) other activities are being undertaken to sufficiently progress the assessing of the reserves and the economic and operating viability of the project. All other exploration costs, including geological and geophysical costs, other dry hole costs and annual lease rentals to explore for or use oil and natural gas, are expensed as incurred. Capitalized costs of proved oil and gas properties are amortized on a unit-of-production method based on volumes produced and reserves.

Management estimates future dismantlement costs for oil and gas properties with reference to engineering estimates after taking into consideration the anticipated method of dismantlement required in accordance with the industry practices and the future cash flows are adjusted to reflect such risks specific to the liability, as appropriate. These estimated future dismantlement costs are discounted at a pre-tax risk-free rate and are capitalized as oil and gas properties, which are subsequently amortized as part of the costs of the oil and gas properties.

2 SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

(h) Construction in progress

Construction in progress represents buildings, oil and gas properties, various plant and equipment under construction and pending installation, and is stated at cost less impairment losses (Note 2(n)). Cost comprises direct costs of construction as well as interest charges, and foreign exchange differences on related borrowed funds to the extent that they are regarded as an adjustment to interest charges, during the periods of construction.

Construction in progress is transferred to property, plant and equipment when the asset is substantially ready for its intended use.

No depreciation is provided in respect of construction in progress.

(i) Goodwill

Goodwill represents amounts arising on acquisition of subsidiaries, associates or joint ventures. Goodwill represents the difference between the cost of acquisition and the fair value of the net identifiable assets acquired.

Prior to January 1, 2008, the acquisition of the non-controlling interests of a consolidated subsidiary was accounted for using the acquisition method whereby the difference between the cost of acquisition and the fair value of the net identifiable assets acquired (on a proportionate share) was recognized as goodwill. From January 1, 2008, any difference between the amount by which the non-controlling interest is adjusted (such as through an acquisition of the non-controlling interests) and the cash or other considerations paid is recognized in equity.

Goodwill is stated at cost less accumulated impairment losses. Goodwill arising on a business combination is allocated to each cash-generating unit, or groups of cash-generating units, that is expected to benefit the synergies of the combination and is tested annually for impairment (Note 2(n)). In respect of associates or joint ventures, the carrying amount of goodwill is included in the carrying amount of the interest in the associates or joint ventures and the investment as a whole is tested for impairment whenever there is objective evidence of impairment (Note 2(n)).

(j) Financial assets

(i) Classification and measurement

The Group classifies financial assets into different categories depending on the business model for managing the financial assets and the contractual terms of cash flows of the financial assets: a) financial assets measured at amortized cost, b) financial assets measured at fair value through other comprehensive income ("FVOCI"), c) financial assets measured at fair value through profit or loss. A contractual cash flow characteristic which could have only a de minimis effect, or could have an effect that is more than de minimis but is not genuine, does not affect the classification of the financial asset.

Financial assets are initially recognized at fair value. For financial assets measured at fair value through profit or loss, the relevant transaction costs are recognized in profit or loss. The transaction costs for other financial assets are included in the initially recognized amount. However, trade accounts receivable and bills receivable arising from sale of goods or rendering services, without significant financing component, are initially recognized based on the transaction price expected to be entitled by the Group.

2 SIGNIFICANT ACCOUNTING POLICIES (Continued)

(j) Financial assets (Continued)

Debt instruments

Debt instruments held by the Group mainly includes cash and cash equivalents, time deposits with financial institutions, receivables. These financial assets are measured at amortized cost and FVOCI.

- Amortized cost: The business model for managing such financial assets by the Group are held for collection of contractual cash flows. The contractual cash flow characteristics are to give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. Interest income from these financial assets is recognized using the effective interest rate method.
- FVOCI: The business model for managing such financial assets by the Group are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest on the principal amount outstanding. Movements in the carrying amount are taken through other comprehensive income, except for the recognition of impairment gains or losses, foreign exchange gains and losses and interest income calculated using the effective interest rate method, which are recognized in profit or loss.

Equity instruments

Equity instruments that the Group has no power to control, jointly control or exercise significant influence over, are measured at fair value through profit or loss and presented in financial assets at fair value through profit or loss.

In addition, the Group designates some equity instruments that are not held for trading as financial assets at FVOCI, are presented in financial assets at FVOCI. The relevant dividends of these financial assets are recognized in profit or loss. When derecognized, the cumulative gain or loss previously recognized in other comprehensive income is transferred to retained earnings.

(ii) Impairment

The Group recognizes a loss allowance for expected credit losses on a financial asset that is measured at amortized cost and a debt instrument that is measured at FVOCI.

The Group measures and recognizes expected credit losses, considering reasonable and supportable information about the relevant past events, current conditions and forecasts of future economic conditions.

The Group measures the expected credit losses of financial instruments on different stages at each balance sheet date. For financial instruments that have no significant increase in credit risk since the initial recognition, on first stage, the Group measures the loss allowance at an amount equal to 12-month expected credit losses. If there has been a significant increase in credit risk since the initial recognition of a financial instrument but credit impairment has not occurred, on second stage, the Group recognizes a loss allowance at an amount equal to lifetime expected credit losses. If credit impairment has occurred since the initial recognition of a financial instrument, on third stage, the Group recognizes a loss allowance at an amount equal to lifetime expected credit losses.

For financial instruments that have low credit risk at the balance sheet date, the Group assumes that there is no significant increase in credit risk since the initial recognition, and measures the loss allowance at an amount equal to 12-month expected credit losses.

For financial instruments on the first stage and the second stage, and that have low credit risk, the Group calculates interest income according to carrying amount without deducting the impairment allowance and effective interest rate. For financial instruments on the third stage, interest income is calculated according to the carrying amount minus amortized cost after the provision of impairment allowance and effective interest rate.

For trade accounts receivable and bills receivable and financial assets at FVOCI related to revenue, the Group measures the loss allowance at an amount equal to lifetime expected credit losses.

The Group recognizes the loss allowance accrued or written back in profit or loss.

2 SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

(j) Financial assets *(Continued)*

(iii) Derecognition

The Group derecognizes a financial asset when: a) the contractual right to receive cash flows from the financial asset expires; b) the Group transfers the financial asset and substantially all the risks and rewards of ownership of the financial asset; c) the financial asset has been transferred and the Group neither transfers nor retains substantially all the risks and rewards of ownership of the financial asset, but the Group has not retained control.

On derecognition of equity instruments at FVOCI, the difference between the carrying amounts and the sum of the consideration received and any accumulated gain or loss previously recognized in other comprehensive income, is recognized in retained earnings. While on derecognition of other financial assets, this difference is recognized in profit or loss.

(k) Financial liabilities

The Group, at initial recognition, classifies financial liabilities as either financial liabilities subsequently measured at amortized cost or financial liabilities at fair value through profit or loss.

The Group's financial liabilities are mainly financial liabilities measured at amortized cost, including trade accounts payable and bills payable, other payables, and loans, etc. These financial liabilities are initially measured at the amount of their fair value after deducting transaction costs and use the effective interest rate method for subsequent measurement.

Where the present obligations of financial liabilities are completely or partially discharged, the Group derecognizes these financial liabilities or discharged parts of obligations. The differences between the carrying amounts and the consideration received are recognized in profit or loss.

(l) Determination of fair value for financial instruments

If there is an active market for financial instruments, the quoted price in the active market is used to measure fair values of the financial instruments. If no active market exists for financial instruments, valuation techniques are used to measure fair values. In valuation, the Group adopts valuation techniques that are applicable in the current situation and have sufficient available data and other information to support it, and selects input values that are consistent with the asset or liability characteristics considered by market participants in the transaction of relevant assets or liabilities, and gives priority to relevant observable input values. Use of unobservable input values where relevant observable input values cannot be obtained or are not practicable.

2 SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

(m) Derivative financial instruments and hedge accounting

Derivative financial instruments are recognized initially at fair value. At each balance sheet date, the fair value is remeasured. The gain or loss on remeasurement to fair value is recognized immediately in profit or loss, except where the derivatives qualify for hedge accounting.

Hedge accounting is a method which recognizes the offsetting effects on profit or loss (or other comprehensive income) of changes in the fair values of the hedging instrument and the hedged item in the same accounting period, to represent the effect of risk management activities.

Hedged items are the items that expose the Group to risks of changes in future cash flows and that are designated as being hedged and that must be reliably measurable. The Group's hedged items include a forecast transaction that is settled with an undetermined future market price and exposes the Group to risk of variability in cash flows, etc.

A hedging instrument is a designated derivative whose changes in cash flows are expected to offset changes in cash flows of the hedged item.

The hedging relationship meets all of the following hedge effectiveness requirements:

(i) There is an economic relationship between the hedged item and the hedging instrument, which shares a risk and that gives rise to opposite changes in fair value that tend to offset each other.

(ii) The effect of credit risk does not dominate the value changes that result from that economic relationship.

(iii) The hedge ratio of the hedging relationship is the same as that resulting from the quantity of the hedged item that the entity actually hedges and the quantity of the hedging instrument that the entity actually uses to hedge that quantity of hedged item. However, that designation does not reflect an imbalance between the weightings of the hedged item and the hedging instrument.

2 SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

(m) Derivative financial instruments and hedge accounting *(Continued)*

Cash flow hedges

Cash flow hedge is a hedge of the exposure to variability in cash flows that is attributable to a particular risk associated with all, or a component of, a recognized asset or liability (such as all or some future interest payments on variable-rate debt) or a highly probable forecast transaction, and could affect profit or loss. Hedge effectiveness is determined at the inception of the hedge relationship, and through periodic prospective effectiveness assessments to ensure that an economic relationship exists between the hedged item and hedging instrument.

As long as a cash flow hedge meets the qualifying criteria for hedge accounting, the separate component of equity associated with the hedged item (cash flow hedge reserve) is adjusted to the lower of the following (in absolute amounts):

- (i) The cumulative gain or loss on the hedging instrument from inception of the hedge; and
- (ii) The cumulative change in fair value (present value) of the hedged item (i.e. the present value of the cumulative change in the hedged expected future cash flows) from inception of the hedge.

The gain or loss on the hedging instrument that is determined to be an effective hedge is recognized in other comprehensive income.

The portion of the gain or loss on the hedging instrument that is determined to be an ineffective hedge is recognized in profit or loss.

If a hedged forecast transaction subsequently results in the recognition of a non-financial asset or non-financial liability, or a hedged forecast transaction for a non-financial asset or a non-financial liability becomes a firm commitment for which fair value hedge accounting is applied, the entity removes that amount from the cash flow hedge reserve and include it directly in the initial cost or other carrying amount of the asset or the liability. This is not a reclassification adjustment and hence it does not affect other comprehensive income.

For cash flow hedges, other than those covered by the preceding policy statements, that amount is reclassified from the cash flow hedge reserve to profit or loss as a reclassification adjustment in the same period or periods during which the hedged expected future cash flows affect profit or loss.

If the amount that has been accumulated in the cash flow hedge reserve is a loss and the Group expects that all or a portion of that loss will not be recovered in one or more future periods, the Group immediately reclassifies the amount that is not expected to be recovered into profit or loss.

When the hedging relationship no longer meets the risk management objective on the basis of which it qualified for hedge accounting (ie the entity no longer pursues that risk management objective), or when a hedging instrument expires or is sold, terminated, exercised, or there is no longer an economic relationship between the hedged item and the hedging instrument or the effect of credit risk starts to dominate the value changes that result from that economic relationship or no longer meets the criteria for hedge accounting, the Group discontinues prospectively the hedge accounting treatments. If the hedged future cash flows are still expected to occur, that amount remains in the cash flow hedge reserve and is accounted for as cash flow hedges. If the hedged future cash flows are no longer expected to occur, that amount is immediately reclassified from the cash flow hedge reserve to profit or loss as a reclassification adjustment. A hedged future cash flow that is no longer highly probable to occur may still be expected to occur, if the hedged future cash flows are still expected to occur, that amount remains in the cash flow hedge reserve and is accounted for as cash flow hedges.

2 SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

(n) Impairment of assets

The carrying amounts of assets, including property, plant and equipment, construction in progress, right-of-use assets and other assets, are reviewed at each balance sheet date to identify indicators that the assets may be impaired. These assets are tested for impairment whenever events or changes in circumstances indicate that their recorded carrying amounts may not be recoverable. When such a decline has occurred, the carrying amount is reduced to the recoverable amount. For goodwill, the recoverable amount is estimated at each balance sheet date.

The recoverable amount is the greater of the fair value less costs to disposal and the value in use. In determining the value in use, expected future cash flows generated by the asset are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Where an asset does not generate cash inflows largely independent of those from other assets, the recoverable amount is determined for the smallest group of assets that generates cash inflows independently (i.e. a cash-generating unit).

The amount of the reduction is recognized as an expense in the consolidated statement of income. Impairment losses recognized in respect of cash-generating units are allocated first to reduce the carrying amount of any goodwill allocated to the cash-generating unit and then, to reduce the carrying amount of the other assets in the unit on a pro rata basis, except that the carrying value of an asset will not be reduced below its individual fair value less costs to disposal, or value in use, if determinable.

Management assesses at each balance sheet date whether there is any indication that an impairment loss recognized for an asset, except in the case of goodwill, in prior years may no longer exist. An impairment loss is reversed if there has been a favorable change in the estimates used to determine the recoverable amount. A subsequent increase in the recoverable amount of an asset, when the circumstances and events that led to the write-down or write-off cease to exist, is recognized as an income. The reversal is reduced by the amount that would have been recognized as depreciation had the write-down or write-off not occurred. An impairment loss in respect of goodwill is not reversed.

(o) Trade, bills and other payables

Trade, bills and other payables are initially recognized at fair value and thereafter stated at amortized cost unless the effect of discounting would be immaterial, in which case they are stated at cost.

(p) Interest-bearing borrowings

Interest-bearing borrowings are recognized initially at fair value less attributable transaction costs. Subsequent to initial recognition, interest-bearing borrowings are stated at amortized cost with any difference between cost and redemption value being recognized in the consolidated statement of income over the period of borrowings using the effective interest method.

2 SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

(q) Provisions and contingent liability

A provision is recognized for liability of uncertain timing or amount when the Group has a legal or constructive obligation arising as a result of a past event, when it is probable that an outflow of economic benefits will be required to settle the obligation and a reliable estimate can be made.

When it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Possible obligations, whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events are also disclosed as contingent liabilities unless the probability of outflow of economic benefits is remote.

Provisions for future dismantlement costs are initially recognized based on the present value of the future costs expected to be incurred in respect of the Group's expected dismantlement and abandonment costs at the end of related oil and gas exploration and development activities. Any subsequent change in the present value of the estimated costs, other than the change due to passage of time which is regarded as interest cost, is reflected as an adjustment to the provision and oil and gas properties.

(r) Revenue recognition

Revenue arises in the course of the Group's ordinary activities, and increases in economic benefits in the form of inflows that result in an increase in equity, other than those relating to contributions from equity participants.

The Group sells crude oil, natural gas, petroleum and chemical products, etc. Revenue is recognized according to the expected consideration amount, when a customer obtains control over the relevant goods or services. To determine whether a customer obtains control of a promised asset, the Group shall consider indicators of the transfer of control, which include, but are not limited to, the Group has a present right to payment for the asset; the Group has transferred physical possession of the asset to the customer; the customer has the significant risks and rewards of ownership of the asset; the customer has accepted the asset.

(i) Sales of goods

Sales are recognized when control of the goods have transferred, being when the products are delivered to the customer. Advance from customers but goods not yet delivered is recorded as contract liabilities and is recognized as revenues when a customer obtains control over the relevant goods.

2 SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

(s) Government grants

Grants from the government are recognized at their fair value where there is a reasonable assurance that the grant will be received and the Group will comply with all attached conditions.

Government grants relating to costs are deferred and recognized in the profit or loss over the period necessary to match them with the costs that they are intended to compensate.

Government grants relating to the purchase of property, plant and equipment are included in non-current liabilities as deferred income and are credited to profit or loss on a straight-line basis over the expected lives of the related assets.

(t) Borrowing costs

Borrowing costs are expensed in the consolidated statements of income in the period in which they are incurred, except to the extent that they are capitalized as being attributable to the construction of an asset which necessarily takes a period of time to get ready for its intended use.

(u) Repairs and maintenance expenditure

Repairs and maintenance expenditure is expensed as incurred.

(v) Environmental expenditures

Environmental expenditures that relate to current ongoing operations or to conditions caused by past operations are expensed as incurred.

Liabilities related to future remediation costs are recorded when environmental assessments and/or cleanups are probable and the costs can be reliably estimated. As facts concerning environmental contingencies become known to the Group, the Group reassesses its position both with respect to accrued liabilities and other potential exposures.

(w) Research and development expense

Research and development expenditures that cannot be capitalized are expensed in the period in which they are incurred. Research and development expense amounted to RMB 7,996, RMB 9,450 and RMB 10,086 for the years ended December 31, 2018, 2019 and 2020, respectively.

(x) Leases

A lease is a contract that a lessor transfers the right to use an identified asset for a period of time to a lessee in exchange for consideration.

(i) As lessee

The Group recognizes a right-of-use asset at the date at which the leased asset is available for use by the Group, and recognizes a lease liability measured at the present value of the remaining lease payments. The lease payments include fixed payments, the exercise price of a purchase option if the Group is reasonably certain to exercise that option, and payments of penalties for terminating the lease if the lease term reflects the Group exercising that option, etc. Variable payments that are based on a percentage of sales are not included in the lease payments, and should be recognized in profit or loss when incurred. Lease liabilities to be paid within one year (including one year) from balance sheet date is presented in current liabilities.

2 SIGNIFICANT ACCOUNTING POLICIES *(Continued)*

(x) Leases *(Continued)*

Right-of-use assets of the Group mainly comprise land. Right-of-use assets are measured at cost which comprises the amount of the initial measurement of the lease liability, any lease payments made at or before the commencement date, any initial direct costs incurred by the lessee, less any lease incentives received. The Group depreciates the right-of-use assets over the shorter of the asset's useful life and the lease term on a straight-line basis. When the recoverable amount of a right-of-use asset is less than its carrying amount, the carrying amount is reduced to the recoverable amount.

Payments associated with short-term leases with lease terms within 12 months and all leases of low-value assets are recognized on a straight-line basis over the lease term as an expense in profit or loss or as cost of relevant assets, instead of recognizing right-of-use assets and lease liabilities.

A lessee shall account for a lease modification as a separate lease if both: (1) the modification increases the scope of the lease by adding the right to use one or more underlying assets; and (2) the consideration for the lease increases by an amount commensurate with the stand-alone price for the increase in scope and any appropriate adjustments to that stand-alone price to reflect the circumstances of the particular contract.

For a lease modification that is not accounted for as a separate lease, except for the practical expedient which applies only to rent concessions occurring as a direct consequence of the covid-19 pandemic, the group determine the lease term of the modified lease at the effective date of the modification, and remeasure the lease liability by discounting the revised lease payments using a revised discount rate. The group decrease the carrying amount of the right-of-use asset to reflect the partial or full termination of the lease for lease modifications that decrease the scope or shorten the term of the lease, and shall recognize in profit or loss any gain or loss relating to the partial or full termination of the lease. The group make a corresponding adjustment to the right-of-use asset for all other lease modifications.

(ii) As lessor

A lease that transfers substantially all the risks and rewards incidental to ownership of an asset is a finance lease. An operating lease is a lease other than a finance lease.

When the Group leases self-owned plants and buildings, equipment and machinery, lease income from an operating lease is recognized on a straight-line basis over the period of the lease. The Group recognizes variable lease income which is based on a certain percentage of sales as rental income when occurred.

(iii) Accounting policy applied until December 31, 2018

Lease prepayments

Lease prepayments represent land use rights paid to the relevant government authorities. Land use rights are carried at cost less accumulated amount charged to expense and impairment losses. The cost of lease prepayments is charged to expense on a straight-line basis over the respective periods of the rights.

Operating leases

Operating lease payments are charged to the consolidated statement of income on a straight-line basis over the period of the respective leases.

(y) Employee benefits

The contributions payable under the Group's retirement plans are recognized as an expense in the consolidated statement of income as incurred and according to the contribution determined by the plans. Further information is set out in Note 37.

Termination benefits, such as employee reduction expenses, are recognized when, and only when, the Group demonstrably commits itself to terminate employment or to provide benefits as a result of voluntary redundancy by having a detailed formal plan which is without realistic possibility of withdrawal.

2 SIGNIFICANT ACCOUNTING POLICIES (Continued)

(z) Income tax

Income tax comprises current and deferred tax. Current tax is calculated on taxable income by applying the applicable tax rates. Deferred tax is provided using the balance sheet liability method on all temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes only to the extent that it is probable that future taxable income will be available against which the assets can be utilized. Deferred tax is calculated on the basis of the enacted tax rates or substantially enacted tax rates that are expected to apply in the period when the asset is realized or the liability is settled. The effect on deferred tax of any changes in tax rates is charged or credited to the consolidated statement of income, except for the effect of a change in tax rate on the carrying amount of deferred tax assets and liabilities which were previously charged or credited to other comprehensive income or directly in equity.

The tax value of losses expected to be available for utilization against future taxable income is set off against the deferred tax liability within the same legal tax unit and jurisdiction to the extent appropriate, and is not available for set off against the taxable profit of another legal tax unit. The carrying amount of a deferred tax asset is reviewed at each balance sheet date and is reduced to the extent that it is no longer probable that the related tax benefit will be realized.

(aa) Dividends

Dividends and distributions of profits proposed in the profit appropriation plan which will be authorized and declared after the balance sheet date, are not recognized as a liability at the balance sheet date and are separately disclosed in the notes to the financial statements. Dividends are recognized as a liability in the period in which they are declared.

(bb) Segment reporting

Operating segments, and the amounts of each segment item reported in the consolidated financial statements, are identified from the financial information provided regularly to the Group's chief operating decision maker for the purposes of allocating resources to, and assessing the performance of the Group's various lines of business.

3. SALES OF GOODS

Sales of goods primarily represents revenue from the sales of refined petroleum products, chemical products, crude oil and natural gas, which are recognized at a point in time.

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Gasoline	711,236	699,202	557,605
Diesel	594,008	615,342	422,569
Crude oil	512,955	549,720	351,707
Basic chemical feedstock	252,158	215,773	155,687
Synthetic resin	125,977	125,658	122,313
Kerosene	168,823	191,636	72,385
Natural gas	43,205	53,839	48,121
Synthetic fiber monomers and polymers	77,572	80,100	41,640
Others (i)	336,441	368,412	277,429
	<u>2,822,375</u>	<u>2,899,682</u>	<u>2,049,456</u>

(i) Others are primarily liquefied petroleum gas and other refinery and chemical byproducts and joint products.

4. OTHER OPERATING REVENUES

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Sale of materials and others	58,623	58,886	55,441
Rental income	1,079	1,231	1,087
	<u>59,702</u>	<u>60,117</u>	<u>56,528</u>

5. SELLING, GENERAL AND ADMINISTRATIVE EXPENSES

The following items are included in selling, general and administrative expenses:

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Operating lease charges	12,301	1,858	2,685
Auditor's remuneration:			
- Audit services	94	70	73
- Others	9	6	8
Impairment losses:			
- Trade accounts receivable	6	1,283	2,105
- Other receivables	8	(2)	(25)

6. PERSONNEL EXPENSES

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Salaries, wages and other benefits	69,786	70,921	77,202
Contributions to retirement schemes (Note 37)	9,181	11,822	8,804
	<u>78,967</u>	<u>82,743</u>	<u>86,006</u>

7. TAXES OTHER THAN INCOME TAX

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Consumption tax (i)	203,653	204,388	197,542
City construction tax (ii)	18,406	16,387	15,699
Education surcharge	13,308	12,111	11,670
Resources tax	6,021	5,883	4,572
Others	7,199	5,748	5,464
	<u>248,587</u>	<u>244,517</u>	<u>234,947</u>

Notes:

- (i) Consumption tax was levied based on sales quantities of taxable products, tax rate of products is presented as below:

Products	Effective from January 13, 2015 RMB/Ton
Gasoline	2,109.76
Diesel	1,411.20
Naphtha	2,105.20
Solvent oil	1,948.64
Lubricant oil	1,711.52
Fuel oil	1,218.00
Jet fuel oil	1,495.20

- (ii) City construction tax is levied on an entity based on its total paid amount of value-added tax and consumption tax.

8. OTHER OPERATING EXPENSE, NET

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Government grants (i)	7,677	6,933	8,775
Ineffective portion of change in fair value of cash flow hedges	(1,978)	(222)	3,052
Net realized and unrealized gain/(loss) on derivative financial instruments not qualified as hedging	191	(4,384)	(1,252)
Impairment losses on long-lived assets (ii)	(6,286)	(345)	(14,560)
(Loss)/gain on disposal of property, plant, equipment and other non-current assets, net	(1,501)	(1,829)	398
Fines, penalties and compensations	(278)	(173)	(43)
Donations	(181)	(210)	(301)
Others	(2,901)	(116)	(1,781)
	<u>(5,257)</u>	<u>(346)</u>	<u>(5,712)</u>

Notes:

- (i) Government grants for the years ended December 31, 2018, 2019 and 2020 primarily represent financial appropriation income and non-income tax refunds received from respective government agencies without conditions or other contingencies attached to the receipts of the grants.
- (ii) Impairment losses recognized on long-lived assets of the exploration and production (“E&P”) segments were RMB 4,274, RMB 3 and RMB 8,495 for the years ended December 31, 2018, 2019 and 2020, respectively. The impairment comprised RMB 4,274, RMB 8,435 on property, plant and equipment for the years ended December 31, 2018 and 2020, respectively, RMB 60 on construction in progress for the year ended December 31, 2020, and RMB 3 on prepayments for the year ended December 31, 2019. E&P segment determines recoverable amounts of property, plant and equipment relating to oil and gas producing activities, which include significant judgements and assumptions. The recoverable amounts were determined based on the present values of the expected future cash flows of the assets using a pre-tax discount rate of 10.47%, 10.47% and 10.47% for the years ended December 31, 2018, 2019 and 2020, respectively. Further future downward revisions to the Group’s oil price outlook would lead to further impairments which, in aggregate, are likely to be material. It is estimated that a general decrease of 5% in oil price, with all other variables held constant, would result in additional impairment loss on the Group’s property, plant and equipment relating to oil and gas producing activities by approximately RMB 4,548. It is estimated that a general increase of 5% in operating cost, with all other variables held constant, would result in additional impairment loss on the Group’s property plant and equipment relating to oil and gas producing activities by approximately RMB 2,836. It is estimated that a general increase of 5% in discount rate, with all other variables held constant, would result in additional impairment loss on the Group’s property, plant and equipment relating to oil and gas producing activities by approximately RMB 287. The primary factor resulting in the E&P segment impairment loss for the year ended December 31, 2018 was downward revision of oil and gas reserve in certain fields. The primary factors resulting in the E&P segment impairment loss for the year ended December 31, 2020 were low oil price outlook and downward revision of oil and gas reserve in certain fields.

8. OTHER OPERATING EXPENSE, NET *(Continued)*

Impairment losses recognized for the chemicals segment were RMB 1,379, RMB 17 and RMB 3,606 for the years ended December 31, 2018, 2019 and 2020, respectively, and comprised of impairment losses of RMB 1,257, RMB 4 and RMB 2,611 on property, plant and equipment for the years ended December 31, 2018, 2019 and 2020, respectively, RMB 25, RMB 29 and RMB 744 on construction in progress for the years ended December 31, 2018, 2019 and 2020, respectively, RMB 251 for investment on associates and joint ventures for the year ended December 31, 2020, RMB 97 on entrusted loans for the year ended December 31, 2018 and written back RMB 16 on entrusted loans for the year ended December 31, 2019. Impairment losses recognized for the refining segment were RMB 353, RMB 245 and RMB 1,923 for the years ended December 31, 2018, 2019 and 2020, respectively, and comprised of impairment losses of RMB 353, RMB 140 and RMB 226 on property, plant and equipment for the years ended December 31, 2018, 2019 and 2020, respectively, and RMB 105 on construction in progress for the year ended December 31, 2019, RMB 1,697 for investment in joint venture for the year ended December 31, 2020. These impairment losses relate to certain refining and chemicals production facilities that are held for use for the years ended December 31, 2018, 2019 and 2020. The carrying values of these facilities were written down to their recoverable amounts that were primarily determined based on the asset held for use model using the present value of estimated future cash flows of the production facilities using the pre-tax discount rates for the years ended December 31, 2018, 2019 and 2020, respectively. The primary factor resulting in the impairment losses on long-lived assets of the refining and chemicals segment for the years ended December 31, 2018, 2019 and 2020, were due to the suspension of operations of certain production facilities. Evidence indicates the economic performance of certain production facilities are worse than expected also contributed to the written down of assets in the chemical segments for the years ended December 31, 2018, 2019 and 2020.

Impairment losses recognized on long-lived assets of the marketing and distribution segment were RMB 264, RMB 80 and RMB 536 for the years ended December 31, 2018, 2019 and 2020 respectively. The impairment comprised of impairment losses of RMB 254, RMB 52 and RMB 442 on property, plant and equipment for the years ended December 31, 2018, 2019 and 2020, respectively, impairment losses of RMB 47 on intangible assets for the year ended December 31, 2020, impairment losses of RMB 7, RMB 7 on investments in associates and joint ventures for the years ended December 31, 2018 and 2020, respectively, impairment losses of, RMB 3 RMB 1 and RMB 40 on construction in progress for the year ended December 31, 2018, 2019 and 2020, respectively, primarily relate to certain service stations and certain construction in progress that were closed or abandoned during respective years, and impairment losses of RMB 27 on prepayments for the year ended December 31, 2019. In measuring the amounts of impairment charges, the carrying amounts of these assets were compared to the present value of the expected future cash flows of the assets, as well as information about sales and purchases of similar properties in the same geographic area.

Impairment loss recognized on long-lived assets of the corporate and others segment was RMB 16 for the year ended December 31, 2018. The impairment comprised of impairment loss of RMB 16 on property, plant and equipment for the years ended December 31, 2018.

9. INTEREST EXPENSE

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Interest expense incurred	6,457	7,039	6,513
Less: Interest expense capitalized*	(499)	(1,015)	(2,011)
	5,958	6,024	4,502
Interest expense on lease liabilities	—	9,646	9,349
Accretion expenses (Note 32)	1,438	1,418	1,343
Interest expense	7,396	17,088	15,194
* Interest rates per annum at which borrowing costs were capitalized for construction in progress	2.37% to 4.66%	2.92% to 4.66%	2.60% to 4.66%

10. INVESTMENT INCOME

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Investment income from disposal of business and long-term equity investments (i)	397	185	37,525
Dividend income from holding of other equity instrument investments	515	492	156
Others	959	242	63
	1,871	919	37,744

Note:

- (i) The Company and Sinomart KTS Development Limited, Sinopec Natural Gas Limited Company and Sinopec Marketing Company Limited (“Marketing Company”), the subsidiaries of the Company entered into the Agreement on Cash Payment to Purchase Equity in Sinopec Yu Ji Pipeline Company Limited, the Agreement on Additional Issuance of Equity and Cash Payment to Purchase Assets, the Agreement on Cash Payment to Purchase Assets and the Agreement on Additional Issuance of Equity to Purchase Assets with China Oil & Gas Pipeline Network Corporation (“PipeChina”), on July 21, 2020 and on July 23, 2020 respectively, pursuant to which the Company and its subsidiaries proposed to dispose target business, including equity interests in the relevant companies, oil and gas pipeline and ancillary facilities, to PipeChina. The above transactions were considered and approved by the 15th Session of 7th Directorate Meeting on July 23, 2020 and the second Extraordinary General Meeting on September 28, 2020. The transaction consideration was mainly additional issuance of equity and/or cash payment by PipeChina and the gain on above transactions was RMB 37,731 million. Main assets and liabilities of disposed target business are as follows:

	30 September 2020 RMB million
Inventories	8,191
Property, plant and equipment, net	83,510
Construction in progress	19,843
Interest in associates	26,412
Long-term debts and Loans from Sinopec Group Company and fellow subsidiaries	(41,800)
Other financial statement items	(9,035)
Net Assets	87,121

11. INCOME TAX EXPENSE

Income tax expense in the consolidated statement of income represents:

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Current tax			
- Provision for the year	27,241	15,021	14,209
- Adjustment of prior years	(719)	(467)	(117)
Deferred taxation (Note 25)	(6,244)	3,385	(7,873)
	<u>20,278</u>	<u>17,939</u>	<u>6,219</u>

Reconciliation between actual income tax expense and the expected income tax expense at applicable statutory tax rates is as follows:

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Earnings before income tax	99,339	90,022	48,143
Expected PRC income tax expense at a statutory tax rate of 25%	24,835	22,506	12,036
Tax effect of non-deductible expenses	2,359	2,321	3,274
Tax effect of non-taxable income (i)	(5,033)	(4,458)	(8,330)
Tax effect of preferential tax rate (ii)	(1,259)	(2,003)	(1,011)
Effect of income taxes at foreign operations	77	(312)	(730)
Tax effect of utilization of previously unrecognized tax losses and temporary differences	(779)	(335)	(65)
Tax effect of tax losses not recognized	609	498	1,087
Write-down of deferred tax assets	188	189	75
Adjustment of prior years	(719)	(467)	(117)
Actual income tax expense	<u>20,278</u>	<u>17,939</u>	<u>6,219</u>

Notes:

- (i) For the year ended December 31, 2020, the tax effect of non-taxable income includes the tax exempt investment income of joint ventures and associates and the tax exempt part of the gain related to the disposal of oil and gas pipeline and ancillary facilities.
- (ii) The provision for PRC current income tax is based on a statutory income tax rate of 25% of the assessable income of the Group as determined in accordance with the relevant income tax rules and regulations of the PRC, except for certain entities of the Group in western regions in the PRC are taxed at preferential income tax rate of 15% through the year 2020. According to Announcement [2020] No. 23 of the MOF "Announcement of the MOF, the State Taxation Administration and the National Development and Reform Commission on continuation of the income tax policy of western development enterprises", the preferential tax rate of 15% extends from January 1, 2021 to December 31, 2030.

12. OTHER COMPREHENSIVE INCOME

	Years ended December 31,								
	2018			2019			2020		
	Before tax amount RMB	Tax effect RMB	Net of tax amount RMB	Before tax amount RMB	Tax effect RMB	Net of tax amount RMB	Before tax amount RMB	Tax effect RMB	Net of tax amount RMB
Cash flow hedges:									
Effective portion of changes in fair value of hedging instruments recognized during the year	(12,500)	2,159	(10,341)	5,258	(974)	4,284	9,207	(2,295)	6,912
Reclassification adjustments for amounts transferred to the consolidated statement of income	730	(130)	600	853	(196)	657	198	(37)	161
Net movement during the year recognized in other comprehensive income (i)	(11,770)	2,029	(9,741)	6,111	(1,170)	4,941	9,405	(2,332)	7,073
Changes in the fair value of instruments at fair value through other comprehensive income	(41)	(12)	(53)	(39)	8	(31)	(6)	(4)	(10)
Transfer of loss on disposal of equity investments at fair value through other comprehensive income to retained earnings	-	-	-	-	-	-	(12)	-	(12)
Net movement during the year recognized in other comprehensive income	(41)	(12)	(53)	(39)	8	(31)	(18)	(4)	(22)
Fair value hedges	-	-	-	-	-	-	162	-	162
Share of other comprehensive loss of associates and joint ventures	(240)	11	(229)	(810)	-	(810)	(2,441)	-	(2,441)
Foreign currency translation differences	3,399	-	3,399	1,480	-	1,480	(4,457)	-	(4,457)
Other comprehensive income	(8,652)	2,028	(6,624)	6,742	(1,162)	5,580	2,651	(2,336)	315

Note:

- (i) As of December 31, 2019 and 2020, cash flow hedge reserve amounted to a gain of RMB 1,102 and a gain of RMB 8,176, respectively, of which a gain of RMB 1,037 and a gain of RMB 7,805 were attributable to owners of the Company.

13. BASIC AND DILUTED EARNINGS PER SHARE

The calculation of basic earnings per share for the years ended December 31, 2018, 2019 and 2020 is based on the net income attributable to ordinary owners of the Company of RMB 61,708, RMB 57,493 and RMB 33,096, respectively, and the weighted average number of shares of 121,071,209,646, 121,071,209,646 and 121,071,209,646, respectively.

The calculation of diluted earnings per share for the years ended December 31, 2018, 2019 and 2020 is based on the net income attributable to ordinary owners of the Company (diluted) of RMB 61,708, RMB 57,493 and RMB 33,096, respectively, and the weighted average number of shares of 121,071,209,646, 121,071,209,646 and 121,071,209,646, respectively, calculated as follows:

(i) Net income attributable to ordinary owners of the Company (diluted)

	2018	2019	2020
	RMB	RMB	RMB
Net income attributable to ordinary owners of the Company	61,708	57,493	33,096
Net income attributable to ordinary owners of the Company (diluted)	61,708	57,493	33,096

(ii) Weighted average number of shares (diluted)

	2018	2019	2020
	Number of	Number of	Number of
	shares	shares	shares
Weighted average number of shares as of December 31	121,071,209,646	121,071,209,646	121,071,209,646
Weighted average number of shares (diluted) as of December 31	121,071,209,646	121,071,209,646	121,071,209,646

14. DERIVATIVE FINANCIAL ASSETS AND DERIVATIVE FINANCIAL LIABILITIES

Derivative financial assets and derivative financial liabilities of the Group are primarily commodity futures and swaps contracts. See Note 40.

15. TRADE ACCOUNTS RECEIVABLE

	December 31,	
	2019	2020
	RMB	RMB
Amounts due from third parties	43,735	22,536
Amounts due from Sinopec Group Company and fellow subsidiaries	6,062	12,120
Amounts due from associates and joint ventures	6,426	4,791
	56,223	39,447
Less: Impairment losses for bad and doubtful debts	(1,848)	(3,860)
	54,375	35,587

The ageing analysis of trade accounts receivable (net of impairment losses for bad and doubtful debts) is as follows:

	December 31,	
	2019	2020
	RMB	RMB
Within one year	54,027	34,509
Between one and two years	190	931
Between two and three years	64	64
Over three years	94	83
	54,375	35,587

Impairment losses for bad and doubtful debts are analyzed as follows:

	2018	2019	2020
	RMB	RMB	RMB
Balance as of January 1	612	606	1,848
Provision for the year	83	1,566	2,173
Written back for the year	(77)	(283)	(68)
Written off for the year	(19)	(41)	(23)
Others	7	-	(70)
Balance as of December 31	606	1,848	3,860

Sales are generally on a cash term. Credit is generally only available for major customers with well-established trading records. Amounts due from Sinopec Group Company and fellow subsidiaries are repayable under the same terms.

Trade accounts receivable (net of impairment losses for bad and doubtful debts) primarily represent receivables that are neither past due nor impaired. These receivables relate to a wide range of customers for whom there is no recent history of default.

Information about the impairment of trade accounts receivable and the Group's exposure to credit risk can be found in Note 40.

16. INVENTORIES

	December 31,	
	2019	2020
	RMB	RMB
Crude oil and other raw materials	89,908	60,155
Work in progress	12,687	13,053
Finished goods	91,554	78,415
Spare parts and consumables	2,578	3,372
	196,727	154,995
Less: Allowance for diminution in value of inventories	(2,585)	(3,100)
	194,142	151,895

Allowance for diminution in value of inventories is analyzed as follows:

	2018	2019	2020
	RMB	RMB	RMB
Balance as of January 1	1,165	6,389	2,585
Allowance for the year	5,538	1,616	11,689
Reversal of allowance on disposal	(114)	(199)	(328)
Written off	(217)	(5,233)	(10,795)
Others	17	12	(51)
Balance as of December 31	6,389	2,585	3,100

During the years ended December 31, 2018, 2019 and 2020, the costs of inventories recognized as an expense in the consolidated statement of income were RMB 2,353,646, RMB 2,441,380 and RMB 1,659,355, respectively. Such costs include the write-down of inventories of RMB 5,538, RMB 1,616 and RMB 11,689, respectively, and the reversal of write-down of inventories of RMB 114, RMB 199 and RMB 328, respectively. The write-down of inventories and the reversal of write-down of inventories were recorded in purchased crude oil, products and operating supplies and expenses in the consolidated statement of income. The write-down of inventories which were realized primarily with the sales of inventories for the years ended December 31, 2018, 2019 and 2020 were RMB 217, RMB 5,233 and RMB 10,795. The write-down of inventories for the year ended December 31, 2020 is mainly related to crude oil and finished goods.

17. PREPAID EXPENSES AND OTHER CURRENT ASSETS

	December 31,	
	2019	2020
	RMB	RMB
Receivables	25,669	34,974
Advances to suppliers	5,063	4,862
Value-added input tax to be deducted	25,313	18,625
Prepaid income tax	1,879	131
	57,924	58,592

18. PROPERTY, PLANT AND EQUIPMENT

	Plants and buildings RMB	Oil and gas, properties RMB	Equipment, machinery and others RMB	Total RMB
Cost:				
Balance as of January 1, 2019	123,946	695,724	973,688	1,793,358
Additions	159	1,408	3,993	5,560
Transferred from construction in progress	6,261	31,378	54,684	92,323
Reclassifications	1,051	(76)	(975)	-
Invest into the joint ventures and associated companies	(8)	-	(303)	(311)
Reclassification to other long-term assets	(748)	-	(729)	(1,477)
Disposals	(469)	(1,549)	(13,635)	(15,653)
Exchange adjustments	42	667	71	780
Balance as of December 31, 2019	<u>130,234</u>	<u>727,552</u>	<u>1,016,794</u>	<u>1,874,580</u>
Balance as of January 1, 2020	130,234	727,552	1,016,794	1,874,580
Additions	390	1,563	5,147	7,100
Transferred from construction in progress	10,848	32,214	98,095	141,157
Reclassifications	1,443	(125)	(1,318)	-
Invest into the joint ventures and associated companies	-	-	(115)	(115)
Reclassification to other long-term assets	(38)	-	(1,052)	(1,090)
Disposals (i)	(6,291)	(806)	(131,231)	(138,328)
Exchange adjustments	(141)	(2,806)	(226)	(3,173)
Balance as of December 31, 2020	<u>136,445</u>	<u>757,592</u>	<u>986,094</u>	<u>1,880,131</u>
Accumulated depreciation:				
Balance as of January 1, 2019	56,242	550,288	565,830	1,172,360
Depreciation for the year	4,144	36,289	47,902	88,335
Impairment losses for the year	11	-	185	196
Reclassifications	292	(46)	(246)	-
Invest into the joint ventures and associated companies	-	-	(216)	(216)
Reclassification to other long-term assets	3	-	(94)	(91)
Written back on disposals	(854)	(6)	(11,564)	(12,424)
Exchange adjustments	21	667	40	728
Balance as of December 31, 2019	<u>59,859</u>	<u>587,192</u>	<u>601,837</u>	<u>1,248,888</u>
Balance as of January 1, 2020	59,859	587,192	601,837	1,248,888
Depreciation for the year	4,628	32,054	48,380	85,062
Impairment losses for the year	683	4,739	6,292	11,714
Reclassifications	393	(98)	(295)	-
Invest into the joint ventures and associated companies	-	-	(54)	(54)
Reclassification to other long-term assets	(8)	-	(161)	(169)
Written back on disposals (i)	(3,209)	(464)	(47,994)	(51,667)
Exchange adjustments	(49)	(2,703)	(138)	(2,890)
Balance as of December 31, 2020	<u>62,297</u>	<u>620,720</u>	<u>607,867</u>	<u>1,290,884</u>
Net book value:				
Balance as of January 1, 2019	67,704	145,436	407,858	620,998
Balance as of December 31, 2019	<u>70,375</u>	<u>140,360</u>	<u>414,957</u>	<u>625,692</u>
Balance as of December 31, 2020	<u>74,148</u>	<u>136,872</u>	<u>378,227</u>	<u>589,247</u>

(i) Disposals for the year ended December 31, 2020 mainly due to the Company and its subsidiaries disposed their oil and gas pipeline and ancillary facilities to PipeChina.

The additions to oil and gas properties of the Group for the years ended December 31, 2019 and 2020 included RMB 1,408 and RMB 1,563 respectively, of estimated dismantlement costs for site restoration (Note 32).

18. PROPERTY, PLANT AND EQUIPMENT *(Continued)*

As of December 31, 2019 and 2020, the Group had no individual substantial property, plant and equipment which have been pledged.

As of December 31, 2019 and 2020, the Group had no individual significant property, plant and equipment which were temporarily idle or pending for disposal.

As of December 31, 2019 and 2020, the Group had no individual significant fully depreciated property, plant and equipment which were still in use.

19. CONSTRUCTION IN PROGRESS

	2019	2020
	RMB	RMB
Balance as of January 1	137,449	173,872
Additions	144,751	130,283
Dry hole costs written off	(5,831)	(5,928)
Transferred to property, plant and equipment	(92,323)	(141,157)
Reclassification to other long-term assets	(10,086)	(11,464)
Impairment losses for the year	(135)	(844)
Disposals and others	46	(19,944)
Exchange adjustments	1	(53)
Balance as of December 31	<u>173,872</u>	<u>124,765</u>

Net changes in capitalized cost of exploratory wells included in the Group's construction in progress in the E&P segment are analyzed as follows:

	2018	2019	2020
	RMB	RMB	RMB
At beginning of year	9,737	7,296	8,961
Additions, net of amount that were capitalized and subsequently expensed in the same year, pending the determination of proved reserves	7,172	8,528	10,779
Transferred to oil and gas properties based on the determination of proved reserves	(2,387)	(2,822)	(3,687)
Dry hole costs written off	(7,226)	(4,041)	(4,924)
At end of year	<u>7,296</u>	<u>8,961</u>	<u>11,129</u>

Aging of capitalized exploratory well costs based on the date the drilling was completed are analyzed as follows:

	December 31,		
	2018	2019	2020
	RMB	RMB	RMB
One year or less	3,467	7,794	10,586
Over one year	3,829	1,167	543
	<u>7,296</u>	<u>8,961</u>	<u>11,129</u>

Capitalized exploratory wells costs aged over one year are related to wells for which the drilling results are being further evaluated or the development plans are being formulated.

The geological and geophysical costs paid during the years ended December 31, 2018, 2019 and 2020 amounted to RMB 3,511, RMB 4,024 and RMB 3,166, respectively.

20. RIGHT-OF-USE ASSETS

	Land	Others	Total
	RMB	RMB	RMB
Cost:			
Balance as of January 1, 2019	244,595	27,381	271,976
Additions	8,737	7,555	16,292
Decreases	(4,766)	(748)	(5,514)
Balance as of December 31, 2019	248,566	34,188	282,754
Balance as of January 1, 2020	248,566	34,188	282,754
Additions	13,983	10,222	24,205
Decreases	(9,405)	(3,142)	(12,547)
Balance as of December 31, 2020	253,144	41,268	294,412
Accumulated depreciation:			
Balance as of January 1, 2019	-	-	-
Additions	9,246	5,728	14,974
Decreases	(131)	(26)	(157)
Balance as of December 31, 2019	9,115	5,702	14,817
Balance as of January 1, 2020	9,115	5,702	14,817
Additions	9,247	6,354	15,601
Decreases	(799)	(1,575)	(2,374)
Balance as of December 31, 2020	17,563	10,481	28,044
Impairment loss:			
Balance as of January 1, 2019	-	-	-
Additions	-	-	-
Decreases	-	-	-
Balance as of December 31, 2019	-	-	-
Balance as of January 1, 2020	-	-	-
Additions	-	-	-
Decreases	-	-	-
Balance as of December 31, 2020	-	-	-
Net book value:			
Balance as of January 1, 2019	244,595	27,381	271,976
Balance as of December 31, 2019	239,451	28,486	267,937
Balance as of December 31, 2020	235,581	30,787	266,368

21. GOODWILL

	December 31,	
	2019	2020
	RMB	RMB
Cost	16,558	16,481
Less: Accumulated impairment losses	(7,861)	(7,861)
	<u>8,697</u>	<u>8,620</u>

Impairment tests for cash-generating units containing goodwill

Goodwill is allocated to the following Group's cash-generating units:

	Principal activities	December 31,	
		2019	2020
		RMB	RMB
Sinopec Zhenhai Refining and Chemical Branch	Manufacturing of intermediate petrochemical products and petroleum products	4,043	4,043
Shanghai SECCO Petrochemical Company Limited ("Shanghai SECCO")	Production and sale of petrochemical products	2,541	2,541
Sinopec Beijing Yanshan Petrochemical Branch	Manufacturing of intermediate petrochemical products and petroleum products	1,004	1,004
Other units without individually significant goodwill		1,109	1,032
		<u>8,697</u>	<u>8,620</u>

Goodwill represents the excess of the cost of purchase over the fair value of the underlying assets and liabilities. The recoverable amounts of the above cash-generating units are determined based on value in use calculations. These calculations use cash flow projections based on financial budgets approved by management covering a one-year period and pre-tax discount rates primarily ranging from 11.0% to 11.9% and 11.4% to 13.4% for the years ended December 31, 2019 and 2020, respectively. Cash flows beyond the one-year period are maintained constant. Based on the estimated recoverable amount, no major impairment loss was recognized.

Key assumptions used for cash flow forecasts for these entities are the gross margin and sales volume. Management determined the budgeted gross margin based on the gross margin achieved in the period immediately before the budget period and management's expectation on the future trend of the prices of crude oil and petrochemical products. The sales volume was based on the production capacity and/or the sales volume in the period immediately before the budget period.

22. INTEREST IN ASSOCIATES

The Group's investments in associates are with companies primarily engaged in the oil and gas, petrochemical, and marketing and distribution operations in the PRC.

The Group's principal associates are as follows:

Name of company	Form of business structure	Particulars of issued and paid up capital	Percentage of equity held by the Company %	Percentage of equity held by the Company's subsidiaries %	Principal activities	Country of incorporation	Principal place of business
PipeChina (i)	Incorporated	Registered capital RMB 500,000 million	9.42	4.58	Operation of oil and natural gas pipeline and auxiliary facilities	PRC	PRC
Sinopec Finance Company Limited ("Sinopec Finance")	Incorporated	Registered capital RMB 18,000 million	49.00	-	Provision of non-banking financial services	PRC	PRC
PAO SIBUR Holding ("SIBUR") (ii)	Incorporated	Registered capital RUB 21,784 million	-	10.00	Processing natural gas and manufacturing petrochemical products	Russia	Russia
Zhongtian Synergetic Energy Company Limited ("Zhongtian Synergetic Energy")	Incorporated	Registered capital RMB 17,516 million	-	38.75	Mining coal and manufacturing of coal-chemical products	PRC	PRC
Caspian Investments Resources Ltd. ("CIR")	Incorporated	Registered capital USD 10,002	-	50.00	Crude oil and natural gas extraction	British Virgin Islands	The Republic of Kazakhstan

Summarized financial information and reconciliation to their carrying amounts in respect of the Group's principal associates:

	PipeChina December 31,	Sinopec Finance December 31,		SIBUR December 31,		Zhongtian Synergetic Energy December 31,		CIR December 31,	
	2020	2019	2020	2019	2020	2019	2020	2019	2020
	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB
Current assets	74,012	180,383	175,139	31,634	30,678	4,219	3,721	7,612	2,402
Non-current assets	655,982	18,926	53,008	182,646	147,140	56,424	53,124	971	903
Current liabilities	(55,562)	(170,621)	(197,872)	(31,295)	(31,157)	(13,887)	(8,315)	(936)	(699)
Non-current liabilities	(104,150)	(582)	(514)	(71,289)	(58,941)	(26,227)	(28,422)	(166)	(286)
Net assets	570,282	28,106	29,761	111,696	87,720	20,529	20,108	7,481	2,320
Net assets attributable to owners of the Company	505,336	28,106	29,761	111,250	87,280	20,529	20,108	7,481	2,320
Net assets attributable to non-controlling interests	64,946	-	-	446	440	-	-	-	-
Share of net assets from associates	70,747	13,772	14,583	11,125	8,728	7,955	7,792	3,741	1,160
Carrying Amounts	70,747	13,772	14,583	11,125	8,728	7,955	7,792	3,741	1,160

22. INTEREST IN ASSOCIATES (Continued)

Summarized statement of comprehensive income

Year ended December 31	PipeChina (iii)	Sinopec Finance			SIBUR			Zhongtian Synergetic Energy			CIR		
	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB
Operating revenues	22,766	4,536	4,966	4,742	59,927	56,706	49,793	12,235	13,329	11,707	2,856	2,334	1,252
Net income/(loss) for the year	6,444	1,868	2,234	2,027	10,400	6,513	(1,936)	1,142	1,994	551	583	424	181
Other comprehensive (loss)/income	-	(157)	411	(372)	6,410	(1,435)	(19,180)	-	-	-	116	151	(308)
Total comprehensive income/(loss)	6,444	1,711	2,645	1,655	16,810	5,078	(21,116)	1,142	1,994	551	699	575	(127)
Dividends declared by associates	-	490	-	-	271	468	285	-	219	284	-	-	2,517
Share of net income/(loss) from associates	709	915	1,095	993	1,040	651	(194)	443	773	214	292	212	91
Share of other comprehensive (loss)/income from associates (iv)	-	(77)	201	(182)	641	(144)	(1,918)	-	-	-	58	76	(154)

The share of net income for years ended December 31, 2018, 2019 and 2020 in all individually immaterial associates accounted for using equity method in aggregate were RMB 4,561, RMB 5,661 and RMB 4,264, respectively.

The share of other comprehensive income/(loss) for the years ended December 31, 2018, 2019 and 2020 in all individually immaterial associates accounted for using equity method in aggregate were a loss of RMB 844, a loss of RMB 155 and a gain of RMB 817, respectively.

The carrying amount as of December 31, 2019 and 2020 of all individually immaterial associates accounted for using equity method in aggregate were RMB 59,144 and RMB 33,153, respectively.

Notes:

- The Group has a member in the Board of Directors of PipeChina. According to the structure and the resolution mechanism of the Board of Directors, the Group can exercise significant influence on PipeChina.
- Sinopec is able to exercise significant influence in SIBUR since Sinopec has a member in SIBUR's Board of Directors and has a member in SIBUR's Management Board.
- The summarized statement of comprehensive income for the year 2020 presents the operating results from the date when the Group can exercise significant influence on PipeChina to December 31, 2020.
- Including foreign currency translation differences.

23. INTEREST IN JOINT VENTURES

The Group's principal interests in joint ventures which are incorporated companies are as follows:

Name of company	Country of incorporation	Particulars of issued and paid up capital	Percentage of equity held by the Company	Percentage of equity held by the Company's subsidiaries	Principal activities	Principal place of business
Fujian Refining & Petrochemical Company Limited ("FREPCO")	PRC	Registered capital RMB 14,758 million	-	50.00	Manufacturing refining oil products	PRC
BASF-YPC Company Limited ("BASF-YPC")	PRC	Registered capital RMB 12,704 million	30.00	10.00	Manufacturing and distribution of petrochemical products	PRC
Taihu Limited ("Taihu")	Cyprus	Registered capital USD 25,000	-	49.00	Crude oil and natural gas extraction	Russia
Yanbu Aramco Sinopec Refining Company Ltd. ("YASREF")	Saudi Arabia	Registered capital USD 1,560 million	-	37.50	Petroleum refining and processing business	Saudi Arabia
Sinopec SABIC Tianjin Petrochemical Company Limited ("Sinopec SABIC Tianjin")	PRC	Registered capital RMB 10,520 million	-	50.00	Manufacturing and distribution of petrochemical products	PRC

Summarized balance sheet and reconciliation to their carrying amounts in respect of the Group's principal joint ventures:

	FREPCO December 31,		BASF-YPC December 31,		Taihu December 31,		YASREF December 31,		Sinopec SABIC Tianjin December 31,	
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB
Current assets										
Cash and cash equivalents	5,603	7,448	1,154	1,838	4,485	1,280	733	1,408	3,242	5,259
Other current assets	11,977	7,492	4,937	4,777	2,336	1,223	11,311	7,516	4,501	2,665
Total current assets	17,580	14,940	6,091	6,615	6,821	2,503	12,044	8,924	7,743	7,924
Non-current assets	17,267	15,237	10,498	9,993	10,453	12,531	50,548	45,413	14,878	18,258
Current liabilities										
Current financial liabilities	(1,280)	(1,203)	(237)	(456)	(57)	(38)	(7,445)	(9,520)	(500)	(998)
Other current liabilities	(7,090)	(5,147)	(1,808)	(2,190)	(1,815)	(1,043)	(12,504)	(8,644)	(2,896)	(3,052)
Total current liabilities	(8,370)	(6,350)	(2,045)	(2,646)	(1,872)	(1,081)	(19,949)	(18,164)	(3,396)	(4,050)
Non-current liabilities										
Non-current financial liabilities	(11,185)	(8,761)	-	-	(125)	(85)	(29,445)	(29,650)	(4,592)	(6,773)
Other non-current liabilities	(290)	(235)	(35)	(42)	(1,984)	(2,017)	(1,963)	(2,008)	(368)	(378)
Total non-current liabilities	(11,475)	(8,996)	(35)	(42)	(2,109)	(2,102)	(31,408)	(31,658)	(4,960)	(7,151)
Net assets	15,002	14,831	14,509	13,920	13,293	11,851	11,235	4,515	14,265	14,981
Net assets attributable to owners of the company	15,002	14,831	14,509	13,920	12,829	11,439	11,235	4,515	14,265	14,981
Net assets attributable to non-controlling interests	-	-	-	-	464	412	-	-	-	-
Share of net assets from joint ventures	7,501	7,416	5,804	5,568	6,286	5,605	4,213	-	7,133	7,491
Carrying Amounts	7,501	7,416	5,804	5,568	6,286	5,605	4,213	-	7,133	7,491

23. INTEREST IN JOINT VENTURES (Continued)

Summarized statement of comprehensive income

Year ended December 31,	FREP			BASF-YPC			Taihu			YASREF			Sinopec SABIC Tianjin		
	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020	2018	2019	2020
	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB
Operating revenues	52,469	57,047	38,691	21,574	19,590	15,701	14,944	15,222	9,528	77,561	75,940	37,337	23,501	20,541	14,881
Depreciation, depletion and amortization	(2,250)	(2,541)	(2,222)	(1,521)	(1,474)	(1,244)	(664)	(629)	(541)	(2,823)	(3,048)	(3,140)	(1,104)	(1,094)	(1,085)
Interest income	157	124	118	41	32	27	141	94	291	101	58	17	169	171	183
Interest expense	(647)	(597)	(535)	(43)	(26)	(16)	(151)	(265)	(20)	(1,382)	(1,470)	(1,136)	(167)	(134)	(131)
Earning/(loss) before income tax	3,920	964	520	3,625	2,314	1,518	3,493	3,320	2,304	(1,569)	(1,292)	(7,193)	3,916	2,178	954
Tax expense	(935)	(197)	(87)	(897)	(579)	(379)	(729)	(708)	(378)	(249)	(8)	1,057	(993)	(533)	(236)
Net income/(loss) for the year	2,985	767	433	2,728	1,735	1,139	2,764	2,612	1,926	(1,818)	(1,300)	(6,136)	2,923	1,645	718
Other comprehensive income/(loss)	-	-	-	-	-	-	921	(1,105)	(3,368)	1,059	(261)	(584)	-	-	-
Total comprehensive income/(loss)	2,985	767	433	2,728	1,735	1,139	3,685	1,507	(1,442)	(759)	(1,561)	(6,720)	2,923	1,645	718
Dividends declared by joint ventures	1,200	1,400	300	1,226	1,224	691	-	-	-	-	-	-	-	1,750	-
Share of net income/(loss) from joint ventures	1,493	384	217	1,091	694	456	1,307	1,235	911	(682)	(488)	(2,301)	1,462	823	359
Share of other comprehensive income/(loss) from joint ventures (i)	-	-	-	-	-	-	435	(522)	(1,593)	397	(98)	(219)	-	-	-

The share of net income for the years ended December 31, 2018, 2019 and 2020 in all individually immaterial joint ventures accounted for using equity method in aggregate were RMB 2,052, RMB 1,737 and RMB 993, respectively.

The share of other comprehensive income/(loss) for the years ended December 31, 2018, 2019 and 2020 in all individually immaterial joint ventures accounted for using equity method in aggregate were a loss of RMB 839, a loss of RMB 168 and a gain of RMB 808, respectively.

The carrying amount as of December 31, 2019 and 2020 of all individually immaterial joint ventures accounted for using equity method in aggregate were RMB 25,530 and RMB 26,099, respectively.

Note:

(i) Including foreign currency translation differences.

24. FINANCIAL ASSETS AT FAIR VALUE THROUGH OTHER COMPREHENSIVE INCOME

	December 31,	
	2019	2020
	RMB	RMB
Non-current assets		
Unlisted equity instruments	1,431	1,376
Listed equity instruments	90	149
Current assets		
Trade accounts receivable and bills receivable (i)	8,661	8,735
	<u>10,182</u>	<u>10,260</u>

Note:

(i) As of December 31, 2019 and 2020, bills receivable and certain trade accounts receivable were classified as financial assets at FVOCI, as the Group's business model is achieved both by collecting contractual cash flows and selling of these assets.

25. DEFERRED TAX ASSETS AND LIABILITIES

Deferred tax assets and liabilities before offset are attributable to the items detailed in the table below:

	Assets		Liabilities	
	December 31,		December 31,	
	2019	2020	2019	2020
	RMB	RMB	RMB	RMB
Receivables and inventories	2,546	2,411	-	-
Payables	1,142	1,286	-	-
Cash flow hedges	116	1,790	(384)	(4,420)
Property, plant and equipment	16,463	15,793	(12,317)	(13,415)
Tax losses carried forward	3,594	13,322	-	-
Financial assets at fair value through other comprehensive income	131	127	(7)	(11)
Intangible assets	595	869	(508)	(517)
Others	318	371	(882)	(676)
Deferred tax assets/(liabilities)	24,905	35,969	(14,098)	(19,039)

The consolidated elimination amount between deferred tax assets and liabilities are as follows:

	December 31,	
	2019	2020
	RMB	RMB
Deferred tax assets	7,289	10,915
Deferred tax liabilities	7,289	10,915

Deferred tax assets and liabilities after the consolidated elimination adjustments are as follows:

	December 31,	
	2019	2020
	RMB	RMB
Deferred tax assets	17,616	25,054
Deferred tax liabilities	6,809	8,124

As of December 31, 2019 and 2020, certain subsidiaries of the Company did not recognize deferred tax of deductible loss carried forward of RMB 16,605 and RMB 17,718, respectively, of which RMB 1,992 and RMB 4,349 were incurred for the years ended December 31, 2019 and 2020, respectively, because it was not probable that the future taxable profits will be realized. These deductible losses carried forward of RMB 3,089, RMB 5,938, RMB 2,356, RMB 1,986 and RMB 4,349 will expire in 2021, 2022, 2023, 2024, 2025 and after, respectively.

Periodically, management performed assessment on the probability that future taxable profit will be available over the period which the deferred tax assets can be realized or utilized. In assessing the probability, both positive and negative evidence was considered, including whether it is probable that the operations will have sufficient future taxable profits over the periods which the deferred tax assets are deductible or utilized and whether the tax losses result from identifiable causes which are unlikely to recur. During the years ended December 31, 2019 and 2020, write-down of deferred tax assets amounted to RMB 189 and RMB 75 (Note 11).

25. DEFERRED TAX ASSETS AND LIABILITIES (Continued)

Movements in the deferred tax assets and liabilities are as follows:

	Balance as of January 1, 2018 RMB	Recognized in consolidated statement of income RMB	Recognized in other comprehensive income RMB	Others RMB	Transferred from reserve RMB	Balance as of December 31, 2018 RMB
Receivables and inventories	381	2,176	3	3	-	2,563
Payables	1,925	(117)	-	-	-	1,808
Cash flow hedges	115	(10)	2,029	1	(1,031)	1,104
Property, plant and equipment	4,222	2,650	(130)	19	-	6,761
Tax losses carried forward	2,325	1,414	6	(36)	-	3,709
Available-for-sale financial assets	117	-	-	(117)	-	-
Financial assets at fair value through other comprehensive income	-	-	(1)	117	-	116
Intangible assets	(336)	273	-	2	-	(61)
Others	(84)	(142)	(2)	(26)	-	(254)
Net deferred tax assets/(liabilities)	8,665	6,244	1,905	(37)	(1,031)	15,746
	Balance as of January 1, 2019 RMB	Recognized in consolidated statement of income RMB	Recognized in other comprehensive income RMB	Others RMB	Transferred from reserve RMB	Balance as of December 31, 2019 RMB
Receivables and inventories	2,563	(17)	-	-	-	2,546
Payables	1,808	(667)	-	1	-	1,142
Cash flow hedges	1,104	73	(1,195)	-	(250)	(268)
Property, plant and equipment	6,761	(2,575)	(39)	(1)	-	4,146
Tax losses carried forward	3,709	(151)	38	(2)	-	3,594
Financial assets at fair value through other comprehensive income	116	-	8	-	-	124
Intangible assets	(61)	148	-	-	-	87
Others	(254)	(196)	(49)	(65)	-	(564)
Net deferred tax assets/(liabilities)	15,746	(3,385)	(1,237)	(67)	(250)	10,807
	Balance as of January 1, 2020 RMB	Recognized in consolidated statement of income RMB	Recognized in other comprehensive income RMB	Others RMB	Transferred from reserve RMB	Balance as of December 31, 2020 RMB
Receivables and inventories	2,546	(122)	(12)	(1)	-	2,411
Payables	1,142	144	-	-	-	1,286
Cash flow hedges	(268)	(42)	(2,316)	-	(4)	(2,630)
Property, plant and equipment	4,146	(2,244)	127	349	-	2,378
Tax losses carried forward	3,594	9,960	(84)	(148)	-	13,322
Financial assets at fair value through other comprehensive income	124	(4)	(4)	-	-	116
Intangible assets	87	19	-	246	-	352
Others	(564)	162	24	73	-	(305)
Net deferred tax assets/(liabilities)	10,807	7,873	(2,265)	519	(4)	16,930

26. LONG-TERM PREPAYMENTS AND OTHER ASSETS

	December 31,	
	2019	2020
	RMB	RMB
Operating rights of service stations	34,013	31,856
Long-term receivables from and prepayment to Sinopec Group Company and fellow subsidiaries	1,562	2,801
Prepayments for construction projects to third parties	3,926	5,861
Others (i)	25,936	33,971
	<u>65,437</u>	<u>74,489</u>

Note:

- (i) Others mainly comprise time deposits with terms of three years, catalyst expenditures and improvement expenditures of property, plant and equipment.

The cost of operating rights of service stations is charged to expense on a straight-line basis over the respective periods of the rights. The movement of operating rights of service stations is as follows:

	2019	2020
	RMB	RMB
Operating rights of service stations		
Cost:		
Balance as of January 1	52,216	53,549
Additions	1,494	493
Decreases	(161)	(475)
Balance as of December 31	<u>53,549</u>	<u>53,567</u>
Accumulated amortization:		
Balance as of January 1	17,282	19,536
Additions	2,357	2,365
Decreases	(103)	(190)
Balance as of December 31	<u>19,536</u>	<u>21,711</u>
Net book value as of December 31	<u>34,013</u>	<u>31,856</u>

27. SHORT-TERM AND LONG-TERM DEBTS AND LOANS FROM SINOPEC GROUP COMPANY AND FELLOW SUBSIDIARIES

Short-term debts represent:

	December 31,	
	2019 RMB	2020 RMB
Third parties' debts		
Short-term bank loans	25,709	16,111
RMB denominated	25,619	16,111
US Dollar ("USD") denominated	90	-
Short-term other loans	22	3
RMB denominated	22	3
Current portion of long-term bank loans	1,790	4,637
RMB denominated	1,765	4,613
USD denominated	25	24
Current portion of long-term corporate bonds	13,000	-
RMB denominated	13,000	-
	14,790	4,637
Corporate bonds (i)	-	3,018
RMB denominated	-	3,018
	40,521	23,769
Loans from Sinopec Group Company and fellow subsidiaries		
Short-term loans	5,465	4,642
RMB denominated	2,709	1,141
USD denominated	2,236	3,298
Hong Kong Dollar ("HKD") denominated	495	31
European Dollar ("EUR") denominated	25	172
Current portion of long-term loans	37,824	622
RMB denominated	37,824	622
	43,289	5,264
	83,810	29,033

The Group's weighted average interest rates on short-term loans were 3.11% and 2.53% per annum as of December 31, 2019 and 2020, respectively. The above borrowings are unsecured.

27. SHORT-TERM AND LONG-TERM DEBTS AND LOANS FROM SINOPEC GROUP COMPANY AND FELLOW SUBSIDIARIES (Continued)

Long-term debts represent:

		December 31,	
		2019	2020
		RMB	RMB
Third parties' debts			
Long-term bank loans			
RMB denominated	Interest rates ranging from 1.08% to 5.23% per annum as of December 31, 2020 with maturities through 2030	31,714	38,226
USD denominated	Interest rates at 1.55% per annum as of December 31, 2020 with maturities through 2039	127	92
		<u>31,841</u>	<u>38,318</u>
Corporate bonds (ii)			
RMB denominated	Fixed interest rates ranging from 2.20% to 4.90% per annum as of December 31, 2020 with maturities through 2023	20,000	26,977
USD denominated	Fixed interest rates ranging from 3.13% to 4.25% per annum as of December 31, 2020 with maturities through 2043	12,157	11,379
		<u>32,157</u>	<u>38,356</u>
Total third parties' long-term debts		<u>63,998</u>	<u>76,674</u>
Less: Current portion		<u>(14,790)</u>	<u>(4,637)</u>
		<u>49,208</u>	<u>72,037</u>
Long-term loans from Sinopec Group Company and fellow subsidiaries			
RMB denominated	Interest rates ranging from 1.08% to 5.23% per annum as of December 31, 2020 with maturities through 2036	47,450	11,013
USD denominated	Interest rates at 1.60% per annum as of December 31, 2020 with maturities in 2027	-	1,387
Less: Current portion		<u>(37,824)</u>	<u>(622)</u>
		<u>9,626</u>	<u>11,778</u>
		<u>58,834</u>	<u>83,815</u>

Short-term and long-term bank loans, short-term other loans and loans from Sinopec Group Company and fellow subsidiaries are primarily unsecured and carried at amortized cost.

Notes:

- (i) The Company issued Super & Short-term Commercial Paper on August 20, 2020 at par value of RMB 100, and the interest will be paid at its maturity. The total issued amount of the 169-day corporate bonds is RMB 3 billion with a fixed rate at 1.70% per annum.
- (ii) The Company issued corporate bonds with a maturity of three years on March 31, 2020 at par value of RMB 100. The total issued amount of the corporate bonds is RMB 10 billion. The corporate bonds adopt a simple interest rate on an annual basis with a fixed rate at 2.70% per annum and the interest is paid once a year.

The Company issued corporate bonds with a maturity of three years on May 27, 2020 at par value of RMB 100. The total issued amount of the corporate bonds is RMB 10 billion. The corporate bonds adopt a simple interest rate on an annual basis with a fixed rate at 2.20% per annum and the interest is paid once a year.

These corporate bonds are carried at amortized cost.

28. LEASE LIABILITIES

	December 31,	
	2019	2020
	RMB	RMB
Lease liabilities		
Current	15,198	15,292
Non-current	177,674	172,306
	<u>192,872</u>	<u>187,598</u>

29. TRADE ACCOUNTS PAYABLE AND BILLS PAYABLE

	December 31,	
	2019	2020
	RMB	RMB
Amounts due to third parties	166,830	132,136
Amounts due to Sinopec Group Company and fellow subsidiaries	11,251	11,384
Amounts due to associates and joint ventures	10,108	7,742
	<u>188,189</u>	<u>151,262</u>
Bills payable	11,834	10,394
Trade accounts payable and bills payable measured at amortized cost	<u>200,023</u>	<u>161,656</u>

30. CONTRACT LIABILITIES

As of December 31, 2019 and 2020, the Group's contract liabilities primarily represent advances from customers. Related performance obligations are satisfied and revenue is recognized within one year.

31. OTHER PAYABLES

	December 31,	
	2019	2020
	RMB	RMB
Salaries and welfare payable	4,807	7,081
Interest payable	612	667
Payables for constructions	50,824	41,724
Other payables	25,618	58,908
Financial liabilities carried at amortized costs	81,861	108,380
Taxes other than income tax	66,257	70,257
	148,118	178,637

32. PROVISIONS

Provisions primarily represent provision for future dismantlement costs of oil and gas properties. The Group has mainly committed to the PRC government to establish certain standardized measures for the dismantlement of its oil and gas properties by making reference to the industry practices and is thereafter constructively obligated to take dismantlement measures of its oil and gas properties.

Movement of provision of the Group's obligations for the dismantlement of its oil and gas properties is as follows:

	2018	2019	2020
	RMB	RMB	RMB
Balance as of January 1	39,407	42,007	42,438
Provision for the year	1,567	1,408	1,563
Accretion expenses	1,438	1,418	1,343
Decrease for the year	(598)	(2,439)	(1,490)
Exchange adjustments	193	44	(141)
Balance as of December 31	42,007	42,438	43,713

33. SHARE CAPITAL

	December 31,	
	2019	2020
	RMB	RMB
Registered, issued and fully paid		
95,557,771,046 listed A shares (2019: 95,557,771,046) of RMB 1.00 each	95,558	95,558
25,513,438,600 listed H shares (2019: 25,513,438,600) of RMB 1.00 each	25,513	25,513
	<u>121,071</u>	<u>121,071</u>

The Company was established on February 25, 2000 with a registered capital of 68.8 billion domestic state-owned shares with a par value of RMB 1.00 each. Such shares were issued to Sinopec Group Company in consideration for the assets and liabilities transferred to the Company (Note 1).

Pursuant to the resolutions passed at an Extraordinary General Meeting held on July 25, 2000 and approvals from relevant government authorities, the Company is authorized to increase its share capital to a maximum of 88.3 billion shares with a par value of RMB 1.00 each and offer not more than 19.5 billion shares with a par value of RMB 1.00 each to investors outside the PRC. Sinopec Group Company is authorized to offer not more than 3.5 billion shares of its shareholdings in the Company to investors outside the PRC. The shares sold by Sinopec Group Company to investors outside the PRC would be converted into H shares.

In October 2000, the Company issued 15,102,439,000 H shares with a par value of RMB 1.00 each, representing 12,521,864,000 H shares and 25,805,750 American Depositary Shares (“ADSs”, each representing 100 H shares), at prices of HKD 1.59 per H share and USD 20.645 per ADS, respectively, by way of a global initial public offering to Hong Kong and overseas investors. As part of the global initial public offering, 1,678,049,000 state-owned ordinary shares of RMB 1.00 each owned by Sinopec Group Company were converted into H shares and sold to Hong Kong and overseas investors.

In July 2001, the Company issued 2.8 billion listed A shares with a par value of RMB 1.00 each at RMB 4.22 by way of a public offering to natural persons and institutional investors in the PRC.

During the year ended December 31, 2010, the Company issued 88,774 listed A shares with a par value of RMB 1.00 each, as a result of exercise of 188,292 warrants entitled to the Bonds with Warrants.

During the year ended December 31, 2011, the Company issued 34,662 listed A shares with a par value of RMB 1.00 each, as a result of conversion by the holders of the 2011 Convertible Bonds.

During the year ended December 31, 2012, the Company issued 117,724,450 listed A shares with a par value of RMB 1.00 each, as a result of conversion by the holders of the 2011 Convertible Bonds.

On February 14, 2013, the Company issued 2,845,234,000 listed H shares (“the Placing”) with a par value of RMB 1.00 each at the Placing Price of HKD 8.45 per share. The aggregate gross proceeds from the Placing amounted to approximately HKD 24,042,227,300.00 and the aggregate net proceeds (after deduction of the commissions and estimated expenses) amounted to approximately HKD 23,970,100,618.00.

In June 2013, the Company issued 21,011,962,225 listed A shares and 5,887,716,600 listed H shares as a result of bonus issues of 2 shares converted from the retained earnings, and 1 share transferred from the share premium for every 10 existing shares.

During the year ended December 31, 2013, the Company issued 114,076 listed A shares with a par value of RMB 1.00 each, as a result of exercise of conversion by the holders of the 2011 Convertible Bonds.

During the year ended December 31, 2014, the Company issued 1,715,081,853 listed A shares with a par value of RMB 1.00 each, as a result of exercise of conversion by the holders of the 2011 Convertible Bonds.

During the year ended December 31, 2015, the Company issued 2,790,814,006 listed A shares with a par value of RMB 1.00 each, as a result of exercise of conversion by the holders of the 2011 Convertible Bonds.

All A shares and H shares rank pari passu in all material aspects.

33. SHARE CAPITAL (Continued)

Capital management

Management optimizes the structure of the Group's capital, which comprises of equity, debts and bonds. In order to maintain or adjust the capital structure of the Group, management may cause the Group to issue new shares, adjust the capital expenditure plan, sell assets to reduce debt, or adjust the proportion of short-term and long-term loans and bonds. Management monitors capital on the basis of the debt-to-capital ratio, which is calculated by dividing long-term loans (excluding current portion) and debentures payable, including long-term debts and loans from Sinopec Group Company and fellow subsidiaries, by the total of equity attributable to owners of the Company and long-term loans (excluding current portion) and debentures payable, and liability-to-asset ratio, which is calculated by dividing total liabilities by total assets. Management's strategy is to make appropriate adjustments according to the Group's operating and investment needs and the changes of market conditions, and to maintain the debt-to-capital ratio and the liability-to-asset ratio of the Group at a range considered reasonable. The debt-to-capital ratio of the Group was 7.4% and 10.2% as of December 31, 2019 and 2020, respectively. The liability-to-asset ratio of the Group was 50.2% and 49.1% as of December 31, 2019 and 2020, respectively.

The schedule of the contractual maturities of loans and commitments are disclosed in Notes 27 and 34, respectively.

There were no changes in the management's approach to capital management of the Group during the year. Neither the Company nor any of its subsidiaries is subject to externally imposed capital requirements.

34. COMMITMENTS AND CONTINGENT LIABILITIES

Operating lease commitments

From January 1, 2019, the Group has recognized right-of-use assets for these leases, except for short-term and low-value leases, see Note 1 and Note 20 for further information.

Capital commitments

As of December 31, 2019 and 2020, the capital commitments of the Group are as follows:

	December 31,	
	2019	2020
	RMB	RMB
Authorized and contracted for (i)	138,088	171,335
Authorized but not contracted for	63,967	33,942
	202,055	205,277

These capital commitments relate to oil and gas exploration and development, refining and petrochemical production capacity expansion projects, the construction of service stations and oil depots and investment commitments.

Note:

- (i) The investment commitments for the years ended December 31, 2019 and 2020 of the Group were RMB 6,100 and RMB 13,172, respectively.

34. COMMITMENTS AND CONTINGENT LIABILITIES (Continued)

Commitments to joint ventures

Pursuant to certain of the joint venture agreements entered into by the Group, the Group is obliged to purchase products from the joint ventures based on market prices.

Exploration and production licenses

Exploration licenses for exploration activities are registered with the Ministry of Natural Resources. The maximum term of the Group's exploration licenses is 7 years, and may be renewed twice within 30 days prior to expiration of the original term with each renewal being for a two-year term. The Group is obligated to make progressive annual minimum exploration investment relating to the exploration blocks in respect of which the license is issued. The Ministry of Natural Resources also issues production licenses to the Group on the basis of the reserve reports approved by relevant authorities. The maximum term of a full production license is 30 years unless a special dispensation is given by the State Council. The maximum term of production licenses issued to the Group is 80 years as a special dispensation was given to the Group by the State Council. The Group's production license is renewable upon application by the Group 30 days prior to expiration.

The Group is required to make payments of exploration license fees and production right usage fees to the Ministry of Natural Resources annually which are expensed. Expenses recognized were approximately RMB 231, RMB 179 and RMB 231 for the years ended December 31, 2018, 2019 and 2020, respectively.

Estimated future annual payments are as follows:

	December 31,	
	2019	2020
	RMB	RMB
Within one year	302	390
Between one and two years	69	99
Between two and three years	34	66
Between three and four years	30	63
Between four and five years	29	56
Thereafter	845	824
	<u>1,309</u>	<u>1,498</u>

34. COMMITMENTS AND CONTINGENT LIABILITIES (Continued)

Contingent liabilities

As of December 31, 2019 and 2020, the guarantees by the Group in respect of facilities granted to the parties below are as follows:

	December 31,	
	2019	2020
	RMB	RMB
Joint ventures	7,100	6,390
Associates (ii)	10,140	8,450
	17,240	14,840

Management monitors the conditions that are subject to the guarantees to identify whether it is probable that a loss will occur, and recognizes any such losses under guarantees when those losses are reliably estimable. As of December 31, 2019 and 2020, the Group estimates that there is no need to pay for the guarantees. Thus no liability has been accrued for a loss related to the Group's obligation under these guarantee arrangements.

Note:

- (ii) The Group provided a guarantee in respect to standby credit facilities granted to Zhongtian Synergetic Energy by banks amount to RMB 17,050. As of December 31, 2019 and 2020, the amount withdrawn by Zhongtian Synergetic Energy and guaranteed by the Group was RMB 10,140 and RMB 8,450.

Environmental contingencies

Under existing legislation, management believes that there are no probable liabilities that will have a material adverse effect on the financial position or operating results of the Group. The PRC government, however, has moved, and may move further towards more rigorous enforcement of applicable laws, and towards the adoption of more stringent environmental standards. Environmental liabilities are subject to considerable uncertainties which affect management's ability to estimate the ultimate cost of remediation efforts. These uncertainties include i) the exact nature and extent of the contamination at various sites including, but not limited to refineries, oil fields, service stations, terminals and land development areas, whether operating, closed or sold, ii) the extent of required cleanup efforts, iii) varying costs of alternative remediation strategies, iv) changes in environmental remediation requirements, and v) the identification of new remediation sites. The amount of such future cost is indeterminable due to such factors as the unknown magnitude of possible contamination and the unknown timing and extent of the corrective actions that may be required. Accordingly, the outcome of environmental liabilities under proposed or future environmental legislation cannot reasonably be estimated at present, and could be material.

The Group paid normal routine pollutant discharge fees of approximately RMB 7,940, RMB 9,271 and RMB 11,362 in the consolidated financial statements for the years ended December 31, 2018, 2019 and 2020, respectively.

Legal contingencies

The Group is a defendant in certain lawsuits as well as the named party in other proceedings arising in the ordinary course of business. Management has assessed the likelihood of an unfavourable outcome of such contingencies, lawsuits or other proceedings and believes that any resulting liabilities will not have a material adverse effect on the financial position, operating results or cash flows of the Group.

35. BUSINESS COMBINATION

Pursuant to the resolution passed at the Directors' meeting on October 28, 2020, the Company entered into an Agreement with Sinopec Assets Management Corporation ("SAMC") in relation to the formation of Sinopec Baling Petrochemical Co. Ltd ("Baling Petrochemical"). According to the Agreement, the Company and SAMC subscribed capital contribution with the business of Baling area respectively and some cash. After the capital injection, the Company remained to hold 55% of Baling Petrochemical's voting rights and was still able to control Baling Petrochemical.

As Sinopec Group Company controls both the Company and SAMC, the transaction described above between Sinopec and SAMC has been accounted as business combination under common control. Accordingly, the assets and liabilities of which SAMC subscribed have been accounted for at historical cost, and the consolidated financial statements of the Group prior to these acquisitions have been restated to include the results of operation and the assets and liabilities of Baling Branch of SAMC on a combined basis.

Baling Petrochemical is mainly engaged in the production and sales of petrochemicals, chemical fibers, fertilizers, fine chemical products and other chemical products.

The financial condition as of December 31, 2019 and the results of operation for the year ended December 31, 2019 previously reported by the Group have been restated, as set out below:

	The Group, as previously reported RMB million	Baling Branch of SAMC RMB million	Elimination and Adjustment* RMB million	The Group, as restated RMB million
Summarised consolidated statement of income for the year ended December 31, 2019:				
Sales of goods and other operating revenues	2,966,193	16,906	(23,300)	2,959,799
Net income attributable to owners of the Company	57,465	50	(22)	57,493
Net income attributable to non-controlling interests	14,568	-	22	14,590
Basic earnings per share (RMB)	0.48	0.0004	-	0.48
Diluted earnings per share (RMB)	0.48	0.0004	-	0.48
Summarised consolidated balance sheet as of December 31, 2019:				
Current assets	445,856	2,097	(643)	447,310
Total assets	1,755,071	5,858	(643)	1,760,286
Current liabilities	576,374	4,247	(643)	579,978
Total liabilities	879,236	4,389	(643)	882,982
Total equity attributable to owners of the Company	738,150	1,448	(652)	738,946
Non-controlling interests	137,685	21	652	138,358
Summarised consolidated statement of cash flows for the year ended December 31, 2019:				
Net cash generated from operating activities	153,420	199	-	153,619
Net cash used in investing activities	(120,463)	(588)	-	(121,051)
Net cash (used in)/generated from financing activities	(84,713)	509	-	(84,204)
Net (decrease)/increase in cash and cash equivalents	(51,756)	120	-	(51,636)

At the completion date, the non-controlling interests amount to RMB 972 was recognized in relation to SAMC's 45% interest in Baling Branch of the Company.

36. RELATED PARTY TRANSACTIONS

Parties are considered to be related to the Group if the Group has the ability, directly or indirectly, to control or jointly control the party or exercise significant influence over the party in making financial and operating decisions, or vice versa, or where the Group and the party are subject to control or common control. Related parties may be individuals (being members of key management personnel, significant shareholders and/or their close family members) or other entities and include entities which are under the significant influence of related parties of the Group where those parties are individuals, and post-employment benefit plans which are for the benefit of employees of the Group or of any entity that is a related party of the Group.

(a) Transactions with Sinopec Group Company and fellow subsidiaries, associates and joint ventures

The Group is part of a larger group of companies under Sinopec Group Company, which is controlled by the PRC government, and has significant transactions and relationships with Sinopec Group Company and fellow subsidiaries. Because of these relationships, it is possible that the terms of these transactions are not the same as those that would result from transactions among wholly unrelated parties.

The principal related party transactions with Sinopec Group Company and fellow subsidiaries, associates and joint ventures, which were carried out in the ordinary course of business are as follows:

	Note	Years ended December 31,		
		2018	2019	2020
		RMB	RMB	RMB
Sales of goods	(i)	260,197	285,853	233,283
Purchases	(ii)	177,726	189,914	158,963
Transportation and storage	(iii)	7,318	8,206	8,848
Exploration and development services	(iv)	23,489	33,310	31,444
Production related services	(v)	28,648	38,827	32,106
Ancillary and social services	(vi)	6,616	3,098	3,099
Operating lease charges for land	(vii)	7,765	-	-
Operating lease charges for buildings	(vii)	521	-	-
Other operating lease charges	(vii)	869	-	-
Agency commission income	(viii)	113	116	160
Interest income	(ix)	848	1,066	704
Interest expense	(x)	1,110	1,334	919
Net deposits withdrawn from/(placed with) related parties	(ix)	6,623	5,230	(17,585)
Net funds obtained from/(repaid to) related parties	(xi)	31,684	3,438	(31,144)

36. RELATED PARTY TRANSACTIONS *(Continued)*

(a) Transactions with Sinopec Group Company and fellow subsidiaries, associates and joint ventures *(Continued)*

The amounts set out in the table above in respect of each of the years in the three-year period ended December 31 represent the relevant costs and income as determined by the corresponding contracts with the related parties.

For the years ended December 31, 2019 and 2020, no individually significant right-of-use assets were leased from Sinopec Group Company and fellow subsidiaries, associates and joint ventures by the Group. The interest expense recognized for the years ended December 31, 2019 and 2020 on lease liabilities in respect of amounts due to Sinopec Group Company and fellow subsidiaries, associates and joint ventures was RMB 8,518 and RMB 8,160.

For the years ended December 31, 2018, 2019 and 2020, the amount of rental the Group paid to Sinopec Group Company and fellow subsidiaries, associates and joint ventures for land are RMB 7,636, RMB 11,333 and RMB 11,090, respectively. For the years ended December 31, 2018, 2019 and 2020, the amount of rental the Group paid to Sinopec Group Company and fellow subsidiaries, associates and joint ventures for buildings are RMB 653, RMB 518 and RMB 571, respectively. For the years ended December 31, 2018, 2019 and 2020, the amount of rental the Group paid to Sinopec Group Company and fellow subsidiaries, associates and joint ventures for others are RMB 836, RMB 468 and RMB 330, respectively.

As of December 31, 2019 and 2020, there was no guarantee given to banks by the Group in respect of banking facilities to Sinopec Group Company and fellow subsidiaries, associates and joint ventures, except for the guarantees disclosed in Note 34. Guarantees given to banks by the Group in respect of banking facilities to associates and joint ventures are disclosed in Note 34.

The directors of the Company are of the opinion that the above transactions with related parties were conducted in the ordinary course of business and on normal commercial terms or in accordance with the agreements governing such transactions, and this has been confirmed by the independent non-executive directors.

Notes:

- (i) Sales of goods represent the sale of crude oil, intermediate petrochemical products, petroleum products and ancillary materials.
- (ii) Purchases represent the purchase of materials and utility supplies directly related to the Group's operations such as the procurement of raw and ancillary materials and related services, supply of water, electricity and gas.
- (iii) Transportation and storage represent the cost for the use of railway, road and marine transportation services, pipelines, loading, unloading and storage facilities.
- (iv) Exploration and development services comprise direct costs incurred in the exploration and development such as geophysical, drilling, well testing and well measurement services.
- (v) Production related services represent ancillary services rendered in relation to the Group's operations such as equipment repair and general maintenance, insurance premium, technical research, communications, firefighting, security, product quality testing and analysis, information technology, design and engineering, construction of oilfield ground facilities, refineries and chemical plants, manufacture of replacement parts and machinery, installation, project management, environmental protection and management services.
- (vi) Ancillary and social services represent expenditures for social welfare and support services such as educational facilities, media communication services, sanitation, accommodation, canteens, and property maintenance.
- (vii) Operating lease charges represent the rental incurred for operating leases in respect of land, buildings and equipment leased from Sinopec Group Company and fellow subsidiaries, associates and joint ventures. No lease charges had incurred for the years ended December 31, 2019 and 2020 because of the adoption of IFRS 16 Leases.
- (viii) Agency commission income represents commission earned for acting as an agent in respect of sales of products and purchase of materials for certain entities owned by Sinopec Group Company.

36. RELATED PARTY TRANSACTIONS *(Continued)*

(a) Transactions with Sinopec Group Company and fellow subsidiaries, associates and joint ventures *(Continued)*

- (ix) Interest income represents interest received from deposits placed with Sinopec Finance and Sinopec Century Bright Capital Investment Limited, finance companies controlled by Sinopec Group Company. The applicable interest rate is determined in accordance with the prevailing saving deposit rate. The balance of deposits as of December 31, 2019 and 2020 were RMB 35,832 and RMB 53,417, respectively.
- (x) Interest expense represents interest charges on the loans obtained from Sinopec Group Company and fellow subsidiaries.
- (xi) The Group obtained loans, discounted bills and others from Sinopec Group Company and fellow subsidiaries.

In connection with the Reorganization, the Company and Sinopec Group Company entered into a number of agreements under which 1) Sinopec Group Company will provide goods and products and a range of ancillary, social and supporting services to the Group and 2) the Group will sell certain goods to Sinopec Group Company. These agreements impacted the operating results of the Group for the year ended December 31, 2020. The terms of these agreements are summarized as follows:

- The Company has entered into a non-exclusive “Agreement for Mutual Provision of Products and Ancillary Services” (“Mutual Provision Agreement”) with Sinopec Group Company effective from January 1, 2000 in which Sinopec Group Company has agreed to provide the Group with certain ancillary production services, construction services, information advisory services, supply services and other services and products. While each of Sinopec Group Company and the Company is permitted to terminate the Mutual Provision Agreement upon at least six months notice, Sinopec Group Company has agreed not to terminate the agreement if the Group is unable to obtain comparable services from a third party. The pricing policy for these services and products provided by Sinopec Group Company to the Group is as follows:
 - (1) the government-prescribed price;
 - (2) where there is no government-prescribed price, the government-guidance price;
 - (3) where there is neither a government-prescribed price nor a government-guidance price, the market price; or
 - (4) where none of the above is applicable, the price to be agreed between the parties, which shall be based on a reasonable cost incurred in providing such services plus a profit margin not exceeding 6%.
- The Company has entered into a non-exclusive “Agreement for Provision of Cultural and Educational, Health Care and Community Services” with Sinopec Group Company effective from January 1, 2000 in which Sinopec Group Company has agreed to provide the Group with certain cultural, educational, health care and community services on the same pricing terms and termination conditions as described in the above Mutual Provision Agreement.
- The Company has entered into a series of lease agreements with Sinopec Group Company to lease certain lands and buildings effective on January 1, 2000. The lease term is 40 or 50 years for lands and 20 years for buildings, respectively. The Company and Sinopec Group Company can renegotiate the rental amount every three years for land. The Company and Sinopec Group Company can renegotiate the rental amount for buildings every year. However such amount cannot exceed the market price as determined by an independent third party.
- The Company has entered into agreements with Sinopec Group Company effective from January 1, 2000 under which the Group has been granted the right to use certain trademarks, patents, technology and computer software developed by Sinopec Group Company.
- The Company has entered into a service stations franchise agreement with Sinopec Group Company effective from January 1, 2000 under which its service stations and retail stores would exclusively sell the refined products supplied by the Group.

36. RELATED PARTY TRANSACTIONS (Continued)
(a) Transactions with Sinopec Group Company and fellow subsidiaries, associates and joint ventures (Continued)

- On the basis of a series of continuing connected transaction agreements signed in 2000, the Company and Sinopec Group Company have signed the Fifth Supplementary Agreement and the Fourth Revised Memorandum of land use rights leasing contract on August 24, 2018, which took effect on January 1, 2019 and made adjustment to “Mutual Supply Agreement”, “Agreement for Provision of Cultural and Educational, Health Care and Community Services”, “Buildings Leasing Contract”, “Intellectual Property Contract” and “Land Use Rights Leasing Contract”, etc.

Amounts due from/to Sinopec Group Company and fellow subsidiaries, associates and joint ventures included in the following accounts captions are summarized as follows:

	December 31,	
	2019	2020
	RMB	RMB
Trade accounts receivable	12,470	16,896
Financial assets at fair value through other comprehensive income	407	760
Prepaid expenses and other current assets	12,771	19,305
Long-term prepayments and other assets	734	6,435
Total	26,382	43,396
Trade accounts payable and bills payable	25,177	22,805
Contract liabilities	4,456	5,940
Other payables	18,793	12,116
Other long-term liabilities	-	3,010
Short-term loans and current portion of long-term loans from Sinopec Group Company and fellow subsidiaries	43,289	5,264
Long-term loans excluding current portion from Sinopec Group Company and fellow subsidiaries	9,626	11,778
Lease liabilities (including to be paid within one year)	171,402	162,048
Total	272,743	222,961

Amounts due from/to Sinopec Group Company and fellow subsidiaries, associates and joint ventures, other than short-term loans and long-term loans, bear no interest, are unsecured and are repayable in accordance with normal commercial terms. The terms and conditions associated with short-term loans and long-term loans payable to Sinopec Group Company and fellow subsidiaries are set out in Note 27.

As of and for the year ended 31 December 2020, and as of and for the year ended 31 December 2019, no individually significant impairment losses for bad and doubtful debts were recognized in respect of amounts due from Sinopec Group Company and fellow subsidiaries, associates and joint ventures.

36. RELATED PARTY TRANSACTIONS *(Continued)*

(b) Key management personnel emoluments

Key management personnel are those persons having authority and responsibility for planning, directing and controlling the activities of the Group, directly or indirectly, including directors and supervisors of the Group. The key management personnel compensation is as follows:

	Years ended December 31,		
	2018	2019	2020
	RMB'000	RMB'000	RMB'000
Short-term employee benefits	5,745	9,209	5,753
Retirement scheme contributions	351	536	342
	<u>6,096</u>	<u>9,745</u>	<u>6,095</u>

(c) Contributions to defined contribution retirement plans

The Group participates in various defined contribution retirement plans organized by municipal and provincial governments for its staff. The details of the Group's employee benefits plan are disclosed in Note 37. As of December 31, 2019 and 2020, the accrual for the contribution to post-employment benefit plans was not material.

(d) Transactions with other state-controlled entities in the PRC

The Group is a state-controlled energy and chemical enterprise and operates in an economic regime currently dominated by entities directly or indirectly controlled by the PRC government through its government authorities, agencies, affiliations and other organizations (collectively referred as "state-controlled entities").

Apart from transactions with Sinopec Group Company and fellow subsidiaries, the Group has transactions with other state-controlled entities, include but not limited to the followings:

- sales and purchases of goods and ancillary materials;
- rendering and receiving services;
- lease of assets;
- depositing and borrowing money; and
- uses of public utilities.

These transactions are conducted in the ordinary course of the Group's business on terms comparable to those with other entities that are not state-controlled.

37. EMPLOYEE BENEFITS PLAN

As stipulated by the regulations of the PRC, the Group participates in various defined contribution retirement plans organized by municipal and provincial governments for its staff. The Group is required to make contributions to the retirement plans at rates ranging from 13.0% to 16.0% of the salaries, bonuses and certain allowances of its staff. In addition, the Group provides a supplementary retirement plan for its staff at rates not exceeding 8% of the salaries. The Group has no other material obligation for the payment of pension benefits associated with these plans beyond the annual contributions described above. The Group's contributions for the years ended December 31, 2018, 2019 and 2020 were RMB 9,181, RMB 11,822 and RMB 8,804, respectively.

38. SEGMENT REPORTING

Segment information is presented in respect of the Group's business segments. The format is based on the Group's management and internal reporting structure.

In a manner consistent with the way in which information is reported internally to the Group's chief operating decision maker for the purposes of resource allocation and performance assessment, the Group has identified the following five reportable segments. No operating segments have been aggregated to form the following reportable segments.

- (i) Exploration and production, which explores and develops oil fields, produces crude oil and natural gas and sells such products to the refining segment of the Group and external customers.
- (ii) Refining, which processes and purifies crude oil, that is sourced from the exploration and production segment of the Group and external suppliers, and manufactures and sells petroleum products to the chemicals and marketing and distribution segments of the Group and external customers.
- (iii) Marketing and distribution, which owns and operates oil depots and service stations in the PRC, and distributes and sells refined petroleum products (mainly gasoline and diesel) in the PRC through wholesale and retail sales networks.
- (iv) Chemicals, which manufactures and sells petrochemical products, derivative petrochemical products and other chemical products mainly to external customers.
- (v) Corporate and others, which largely comprises the trading activities of the import and export companies of the Group and research and development undertaken by other subsidiaries.

The segments were determined primarily because the Group manages its exploration and production, refining, marketing and distribution, chemicals, and corporate and others businesses separately. The reportable segments are each managed separately because they manufacture and/or distribute distinct products with different production processes and due to their distinct operating and gross margin characteristics.

(1) Information of reportable segmental revenues, profits or losses, assets and liabilities

The Group's chief operating decision maker evaluates the performance and allocates resources to its operating segments on an operating profit basis, without considering the effects of finance costs or investment income. Inter-segment transfer pricing is based on the market price or cost plus an appropriate margin, as specified by the Group's policy.

Assets and liabilities dedicated to a particular segment's operations are included in that segment's total assets and liabilities. Segment assets include all tangible and intangible assets, except for interest in associates and joint ventures, investments, deferred tax assets, cash and cash equivalents, time deposits with financial institutions and other unallocated assets. Segment liabilities exclude short-term debts, income tax payable, long-term debts, loans from Sinopec Group Company and fellow subsidiaries, deferred tax liabilities and other unallocated liabilities.

38. SEGMENT REPORTING *(Continued)*
(1) Information of reportable segmental revenues, profits or losses, assets and liabilities *(Continued)*

Information of the Group's reportable segments is as follows:

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Sales of goods			
Exploration and production			
External sales	93,499	111,114	104,524
Inter-segment sales	95,954	89,315	57,513
	189,453	200,429	162,037
Refining			
External sales	148,930	141,674	114,064
Inter-segment sales	1,109,088	1,077,018	825,812
	1,258,018	1,218,692	939,876
Marketing and distribution			
External sales	1,408,989	1,393,557	1,062,447
Inter-segment sales	5,224	4,159	4,854
	1,414,213	1,397,716	1,067,301
Chemicals			
External sales	461,123	428,830	322,121
Inter-segment sales	101,387	78,165	40,518
	562,510	506,995	362,639
Corporate and others			
External sales	709,834	824,507	458,154
Inter-segment sales	650,271	654,337	430,073
	1,360,105	1,478,844	888,227
Elimination of inter-segment sales	(1,961,924)	(1,902,994)	(1,370,624)
Sales of goods	2,822,375	2,899,682	2,049,456
Other operating revenues			
Exploration and production	10,738	10,283	5,718
Refining	5,389	5,464	4,634
Marketing and distribution	32,424	33,247	34,905
Chemicals	9,628	9,273	9,215
Corporate and others	1,523	1,850	2,056
Other operating revenues	59,702	60,117	56,528
Sales of goods and other operating revenues	2,882,077	2,959,799	2,105,984

38. SEGMENT REPORTING (Continued)
(1) Information of reportable segmental revenues, profits or losses, assets and liabilities (Continued)

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Result			
Operating (loss)/income			
By segment			
- Exploration and production	(10,107)	9,284	(16,476)
- Refining	54,827	30,632	(5,555)
- Marketing and distribution	23,464	29,107	20,828
- Chemicals	27,307	17,327	10,372
- Corporate and others	(9,293)	64	(393)
- Elimination	(3,634)	(40)	4,417
Total segment operating income	82,564	86,374	13,193
Share of profit/(loss) from associates and joint ventures			
- Exploration and production	2,598	3,167	2,117
- Refining	109	(640)	(2,516)
- Marketing and distribution	3,155	3,309	2,200
- Chemicals	6,298	4,611	1,723
- Corporate and others	1,814	2,330	3,188
Aggregate share of profits from associates and joint ventures	13,974	12,777	6,712
Investment (loss)/income			
- Exploration and production	(3)	(19)	13,118
- Refining	315	59	14,941
- Marketing and distribution	43	73	8,980
- Chemicals	596	578	(61)
- Corporate and others	920	228	766
Aggregate investment income	1,871	919	37,744
Net finance costs	930	(10,048)	(9,506)
Earnings before income tax	99,339	90,022	48,143

38. SEGMENT REPORTING (Continued)
(1) Information of reportable segmental revenues, profits or losses, assets and liabilities (Continued)

	December 31,		
	2018	2019	2020
	RMB	RMB	RMB
Assets			
Segment assets			
- Exploration and production	321,686	410,950	354,024
- Refining	271,356	321,080	270,431
- Marketing and distribution	317,641	399,242	373,430
- Chemicals	161,940	180,974	186,033
- Corporate and others	152,799	131,686	118,458
Total segment assets	<u>1,225,422</u>	<u>1,443,932</u>	<u>1,302,376</u>
Interest in associates and joint ventures	145,721	152,204	188,342
Financial assets at fair value through other comprehensive income	1,450	1,521	1,525
Deferred tax assets	21,694	17,616	25,054
Cash and cash equivalents, time deposits with financial institutions	167,020	128,052	188,057
Other unallocated assets	36,094	16,961	28,451
Total assets	<u>1,597,401</u>	<u>1,760,286</u>	<u>1,733,805</u>
Liabilities			
Segment liabilities			
- Exploration and production	94,170	167,933	163,588
- Refining	103,809	122,264	136,869
- Marketing and distribution	159,536	226,531	234,309
- Chemicals	38,924	58,066	49,497
- Corporate and others	144,216	137,881	119,215
Total segment liabilities	<u>540,655</u>	<u>712,675</u>	<u>703,478</u>
Short-term debts	31,462	40,521	23,769
Income tax payable	6,701	3,267	6,586
Long-term debts	51,065	49,208	72,037
Loans from Sinopec Group Company and fellow subsidiaries	74,181	52,915	17,042
Deferred tax liabilities	5,948	6,809	8,124
Other unallocated liabilities	29,391	17,587	19,911
Total liabilities	<u>739,403</u>	<u>882,982</u>	<u>850,947</u>

38. SEGMENT REPORTING (Continued)

(1) Information of reportable segmental revenues, profits or losses, assets and liabilities (Continued)

	Years ended December 31,		
	2018 RMB	2019 RMB	2020 RMB
Capital expenditure			
Exploration and production	42,155	61,739	56,416
Refining	27,908	31,372	24,722
Marketing and distribution	21,429	29,566	25,403
Chemicals	19,578	22,438	26,202
Corporate and others	6,906	1,979	2,312
	<u>117,976</u>	<u>147,094</u>	<u>135,055</u>
Depreciation, depletion and amortization			
Exploration and production	60,331	50,732	46,273
Refining	18,541	19,676	20,048
Marketing and distribution	16,296	21,572	23,196
Chemicals	13,379	14,326	14,376
Corporate and others	1,797	2,866	3,072
	<u>110,344</u>	<u>109,172</u>	<u>106,965</u>
Impairment losses on long-lived assets			
Exploration and production	4,274	3	8,495
Refining	353	245	1,923
Marketing and distribution	264	80	536
Chemicals	1,379	17	3,606
Corporate and others	16	-	-
	<u>6,286</u>	<u>345</u>	<u>14,560</u>

(2) Geographical information

The following tables set out information about the geographical information of the Group's external sales and the Group's non-current assets, excluding financial instruments and deferred tax assets. In presenting information on the basis of geographical segments, segment revenue is based on the geographical location of customers, and segment assets are based on the geographical location of the assets.

	Years ended December 31,		
	2018 RMB	2019 RMB	2020 RMB
External sales			
Mainland China	2,110,478	2,124,684	1,721,955
Singapore	395,129	505,672	215,846
Others	376,470	329,443	168,183
	<u>2,882,077</u>	<u>2,959,799</u>	<u>2,105,984</u>
	December 31,		
	2018 RMB	2019 RMB	2020 RMB
Non-current assets			
Mainland China	993,411	1,239,437	1,211,441
Others	50,892	52,705	36,782
	<u>1,044,303</u>	<u>1,292,142</u>	<u>1,248,223</u>

39. PRINCIPAL SUBSIDIARIES

As of December 31, 2020, the following list contains the particulars of subsidiaries which principally affected the results, assets and liabilities of the Group.

Name of Company	Particulars of issued capital	Interests held by the Company %	Interests held by non-controlling interests %	Principal activities
Sinopec Great Wall Energy & Chemical Company Limited	RMB 22,761	100.00	-	- Coal chemical industry investment management, production and sale of coal chemical products
Sinopec Yangzi Petrochemical Company Limited	RMB 15,651	100.00	-	- Manufacturing of intermediate petrochemical products and petroleum products
Sinopec Overseas Investment Holding Limited ("SOIH")	USD 1,662	100.00	-	- Investment holding of overseas business
Sinopec International Petroleum Exploration and Production Limited ("SIPL")	RMB 8,250	100.00	-	- Investment in exploration, production and sale of petroleum and natural gas
Sinopec Yizheng Chemical Fibre Limited Liability Company	RMB 4,000	100.00	-	- Production and sale of polyester chips and polyester fibres
Sinopec Lubricant Company Limited	RMB 3,374	100.00	-	- Production and sale of refined petroleum products, lubricant base oil, and petrochemical materials
China International United Petroleum and Chemical Company Limited	RMB 5,000	100.00	-	- Trading of crude oil and petrochemical products
Sinopec Qingdao Petrochemical Company Limited	RMB 1,595	100.00	-	- Manufacturing of intermediate petrochemical products and petroleum products
Sinopec Catalyst Company Limited	RMB 1,500	100.00	-	- Production and sale of catalyst products
China Petrochemical International Company Limited	RMB 1,400	100.00	-	- Trading of petrochemical products
Sinopec Chemical Sales Company Limited	RMB 1,000	100.00	-	- Marketing and distribution of petrochemical products
Sinopec Beihai Refining and Chemical Limited Liability Company	RMB 5,294	98.98	1.02	Import and processing of crude oil, production, storage and sale of petroleum products and petrochemical products
ZhongKe (Guangdong) Refinery & Petrochemical Company Limited	RMB 6,397	90.30	9.70	Crude oil processing and petroleum products manufacturing
Sinopec Qingdao Refining and Chemical Company Limited	RMB 5,000	85.00	15.00	Manufacturing of intermediate petrochemical products and petroleum products
Sinopec Hainan Refining and Chemical Company Limited	RMB 9,606	75.00	25.00	Manufacturing of intermediate petrochemical products and petroleum products
Marketing Company	RMB 28,403	70.42	29.58	Marketing and distribution of refined petroleum products
Shanghai SECCO	RMB 7,801	67.60	32.40	Production and sale of petrochemical products
Sinopec Kantons Holdings Limited ("Sinopec Kantons")	HKD 248	60.33	39.67	Provision of crude oil jetty services and natural gas pipeline transmission services
Sinopec-SK (Wuhan) Petrochemical Company Limited ("Sinopec-SK")	RMB 7,193	59.00	41.00	Production, sale, research and development of petrochemical products, ethylene and downstream byproducts
Gaoqiao Petrochemical Company Limited	RMB 10,000	55.00	45.00	Manufacturing of intermediate petrochemical products and petroleum products
Baling Petrochemical (i)	RMB 3,000	55.00	45.00	Crude oil processing and petroleum products manufacturing
Sinopec Shanghai Petrochemical Company Limited ("Shanghai Petrochemical")	RMB 10,824	50.44	49.56	Manufacturing of synthetic fibres, resin and plastics, intermediate petrochemical products and petroleum products
Fujian Petrochemical Company Limited ("Fujian Petrochemical") (ii)	RMB 10,492	50.00	50.00	Manufacturing of plastics, intermediate petrochemical products and petroleum products

39. PRINCIPAL SUBSIDIARIES (Continued)

Except for Sinopec Kantons and SOIH, which are incorporated in Bermuda and Hong Kong SAR respectively, all of the above principal subsidiaries are incorporated and operate their businesses principally in the PRC. All of the above principal subsidiaries are limited companies.

The Group entered into an Agreement on transferring equity interests in the relevant oil and pipeline companies with PipeChina, which included 100% equity of Sinopec Pipeline Storage & Transportation Company Limited. See Note 10.

Notes:

- (i) See Note 35.
- (ii) The Group consolidated the financial statements of the entity because it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity.

Summarized financial information on subsidiaries with material non-controlling interests

Set out below are the summarized financial information which the amount before inter-company eliminations for each subsidiary that has non-controlling interests that are material to the Group.

Summarized consolidated balance sheet

	Marketing Company		SIPL		Shanghai Petrochemical		Fujian Petrochemical		Sinopec Kantons		Shanghai SECCO		Sinopec-SK	
	December 31,		December 31,		December 31,		December 31,		December 31,		December 31,		December 31,	
	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020	2019	2020
	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB	RMB
Current assets	129,266	172,352	19,151	22,620	22,309	17,305	1,788	1,582	1,284	4,373	11,858	10,431	5,337	3,639
Current liabilities	(192,106)	(201,678)	(456)	(475)	(15,479)	(15,232)	(804)	(458)	(2,961)	(924)	(3,196)	(2,783)	(15,037)	(6,377)
Net current (liabilities)/ assets	(62,840)	(29,326)	18,695	22,145	6,830	2,073	984	1,124	(1,677)	3,449	8,662	7,648	(9,700)	(2,738)
Non-current assets	340,356	323,571	13,234	8,951	23,185	27,314	11,558	12,568	12,777	9,106	11,473	12,177	21,567	22,187
Non-current liabilities	(58,732)	(59,554)	(16,952)	(18,270)	(21)	(52)	(688)	(693)	(158)	(170)	(1,627)	(1,553)	(7)	(8,509)
Net non-current assets/(liabilities)	281,624	264,017	(3,718)	(9,319)	23,164	27,262	10,870	11,875	12,619	8,936	9,846	10,624	21,560	13,678
Net assets	218,784	234,691	14,977	12,826	29,994	29,335	11,854	12,999	10,942	12,385	18,508	18,272	11,860	10,940
Attributable to owners of the Company	148,256	159,205	6,308	5,876	14,998	14,727	5,927	6,499	6,583	7,454	12,511	12,352	6,997	6,455
Attributable to non-controlling interests	70,528	75,486	8,669	6,950	14,996	14,608	5,927	6,500	4,359	4,931	5,997	5,920	4,863	4,485

39. PRINCIPAL SUBSIDIARIES *(Continued)*
Summarized consolidated statement of comprehensive income

Year ended December 31,	Marketing Company			SIPL			Shanghai Petrochemical			Fujian Petrochemical			Sinopec Kantons			Shanghai SECCO			Sinopec-SK		
	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB
Operating revenues	1,443,698	1,427,705	1,099,680	5,037	3,282	2,017	107,689	100,270	74,624	5,261	5,535	4,871	1,398	1,274	1,064	26,320	28,341	21,626	17,134	31,016	28,702
Net income/(loss) for the year	22,046	22,992	22,415	3,272	2,831	1,160	5,336	2,227	656	1,576	477	243	1,065	1,131	2,047	3,099	3,137	2,132	1,879	701	(920)
Total comprehensive income/(loss)	22,589	23,362	21,149	4,536	2,693	(720)	5,336	2,235	645	1,576	477	243	1,067	1,140	1,814	3,099	3,137	2,132	1,879	701	(920)
Comprehensive income/(loss) attributable to non-controlling interests	7,794	8,289	7,205	2,737	1,651	(287)	2,645	1,113	325	788	238	121	399	433	707	1,004	1,016	691	658	245	(377)
Dividends paid to non-controlling interests	3,964	4,830	2,766	-	10,926	316	1,616	1,344	649	600	650	150	104	159	175	1,191	822	767	-	-	-

Summarized statement of cash flows

Year ended December 31,	Marketing Company			SIPL			Shanghai Petrochemical			Fujian Petrochemical			Sinopec Kantons			Shanghai SECCO			Sinopec-SK		
	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB	2018 RMB	2019 RMB	2020 RMB
Net cash generated from/(used in) operating activities	24,825	40,260	54,139	3,467	2,128	281	6,659	5,057	1,680	38	622	(244)	738	716	586	3,766	4,601	3,119	3,308	5,532	(363)
Net cash generated from/ (used in) investing activities	8,339	(25,923)	(40,010)	4,096	678	(2,659)	(1,928)	(4,623)	(3,888)	(215)	(472)	(649)	648	397	3,846	(480)	(91)	(4,335)	(3,099)	(4,987)	(2,340)
Net cash (used in)/ generated from financing activities	(32,084)	(21,535)	(12,402)	(5,419)	(116)	1,683	(3,507)	(1,737)	1,682	43	(163)	882	(1,551)	(1,208)	(1,250)	(3,676)	(2,050)	(2,879)	525	250	2,176
Net increase/(decrease) in cash and cash equivalents	1,080	(7,198)	1,727	2,144	2,690	(695)	1,224	(1,303)	(526)	(134)	(13)	(11)	(165)	(95)	3,182	(390)	2,460	(4,095)	734	795	(527)
Cash and cash equivalents as of January 1	12,921	14,142	6,901	3,605	5,993	8,833	7,504	8,742	7,450	226	92	79	343	198	117	7,205	6,817	9,278	64	798	1,593
Effect of foreign currency exchange rate changes	141	(43)	14	244	150	(439)	14	11	(8)	-	-	-	20	14	(117)	2	1	(2)	-	-	-
Cash and cash equivalents as of December 31	14,142	6,901	8,642	5,993	8,833	7,699	8,742	7,450	6,916	92	79	68	198	117	3,182	6,817	9,278	5,181	798	1,593	1,066

40. FINANCIAL RISK MANAGEMENT AND FAIR VALUES

Overview

Financial assets of the Group include cash and cash equivalents, time deposits with financial institutions, financial assets at fair value through profit or loss, derivative financial assets, trade accounts receivable, amounts due from Sinopec Group Company and fellow subsidiaries, amounts due from associates and joint ventures, financial assets at FVOCI and other receivables. Financial liabilities of the Group include short-term debts, loans from Sinopec Group Company and fellow subsidiaries, derivative financial liabilities, trade accounts payable and bills payable, amounts due to Sinopec Group Company and fellow subsidiaries, amounts due to associates and joint ventures, other payables, long-term debts and lease liabilities.

The Group has exposure to the following risks from its uses of financial instruments:

- credit risk;
- liquidity risk; and
- market risk.

The Board of Directors has overall responsibility for the establishment, oversight of the Group's risk management framework, and developing and monitoring the Group's risk management policies.

The Group's risk management policies are established to identify and analyze the risks faced by the Group, and set appropriate risk limits and controls to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management controls and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations. Internal audit department undertakes both regular and ad hoc reviews of risk management controls and procedures, the results of which are reported to the Group's audit committee.

Credit risk

(i) Risk management

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Group's deposits placed with financial institutions (including structured deposits) and receivables from customers. To limit exposure to credit risk relating to deposits, the Group primarily places cash deposits only with large financial institutions in the PRC with acceptable credit ratings. The majority of the Group's trade accounts receivable relate to sales of petroleum and chemical products to related parties and third parties operating in the petroleum and chemical industries. No single customer accounted for greater than 10% of total trade accounts receivable as of December 31, 2020, except the amounts due from Sinopec Group Company and fellow subsidiaries. Management performs ongoing credit evaluations of the Group's customers' financial condition and generally does not require collateral on trade accounts receivable. The Group maintains an impairment loss for doubtful accounts and actual losses have been within management's expectations.

The carrying amounts of cash and cash equivalents, time deposits with financial institutions, financial assets at fair value through profit or loss, derivative financial assets, trade accounts receivable, financial assets at FVOCI and other receivables, represent the Group's maximum exposure to credit risk in relation to financial assets.

(ii) Impairment of financial assets

The Group's primary type of financial assets that are subject to the expected credit loss model is trade accounts receivable, financial assets at FVOCI and other receivables.

The Group's cash deposits are placed only with large financial institutions with acceptable credit ratings, and there is no material impairment loss identified.

40. FINANCIAL RISK MANAGEMENT AND FAIR VALUES (Continued)

Credit risk (Continued)

For trade accounts receivable and financial assets at FVOCI, the Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade accounts receivable and financial assets at FVOCI.

To measure the expected credit losses, trade accounts receivable and financial assets at FVOCI have been grouped based on shared credit risk characteristics and the days past due.

The expected loss rates are based on the payment profiles of sales over a period of 36 months before December 31, 2020 or December 31, 2019, respectively, and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward-looking information on macroeconomic factors affecting the ability of the customers to settle the receivables.

The detailed analysis of trade accounts receivable and financial assets at FVOCI, based on which the Group generated its payment profile is listed in Note 15 and Note 24.

All of the entity's other receivables are considered to have low credit risk, and the loss allowance recognized during the period was therefore limited to 12 months expected losses. The Group considers 'low credit risk' for other receivables when they have a low risk of default and the issuer has a strong capacity to meet its contractual cash flow obligations in the near term.

Liquidity risk

Liquidity risk is the risk that the Group will not be able to meet its financial obligations as they fall due. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation. Management prepares monthly cash flow budget to ensure that the Group will always have sufficient liquidity to meet its financial obligations as they fall due. The Group arranges and negotiates financing with financial institutions and maintains a certain level of standby credit facilities to reduce the Group's liquidity risk.

As of December 31, 2019 and 2020, the Group has standby credit facilities with several PRC financial institutions which provide borrowings up to RMB 379,649 and RMB 443,966 on an unsecured basis, at a weighted average interest rate of 3.57% and 2.85% per annum, respectively. As of December 31, 2019 and 2020, the Group's outstanding borrowings under these facilities were RMB 2,947 and RMB 4,041 and were included in debts, respectively.

The following table sets out the remaining contractual maturities at the balance sheet date of the Group's financial liabilities, which are based on contractual undiscounted cash flows (including interest payments computed using contractual rates or, if floating, based on prevailing rates current at the balance sheet date) and the earliest date the Group would be required to repay:

	December 31, 2019					
	Carrying amount	Total contractual undiscounted cash flow	Within 1 year or on demand	More than 1 year but less than 2 years	More than 2 years but less than 5 years	More than 5 years
	RMB	RMB	RMB	RMB	RMB	RMB
Short-term debts	40,521	42,240	42,240	-	-	-
Long-term debts	49,208	62,955	952	6,271	25,189	30,543
Loans from Sinopec Group Company and fellow subsidiaries	52,915	54,508	43,623	985	7,088	2,812
Lease liabilities	192,872	367,711	16,488	15,676	45,008	290,539
Derivative financial liabilities	2,729	2,729	2,729	-	-	-
Trade accounts payable and bills payable	200,023	200,023	200,023	-	-	-
Other payables	81,861	81,861	81,861	-	-	-
	620,129	812,027	387,916	22,932	77,285	323,894

40. FINANCIAL RISK MANAGEMENT AND FAIR VALUES (Continued)
Liquidity risk (Continued)

	December 31, 2020					
	Carrying amount	Total contractual undiscounted cash flow	Within 1 year or on demand	More than 1 year but less than 2 years	More than 2 years but less than 5 years	More than 5 years
	RMB	RMB	RMB	RMB	RMB	RMB
Short-term debts	23,769	25,280	25,280	-	-	-
Long-term debts	72,037	80,562	1,339	11,753	60,414	7,056
Loans from Sinopec Group Company and fellow subsidiaries	17,042	17,978	5,512	929	10,109	1,428
Lease liabilities	187,598	329,083	15,957	15,456	43,513	254,157
Derivative financial liabilities	4,826	4,826	4,826	-	-	-
Trade accounts payable and bills payable	161,656	161,656	161,656	-	-	-
Other payables	93,623	93,623	93,623	-	-	-
	560,551	713,008	308,193	28,138	114,036	262,641

Management believes that the Group's current cash on hand, expected cash flows from operations and available standby credit facilities from financial institutions will be sufficient to meet the Group's short-term and long-term capital requirements.

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return on risk.

Currency risk

Currency risk arises on financial instruments that are denominated in a currency other than the functional currency in which they are measured. The Group's currency risk exposure primarily relates to short-term and long-term debts and loans from Sinopec Group Company and fellow subsidiaries denominated in USD and lease liabilities denominated in Singapore Dollar ("SGD"). The Group enters into foreign exchange contracts to manage its currency risk exposure.

Included primarily in short-term and long-term debts and loans from Sinopec Group Company and fellow subsidiaries of the Group and lease liabilities are the following amounts denominated in a currency other than the functional currency of the entity to which they relate:

	December 31,	
	2019	2020
Gross exposure arising from loans and lease liabilities		
USD	103	22
SGD	4	-

40. FINANCIAL RISK MANAGEMENT AND FAIR VALUES (Continued)

Currency risk (Continued)

A 5 percent strengthening/weakening of RMB against the following currencies as of December 31, 2019 and 2020 would have increased/decreased net income for the year of the Group by the amounts shown below. This analysis has been determined assuming that the change in foreign exchange rates had occurred at the balance sheet date and had been applied to the foreign currency balances to which the Group has significant exposure as stated above, and that all other variables, in particular interest rates, remain constant. The analysis is performed on the same basis for 2019.

	December 31,	
	2019	2020
	RMB	RMB
USD	27	5
SGD	1	-

Other than the amounts as disclosed above, the amounts of other financial assets and liabilities of the Group are substantially denominated in the functional currency of respective entity within the Group.

Interest rate risk

The Group's interest rate risk exposure arises primarily from its short-term and long-term debts and loans from Sinopec Group Company and fellow subsidiaries. Debts bearing interest at variable rates and at fixed rates expose the Group to cash flow interest rate risk and fair value interest rate risk respectively. The interest rates and terms of repayment of short-term and long-term debts, and loans from Sinopec Group Company and fellow subsidiaries of the Group are disclosed in Note 27.

As of December 31, 2019, it is estimated that a general increase/decrease of 100 basis points in variable interest rates, with all other variables held constant, would decrease/increase the Group's net income for the year by approximately RMB 352. As of December 31, 2020, it is estimated that a general increase/decrease of 100 basis points in variable interest rates, with all other variables held constant, would decrease/increase the Group's net income for the year by approximately RMB 245. This sensitivity analysis has been determined assuming that the change of interest rates was applied to the Group's debts outstanding at the balance sheet date with exposure to cash flow interest rate risk. The analysis is performed on the same basis for 2019.

Commodity price risk

The Group engages in oil and gas operations and is exposed to commodity price risk related to price volatility of crude oil, refined oil products and chemical products. The fluctuations in prices of crude oil, refined oil products and chemical products could have significant impact on the Group. The Group uses derivative financial instruments, including commodity futures and swaps contracts, to manage a portion of this risk.

As of December, 31, 2019 and 2020, the Group had certain commodity contracts of crude oil, refined oil products and chemical products designated as qualified cash flow hedges and economic hedges. As of December 31, 2019 and 2020, the fair value of such derivative hedging financial instruments is derivative financial assets of RMB 788 and RMB 12,353, respectively, and derivative financial liabilities of RMB 2,728 and RMB 4,808, respectively.

As of December 31, 2019, it is estimated that a general increase/decrease of USD 10 per barrel in basic price of derivative financial instruments, with all other variables held constant, would impact the fair value of derivative financial instruments, which would increase/decrease the Group's net income for the year by approximately RMB 3,134 and decrease/increase the Group's other reserves by approximately RMB 4,289. As of December 31, 2020, it is estimated that a general increase/decrease of USD 10 per barrel in basic price of derivative financial instruments, with all other variables held constant, would impact the fair value of derivative financial instruments, which would increase/decrease the Group's net income for the year by approximately RMB 3,592 and increase/decrease the Group's other reserves by approximately RMB 10,379. This sensitivity analysis has been determined assuming that the change in prices had occurred at the balance sheet date and the change was applied to the Group's derivative financial instruments at that date with exposure to commodity price risk. The analysis is performed on the same basis for 2019.

40. FINANCIAL RISK MANAGEMENT AND FAIR VALUES (Continued)
Fair values

- (i) Financial instruments carried at fair value

The following table presents the carrying value of financial instruments measured at fair value at the balance sheet date across the three levels of the fair value hierarchy defined in IFRS 7, *Financial Instruments: Disclosures*, with the fair value of each financial instrument categorized in its entirety based on the lowest level of input that is significant to that fair value measurement. The levels are defined as follows:

- Level 1 (highest level): fair values measured using quoted prices (unadjusted) in active markets for identical financial instruments.
- Level 2: fair values measured using quoted prices in active markets for similar financial instruments, or using valuation techniques in which all significant inputs are directly or indirectly based on observable market data.
- Level 3 (lowest level): fair values measured using valuation techniques in which any significant input is not based on observable market data.

December 31, 2019				
	Level 1	Level 2	Level 3	Total
	RMB	RMB	RMB	RMB
Assets				
Financial assets at fair value through profit or loss:				
- Structured deposits	-	-	3,318	3,318
- Equity investments, listed and at quoted market price	1	-	-	1
Derivative financial assets:				
- Derivative financial assets	128	709	-	837
Financial assets at fair value through other comprehensive income:				
- Equity investments	90	-	1,431	1,521
- Trade accounts receivable and bills receivable	-	-	8,661	8,661
	219	709	13,410	14,338
Liabilities				
Derivative financial liabilities:				
- Derivative financial liabilities	1,209	1,520	-	2,729
	1,209	1,520	-	2,729
December 31, 2020				
	Level 1	Level 2	Level 3	Total
	RMB	RMB	RMB	RMB
Assets				
Financial assets at fair value through profit or loss:				
- Equity investments, listed and at quoted market price	1	-	-	1
Derivative financial assets:				
- Derivative financial assets	9,628	2,900	-	12,528
Financial assets at fair value through other comprehensive income:				
- Equity investments	149	-	1,376	1,525
- Trade accounts receivable and bills receivable	-	-	8,735	8,735
	9,778	2,900	10,111	22,789
Liabilities				
Derivative financial liabilities:				
- Derivative financial liabilities	2,471	2,355	-	4,826
	2,471	2,355	-	4,826

During the years ended December 31, 2019 and 2020, there was no transfer between instruments in Level 1 and Level 2.

40. FINANCIAL RISK MANAGEMENT AND FAIR VALUES (Continued)

Fair values (Continued)

(i) Financial instruments carried at fair value (Continued)

Management of the Group uses discounted cash flow model with inputted interest rate and commodity index, which were influenced by historical fluctuation and the probability of market fluctuation, to evaluate the fair value of the structured deposits and trade accounts receivable and bills receivable classified as Level 3 financial assets.

(ii) Fair values of financial instruments carried at other than fair value

The disclosures of the fair value estimates, and their methods and assumptions of the Group's financial instruments, are made to comply with the requirements of IFRS 7 and IFRS 9 and should be read in conjunction with the Group's consolidated financial statements and related notes. The estimated fair value amounts have been determined by the Group using market information and valuation methodologies considered appropriate. However, considerable judgement is required to interpret market data to develop the estimates of fair value. Accordingly, the estimates presented herein are not necessarily indicative of the amounts the Group could realize in a current market exchange. The use of different market assumptions and/or estimation methodologies may have a material effect on the estimated fair value amounts.

The fair values of the Group's financial instruments carried at other than fair value (other than long-term indebtedness and investments in unquoted equity securities) approximate their carrying amounts due to the short-term maturity of these instruments. The fair values of long-term indebtedness are estimated by discounting future cash flows using current market interest rates offered to the Group for debt with substantially the same characteristic and maturities range from 2.37% to 4.90% and from 0.77% to 4.65% for the years ended December 31, 2019 and 2020, respectively. The following table presents the carrying amount and fair value of the Group's long-term indebtedness other than loans from Sinopec Group Company and fellow subsidiaries as of December 31, 2019 and 2020:

	December 31,	
	2019	2020
	RMB	RMB
Carrying amount	63,998	76,674
Fair value	62,646	74,282

The Group has not developed an internal valuation model necessary to estimate the fair values of loans from Sinopec Group Company and fellow subsidiaries as it is not considered practicable to estimate their fair values because the cost of obtaining discount and borrowing rates for comparable borrowings would be excessive based on the Reorganization of the Group, the Group's existing capital structure and the terms of the borrowings.

Except for the above items, the financial assets and liabilities of the Group are carried at amounts not materially different from their fair values as of December 31, 2019 and 2020.

41. ACCOUNTING ESTIMATES AND JUDGEMENTS

The Group's financial condition and results of operations are sensitive to accounting methods, assumptions and estimates that underlie the preparation of the consolidated financial statements. Management bases the assumptions and estimates on historical experience and on various other assumptions that it believes to be reasonable and which form the basis for making judgements about matters that are not readily apparent from other sources. On an ongoing basis, management evaluates its estimates. Actual results may differ from those estimates as facts, circumstances and conditions change.

The selection of critical accounting policies, the judgements and other uncertainties affecting application of such policies and the sensitivity of reported results to changes in conditions and assumptions are factors to be considered when reviewing the consolidated financial statements. The significant accounting policies are set forth in Note 2. Management believes the following critical accounting policies involve the most significant judgements and estimates used in the preparation of the consolidated financial statements.

41. ACCOUNTING ESTIMATES AND JUDGEMENTS (Continued)

Oil and gas properties and reserves

The accounting for the exploration and production's oil and gas activities is subject to accounting rules that are unique to the oil and gas industry. There are two methods to account for oil and gas business activities, the successful efforts method and the full cost method. The Group has elected to use the successful efforts method. The successful efforts method reflects the volatility that is inherent in exploring for mineral resources in that costs of unsuccessful exploratory efforts are charged to expense as they are incurred. These costs primarily include dry hole costs, seismic costs and other exploratory costs. Under the full cost method, these costs are capitalized and written-off or depreciated over time.

Engineering estimates of the Group's oil and gas reserves are inherently imprecise and represent only approximate amounts because of the subjective judgements involved in developing such information. There are authoritative guidelines regarding the engineering criteria that have to be met before estimated oil and gas reserves can be designated as "proved". Proved and proved developed reserves estimates are updated at least annually and take into account recent production and technical information about each field. In addition, as prices and cost levels change from year to year, the estimates of proved and proved developed reserves also change. This change is considered a change in estimate for accounting purposes and is reflected on a prospective basis in relation to depreciation rates. Oil and gas reserves have a direct impact on the assessment of the recoverability of the carrying amounts of oil and gas properties reported in the financial statements. If proved reserves estimates are revised downwards, earnings could be affected by changes in depreciation expense or an immediate write-down of the property's carrying amount.

Future dismantlement costs for oil and gas properties are estimated with reference to engineering estimates after taking into consideration the anticipated method of dismantlement required in accordance with industry practices in similar geographic area, including estimation of economic life of oil and gas properties, technology and price level. The present values of these estimated future dismantlement costs are capitalized as oil and gas properties with equivalent amounts recognized as provisions for dismantlement costs.

Despite the inherent imprecision in these engineering estimates, these estimates are used in determining depreciation expense, impairment loss and future dismantlement costs. Capitalized costs of proved oil and gas properties are amortized on a unit-of-production method based on volumes produced and reserves.

Impairment for long-lived assets

If circumstances indicate that the net book value of a long-lived asset may not be recoverable, the asset may be considered "impaired", and an impairment loss may be recognized in accordance with IAS 36 "Impairment of Assets". The carrying amounts of long-lived assets are reviewed periodically in order to assess whether the recoverable amounts have declined below the carrying amounts. These assets are tested for impairment whenever events or changes in circumstances indicate that their recorded carrying amounts may not be recoverable. When such a decline has occurred, the carrying amount is reduced to recoverable amount. For goodwill, the recoverable amount is estimated annually. The recoverable amount is the greater of the net selling price and the value in use. It is difficult to precisely estimate selling price because quoted market prices for the Group's assets or cash-generating units are not readily available. In determining the value in use, expected cash flows generated by the asset or the cash-generating units are discounted to their present value, which requires significant judgement relating to level of sale volume, selling price, amount of operating costs and discount rate. Management uses all readily available information in determining an amount that is a reasonable approximation of recoverable amount, including estimates based on reasonable and supportable assumptions and projections of sale volume, selling price, amount of operating costs and discount rate.

Depreciation

Property, plant and equipment, other than oil and gas properties, are depreciated on a straight-line basis over the estimated useful lives of the assets, after taking into account the estimated residual value. Management reviews the estimated useful lives of the assets at least annually in order to determine the amount of depreciation expense to be recorded during any reporting period. The useful lives are based on the Group's historical experience with similar assets and take into account anticipated technological changes. The depreciation expense for future periods is adjusted if there are significant changes from previous estimates.

41. ACCOUNTING ESTIMATES AND JUDGEMENTS *(Continued)*

Measurement of expected credit losses

The Group measures and recognizes expected credit losses, considering reasonable and supportable information about the relevant past events, current conditions and forecasts of future economic conditions. The Group regularly monitors and reviews the assumptions used for estimating expected credit losses.

Allowance for diminution in value of inventories

If the costs of inventories become higher than their net realizable values, an allowance for diminution in value of inventories is recognized. Net realizable value represents the estimated selling price in the ordinary course of business, less the estimated costs of completion and the estimated costs necessary to make the sale. Management bases the estimates on all available information, including the current market prices of the finished goods and raw materials, and historical operating costs. If the actual selling prices were to be lower or the costs of completion were to be higher than estimated, the actual allowance for diminution in value of inventories could be higher than estimated.

42. PARENT AND ULTIMATE HOLDING COMPANY

The directors consider the parent and ultimate holding company of the Group as of December 31, 2020 is Sinopec Group Company, a state-owned enterprise established in the PRC. This entity does not produce financial statements available for public use.

43. RESERVES

	2019	2020
	RMB	RMB
Capital reserve (Note (a))		
Balance as of January 1	26,788	29,730
Distribution to SAMC in the Acquisition of Baling Branch of SAMC (Note 35)	—	(972)
Transaction with non-controlling interests	2,933	(138)
Others	9	812
Balance as of December 31	29,730	29,432
Share premium (Note (b))		
Balance as of January 1	55,850	55,850
Balance as of December 31	55,850	55,850
Statutory surplus reserve (Note (c))		
Balance as of January 1	86,678	90,423
Appropriation	3,745	1,857
Balance as of December 31	90,423	92,280
Discretionary surplus reserve		
Balance as of January 1	117,000	117,000
Balance as of December 31	117,000	117,000
Other reserves		
Balance as of January 1	(4,477)	1,941
Other comprehensive income	5,415	1,406
Amounts transferred to initial carrying amount of hedged items	1,038	(47)
Others	(35)	200
Balance as of December 31	1,941	3,500
Retained earnings (Note (d))		
Balance as of January 1	315,167	322,931
Net income attributable to owners of the Company	57,493	33,096
Final dividend inspect of the previous year, approved and paid during the year (Note (e))	(31,479)	(23,004)
Interim dividend (Note (f))	(14,529)	(8,475)
Appropriation	(3,745)	(1,857)
Others	24	(330)
Balance as of December 31	322,931	322,361
	617,875	620,423

43. RESERVES *(Continued)*

Notes:

- (a) The capital reserve represents (i) the difference between the total amount of the par value of shares issued and the amount of the net assets transferred from Sinopec Group Company in connection with the Reorganization (Note 1), and (ii) the difference between the considerations paid over or received the amount of the net assets of entities and related operations acquired from or sold to Sinopec Group Company and non-controlling interests.
- (b) The application of the share premium account is governed by Sections 167 and 168 of the PRC Company Law.
- (c) According to the PRC Company Law and the Articles of Association of the Company, the Company is required to transfer 10% of its net income determined in accordance with the accounting policies complying with Accounting Standards for Business Enterprises (“CASs”), adopted by the Group to statutory surplus reserve. In the event that the reserve balance reaches 50% of the registered capital, no transfer is required. The transfer to this reserve must be made before distribution of a dividend to shareholders. Statutory surplus reserve can be used to make good previous years’ losses, if any, and may be converted into share capital by issuing of new shares to shareholders in proportion to their existing shareholdings or by increasing the par value of the shares currently held by them, provided that the balance after such issue is not less than 25% of the registered capital.

During the years ended December 31, 2018, 2019 and 2020, the Company transferred RMB 3,996, RMB 3,745 and RMB 1,857 respectively, being 10% of the net income determined in accordance with the accounting policies complying with CASs.

- (d) As of December 31, 2019 and 2020, the amount of retained earnings available for distribution was RMB 130,645 and RMB 115,849, respectively, being the amount determined in accordance with CASs. According to the Articles of Association of the Company, the amount of retained earnings available for distribution to owners of the Company is the lower of the amount determined in accordance with the accounting policies complying with CASs and the amount determined in accordance with the accounting policies complying with IFRS.

Pursuant to a resolution passed at the director’s meeting on March 26, 2021, final dividends in respect of the year ended December 31, 2020 of RMB 0.13 per share totaling RMB 15,739 were proposed for shareholders’ approval at the Annual General Meeting. Final cash dividend for the year ended December 31, 2020 proposed after the balance sheet date has not been recognized as a liability at the balance sheet date.

- (e) Pursuant to the shareholders’ approval at the Annual General Meeting on May 9, 2019, a final dividend of RMB 0.26 per share totaling RMB 31,479 according to total shares as of June 10, 2019 was approved. All dividends have been paid in the year ended December 31, 2019.

Pursuant to the shareholders’ approval at the Annual General Meeting on May 19, 2020, a final dividend of RMB 0.19 per share totaling RMB 23,004 according to total shares as of June 9, 2020 was approved. All dividends have been paid in the year ended December 31, 2020.

- (f) Pursuant to the Company’s Articles of Association and a resolution passed at the Directors’ meeting on August 23, 2019, the directors authorized to declare the interim dividends for the year ended December 31, 2019 of RMB 0.12 per share totaling RMB 14,529. Dividends were paid on September 17, 2019.

Pursuant to the shareholders’ approval at the General Meeting on September 28, 2020, the interim dividends for the year ending December 31, 2020 of RMB 0.07 per share totaling RMB 8,475 were approved. Dividends were paid on October 23, 2020.

**SUPPLEMENTAL INFORMATION ON OIL AND GAS
PRODUCING ACTIVITIES (UNAUDITED)**
(All currency amounts in million)

In accordance with “Accounting Standards Codification (ASC) Topic 932 Extractive Activities – Oil and Gas”, issued by the Financial Accounting Standards Board of the United States, “Rule 4-10 of Regulation S-X”, issued by Securities and Exchange Commission (SEC), and in accordance with “Industrial Information Disclosure Guidelines for Public Company – No.8 Oil and Gas Exploitation”, issued by Shanghai Stock Exchange, this section provides supplemental information on oil and gas exploration and producing activities of the Group and its equity method investments at December 31, 2019 and 2020, and for the years then ended in the following six separate tables. Tables I through III provide historical cost information under IFRS pertaining to capitalized costs related to oil and gas producing activities; costs incurred in oil and gas exploration and development; and results of operation related to oil and gas producing activities. Tables IV through VI present information on the Group’s and its equity method investments’ estimated net proved reserve quantities; standardized measure of discounted future net cash flows; and changes in the standardized measure of discounted cash flows.

Tables I to VI of supplemental information on oil and gas producing activities set out below represent information of the Company and its consolidated subsidiaries and equity method investments.

Table I: Capitalized costs related to oil and gas producing activities

	Years ended December 31,								
	2018			2019			2020		
	RMB			RMB			RMB		
	Total	China	Other countries	Total	China	Other countries	Total	China	Other countries
The Group									
Property cost, wells and related equipments and facilities	695,724	651,531	44,193	727,552	684,246	43,306	757,592	716,683	40,909
Supporting equipments and facilities	199,321	199,304	17	202,208	202,192	16	184,638	184,621	17
Uncompleted wells, equipments and facilities	40,778	40,770	8	46,712	46,526	186	37,445	37,439	6
Total capitalized costs	935,823	891,605	44,218	976,472	932,964	43,508	979,675	938,743	40,932
Accumulated depreciation, depletion, amortization and impairment losses	(658,093)	(618,593)	(39,500)	(702,392)	(661,177)	(41,215)	(742,195)	(702,829)	(39,366)
Net capitalized costs	277,730	273,012	4,718	274,080	271,787	2,293	237,480	235,914	1,566
Equity method investments									
Share of net capitalized costs of associates and joint ventures	6,304	-	6,304	5,743	-	5,743	5,843	-	5,843
Total of the Group’s and its equity method investments’ net capitalized costs	284,034	273,012	11,022	279,823	271,787	8,036	243,323	235,914	7,409

**SUPPLEMENTAL INFORMATION ON OIL AND GAS
PRODUCING ACTIVITIES (UNAUDITED) (Continued)**
(All currency amounts in million)

Table II: Costs incurred in oil and gas exploration and development

	Years ended December 31,								
	2018			2019			2020		
	RMB			RMB			RMB		
	Total	China	Other countries	Total	China	Other countries	Total	China	Other countries
The Group									
Exploration	12,108	12,108	-	16,295	16,295	-	16,752	16,752	-
Development	27,453	27,329	124	37,412	37,245	167	38,241	37,636	605
Total costs incurred	39,561	39,437	124	53,707	53,540	167	54,993	54,388	605
Equity method investments									
Share of costs of exploration and development of associates and joint ventures	793	-	793	747	-	747	100	-	100
Total of the Group's and its equity method investments' exploration and development costs	40,354	39,437	917	54,454	53,540	914	55,093	54,388	705

**SUPPLEMENTAL INFORMATION ON OIL AND GAS
PRODUCING ACTIVITIES (UNAUDITED) (Continued)**
(All currency amounts in million)

Table III: Results of operations related to oil and gas producing activities

	Years ended December 31,								
	2018			2019			2020		
	RMB			RMB			RMB		
	Total	China	Other countries	Total	China	Other countries	Total	China	Other countries
The Group									
Revenues									
Sales	57,860	57,860	-	59,552	59,262	290	52,354	52,354	-
Transfers	89,569	84,532	5,037	83,633	80,641	2,992	58,069	56,052	2,017
	147,429	142,392	5,037	143,185	139,903	3,282	110,423	108,406	2,017
Production costs excluding taxes	(47,227)	(45,953)	(1,274)	(47,969)	(46,725)	(1,244)	(44,595)	(43,487)	(1,108)
Exploration expenses	(10,744)	(10,744)	-	(10,510)	(10,510)	-	(9,716)	(9,716)	-
Depreciation, depletion, amortization and impairment losses	(62,832)	(60,877)	(1,955)	(48,630)	(47,580)	(1,050)	(52,608)	(51,754)	(854)
Taxes other than income tax	(11,400)	(11,400)	-	(9,395)	(9,395)	-	(7,379)	(7,379)	-
Earnings before taxation	15,226	13,418	1,808	26,681	25,693	988	(3,875)	(3,930)	55
Income tax expense	709	-	709	338	-	338	188	-	188
Results of operation from producing activities	15,935	13,418	2,517	27,019	25,693	1,326	(3,687)	(3,930)	243
Equity method investments									
Revenues									
Sales	9,530	-	9,530	9,325	-	9,325	4,913	-	4,913
	9,530	-	9,530	9,325	-	9,325	4,913	-	4,913
Production costs excluding taxes	(2,455)	-	(2,455)	(2,516)	-	(2,516)	(998)	-	(998)
Exploration expenses	-	-	-	-	-	-	-	-	-
Depreciation, depletion, amortization and impairment losses	(1,163)	-	(1,163)	(1,124)	-	(1,124)	(940)	-	(940)
Taxes other than income tax	(4,075)	-	(4,075)	(4,068)	-	(4,068)	(1,930)	-	(1,930)
Earnings before taxation	1,837	-	1,837	1,617	-	1,617	1,045	-	1,045
Income tax expense	(667)	-	(667)	(486)	-	(486)	(303)	-	(303)
Share of net income for producing activities of associates and joint ventures	1,170	-	1,170	1,131	-	1,131	742	-	742
Total of the Group's and its equity method investments' results of operations for producing activities	17,105	13,418	3,687	28,150	25,693	2,457	(2,945)	(3,930)	985

The results of operations for producing activities for the years ended December 31, 2018, 2019 and 2020 are shown above. Revenues include sales to unaffiliated parties and transfers (essentially at third-party sales prices) to other segments of the Group. Income taxes are based on statutory tax rates, reflecting allowable deductions and tax credits. General corporate overhead and interest income and expense are excluded from the results of operations.

**SUPPLEMENTAL INFORMATION ON OIL AND GAS
PRODUCING ACTIVITIES (UNAUDITED) (Continued)**
(All currency amounts in million)

Table IV: Reserve quantities information

The Group's and its equity method investments' estimated net proved underground oil and gas reserves and changes thereto for the years ended December 31, 2018, 2019 and 2020 are shown in the following table.

Proved oil and gas reserves are those quantities of oil and gas, which by analysis of geoscience and engineering data, can be estimated with reasonable certainty to be economically producible from a given date forward, from known reservoirs, and under existing economic conditions, operating methods, and government regulation before contracts providing the right to operate expire, unless evidence indicates that renewal is reasonably certain, regardless of whether the estimate is a deterministic estimate or probabilistic estimate. Due to the inherent uncertainties and the limited nature of reservoir data, estimates of underground reserves are subject to change as additional information becomes available.

Proved developed oil and gas reserves are proved reserves that can be expected to be recovered through existing wells with existing equipment and operating methods or in which the cost of the required equipment is relatively minor compared with the cost of a new well.

"Net" reserves exclude royalties and interests owned by others and reflect contractual arrangements and obligation of rental fee in effect at the time of the estimate.

**SUPPLEMENTAL INFORMATION ON OIL AND GAS
PRODUCING ACTIVITIES (UNAUDITED) (Continued)**
(All currency amounts in million)

Table IV: Reserve quantities information (Continued)

	Years ended December 31,								
	2018			2019			2020		
	Total	China	Other countries	Total	China	Other countries	Total	China	Other countries
The Group									
Proved developed and undeveloped reserves (oil) (million barrels)									
Beginning of year	1,293	1,261	32	1,367	1,339	28	1,450	1,433	17
Revisions of previous estimates	160	158	2	81	85	(4)	(161)	(171)	10
Improved recovery	95	90	5	160	160	-	109	109	-
Extensions and discoveries	79	79	-	98	98	-	111	111	-
Production	(260)	(249)	(11)	(256)	(249)	(7)	(257)	(250)	(7)
End of year	1,367	1,339	28	1,450	1,433	17	1,252	1,232	20
Non-controlling interest in proved developed and undeveloped reserves at the end of year	12	-	12	8	-	8	5	-	5
Proved developed reserves									
Beginning of year	1,156	1,124	32	1,271	1,244	27	1,343	1,326	17
End of year	1,271	1,244	27	1,343	1,326	17	1,145	1,130	15
Proved undeveloped reserves									
Beginning of year	137	137	-	96	95	1	107	107	-
End of year	96	95	1	107	107	-	107	102	5
Proved developed and undeveloped reserves (gas) (billion cubic feet)									
Beginning of year	6,985	6,985	-	6,793	6,793	-	7,216	7,216	-
Revisions of previous estimates	(40)	(40)	-	123	123	-	171	171	-
Improved recovery	142	142	-	469	469	-	692	692	-
Extensions and discoveries	680	680	-	875	875	-	1,171	1,171	-
Production	(974)	(974)	-	(1,044)	(1,044)	-	(1,069)	(1,069)	-
End of year	6,793	6,793	-	7,216	7,216	-	8,181	8,181	-
Proved developed reserves									
Beginning of year	6,000	6,000	-	5,822	5,822	-	6,026	6,026	-
End of year	5,822	5,822	-	6,026	6,026	-	6,357	6,357	-
Proved undeveloped reserves									
Beginning of year	985	985	-	971	971	-	1,190	1,190	-
End of year	971	971	-	1,190	1,190	-	1,824	1,824	-

**SUPPLEMENTAL INFORMATION ON OIL AND GAS
PRODUCING ACTIVITIES (UNAUDITED) (Continued)**
(All currency amounts in million)

Table IV: Reserve quantities information (Continued)

	Years ended December 31,								
	2018			2019			2020		
	Total	China	Other countries	Total	China	Other countries	Total	China	Other countries
Equity method investments									
Proved developed and undeveloped reserves of associates and joint ventures (oil) (million barrels)									
Beginning of year	306	-	306	299	-	299	290	-	290
Revisions of previous estimates	12	-	12	(8)	-	(8)	13	-	13
Improved recovery	4	-	4	2	-	2	-	-	-
Extensions and discoveries	5	-	5	25	-	25	11	-	11
Production	(28)	-	(28)	(28)	-	(28)	(24)	-	(24)
End of year	299	-	299	290	-	290	290	-	290
Proved developed reserves									
Beginning of year	273	-	273	261	-	261	245	-	245
End of year	261	-	261	245	-	245	244	-	244
Proved undeveloped reserves									
Beginning of year	33	-	33	38	-	38	45	-	45
End of year	38	-	38	45	-	45	46	-	46
Proved developed and undeveloped reserves of associates and joint ventures (gas) (billion cubic feet)									
Beginning of year	12	-	12	13	-	13	9	-	9
Revisions of previous estimates	2	-	2	(1)	-	(1)	4	-	4
Improved recovery	2	-	2	-	-	-	-	-	-
Extensions and discoveries	-	-	-	-	-	-	-	-	-
Production	(3)	-	(3)	(3)	-	(3)	(3)	-	(3)
End of year	13	-	13	9	-	9	10	-	10
Proved developed reserves									
Beginning of year	12	-	12	13	-	13	9	-	9
End of year	13	-	13	9	-	9	8	-	8
Proved undeveloped reserves									
Beginning of year	-	-	-	-	-	-	-	-	-
End of year	-	-	-	-	-	-	2	-	2
Total of the Group and its equity method investments									
Proved developed and undeveloped reserves (oil) (million barrels)									
Beginning of year	1,599	1,261	338	1,666	1,339	327	1,740	1,433	307
End of year	1,666	1,339	327	1,740	1,433	307	1,542	1,232	310
Proved developed and undeveloped reserves (gas) (billion cubic feet)									
Beginning of year	6,997	6,985	12	6,806	6,793	13	7,225	7,216	9
End of year	6,806	6,793	13	7,225	7,216	9	8,191	8,181	10

**SUPPLEMENTAL INFORMATION ON OIL AND GAS
PRODUCING ACTIVITIES (UNAUDITED) (Continued)**
(All currency amounts in million)

Table V: Standardized measure of discounted future net cash flows

The standardized measure of discounted future net cash flows, related to the above proved oil and gas reserves, is calculated in accordance with the requirements of “ASC Topic 932 Extractive Activities – Oil and Gas”, “SEC Rule 4-10 of Regulation S-X”, and “Industrial Information Disclosure Guidelines for Public Company – No.8 Oil and Gas Exploitation”. Estimated future cash inflows from production are computed by applying the average, first-day-of-the-month price adjusted for differential for oil and gas during the twelve-month period before the ending date of the period covered by the report to year-end quantities of estimated net proved reserves. Future price changes are limited to those provided by contractual arrangements in existence at the end of each reporting year. Future development and production costs are those estimated future expenditures necessary to develop and produce year-end estimated proved reserves based on year-end cost indices, assuming continuation of year-end economic conditions. Estimated future income taxes are calculated by applying appropriate year-end statutory tax rates to estimated future pre-tax net cash flows, less the tax basis of related assets. Discounted future net cash flows are calculated using 10% discount factors. This discounting requires a year-by-year estimate of when the future expenditure will be incurred and when the reserves will be produced.

The information provided does not represent management’s estimate of the Group’s and its equity method investments’ expected future cash flows or value of proved oil and gas reserves. Estimates of proved reserve quantities are imprecise and change over time as new information becomes available. Moreover, probable and possible reserves, which may become proved in the future, are excluded from the calculations. The arbitrary valuation requires assumptions as to the timing and amount of future development and production costs. The calculations are made for the years ended December 31, 2018, 2019 and 2020 and should not be relied upon as an indication of the Group’s and its equity method investments’ future cash flows or value of its oil and gas reserves.

	Years ended December 31,								
	2018			2019			2020		
	RMB			RMB			RMB		
	Total	China	Other countries	Total	China	Other countries	Total	China	Other countries
The Group									
Future cash flows	868,058	854,563	13,495	869,402	856,037	13,365	595,159	589,659	5,500
Future production costs	(381,893)	(376,532)	(5,361)	(384,417)	(377,692)	(6,725)	(275,409)	(271,824)	(3,585)
Future development costs	(22,310)	(19,300)	(3,010)	(27,065)	(22,216)	(4,849)	(27,028)	(23,902)	(3,126)
Future income tax expenses	(42,728)	(40,651)	(2,077)	(40,720)	(39,634)	(1,086)	(11,758)	(10,521)	(1,237)
Undiscounted future net cash flows	421,127	418,080	3,047	417,200	416,495	705	280,964	283,412	(2,448)
10% annual discount for estimated timing of cash flows	(126,910)	(126,617)	(293)	(126,203)	(126,175)	(28)	(87,579)	(86,127)	(1,452)
Standardized measure of discounted future net cash flows	294,217	291,463	2,754	290,997	290,320	677	193,385	197,285	(3,900)
Discounted future net cash flows attributable to non-controlling interests	1,239	-	1,239	305	-	305	(1,284)	-	(1,284)
Equity method investments									
Future cash flows	48,778	-	48,778	41,796	-	41,796	31,259	-	31,259
Future production costs	(12,462)	-	(12,462)	(13,141)	-	(13,141)	(13,050)	-	(13,050)
Future development costs	(4,433)	-	(4,433)	(5,603)	-	(5,603)	(5,712)	-	(5,712)
Future income tax expenses	(5,632)	-	(5,632)	(3,995)	-	(3,995)	(1,740)	-	(1,740)
Undiscounted future net cash flows	26,251	-	26,251	19,057	-	19,057	10,757	-	10,757
10% annual discount for estimated timing of cash flows	(13,012)	-	(13,012)	(8,852)	-	(8,852)	(4,828)	-	(4,828)
Standardized measure of discounted future net cash flows	13,239	-	13,239	10,205	-	10,205	5,929	-	5,929
Total of the Group’s and its equity method investments’ results of standardized measure of discounted future net cash flows	307,456	291,463	15,993	301,202	290,320	10,882	199,314	197,285	2,029

**SUPPLEMENTAL INFORMATION ON OIL AND GAS
PRODUCING ACTIVITIES (UNAUDITED) (Continued)**
(All currency amounts in million)

Table VI: Changes in the standardized measure of discounted cash flows

	Years ended December 31,		
	2018	2019	2020
	RMB	RMB	RMB
The Group			
Sales and transfers of oil and gas produced, net of production costs	(88,802)	(85,821)	(58,449)
Net changes in prices and production costs	98,952	(25,442)	(122,641)
Net changes in estimated future development cost	(5,468)	(10,108)	(7,912)
Net changes due to extensions, discoveries and improved recoveries	41,385	61,465	44,602
Revisions of previous quantity estimates	22,040	12,995	(11,211)
Previously estimated development costs incurred during the year	9,507	9,737	6,684
Accretion of discount	22,405	32,407	31,940
Net changes in income taxes	(28,894)	1,547	19,375
Net changes for the year	71,125	(3,220)	(97,612)
Equity method investments			
Sales and transfers of oil and gas produced, net of production costs	(3,001)	(2,741)	(1,984)
Net changes in prices and production costs	1,620	(2,804)	(5,190)
Net changes in estimated future development cost	(196)	(881)	(299)
Net changes due to extensions, discoveries and improved recoveries	341	1,321	369
Revisions of previous quantity estimates	818	(423)	437
Previously estimated development costs incurred during the year	272	355	232
Accretion of discount	1,196	1,438	979
Net changes in income taxes	(366)	701	1,180
Net changes for the year	684	(3,034)	(4,276)
Total of the Group's and its equity method investments' results of net changes for the year	71,809	(6,254)	(101,888)

China Oil & Gas Pipeline Network Corporation

AND

China Petroleum & Chemical Corporation

Agreement on Additional Issuance of Equity to
Purchase Relevant Oil and Gas Pipeline Assets

July 2020

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This agreement ("Agreement") is entered into by and between the following parties in Beijing of People's Republic of China ("PRC") on July 23, 2020.

The Purchaser:

Name: China Oil & Gas Pipeline Network Corporation ("PipeChina")

Legal Representative: ZHANG Wei

Registered Address: Room 08-10, 6/F Block A, 5 Dongtucheng Road, Chaoyang District, Beijing

The Seller:

Name: China Petroleum & Chemical Corporation

Legal Representative: ZHANG Yuzhuo

Registered Address: 22, Chaoyangmen North Street, Chaoyang District, Beijing

Each defined term in the Agreement shall have the meaning ascribed to it as set forth in the Appendix 1 to the Agreement.

WHEREAS:

- (A) As of the date hereof, the registered capital of the Purchaser is RMB20 billion, and its scope of business includes pipeline transportation; storage services; equipment import; technology import and export; technology research; informatization research and application; technology consulting, technology services, technology transfer, technology promotion. 100% of registered capital in Purchaser is held by the State Council.
- (B) The Seller proposes to sell to the Purchaser Target Assets owned by the Seller as set forth in Appendix 2 to the Agreement, i.e., the equity interest the Seller owns in the Target Companies, (which Target Companies own and operate oil and gas pipelines, gas storages and LNG terminals and its ancillary facilities, pipeline inventory and other related assets). The Purchaser wishes to purchase and receive such Target Assets pursuant to the terms and conditions set forth hereof (the "Transaction").
- (C) As of the date hereof, the Purchaser is negotiating and finalizing certain transactions with (i) certain Relevant Investors, to which the Purchaser proposes to issue additional equity and/or make cash payment as considerations for the purchase of oil and gas pipeline assets owned by such Relevant Investors, and (ii) certain other Relevant Investors, which propose to subscribe for new equity in the Purchaser for cash. As a result, all above-mentioned Relevant Investors will essentially subscribe for additional equity to be issued by the Purchaser at the same price (i.e., RMB1.00 per RMB1.00 registered capital of the Purchaser) (such capital increase and the Transaction is collectively known as the "Reorganization"). Assuming the closing of all the above-mentioned transactions, the post-Reorganization registered capital of the Purchaser shall be RMB500 billion, with a post-Reorganization shareholder structure as set forth in Appendix 3 hereto.

The Seller and the Purchaser shall be referred to hereinafter each as a "Party," and collectively, the "Parties."

NOW, THEREFORE, in consideration of the purpose of this Transaction, based on friendly negotiation and to achieve mutual benefits, the Parties have reached the arrangement as the following:

1. TARGET ASSETS

- 1.1 The Seller shall, subject to the terms and conditions herein, sell to the Purchaser the Target Assets set forth in Appendix 2, i.e., the equity interests in the Target Companies owned by the Seller, the specific scope of which shall be subject to the scope of Appraised Asset as set forth in the corresponding Valuation Report.

2. TRANSACTION CONSIDERATION AND PAYMENT METHOD

- 2.1 According to the Valuation Report, the appraised value of the Target Assets with respect to the Transaction is RMB47,112,516,300, which is set forth in the Appendix 2.
- 2.2 After negotiation, the Parties agreed that the Transaction Consideration to be paid by Purchaser for the purchase of the Target Assets of the Transaction is RMB47,112,516,300, provided, that the final consideration to be paid for the Target Assets shall be subject to the appraised value with the approval/filing procedures performed in accordance with PRC laws and regulations.
- 2.3 The paid-in registered capital of PipeChina shall be RMB500 billion after the Reorganization. The Parties agree that the Purchaser will pay the Transaction Consideration to the Seller through issuance of additional equity (the "Equity Consideration") based on the appraised value of the Target Assets, and the Seller shall subscribe, in way of transferring Target Assets to the Seller, for RMB47,112,516,300 of PipeChina's registered capital upon the Reorganization.
- 2.4 The Parties hereby agree that, with respect to the Equity Consideration, the Purchaser shall issue capital contribution certificates to the Seller on the Closing Date, and register the Seller in Purchaser's internal register of members. The Parties further agree that, from the date the Seller has been registered on the register of members of the Purchaser, the Seller shall enjoy all equity interests in, and assume the responsibilities and obligations corresponding to, the Equity Consideration.

3. PROFIT AND LOSS DURING THE TRANSITION PERIOD

- 3.1 The Transition Period shall refer to the period from the Valuation Date (exclusive) to the Closing Date (inclusive) under this Agreement.
- 3.2 The Parties hereby agree that, within 60 Days from the Closing Date, the Parties shall perform an audit on the Target Assets and have an auditor's report issued ("Closing Audit") to determine the profit and loss of the Target Assets during the Transition Period. Such Closing Audit shall be completed by an accounting firm with securities and futures business qualifications jointly appointed by the Parties, the audit fees for which shall be borne by the Parties at a 50-50 split.

3.3 The Purchaser shall pay to the Seller, in cash, the profit generated by the Target Assets or the corresponding portion of the net assets increased due to other reasons during the Transition Period, and the Seller shall pay to the Purchaser, in cash, the loss incurred by the Target Assets or the corresponding portion of the net assets decreased during the Transition Period, each amount to be determined by the Closing Audit report. The Parties hereby agree that such payment shall be made within 10 Business Days after the issuance of the Closing Audit report pursuant to Article 3.2 of this Agreement.

4. CONDITIONS PRECEDENT TO CLOSING

4.1 The Closing is conditioned upon the following Conditions Precedent being satisfied or waived by applicable parties/governmental authorities (if applicable):

- (1) The representations, covenants and warranties made by the Parties on the Execution Date shall have remained true, accurate and complete, without misleading statements, misrepresentations and omissions in all material respects as of the Closing Date;
- (2) The Seller shall have approved the Transaction in accordance with its constitutional document;
- (3) The Purchaser shall have approved the Transaction in accordance with its constitutional document;
- (4) Declaration of concentration of business operators in respect of the Transaction shall have been filled and approved;
- (5) All other Relevant Investors participating in the Reorganization shall have approved the Reorganization, and confirmed the articles of association to be adopted by the Purchaser after the Reorganization;
- (6) The Purchaser shall have issued capital contribution certificates to the Seller and registered the Seller on the internal register of members of the Purchaser. The Purchaser shall have had extensive communication with the Administration for Market Regulation in relation to the necessary changes of company registrations to be filed with the Administration for Market Regulation upon completion of the Reorganization (including but not limited to registering the Seller as the Purchaser's shareholder and filing the director designated by the Seller with Administration for Market Regulation), and obtained the administration's informal confirmation.
- (7) The Valuation Report on the Target Assets under this Agreement shall have been approved or filed in accordance with the PRC laws and regulations;
- (8) All other applicable approvals, permits, filings and registrations from or with the relevant authorities with respect to the Transaction shall have been obtained or completed;

- (9) The Parties or their subsidiaries shall have entered into relevant oil and gas pipeline facility service contracts in accordance with Article 5.6 (4) of this Agreement;
- (10) Each of the Relevant Investors with respect to the Reorganization shall have respectively executed transaction agreements, the core conditions and terms of which are substantially the same as this Agreement, and conditions precedent to a closing and cash capital contribution (if applicable) thereunder on the same date as the Closing of the Transaction have been satisfied.

For the Conditions Precedent above, the Seller is responsible for condition (2), the Purchaser is responsible for conditions (3), (5), (6) and (10), and both Parties are responsible for conditions (1), (4), (7), (8) and (9). For the avoidance of doubt, the condition precedent to be solely handled by one Party can only be waived by the other Party, provided that conditions (2), (3), (4), (7) and (8) cannot be waived.

- 4.2 The Parties hereby agree to cause all the Conditions Precedent as set forth under Article 4.1 to be satisfied as soon as practicable prior to the Closing Date. If the satisfaction of any condition precedent applicable to one Party needs the assistance from the other Party, the other Party shall provide such assistance. The Parties shall remain in communication on the related matters in relation to each Condition Precedent, and coordinate and solve the problems encountered during this process in a timely manner. After the Execution Date, neither Party shall engage in any conduct with the purpose to prevent or restrict the satisfaction of each condition precedent set forth under Article 4.1.

5. CLOSING AND HANDOVER

- 5.1 The Parties hereby confirm and agree that, the ownership of, and the obligations, responsibilities and risks in relation to, the Target Asset shall be transferred from the Seller to the Purchaser at 24:00 on September 30, 2020 (the "Closing Date").

- 5.2 Transfer of Target Assets and relevant responsibilities on the Closing Date. Upon 24:00 on the Closing Date, the Target Assets and the businesses and employees in relation thereto shall be deemed received and lawfully owned by the Purchaser on an "as-is" basis, and the obligations, responsibilities and risks in relation to the Target Assets shall be assumed by the Purchaser. Unless otherwise stipulated hereunder, after the Closing Date (excluding the Closing Date), the obligations, responsibilities and risks in relation to the Target Assets shall no longer be assumed by the Seller.

Within three years after the Closing Date, for any Major Loss(es) incurred by the Purchaser as a result of Third-Party Claims or administrative penalties arising from any violation of the law by the Seller prior to the Closing Date in the operation and management of the Target Assets/Target Companies or any major defect of the Target Assets (except for those have been disclosed to the Purchaser and reflected in the financial accounts, audit reports and Valuation Reports of the Seller and the Target Companies), the Parties shall amicably negotiate a solution in good faith.

- 5.3 The Parties hereby agree to work together to streamline the preparation for the handover of the Target Assets, and jointly complete the handover of the Target Assets starting from 24:00 on the Closing Date. The Purchaser shall ensure compliance with safety production systems of the Seller during the preparation for the handover of the Target Assets, and shall assume responsibility for any safety production accidents caused by faults of the Purchaser.
- 5.4 The Parties hereby agree that they shall work together to procure the completion of the change of the registration with Administration of Market Regulation with respect to all Target Companies under the Target Assets within 60 Days from the Closing Date, including but not limited to the registration for change of shareholders, filing of amendment to articles of association, registration for change of directors, supervisors and senior management, registration for change of company's name (removing words like "Sinopec Corp" and "Sinopec") (the "Handover"). If the Handover has not been completed before the expiry of the period mentioned above, the Parties agree to work together to complete the Handover as soon as possible in accordance with an alternative arrangements.
- 5.5 The Parties hereby agree that, the Purchaser shall convene a general meeting for all shareholders and complete the change of registration with the Administration of Market Regulation with respect to the Reorganisation within no later than 15 Business Days from the Closing Date, including but not limited to the registration for the change of registered capital and change of shareholders, filing of amendment to articles of association, and filing of change of directors, supervisors and senior management. The Seller shall cooperate with the Purchaser in relation thereto.
- 5.6 Special provisions
- (1) If the Seller needs to obtain consent from, or deliver notice to, any Third Party with respect to the disposal, sale or transfer of the Target Assets pursuant to the agreements entered therewith, the Seller shall identify all such relevant agreements before the Closing Date. If any Third Party does not consent to the transfer of the Target Assets to the Purchaser, as a result of which such Third Party is entitled to any indemnification under applicable agreement(s), the Parties shall negotiate for a solution.
 - (2) The Parties hereby agree that the transfer of the relevant employees and other personnel in relation to the Target Assets shall be completed following the general principle of "personnel go with assets (business)," and in accordance with the management memorandum with respect to the transfer of organization and personnel to be entered into as appropriate.

- (3) The Parties hereby agree that, for the commercial loans set forth in Appendix 6, the Seller shall transfer the loans #1 through #4 under Part 1 to the Target Companies before the Closing Date, and the relevant Target Companies shall assume obligations and responsibilities pursuant to the terms of such commercial loan agreements, provided that if the transfer is not completed due to the internal reorganization of the Seller, the Seller shall use reasonable efforts to complete the transfer as soon as possible, and the Parties agree that the rights and obligations under such loan agreement shall be assigned to, and assumed by, the Target Companies since the Closing Date. After the Closing Date, the Purchaser will cause relevant companies to fulfil their obligations and responsibilities of such commercial loan agreements pursuant to the terms thereunder, for which the Seller shall not be deemed responsible. If, due to other reasons, the Seller makes any advanced payment, suffers any losses or assumes any other reasonable expenses (which shall be agreed upon by the Parties or determined by judicial authorities or other government authorities) with respect to loan #9 under Part 1 as set forth in Appendix 6 after the Closing Date, the Purchaser shall indemnify the Seller in full.
- (4) The Parties hereby agree that, upon 24:00 on the Closing Date, the Seller shall have the right to continue to use the oil and gas pipelines, gas storages, LNG terminals and its ancillary facilities, pipeline inventory and other related assets under the Target Assets as per the agreement between the Parties. The Purchaser shall undertake to duly perform the relevant oil and gas pipeline network service contracts to be entered into by the Parties or their respective subsidiaries after the Closing Date, so as to ensure after the Closing Date: (1) the proper operation of the business in relation to the Target Assets; (2) that the pipeline transportation services and other services to be provided by the Purchaser to the Seller shall meet the existing standards implemented by, and the need of business operations of, the Seller so as to avoid potential adverse impacts to the Seller's future operations; and (3) with the current governmental pricing unchanged, the service price applicable to the natural gas pipelines, crude oil pipelines and LNG terminals shall remain unchanged, the service price applicable to refined oil pipeline transportation shall be determined by reference to the pricing principle applicable to natural gas transportation, and the royalties for other storage and transportation facilities shall be determined by the Parties in accordance with the market-oriented principles. The specific arrangements for the above-mentioned matters shall be agreed upon by and between the Parties under a separate agreement.
- (5) If the Target Assets have the trademark or logo of the Seller, the use of such Target Assets by the Purchaser after receiving the Target Assets and before such trademark or logo is removed shall not be deemed as infringement to the Seller's relevant Intellectual Property Rights or goodwill. The Purchaser shall remove any and all related trademark and logo within six months after the Closing Date. Starting from the Closing Date, any and all legal liabilities arising from the Target Assets (including but not limited to any liability for tort and breach of contract) shall be borne by the Purchaser even if the Target Assets have the trademark or logo of the Seller.
- (6) The Parties hereby agree to otherwise amicably negotiate on the use of the Seller's patents, copyrights and other Intellectual Property Rights by the Purchaser and the Target Company for fees.

- (7) The Parties hereby agree that, the pipeline inventory assets that the Purchaser proposes to purchase from the Seller in addition to the Target Assets shall be otherwise agreed upon by the Parties under separate agreements.

6. ARRANGEMENT ON HANDOVER

- 6.1 The Parties hereby agree to cooperate with each other and use their reasonable efforts to prepare, provide and submit all the necessary documents in a timely manner so as to complete all necessary applications, notices, requests, filings and other documents, and to obtain as soon as practicable all licenses, consents, approvals and authorizations necessary or applicable to the Closing of this Transaction from all the Third Parties and governmental authorities. For the avoidance of doubt, the Purchaser shall lead and take responsibility for organizing the declaration of concentration of business operators for this Transaction, and the Seller shall cooperate as necessary.
- 6.2 The Seller shall provide the Purchaser with all the necessary assistance for the inventory and handover of the Target Assets and personnel, allow the Purchaser's Representatives, upon reasonable notice, to enter into the entities (and its premises) that manage or operate the Target Assets, and provide necessary information, materials and assistance to the Purchaser.
- 6.3 In order to secure the smooth handover and operations of the Target Assets and personnel, the proper operations of the business dependent on the Target Assets, and to maintain the quality of the service, so as to avoid Material Adverse Effects on the orderly operation of the Parties' business, the Seller hereby agrees that, prior to the completion of the Handover of the Target Assets, the Target Assets shall be operated in a manner following the Seller's ordinary course of business, and the Seller shall use commercially reasonable efforts to secure the proper operation of all key assets and prevent any Material Adverse Effects on the Target Assets. If the Seller has knowledge of any incident that may lead to any Material Adverse Effects on the Target Assets, it shall promptly notify the Purchaser and negotiate with the Purchaser within 10 Days upon the occurrence of such incident.
- 6.4 As of the Execution Date, the Seller is under necessary internal reorganization with respect to certain assets, Liabilities and personnel as a part of the Target Assets. The Parties hereby agree and acknowledge that, the Seller shall use reasonable best efforts to complete such internal reorganization prior to the Closing Date and handover the Target Assets to the Purchaser pursuant to the terms hereof. If, due to reasons beyond control of the Parties, the Seller fails to complete the above mentioned internal reorganization prior to the Closing Date, the Parties shall separately negotiate a plan to complete the internal reorganization as soon as possible by a practicable date after the Closing Date. If the Seller is unable to handover any part of the Target Assets due to the failure to complete its internal reorganization, the Parties shall negotiate a solution separately.

- 6.5 According to the terms of the Transaction, two blocks of land of one Target Company, Sinopec Xinjiang Coal-based SNG Transmission Pipeline Co., Ltd. ("Xinjiang Coal-based SNG"), are not included in the assets valuation scope of the Target Assets. At the execution of this Agreement, Xinjiang Coal-based SNG has entered into relevant agreements with the Seller's subsidiaries on disposal of such lands in accordance with the Seller's internal reorganization plan, and is in the corresponding process of changing the ownership of such lands. The Parties hereby agree that, if the aforementioned changing process has not been completed before the Closing Date, the Purchaser shall cooperate to cause Xinjiang Coal-based SNG to provide necessary assistance to the Seller and its subsidiaries.
- 6.6 In order to secure the smooth operation and transition of the Target Assets and personnel in relation thereto, the Parties hereby agree to perform their responsibilities respectively, take responsibility for the handover of the Target Assets within their respective scopes, and actively facilitate the smooth handover of the Target Assets.
7. THE SHAREHOLDER RIGHTS OF THE SELLER
- 7.1 Upon the completion of the Transaction and the Reorganization, as a shareholder of the Purchaser, the Seller shall enjoy and bear all shareholder right and obligations in accordance with the *Company Law of People's Republic of China* and relevant legal documents as well as separate arrangement reached between the Parties. The Purchaser will, in accordance with the "same-share, same-rights" principle, afford equal treatment with respect to shareholders' rights and obligations to the investors participating the Reorganization, the details of which shall be set forth in the Purchaser's articles of association to be adopted upon the completion of the Reorganization.
- 7.2 The board of directors of the Purchaser shall consist of eleven directors, of which the Seller shall have one board seat.
- 7.3 Each shareholder of the Purchaser shall be entitled to distributions of the Purchaser's profit and residual property after liquidation in proportion to its respective paid-in capital contribution. Subject to the feasibility of profits distribution, the proportion of cash dividends to be distributed by the Purchaser shall in principle be no less than 30% of the annual distributable profit, with the detailed distribution plan and the distribution proportion for each year determined by the Purchaser's board of directors and its shareholders' general meeting following internal approval procedures in accordance with the Purchaser's articles of association, giving consideration of the Purchaser's capital status and requirements for business developments.
8. REPRESENTATIONS AND WARRANTIES OF THE SELLER
- 8.1 As of the Execution Date and the Closing Date, and immediately prior to the Handover of the Target Assets, the Seller makes the following representations and warranties to the Purchaser that, subject to the disclosure otherwise made hereunder:

- (1) it is a company limited by shares with full civil capacity in accordance with PRC law, with right, power and legal capacity to enter into this Agreement and perform all the obligations and responsibilities under this Agreement. The execution and performance of this Agreement by the Seller will not conflict with, or violate:
- i. the provisions of its internal constitutional documents and other relevant documents, or any applicable laws, regulations or rules;
 - ii. orders, judgment and decrees issued by any court, government authorities and regulatory authorities prior to the execution of this Agreement;
 - iii. any necessary procedures required by applicable laws and/or binding agreements and documents prior to the Closing Date, except those not having a Material Adverse Effect on the Purchaser's operation of the Target Assets.
- (2) it has obtained the necessary license, authorizations and approvals for the execution and performance of this Agreement in accordance with the current laws and regulations, and will take all practicable measures to obtain such licenses, authorizations and approvals essential for the performance of the Agreement but not yet obtained.
- (3) all the representations and warranties set forth in Appendix 5.
- (4) the Seller will complete the Closing and Handover as soon as possible in accordance with the terms and conditions hereunder.
- (5) if certain unforeseeable condition occurs to the Seller after the Execution Date but prior to the Closing Date, which will cause any aspect of any representations, warranties and covenants that is material to the financial or operational condition of the Target Assets to become untrue, inaccurate or misleading, the Seller shall give a written notice to the Purchaser within 15 Days after it becomes aware of the above-mentioned changes.
- (6) prior to the completion of the Handover, except for the internal reorganization to be made by the Seller pursuant to Article 6.4 of this Agreement within the scope of Target Assets, or the normal provision of depreciation and amortization, depletion, abandonment, recovery of accounts receivable, settlement of due liabilities, Transferring Construction in Progress into Fixed Assets and other ordinary disposal situations in the process of production and operation, the Seller undertakes that it will not make decisions to implement the following conducts: making material adjustment to the Target Assets, setting up external guarantees on Target Assets, making material business change in relation to Target Assets or adjusting principal business, making material adjustment to accounting principles related to the Target Assets (except as required by laws and regulations) and other conducts that will cause Material Adverse Change to the ordinary operation of the Target Assets.

9. REPRESENTATIONS AND WARRANTIES OF THE PURCHASER

9.1 As of the Execution Date and the Closing Date, and immediately prior to the Handover of the Target Assets, the Purchaser makes the following representations and warranties that:

- (1) it is a limited liability company with full civil capacity in accordance with PRC law, with right, power and ability to enter into this Agreement and perform all the obligations and responsibilities under this Agreement. The execution and performance of this Agreement will not conflict with, or violate:
 - i. the provisions of its internal constitutional documents and other relevant documents, or any applicable laws, regulations or rules;
 - ii. orders, judgment and decrees issued by courts, government authorities and regulatory authorities before the execution of the Agreement;
 - iii. any necessary procedures required by applicable laws and/or binding agreements and documents prior to the Closing Date.
- (2) it has obtained the necessary licenses, authorizations and approvals for the execution and performance of this Agreement in accordance with the current laws and regulations, and will take all practicable measure to obtain licenses, authorizations and approvals essential to the performance of the Agreement but not yet obtained.
- (3) the Purchaser will pay Transaction Consideration subject to the terms and conditions of this Agreement and complete the Closing and Handover as soon as possible.
- (4) at the same time as the Transaction, Relevant Investors will be introduced by the Purchaser and will make capital contributions in cash and in kind, respectively. Upon the completion of the Reorganization, the registered capital and shareholding structure of the Purchaser shall be as set forth in Appendix 3.
- (5) the Purchaser will operate in the ordinary course of business, enter into business contracts following general commercial principles and on the basis of fair and reasonable commercial terms, and make commercially reasonable efforts to ensure the smooth operation of all key assets, to ensure (i) there will be no Material Adverse Effects on the Purchaser's operation, (ii) the service quality will not be lower than the existing standards, and (iii) there will be no significant adverse acts or omission affecting the continuous normal use of the Target Assets by the Seller for its production and operation, provided that for any Purchaser's failure to fulfil the representation and warranties under this paragraph due to the facts or circumstances existing before the Closing Date (subject to the decisions of the judicial authorities or government authorities), the Parties shall amicably negotiate a solution in good faith.

- (6) if certain unforeseeable condition occurs to the Purchaser after the Execution Date but prior to the Closing Date, which will cause any material aspect of any representations, warranties and undertakings to become untrue, inaccurate or misleading, the Purchaser shall give a written notice to the Seller within 15 Days after it becomes aware of the above-mentioned changes.

10. LIABILITIES FOR BREACH OF THE AGREEMENT

- 10.1 If any representations and/or warranties made by any Party hereunder contains, in any material aspects, intentional misrepresentations, omission or misleading statements, or if any Party is in breach of any covenants made therein, or if such Party is in breach of any agreements or other terms hereunder, such Party shall be deemed to have breached this Agreement, and be responsible to indemnify direct damages incurred by the observant Party.
- 10.2 If the Seller refuses to complete the change of the registration with the Administration for Market Regulation in relation to the Target Assets or hand over the Target Assets and relevant businesses and employees thereunder within the agreed time limit pursuant to the terms of this Agreement, the Seller shall pay an overdue penalty amounting to 0.05% of the consideration for the assets failed to be handed over as agreed per day, except for the cases where the delayed handover of the Target Assets is not due to the Seller's faults (including but not limited to Force Majeure or any reasons due to the Purchaser), provided, that the liabilities to be borne by the Seller as a result of failure to complete the change of the registration with Administration for Market Regulation for any given Target Assets under this article shall not, in aggregate, exceed 1% of the valuation of such Target Assets.
- 10.3 If the Purchaser fails to pay the consideration pursuant to the terms of this Agreement, the Purchaser shall pay an overdue penalty amounting to 0.05% of the overdue consideration to the Seller per day, except for the cases where such failure are due to the Seller's faults.
- 10.4 Unless there is an existing breach on the Seller's side or a Force Majeure event, the Seller has the right to hold the Purchaser liable for the actual loss incurred in connection with the failure of the Purchaser to fulfil the condition precedent (6) in accordance with Article 4.1 of this Agreement.

11. THIRD-PARTY CLAIMS AND ADMINISTRATIVE PENALTIES

- 11.1 Any controversy, dispute and administrative penalties (if any) occurs after the Closing Date that arises from the reasons and facts in relation to the Target Assets/ Target Companies before the Closing Date shall be resolved in accordance with the principles under Article 5.2 of the Agreement. If a Party is aware of any litigation, arbitration or controversy raised by a Third Party, it shall promptly notify the other Party and make all reasonable efforts to avoid and mitigate losses.

12. ANNOUNCEMENT

- 12.1 Without the prior consent of the other Party (which shall not be unreasonably withheld or delayed), neither Party (and any of their respective Affiliates) shall publish any announcement or issue any circular regarding the existence of the Agreement (or any other transaction document) or its subject matters.
- 12.2 If the laws or a stock exchange with appropriate jurisdiction or any regulatory or other supervisory institutions or authorities require (regardless of the validity of such requirement) the issuance of any notice, announcement or circular, then the restrictions under Article 12.1, Article 13.1 and Article 13.5 shall not be applied.

13. CONFIDENTIALITY

- 13.1 The information provided by the Party of the Agreement who owns the information (the "Provider") to the other Party (the "Recipient") in accordance with this Agreement, including but not limited to any material related to the Target Assets or terms and relevant negotiations under this Agreement and other transaction agreements (hereinafter collectively as "Confidential Information"), shall only be used by the Recipient and its personnel for the purpose of this Agreement. Except as otherwise provided in this Agreement, for any Confidential Information provided by the Provider, the Recipient and its personnel who are aware of the Confidential Information shall not directly or indirectly provide, disclose or otherwise transfer to any Third Party, or permit any Third Party to use, or provide any opinion or suggestion to any Third Party using, the Confidential Information without written consent of the Provider. In this Article, the "Third Party" refers to any natural person, legal person or other organizations other than the Parties to the Agreement, other than the Affiliates of the Parties.
- 13.2 Confidential Information provided or disclosed by the Provider to the Recipient shall only be disclosed by the Recipient to certain of its designated employees for the purpose of the performance of this Agreement, and such disclosure shall be made only within the scope required for such performance, provided, that the Recipient shall not disclose any Confidential Information to such employees without taking all reasonable precautions, which includes but not limited to notifying the confidential nature of the information to be disclosed to such employees and have such employees make confidential commitments as at least strict as the confidential obligations of the Agreement, so as to prevent such employees from using Confidential Information for personal interests or making any unauthorized disclosures to any Third Parties. Any violation of the confidentiality obligations by the Recipient's employees shall be deemed as the violation of the confidential obligations by the Recipient.
- 13.3 Where the Recipient's lawyers, accountants, contractors and consultants need to know the Confidential Information to provide professional assistance, the Recipient may disclose Confidential Information to such parties, provided that it shall require the above-mentioned parties to enter into confidential agreements or to perform confidential obligations in accordance with relevant professional ethical standards.

- 13.4 If the securities regulatory rules of the place(s) where the Company's shares are listed, or relevant governmental or regulatory authorities require the Recipient to disclose any Confidential Information, the Recipient may disclose within the scope required by such securities regulatory rules or governmental or regulatory authorities without being subject to liabilities hereunder, provided that the Recipient shall immediately notify the information to be disclosed to the Provider in writing so that the Provider may take necessary protective measures, and such notification shall be made to the extent possible before the information is disclosed. The Provider shall cooperate to provide to the Recipient the materials and information needed for the purpose of publishing announcements or circulars.
- 13.5 The term of the confidential obligations under this Article is three years.
- 13.6 The confidential obligations under this Article do not apply to the following information:
- (1) Information that was publicly available when disclosed by one Party, or becomes publicly available after the disclosure (other than due to the negligence of the Recipient or its employees, lawyers, accountants, contractors, consultants or other personnel);
 - (2) Information was, as proved by written evidence, already known by the Recipient upon the disclosure by the Provider, which did not come directly or indirectly from the Provider;
 - (3) Information was, as proved by written evidence, already disclosed by a Third Party to the Recipient, which does not have confidential obligations and is entitled to make the disclosure.
- 13.7 When the Agreement is rescinded or terminated, the Recipient shall immediately cease using and shall not permit any Third Party to use the Confidential Information provided by the Provider, and, upon the Provider's written request, shall delete or destroy the Confidential Information provided by the Provider or return to the Provider, without retaining any information in any form.
- 14. NO ASSIGNMENT**
- 14.1 Except as contemplated hereunder or with written consent by the Parties, no one shall transfer, assign or otherwise dispose all or part of its rights under this Agreement, nor shall it grant, establish or dispose any rights, interests or obligations therein. Any transfer in conflict with Article 14 is invalid.
- 15. FURTHER ASSURANCE**
- 15.1 The Parties shall each execute (or cause to be executed) other documents as required by relevant laws and regulations or deemed necessary for the effectiveness or performance of this Agreement.

16. TAXES AND EXPENSES

- 16.1 Subject to Article 16.2, unless otherwise provided hereunder (or under any other Transaction Documents), each Party shall be responsible for its own costs, expenses and other payments incurred in relation to the Transaction.
- 16.2 The Parties shall bear and pay all taxes arising under this Agreement or any other Transaction Documents in accordance with laws, regulations and relevant rules or decisions, and all fees collected by governmental authorities, regulatory institutions and stock exchanges.
- 16.3 With respect to the Transaction, unless otherwise required by laws and regulations and/or agreed by the Parties, all expenses incurred due to the Handover of the Target Assets shall be reasonably arranged and resolved through negotiation by and between the Parties.
- 16.4 The internal reorganization under Article 6.4 involves the transfer of original branches and related assets to the Target Companies. The Parties shall negotiate amicably to make the Purchaser eligible for obtain the corresponding Value-Added Tax ("VAT") input deduction. In case where termination registration with the Administration for Market Regulation or cancellation of tax registration is involved, the Seller hereby agrees to complete such termination/cancellation within 12 months.
- 16.5 The Parties shall negotiate amicably, and deal with tax matters regarding the transfer of the Target Assets in accordance with VAT Regulations and relevant regulations. If the PRC taxation authority believes that the Transaction is within the VAT taxation scope, the Seller shall take the appraised asset value as the VAT-excluded price and invoice the Purchaser based on such price at the tax rate provided by relevant tax laws, and the Purchaser shall pay the price with tax included.
- 16.6 Assuming the special tax treatment to the Transaction is applicable to the Seller, the Purchaser shall ensure that the relevant acquisition adopts the special tax treatment principles under the Notice of the Ministry of Finance and the State Administration for Taxation on Several Issues Concerning the Enterprise Income Tax Treatment on Enterprise Reorganization (No. 59 [2009] of the Ministry of Finance), and it will not transfer the equity interest it acquired in the Target Companies in any form and that the Target Company will not change its original substantive operations (within the extent of its capacity as a shareholder) within 12 consecutive months from the Reorganization date. Meanwhile, the Seller will not transfer the equity interest it acquired in the Purchaser within 12 consecutive months from the date immediately following the date on which it is registered as a shareholder of the Purchaser. The Parties participating in the Reorganization (including the Purchaser, Target Company and the Seller) shall complete the registration and filing in accordance with tax-related requirements. If any Party fails to perform the above undertakings and covenants, the observant Party is entitled to pursue the breaching Party's liability for its breach of contract with respect to actual losses incurred to the observant Party.

17. NOTICE

- 17.1 Any notice related to this Agreement shall be written in Chinese, and delivered via designated courier, fax, email or express delivery by a courier company recognized by both Parties. The notice is effective upon receipt and is deemed to have been received at the following time: (a) if via designated courier or express delivery, on the third day after it is delivered to the recipient or sent out by the courier company; (b) if via fax, at the time the sender sends the notice with the notice showing that it has been delivered; or (c) if via email, when the relevant email reaches that recipient's email address. In each case, if it is delivered out of the business hours, the notice shall be deemed to be received at the beginning of the business hours on the next Business Day.
- 17.2 For the purposes of Article 17.1, contact information such as the addresses and fax numbers of the Parties are set forth in Appendix 4.

18. CONFLICT WITH OTHER AGREEMENTS

- 18.1 This Agreement and its appendices constitute all the legal document with respect to the Transaction. If any oral discussion and written agreement entered into by the Parties before the execution of the Agreement is inconsistent with the Agreement, the content of the Agreement shall prevail, unless the Parties expressly agreed otherwise.

19. WAIVER, RIGHTS AND REMEDIES

- 19.1 Unless otherwise expressly provided in the Agreement, no waiver, failure or delay by any Party in exercising any right, power or remedy hereunder or under any other Transaction Documents shall be deemed as a waiver thereof, nor shall it preclude any future exercise of such right, power or remedy, and no single or partial exercise of any such right, power or remedy shall preclude any other or future exercise thereof.

20. TEXTS

- 20.1 This Agreement is prepared in Chinese. The Agreement is made in twelve originals with each Party holding three copies, and the remaining six copies reserved for approvals and/or filings by the governmental authorities. The aforementioned texts of the Agreement have the same legal effect.

21. EFFECTIVE DATE AND AMENDMENT

- 21.1 This Agreement shall be established upon the execution by the legal representatives or authorized representatives of the Parties and the affixation of the official chops of both Parties, and shall enter into force upon the satisfaction of the following conditions:
- (1) the Purchaser's shareholder has decided to approve the Transaction;
 - (2) the Seller's shareholders' meeting has approved the Transaction.

- 21.2 Upon the date of establishment of this Agreement, Articles 12 (Announcement), 13 (Confidentiality), 14 (No assignment), 16 (Taxes and expenses), 17 (Notice), 18 (Conflict with other agreements), 19 (Waiver, rights and remedies), 21 (Effective date and amendment), 22 (Invalidity), 23 (Jurisdiction and arbitration) and Appendix 1 (Definition and interpretation) shall be legally binding upon the Parties.
- 21.3 Upon the execution of this Agreement, any amendment to this Agreement (or any other Transaction Document) shall be made in writing, and effective upon the execution by the legal representatives or authorized representatives of the Parties and the affixation of the official chops of both Parties.
- 22. INVALIDITY**
- 22.1 The provisions of this Agreement and other Transaction Documents are severable. If any such provision is deemed to be or become invalid or unenforceable in any respect in accordance with laws and regulations, it shall be ineffective in that respect, and the Parties shall make reasonable efforts to replace such provision with a valid and enforceable alternative provision whose effect is as close as possible to the intended.
- 23. JURISDICTION AND ARBITRATION**
- 23.1 This Agreement is governed by, and shall be interpreted in accordance with, the PRC laws and regulations.
- 23.2 The Parties shall use good faith to resolve any dispute, controversy or claim (collectively, the “Dispute”) arising from, or in connection with, the interpretation or performance of this Agreement through amicable negotiation, during which the Parties may consult the regulatory authority. If a settlement cannot be reached through negotiation within sixty Days after one Party has brought the matter to the other Party, the Parties may refer such matter to arbitration.
- 23.3 The Dispute shall be submitted to China International Economic and Trade Arbitration Commission (“CIETAC”) for arbitration in accordance with its rules in force at the time of arbitration. The Dispute shall be decided by three arbitrators. Each party shall appoint one arbitrator, and the third arbitrator shall be appointed by the other two arbitrators, provided that if the other two arbitrators cannot decide on the choice of the third arbitrator, such arbitrator shall be appointed by CIETAC.
- 23.4 The arbitration proceedings shall be presided over by CIETAC as the presiding authority and shall be conducted in Chinese. The arbitration proceedings shall be held in Beijing.
- 23.5 The arbitration award made in accordance with the above arbitration procedures shall be final and binding upon the Parties, and shall be enforceable in accordance with its provisions.
- 23.6 The arbitration fees shall be borne by the losing Party. The Parties agree that if it is necessary for one Party to enforce the arbitral award through legal proceedings of any type, the Party subject to enforcement shall pay all reasonable fees and expenses as well as legal fees in connection with the enforcement of the arbitral award.

23.7 During the dispute resolution, the Parties shall continue to implement this Agreement in all other aspects except for the matter in dispute.

24. FORCE MAJEURE

24.1 In the event of a Force Majeure event that either Party is in whole or in part unable to perform its obligations under this Agreement due to the influence of such event, it shall be exempted from the liabilities in whole or in part according to the circumstances affected by Force Majeure. The performance of the obligations by the Parties under this Agreement may be suspended during the delay period caused by Force Majeure, and shall be automatically extended for a period equal to the delay period. The Party suffering from Force Majeure shall notify the other Party in writing as soon as possible and provide valid proof documents certifying the occurrence and time of Force Majeure within 15 Days. The Party suffering from Force Majeure shall take all reasonable measures to mitigate the consequences of Force Majeure as soon as possible. In the event of a Force Majeure event, the Parties shall negotiate immediately in order to find a fair solution and make their best effort to mitigate the consequences caused by Force Majeure.

(The remainder is intentionally left blank. Appendices and signature pages to follow)

The Parties have executed the “Agreement on Additional Issuance of Equity to Purchase Related Assets of Oil and Gas Pipelines” on the date indicated at the beginning of the document as a proof.

/s/ China Oil & Gas Pipeline Network Corporation (Official Seals)

(Signed by Legal Representative or Authorized Representative)

The Parties have executed the “Agreement on Additional Issuance of Equity to Purchase Related Assets of Oil and Gas Pipelines” on the date indicated at the beginning of the document as a proof.

/s/ China Petroleum & Chemical Corporation (Official Seals)

(Signed by Legal Representative or Authorized Representative)

Closing	means the closing of transfer of Target Assets as set forth in Article 5.
Closing Date	means September 30, 2020.
Transition Period	means the period starting from the Valuation Date (exclusive) through the Closing Date (inclusive).
Handover	has the meaning set forth in Article 5.4.
Transaction Documents	means this Agreement and all appendix thereto, any supplemental agreements entered by and between Parties from time to time, and the Valuation Report (including the specifics of the Appraised Assets).
Conditions Precedent	means closing conditions set forth in Article 4.1, and a “Condition Precedent” means any one of such Conditions Precedent.
Third Party/Parties	means any entity or individual other than the Parties hereunder.
Third-Party Claim	means the disputes, controversies, litigations or arbitrations raised (by Third Parties) in relation to the Target Assets, and the liabilities and indemnification obligations in relation thereto.
Representative(s)	means, with respect to a Party and/or its Affiliates, its and or its Affiliate’s director, senior management, employee, agent, counsel, accountant and consultant.
Provider	has the meaning set forth in Article 13.1.
Recipient	has the meaning set forth in Article 13.1.
Transferring Construction in Progress into Fixed Assets	means, after the completion of the construction in progress, and upon the final acceptance of the construction, the construction in progress is put into use and be recorded as fixed assets on the book(s) of the Seller.
Affiliates	means, with respect to any Party, any entity controlled by such Party, controlling such Party or under common control with such Party.
Liability	means all current or future, actual, potential or debitive, liability, obligation and debts in all nature, incurred as a result of agreements, operations of law or other reason, and incurred jointly or separately either as a debtor or a guarantor.
Material Adverse Change/Material Adverse Effect	means incident(s) that, individually results in an actual or reasonable foreseeable loss of no less than RMB3.6 billion to the assets sold by the Seller and its Affiliates to the Purchaser and business in relation thereto, or in aggregate result in an actual or reasonable foreseeable loss of no less than RMB6 billion to the assets sold by the Seller to the Purchaser and business in relation thereto.
Major Loss(es)	means, accumulative and actual losses of more than RMB6 billion to the assets sold by the Seller and its Affiliates to the Purchaser and business in relation thereto.

Dispute	has the meaning set forth in Article 23.2.
CIETAC	has the meaning set forth in Article 23.3.
Intellectual Property Rights	means patents, trademarks, service marks, company logos, trade names, domain names, design rights, copyrights (including but not limited to computer software copyrights) and database rights, semiconductor circuit rights, utility models, design rights, invention rights, proprietary technology rights, and other intellectual property rights (regardless of whether it has been registered or not) and all rights or forms of protection that have equivalent or similar utility anywhere in the world, and the term “registration” includes registration and application for registration.
Tax	shall include (a) taxes levied on total or net income, profits and gains, and (b) all other taxes, levies, tariffs, import taxes, charges and withholding taxes (if applicable) of any nature, including any consumption tax, value-added tax and its additional taxes, corporate income tax, personal income tax (if applicable), real estate tax, land value-added tax, deed tax, farmland occupation tax, urban land use tax, environmental protection tax, stamp duty, etc., or withholding of any nature (including any related fines, penalties, late fees or interest).
Confidential Information	means, (i) with respect to the Purchaser’s obligation, any materials received or held by PipeChina (or any of its Representatives) that are relating to the Seller or the Target Assets, or any materials with respect to the Target Assets received or held prior to the Closing; (ii) with respect to the Seller’s obligation, any materials received or held by the Seller (or any of its Representatives) that are relating to PipeChina, or any materials with respect to Target Assets received or held prior to and after the Closing; or any materials in relation to this Agreement or other Transaction Documents and the negotiation thereof.
Force Majeure	means unforeseeable, unavoidable and insurmountable objective conditions, including natural disasters such as earthquakes, typhoons, floods, and heavy rains (subject to the information issued by the local government or functional management departments such as meteorology), fires, wars, plagues (including COVID-19 pandemic), any government actions, any changes and promulgation of laws, etc., that directly affects the performance of this Agreement (or cause the performance of this Agreement deviates from the terms thereunder).

PRC/China	means the People's Republic of China (for the sole purpose of this Agreement, excluding the applicable laws of Hong Kong Special Administrative Region of China, Macao Special Administrative Region of China and Taiwan).
RMB	means the legal currency of China.
Day(s)	means, unless otherwise specified, calendar days, provided that in any circumstances, if the last day of a given period hereunder is a holiday, then the last day of such period shall be the next day immediately following such holiday. Unless otherwise specified, "prior to a certain day" shall mean a period ending on such day, while "after a certain day" shall mean a period starting from the next day of such day.
Business Day(s)	means any day other than a Saturday, Sunday or a national holiday determined by the PRC government.

2. Interpretation. Unless otherwise specified, under this Agreement:

- (1) a "person" shall mean any individual, business name, organization, company (whether legal person or not), government (including but not limited to central and local governments and their constituent departments), any joint venture, association, partnership enterprises, institutions, work councils or employee representative organizations (regardless of whether they have independent legal personality or not);
- (2) an "Article" shall be an article hereunder;
- (3) headings are set for the ease of references only and shall not affect the interpretation of this Agreement;
- (4) in order to facilitate the payment in RMBs, any other amounts denominated in foreign currencies shall be converted into RMBs at the exchange rate on such date;
- (5) words introduced by terms like "including," "includes" or "especially" or other similar terms shall be deemed as explanatory only and does not limit the meaning of the words prior to such terms; and
- (6) for laws and regulations, including laws, administrative regulations, administrative rules, local regulations, etc., unless otherwise expressly provided in this Agreement, any explicit reference to a regulation (including any regulation in any jurisdiction) shall include: (a) the laws and regulations as revised, merged or re-enacted before or after the Execution Date; (b) the laws and regulations that were re-promulgated (whether revised or not); and (c) any supplementary regulations (including regulations) formulated in accordance with the laws and regulations (before or after the Execution Date) that have been revised, merged or re-enacted as described in paragraph (a) or (b) above, unless any matters mentioned in paragraphs (a) to (c) appear after the date of the Execution Date, and increase or change the Purchaser's or Seller's responsibilities hereunder.

3. Appendix. Appendices shall be deemed as an integral part of this Agreement.
4. Inconsistence. If any defined terms in this Appendix 1 is inconsistent with any articles or terms set forth in other Appendices, for the interpretation of such Articles or Appendices, the definition in such Articles or Appendix shall prevail.

Appendix 2: Target Assets, Appraised Value, Pricing and Payment of Consideration

Appendix 3: Post-reorganization Capital Structure

Appendix 4: Contact Information

Appendix 5: Seller Representations and Warranties

Appendix 6: Commercial Bank Loans

China Oil & Gas Pipeline Network Corporation

AND

Sinopec Natural Gas Limited Company

Agreement on Additional Issuance of Equity
and Cash Payment to Purchase Relevant Oil and Gas
Pipeline Assets

July 2020

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This agreement ("Agreement") is entered into by and between the following parties in Beijing of People's Republic of China ("PRC") on July 23, 2020.

The Purchaser:

Name: China Oil & Gas Pipeline Network Corporation ("PipeChina")

Legal Representative: ZHANG Wei

Registered Address: Room 08-10, 6/F Block A, 5 Dongtucheng Road, Chaoyang District, Beijing

The Seller:

Name: Sinopec Natural Gas Limited Company

Legal Representative: GAO Aihua

Registered Address: 6/F, Building 1, A67, Ande Road, Xicheng District, Beijing

Each defined term in the Agreement shall have the meaning ascribed to it as set forth in the Appendix 1 to the Agreement.

WHEREAS:

- (A) As of the date hereof, the registered capital of the Purchaser is RMB20 billion, and its scope of business includes pipeline transportation; storage services; equipment import; technology import and export; technology research; informatization research and application; technology consulting, technology services, technology transfer, technology promotion. 100% of registered capital in Purchaser is held by the State Council.
- (B) The Seller proposes to sell to the Purchaser Target Assets owned by the Seller as set forth in Appendix 2 to the Agreement, i.e., the equity interest the Seller owns in the Target Companies (which Target Companies own and operate oil and gas pipelines, gas storages and LNG terminals and its ancillary facilities, pipeline inventory and other related assets). The Purchaser wishes to purchase and receive such Target Assets pursuant to the terms and conditions set forth hereof (the "Transaction").
- (C) As of the date hereof, the Purchaser is negotiating and finalizing certain transactions with (i) certain Relevant Investors, to which the Purchaser proposes to issue additional equity and/or make cash payment as considerations for the purchase of oil and gas pipeline assets owned by such Relevant Investors, and (ii) certain other Relevant Investors, which propose to subscribe for new equity in the Purchaser for cash. As a result, all above-mentioned Relevant Investors will essentially subscribe for additional equity to be issued by the Purchaser at the same price (i.e., RMB1.00 per RMB1.00 registered capital of the Purchaser) (such capital increase and the Transaction is collectively known as the "Reorganization"). Assuming the closing of all the above-mentioned transactions, the post-Reorganization registered capital of the Purchaser shall be RMB500 billion, with a post-Reorganization shareholder structure as set forth in Appendix 3 hereto.

The Seller and the Purchaser shall be referred to hereinafter each as a "Party," and collectively, the "Parties."

NOW, THEREFORE, in consideration of the purpose of this Transaction, based on friendly negotiation and to achieve mutual benefits, the Parties have reached the arrangement as the following:

1. TARGET ASSETS

- 1.1 The Seller shall, subject to the terms and conditions herein, sell to the Purchaser the Target Assets set forth in Appendix 2, i.e., the equity interests in the Target Companies owned by the Seller, the specific scope of which shall be subject to the scope of Appraised Asset as set forth in the corresponding Valuation Report.

2. TRANSACTION CONSIDERATION AND PAYMENT METHOD

- 2.1 According to the Valuation Report, the appraised value of the Target Assets with respect to the Transaction is RMB41,508,976,800, which is set forth in the Appendix 2.
- 2.2 After negotiation, the Parties agreed that the Transaction Consideration to be paid by Purchaser for the purchase of the Target Assets of the Transaction is RMB41,508,976,800, provided, that the final consideration to be paid for the Target Assets shall be subject to the appraised value with the approval/filing procedures performed in accordance with PRC laws and regulations.
- 2.3 The paid-in registered capital of PipeChina shall be RMB500 billion after the Reorganization. The Parties agree that the Purchaser will pay the Transaction Consideration to the Seller through issuance of additional equity (the "Equity Consideration") based on the appraised value of the Target Assets, and the Seller shall subscribe, in way of transferring Target Assets of RMB22,887,483,700 to the Seller, for RMB22,887,483,700 of PipeChina's registered capital upon the Reorganization.
- 2.4 The Parties hereby agree that, with respect to the Equity Consideration, the Purchaser shall issue capital contribution certificates to the Seller on the Closing Date, and register the Seller in Purchaser's internal register of members. The Parties further agree that, from the date the Seller has been registered on the register of members of the Purchaser, the Seller shall enjoy all equity interests in, and assume the responsibilities and obligations corresponding to, the Equity Consideration.
- 2.5 The Parties hereby agree that, for the cash consideration of RMB18,621,493,100, the Purchaser shall pay 90% of the aggregate cash consideration under the Transaction by October 15, 2020 (inclusive), as well as the interest thereof as calculated at the rate of demand deposits of the bank for the same period from October 1, 2020 until the payment receipt date. The Purchaser shall pay the remaining 10% of cash consideration within 10 Business Days from the issuance of the Closing Audit report as set forth in Article 3.2, as well as the interest thereof as calculated at the rate of the demand deposits of the bank for the same period from October 1, 2020 until the payment receipt date.

- 2.6 Unless otherwise notified in writing, the cash consideration payable under the Transaction shall be paid by the Purchaser to Seller's designated bank account (details as set out in Appendix 4).
3. PROFIT AND LOSS DURING THE TRANSITION PERIOD
- 3.1 The Transition Period shall refer to the period from the Valuation Date (exclusive) to the Closing Date (inclusive) under this Agreement.
- 3.2 The Parties hereby agree that, within 60 Days from the Closing Date, the Parties shall perform an audit on the Target Assets and have an auditor's report issued ("Closing Audit") to determine the profit and loss of the Target Assets during the Transition Period. Such Closing Audit shall be completed by an accounting firm with securities and futures business qualifications jointly appointed by the Parties, the audit fees for which shall be borne by the Parties at a 50-50 split.
- 3.3 The Purchaser shall pay to the Seller, in cash, the profit generated by the Target Assets or the corresponding portion of the net assets increased due to other reasons during the Transition Period, and the Seller shall pay to the Purchaser, in cash, the loss incurred by the Target Assets or the corresponding portion of the net assets decreased during the Transition Period, each amount to be determined by the Closing Audit report. The Parties hereby agree that such payment shall be made within 10 Business Days after the issuance of the Closing Audit report pursuant to Article 3.2 of this Agreement.
4. CONDITIONS PRECEDENT TO CLOSING
- 4.1 The Closing is conditioned upon the following Conditions Precedent being satisfied or waived by applicable parties/governmental authorities (if applicable):
- (1) The representations, covenants and warranties made by the Parties on the Execution Date shall have remained true, accurate and complete, without misleading statements, misrepresentations and omissions in all material respects as of the Closing Date;
 - (2) The Seller shall have approved the Transaction in accordance with its constitutional document;
 - (3) The Purchaser shall have approved the Transaction in accordance with its constitutional document;
 - (4) Declaration of concentration of business operators in respect of the Transaction shall have been filled and approved.
 - (5) All other Relevant Investors participating in the Reorganization shall have approved the Reorganization, and confirmed the articles of association to be adopted by the Purchaser after the Reorganization;

- (6) The Purchaser shall have issued capital contribution certificates to the Seller and registered the Seller on the internal register of members of the Purchaser. The Purchaser shall have had extensive communication with the Administration for Market Regulation in relation to the necessary changes of company registrations to be filed with the Administration for Market Regulation upon completion of the Reorganization (including but not limited to registering the Seller as the Purchaser's shareholder and filing the director designated by the Seller with Administration for Market Regulation), and obtained the administration's informal confirmation.
- (7) The Valuation Report on the Target Assets under this Agreement shall have been approved or filed in accordance with the PRC laws and regulations;
- (8) All other applicable approvals, permits, filings and registrations from or with the relevant authorities with respect to the Transaction shall have been obtained or completed;
- (9) The Parties or their subsidiaries shall have entered into relevant oil and gas pipeline facility service contracts in accordance with Article 5.6 (3) of this Agreement;
- (10) Each of the Relevant Investors with respect to the Reorganization shall have respectively executed transaction agreements, the core conditions and terms of which are substantially the same as this Agreement, and conditions precedent to a closing and cash capital contribution (if applicable) thereunder on the same date as the Closing of the Transaction have been satisfied.

For the Conditions Precedent above, the Seller is responsible for condition (2), the Purchaser is responsible for conditions (3), (5), (6) and (10), and both Parties are responsible for conditions (1), (4), (7), (8) and (9). For the avoidance of doubt, the condition precedent to be solely handled by one Party can only be waived by the other Party, provided that conditions (2), (3), (4), (7) and (8) cannot be waived.

- 4.2 The Parties hereby agree to cause all the Conditions Precedent as set forth under Article 4.1 to be satisfied as soon as practicable prior to the Closing Date. If the satisfaction of any condition precedent applicable to one Party needs the assistance from the other Party, the other Party shall provide such assistance. The Parties shall remain in communication on the related matters in relation to each Condition Precedent, and coordinate and solve the problems encountered during this process in a timely manner. After the Execution Date, neither Party shall engage in any conduct with the purpose to prevent or restrict the satisfaction of each condition precedent set forth under Article 4.1.

5. CLOSING AND HANDOVER

- 5.1 The Parties hereby confirm and agree that, the ownership of, and the obligations, responsibilities and risks in relation to, the Target Asset shall be transferred from the Seller to the Purchaser at 24:00 on September 30, 2020 (the "Closing Date").

- 5.2 Transfer of Target Assets and relevant responsibilities on the Closing Date. Upon 24:00 on the Closing Date, the Target Assets and the businesses and employees in relation thereto shall be deemed received and lawfully owned by the Purchaser on an “as-is” basis, and the obligations, responsibilities and risks in relation to the Target Assets shall be assumed by the Purchaser. Unless otherwise stipulated hereunder, after the Closing Date (excluding the Closing Date), the obligations, responsibilities and risks in relation to the Target Assets shall no longer be assumed by the Seller.

Within three years after the Closing Date, for any Major Loss(es) incurred by the Purchaser as a result of Third-Party Claims or administrative penalties arising from any violation of the law by the Seller prior to the Closing Date in the operation and management of the Target Assets/Target Companies or any major defect of the Target Assets (except for those have been disclosed to the Purchaser and reflected in the financial accounts, audit reports and Valuation Reports of the Seller and the Target Companies), the Parties shall amicably negotiate a solution in good faith.

- 5.3 The Parties hereby agree to work together to streamline the preparation for the handover of the Target Assets, and jointly complete the handover of the Target Assets starting from 24:00 on the Closing Date. The Purchaser shall ensure compliance with safety production systems of the Seller during the preparation for the handover of the Target Assets, and shall assume responsibility for any safety production accidents caused by faults of the Purchaser.
- 5.4 The Parties hereby agree that they shall work together to procure the completion of the change of the registration with Administration for Market Regulation with respect to all Target Companies under the Target Assets within 60 Days from the Closing Date, including but not limited to the registration for change of shareholders, filing of amendment to articles of association, registration for change of directors, supervisors and senior management, registration for change of company's name (removing words like “Sinopec Corp” and “Sinopec”) (the “Handover”). If the Handover has not been completed before the expiry of the period mentioned above, the Parties agree to work together to complete the Handover as soon as possible in accordance with an alternative arrangements.
- 5.5 The Parties hereby agree that, the Purchaser shall convene a general meeting for all shareholders and complete the change of registration with the Administration for Market Regulation with respect to the Reorganization within no later than 15 Business Days from the Closing Date, including but not limited to the registration for the change of registered capital and change of shareholders, filing of amendment to articles of association, and filing of change of directors, supervisors and senior management. The Seller shall cooperate with the Purchaser in relation thereto.
- 5.6 Special provisions
- (1) If the Seller needs to obtain consent from, or deliver notice to, any Third Party with respect to the disposal, sale or transfer of the Target Assets pursuant to the agreements entered therewith, the Seller shall identify all such relevant agreements before the Closing Date. If any Third Party does not consent to the transfer of the Target Assets to the Purchaser, as a result of which such Third Party is entitled to any indemnification under applicable agreement(s), the Parties shall negotiate for a solution.

- (2) The Parties hereby agree that the transfer of the relevant employees and other personnel in relation to the Target Assets shall be completed following the general principle of “personnel go with assets (business),” and in accordance with the management memorandum with respect to the transfer of organization and personnel to be entered into as appropriate.
- (3) The Parties hereby agree that, upon 24:00 on the Closing Date, the Seller shall have the right to continue to use the gas pipelines, gas storages, LNG terminals and its ancillary facilities, pipeline inventory and other related assets under the Target Assets as per the agreement between the Parties. The Purchaser shall undertake to duly perform the relevant gas network service contracts to be entered into by the Parties or their respective subsidiaries after the Closing Date, so as to ensure after the Closing Date: (1) the proper operation of the business in relation to the Target Assets; (2) that the pipeline transportation services and other services to be provided by the Purchaser to the Seller shall meet the existing standards implemented by, and the need of business operations of, the Seller so as to avoid potential adverse impacts to the Seller’s future operations; and (3) with the current pricing unchanged, the service price applicable to the natural gas pipelines and LNG terminals shall remain unchanged, and the royalties for other storage and transportation facilities shall be determined by the Parties in accordance with the market-oriented and “cost-plus-reasonable-profits” principles. The specific arrangements for the above-mentioned matters shall be agreed upon by and between the Parties under a separate agreement.
- (4) If the Target Assets have the trademark or logo of the Seller, the use of such Target Assets by the Purchaser after receiving the Target Assets and before such trademark or logo is removed shall not be deemed as infringement to the Seller’s relevant Intellectual Property Rights or goodwill. The Purchaser shall remove any and all related trademark and logo within six months after the Closing Date. Starting from the Closing Date, any and all legal liabilities arising from the Target Assets (including but not limited to any liability for tort and breach of contract) shall be borne by the Purchaser even if the Target Assets have the trademark or logo of the Seller.
- (5) The Parties hereby agree to otherwise amicably negotiate on the use of the Seller’s patents, copyrights and other Intellectual Property Rights by the Purchaser and the Target Company for fees.

6. ARRANGEMENT ON HANDOVER

- 6.1 The Parties hereby agree to cooperate with each other and use their reasonable efforts to prepare, provide and submit all the necessary documents in a timely manner so as to complete all necessary applications, notices, requests, filings and other documents, and to obtain as soon as practicable all licenses, consents, approvals and authorizations necessary or applicable to the Closing of this Transaction from all the Third Parties and governmental authorities. For the avoidance of doubt, the Purchaser shall lead and take responsibility for organizing the declaration of concentration of business operators for this Transaction, and the Seller shall cooperate as necessary.

- 6.2 The Seller shall provide the Purchaser with all the necessary assistance for the inventory and handover of the Target Assets and personnel, allow the Purchaser's Representatives, upon reasonable notice, to enter into the entities (and its premises) that manage or operate the Target Assets, and provide necessary information, materials and assistance to the Purchaser.
- 6.3 In order to secure the smooth handover and operations of the Target Assets and personnel, the proper operations of the business dependent on the Target Assets, and to maintain the quality of the service, so as to avoid Material Adverse Effects on the orderly operation of the Parties' business, the Seller hereby agrees that, prior to the completion of the Handover of the Target Assets, the Target Assets shall be operated in a manner following the Seller's ordinary course of business, and the Seller shall use commercially reasonable efforts to secure the proper operation of all key assets and prevent any Material Adverse Effects on the Target Assets. If the Seller has knowledge of any incident that may lead to any Material Adverse Effects on the Target Assets, it shall promptly notify the Purchaser and negotiate with the Purchaser within 10 Days upon the occurrence of such incident.
- 6.4 As of the Execution Date, the Seller is under necessary internal reorganization with respect to certain assets, Liabilities and personnel as a part of the Target Assets. The Parties hereby agree and acknowledge that, the Seller shall use reasonable best efforts to complete such internal reorganization prior to the Closing Date and handover the Target Assets to the Purchaser pursuant to the terms hereof. If, due to reasons beyond control of the Parties, the Seller fails to complete the above mentioned internal reorganization prior to the Closing Date, the Parties shall separately negotiate a plan to complete the internal reorganization as soon as possible by a practicable date after the Closing Date. If the Seller is unable to handover any part of the Target Assets due to the failure to complete its internal reorganization, the Parties shall negotiate a solution separately.
- 6.5 In order to secure the smooth operation and transition of the Target Assets and personnel in relation thereto, the Parties hereby agree to perform their responsibilities respectively, take responsibility for the handover of the Target Assets within their respective scopes, and actively facilitate the smooth handover of the Target Assets.
7. THE SHAREHOLDER RIGHTS OF THE SELLER
- 7.1 Upon the completion of the Transaction and the Reorganization, as a shareholder of the Purchaser, the Seller shall enjoy and bear all shareholder right and obligations in accordance with the *Company Law of People's Republic of China* and relevant legal documents as well as separate arrangement reached between the Parties. The Purchaser will, in accordance with the "same-share, same-rights" principle, afford equal treatment with respect to shareholders' rights and obligations to the investors participating the Reorganization, the details of which shall be set forth in the Purchaser's articles of association to be adopted upon the completion of the Reorganization.

- 7.2 Each shareholder of the Purchaser shall be entitled to distributions of the Purchaser's profit and residual property after liquidation in proportion to its respective paid-in capital contribution. Subject to the feasibility of profits distribution, the proportion of cash dividends to be distributed by the Purchaser shall in principle be no less than 30% of the annual distributable profit, with the detailed distribution plan and the distribution proportion for each year determined by the Purchaser's board of directors and its shareholders' general meeting following internal approval procedures in accordance with the Purchaser's articles of association, giving consideration of the Purchaser's capital status and requirements for business developments.
- 7.3 After the Reorganization, the Seller is entitled to transfer or assign or otherwise dispose of the equity interest in the Purchaser held by it to China Petroleum & Chemical Corporation or its designated affiliate (the "Seller's Shareholding Adjustment"). The Purchaser undertakes that it will procure other shareholders of the Purchaser to agree to the Seller's Shareholding Adjustment and to waive their right of first refusal in relation to the Seller's Shareholding Adjustment.
- 8. REPRESENTATIONS AND WARRANTIES OF THE SELLER**
- 8.1 As of the Execution Date and the Closing Date, and immediately prior to the Handover of the Target Assets, the Seller makes the following representations and warranties to the Purchaser that, subject to the disclosure otherwise made hereunder:
- (1) it is a limited liability company with full civil capacity in accordance with PRC law, with right, power and ability to enter into this Agreement and perform all the obligations and responsibilities under this Agreement. The execution and performance of this Agreement by the Seller will not conflict with, or violate:
- i. the provisions of its internal constitutional documents and other relevant documents, or any applicable laws, regulations or rules;
 - ii. orders, judgment and decrees issued by any court, government authorities and regulatory authorities prior to the execution of this Agreement;
 - iii. any necessary procedures required by applicable laws and/or binding agreements and documents prior to the Closing Date, except those not having a Material Adverse Effect on the Purchaser's operation of the Target Assets.

- (2) it has obtained the necessary license, authorizations and approvals for the execution and performance of this Agreement in accordance with the current laws and regulations, and will take all practicable measures to obtain such licenses, authorizations and approvals essential for the performance of the Agreement but not yet obtained.
- (3) all the representations and warranties set forth in Appendix 5.
- (4) the Seller will complete the Closing and Handover as soon as possible in accordance with the terms and conditions hereunder.
- (5) if certain unforeseeable condition occurs to the Seller after the Execution Date but prior to the Closing Date, which will cause any aspect of any representations, warranties and covenants that is material to the financial or operational condition of the Target Assets to become untrue, inaccurate or misleading, the Seller shall give a written notice to the Purchaser within 15 Days after it becomes aware of the above-mentioned changes.
- (6) prior to the completion of the Handover, except for the internal reorganization to be made by the Seller pursuant to Article 6.4 of this Agreement within the scope of Target Assets, or the normal provision of depreciation and amortization, depletion, abandonment, recovery of accounts receivable, settlement of due liabilities, Transferring Construction in Progress into Fixed Assets and other ordinary disposal situations in the process of production and operation, the Seller undertakes that it will not make decisions to implement the following conducts: making material adjustment to the Target Assets, setting up external guarantees on Target Assets, making material business change in relation to Target Assets or adjusting principal business, making material adjustment to accounting principles related to the Target Assets (except as required by laws and regulations) and other conducts that will cause Material Adverse Change to the ordinary operation of the Target Assets.

9. REPRESENTATIONS AND WARRANTIES OF THE PURCHASER

9.1 As of the Execution Date and the Closing Date, and immediately prior to the Handover of the Target Assets, the Purchaser makes the following representations and warranties that:

- (1) it is a limited liability company with full civil capacity in accordance with PRC law, with right, power and legal capacity to enter into this Agreement and perform all the obligations and responsibilities under this Agreement. The execution and performance of this Agreement will not conflict with, or violate:
 - i. the provisions of its internal constitutional documents and other relevant documents, or any applicable laws, regulations or rules;
 - ii. orders, judgment and decrees issued by courts, government authorities and regulatory authorities before the execution of the Agreement;

iii. any necessary procedures required by applicable laws and/or binding agreements and documents prior to the Closing Date.

- (2) it has obtained the necessary licenses, authorizations and approvals for the execution and performance of this Agreement in accordance with the current laws and regulations, and will take all practicable measure to obtain licenses, authorizations and approvals essential to the performance of the Agreement but not yet obtained.
- (3) the Purchaser will pay Transaction Consideration subject to the terms and conditions of this Agreement and complete the Closing and Handover as soon as possible.
- (4) at the same time as the Transaction, Relevant Investors will be introduced by the Purchaser and will make capital contributions in cash and in kind, respectively. Upon the completion of the Reorganization, the registered capital and shareholding structure of the Purchaser shall be as set forth in Appendix 3.
- (5) the Purchaser will operate in the ordinary course of business, enter into business contracts following general commercial principles and on the basis of fair and reasonable commercial terms, and make commercially reasonable efforts to ensure the smooth operation of all key assets, to ensure (i) there will be no Material Adverse Effects on the Purchaser's operation, (ii) the service quality will not be lower than the existing standards, and (iii) there will be no significant adverse acts or omission affecting the continuous normal use of the Target Assets by the Seller for production and operation, provided, that for any Purchaser's failure to fulfil the representation and warranties under this paragraph due to the facts or circumstances existing before the Closing Date (subject to the decisions of the judicial authorities or government authorities), the Parties shall amicably negotiate a solution in good faith.
- (6) if certain unforeseeable condition occurs to the Purchaser after the Execution Date but prior to the Closing Date, which will cause any material aspect of any representations, warranties and undertakings to become untrue, inaccurate or misleading, the Purchaser shall give a written notice to the Seller within 15 Days after it becomes aware of the above-mentioned changes.

10. LIABILITIES FOR BREACH OF THE AGREEMENT

- 10.1 If any representations and/or warranties made by any Party hereunder contains, in any material aspects, intentional misrepresentations, omission or misleading statements, or if any Party is in breach of any covenants made therein, or if such Party is in breach of any agreements or other terms hereunder, such Party shall be deemed to have breached this Agreement, and be responsible to indemnify direct damages incurred by the observant Party.

- 10.2 If the Seller refuses to complete the change of the registration with the Administration for Market Regulation in relation to the Target Assets or hand over the Target Assets and relevant businesses and employees thereunder within the agreed time limit pursuant to the terms of this Agreement, the Seller shall pay an overdue penalty amounting to 0.05% of the consideration for the assets failed to be handed over as agreed per day, except for the cases where the delayed handover of the Target Assets is not due to the Seller's faults (including but not limited to Force Majeure or any reasons due to the Purchaser), provided, that the liabilities to be borne by the Seller as a result of failure to complete the change of the registration with Administration for Market Regulation for any given Target Assets under this article shall not, in aggregate, exceed 1% of the valuation of such Target Assets.
- 10.3 If the Purchaser fails to pay the consideration pursuant to the terms of this Agreement, the Purchaser shall pay an overdue penalty amounting to 0.05% of the overdue consideration to the Seller per day, except for the cases where such failure are due to the Seller's faults.
- 10.4 Unless there is an existing breach on the Seller's side or a Force Majeure event, the Seller has the right to hold the Purchaser liable for the actual loss incurred in connection with the failure of the Purchaser to fulfil the condition precedent (6) in accordance with Article 4.1 of this Agreement.
- 11. THIRD-PARTY CLAIMS AND ADMINISTRATIVE PENALTIES**
- 11.1 Any controversy, dispute and administrative penalties (if any) occurs after the Closing Date that arises from the reasons and facts in relation to the Target Assets/Target Companies before the Closing Date shall be resolved in accordance with the principles under Article 5.2 of the Agreement. If a Party is aware of any litigation, arbitration or controversy raised by a Third Party, it shall promptly notify the other Party and make all reasonable efforts to avoid and mitigate losses.
- 12. ANNOUNCEMENT**
- 12.1 Without the prior consent of the other Party (which shall not be unreasonably withheld or delayed), neither Party (and any of their respective Affiliates) shall publish any announcement or issue any circular regarding the existence of the Agreement (or any other transaction document) or its subject matters.
- 12.2 If the laws or a stock exchange with appropriate jurisdiction or any regulatory or other supervisory institutions or authorities require (regardless of the validity of such requirement) the issuance of any notice, announcement or circular, then the restrictions under Article 12.1, Article 13.1 and Article 13.5 shall not be applied.
- 13. CONFIDENTIALITY**
- 13.1 The information provided by the Party of the Agreement who owns the information (the "Provider") to the other Party (the "Recipient") in accordance with this Agreement, including but not limited to any material related to the Target Assets or terms and relevant negotiations under this Agreement and other transaction agreements (hereinafter collectively as "Confidential Information"), shall only be used by the Recipient and its personnel for the purpose of this Agreement. Except as otherwise provided in this Agreement, for any Confidential Information provided by the Provider, the Recipient and its personnel who are aware of the Confidential Information shall not directly or indirectly provide, disclose or otherwise transfer to any Third Party, or permit any Third Party to use, or provide any opinion or suggestion to any Third Party using, the Confidential Information without written consent of the Provider. In this Article, the "Third Party" refers to any natural person, legal person or other organizations other than the Parties to the Agreement, other than the Affiliates of the Parties.

- 13.2 Confidential Information provided or disclosed by the Provider to the Recipient shall only be disclosed by the Recipient to certain of its designated employees for the purpose of the performance of this Agreement, and such disclosure shall be made only within the scope required for such performance, provided, that the Recipient shall not disclose any Confidential Information to such employees without taking all reasonable precautions, which includes but not limited to notifying the confidential nature of the information to be disclosed to such employees and have such employees make confidential commitments as at least strict as the confidential obligations of the Agreement, so as to prevent such employees from using Confidential Information for personal interests or making any unauthorized disclosures to any Third Parties. Any violation of the confidentiality obligations by the Recipient's employees shall be deemed as the violation of the confidential obligations by the Recipient.
- 13.3 Where the Recipient's lawyers, accountants, contractors and consultants need to know the Confidential Information to provide professional assistance, the Recipient may disclose Confidential Information to such parties, provided that it shall require the above-mentioned parties to enter into confidential agreements or to perform confidential obligations in accordance with relevant professional ethical standards.
- 13.4 If the securities regulatory rules of the place(s) where the Company's shares are listed, or relevant governmental or regulatory authorities require the Recipient to disclose any Confidential Information, the Recipient may disclose within the scope required by such securities regulatory rules or governmental or regulatory authorities without being subject to liabilities hereunder, provided, that the Recipient shall immediately notify the information to be disclosed to the Provider in writing so that the Provider may take necessary protective measures, and such notification shall be made to the extent possible before the information is disclosed. The Provider shall cooperate to provide to the Recipient the materials and information needed for the purpose of publishing announcements or circulars.
- 13.5 The term of the confidential obligations under this Article is three years.
- 13.6 The confidential obligations under this Article do not apply to the following information:
- (1) Information that was publicly available when disclosed by one Party, or becomes publicly available after the disclosure (other than due to the negligence of the Recipient or its employees, lawyers, accountants, contractors, consultants or other personnel);

- (2) Information was, as proved by written evidence, already known by the Recipient upon the disclosure by the Provider, which did not come directly or indirectly from the Provider;
- (3) Information was, as proved by written evidence, already disclosed by a Third Party to the Recipient, which does not have confidential obligations and is entitled to make the disclosure.
- 13.7 When the Agreement is rescinded or terminated, the Recipient shall immediately cease using and shall not permit any Third Party to use the Confidential Information provided by the Provider, and, upon the Provider's written request, shall delete or destroy the Confidential Information provided by the Provider or return to the Provider, without retaining any information in any form.
- 14. NO ASSIGNMENT**
- 14.1 Except as contemplated hereunder or with written consent by the Parties, no one shall transfer, assign or otherwise dispose all or part of its rights under this Agreement, nor shall it grant, establish or dispose any rights, interests or obligations therein. Any transfer in conflict with Article 14 is invalid.
- 15. FURTHER ASSURANCE**
- 15.1 The Parties shall each execute (or cause to be executed) other documents as required by relevant laws and regulations or deemed necessary for the effectiveness or performance of this Agreement.
- 16. TAXES AND EXPENSES**
- 16.1 Subject to Article 16.2, unless otherwise provided hereunder (or under any other Transaction Documents), each Party shall be responsible for its own costs, expenses and other payments incurred in relation to the Transaction.
- 16.2 The Parties shall bear and pay all taxes arising under this Agreement or any other Transaction Documents in accordance with laws, regulations and relevant rules or decisions, and all fees collected by governmental authorities, regulatory institutions and stock exchanges.
- 16.3 With respect to the Transaction, unless otherwise required by laws and regulations and/or agreed by the Parties, all expenses incurred due to the Handover of the Target Assets shall be reasonably arranged and resolved through negotiation by and between the Parties.
- 16.4 The Parties shall negotiate amicably, and deal with tax matters regarding the transfer of the Target Assets in accordance with Value-Added Tax ("VAT") Regulations and relevant regulations. If the PRC taxation authority believes that the Transaction is within the VAT taxation scope, the Seller shall take the appraised asset value as the VAT-excluded price and invoice the Purchaser based on such price at the tax rate provided by relevant tax laws, and the Purchaser shall pay the price with tax included.

- 16.5 Assuming the special tax treatment to the Transaction is applicable to the Seller, the Purchaser shall ensure that the relevant acquisition adopts the special tax treatment principles under the Notice of the Ministry of Finance and the State Administration of Taxation on Several Issues Concerning the Enterprise Income Tax Treatment on Enterprise Reorganization (No. 59 [2009] of the Ministry of Finance), and it will not transfer the equity interest it acquired in the Target Companies in any form and that the Target Company will not change its original substantive operations (within the extent in its capacity as a shareholder) within 12 consecutive months from the Reorganization Date. Meanwhile, the Seller will not transfer the equity interest it acquired in the Purchaser within 12 consecutive months from the date immediately following the date on which it is registered as a shareholder of the Purchaser. The Parties participating in the Reorganization (including the Purchaser, Target Company and the Seller) shall complete the registration and filing in accordance with tax-related requirements. If any Party fails to perform the above undertakings and covenants, the observant Party is entitled to pursue the breaching Party's liability for its breach of contract with respect to actual losses incurred to the observant Party.
- 17. NOTICE**
- 17.1 Any notice related to this Agreement shall be written in Chinese, and delivered via designated courier, fax, email or express delivery by a courier company recognized by both Parties. The notice is effective upon receipt and is deemed to have been received at the following time: (a) if via designated courier or express delivery, on the third day after it is delivered to the recipient or sent out by the courier company; (b) if via fax, at the time the sender sends the notice with the notice showing that it has been delivered; or (c) if via email, when the relevant email reaches that recipient's email address. In each case, if it is delivered out of the business hours, the notice shall be deemed to be received at the beginning of the business hours on the next Business Day.
- 17.2 For the purposes of Article 17.1, contact information such as the addresses and fax numbers of the Parties are set forth in Appendix 4.
- 18. CONFLICT WITH OTHER AGREEMENTS**
- 18.1 This Agreement and its appendices constitute all the legal document with respect to the Transaction. If any oral discussion and written agreement entered into by the Parties before the execution of the Agreement is inconsistent with the Agreement, the content of the Agreement shall prevail, unless the Parties expressly agreed otherwise.
- 19. WAIVER, RIGHTS AND REMEDIES**
- 19.1 Unless otherwise expressly provided in the Agreement, no waiver, failure or delay by any Party in exercising any right, power or remedy hereunder or under any other Transaction Documents shall be deemed as a waiver thereof, nor shall it preclude any future exercise of such right, power or remedy and no single or partial exercise of any such right, power or remedy shall preclude any other or future exercise thereof.

20. TEXTS

- 20.1 This Agreement is prepared in Chinese. The Agreement is made in seventeen originals with each Party holding three copies, and the remaining eleven copies reserved for approvals and/or filings by the governmental authorities. The aforementioned texts of the Agreement have the same legal effect.

21. EFFECTIVE DATE AND AMENDMENT

- 21.1 This Agreement shall be established upon the execution by the legal representatives or authorized representatives of the Parties and the affixation of the official chops of both Parties, and shall enter into force upon the satisfaction of the following conditions:

- (1) the Purchaser's shareholder has decided to approve the Transaction;
- (2) the Seller's shareholders and its shareholders' meeting have approved the Transaction.

- 21.2 Upon the date of establishment of this Agreement, Articles 12 (Announcement), 13 (Confidentiality), 14 (No assignment), 16 (Taxes and expenses), 17 (Notice), 18 (Conflict with other agreements), 19 (Waiver, rights and remedies), 21 (Effective date and amendment), 22 (Invalidity), 23 (Jurisdiction and arbitration) and Appendix 1 (Definition and interpretation) shall be legally binding upon the Parties.

- 21.3 Upon the execution of this Agreement, any amendment to this Agreement (or any other Transaction Document) shall be made in writing, and effective upon the execution by the legal representatives or authorized representatives of the Parties and the affixation of the official chops of both Parties.

22. INVALIDITY

- 22.1 The provisions of this Agreement and other Transaction Documents are severable. If any such provision is deemed to be or become invalid or unenforceable in any respect in accordance with laws and regulations, it shall be ineffective in that respect, and the Parties shall make reasonable efforts to replace such provision with a valid and enforceable alternative provision whose effect is as close as possible to the intended.

23. JURISDICTION AND ARBITRATION

- 23.1 This Agreement is governed by, and shall be interpreted in accordance with, the PRC laws and regulations.

- 23.2 The Parties shall use good faith to resolve any dispute, controversy or claim (collectively, the “Dispute”) arising from, or in connection with, the interpretation or performance of this Agreement through amicable negotiation, during which the Parties may consult the regulatory authority. If a settlement cannot be reached through negotiation within sixty Days after one Party has brought the matter to the other Party, the Parties may refer such matter to arbitration.
- 23.3 The Dispute shall be submitted to China International Economic and Trade Arbitration Commission (“CIETAC”) for arbitration in accordance with its rules in force at the time of arbitration. The Dispute shall be decided by three arbitrators. Each party shall appoint one arbitrator, and the third arbitrator shall be appointed by the other two arbitrators, provided that if the other two arbitrators cannot decide on the choice of the third arbitrator, such arbitrator shall be appointed by CIETAC.
- 23.4 The arbitration proceedings shall be presided over by CIETAC as the presiding authority and shall be conducted in Chinese. The arbitration proceedings shall be held in Beijing.
- 23.5 The arbitration award made in accordance with the above arbitration procedures shall be final and binding upon the Parties, and shall be enforceable in accordance with its provisions.
- 23.6 The arbitration fees shall be borne by the losing Party. The Parties agree that if it is necessary for one Party to enforce the arbitral award through legal proceedings of any type, the Party subject to enforcement shall pay all reasonable fees and expenses as well as legal fees in connection with the enforcement of the arbitral award.
- 23.7 During the dispute resolution, the Parties shall continue to implement this Agreement in all other aspects except for the matter in dispute.

24. FORCE MAJEURE

- 24.1 In the event of a Force Majeure event that either Party is in whole or in part unable to perform its obligations under this Agreement due to the influence of such event, it shall be exempted from the liabilities in whole or in part according to the circumstances affected by Force Majeure. The performance of the obligations by the Parties under this Agreement may be suspended during the delay period caused by Force Majeure, and shall be automatically extended for a period equal to the delay period. The Party suffering from Force Majeure shall notify the other Party in writing as soon as possible and provide valid proof documents certifying the occurrence and time of Force Majeure within 15 Days. The Party suffering from Force Majeure shall take all reasonable measures to mitigate the consequences of Force Majeure as soon as possible. In the event of a Force Majeure event, the Parties shall negotiate immediately in order to find a fair solution and make their best effort to mitigate the consequences caused by Force Majeure.

(The remainder is intentionally left blank. Appendices and signature pages to follow)

The Parties have executed the “Agreement on Additional Issuance of Equity and Cash Payment to Purchase Related Assets of Oil and Gas Pipelines” on the date indicated at the beginning of the document as a proof.

/s/ China Oil & Gas Pipeline Network Corporation (Official Seals)

(Signed by Legal Representative or Authorized Representative)

The Parties have executed the “Agreement on Additional Issuance of Equity and Cash Payment to Purchase Related Assets of Oil and Gas Pipelines” on the date indicated at the beginning of the document as a proof.

/s/ Sinopec Natural Gas Limited Company (Official Seals)

(Signed by Legal Representative or Authorized Representative)

Appendix 1: Definition and Interpretation

1. Definition. The following defined terms shall have corresponding meanings ascribed to it as set forth below in the table.

Agreement	means this Agreement on Additional Issuance of Equity and Cash Payment to Purchase Relevant Oil and Gas Pipeline Assets
Purchaser/PipeChina	means China Oil & Gas Pipeline Network Corporation
Seller	means Sinopec Natural Gas Limited Company
Transaction	means, as contemplated hereunder, the proposed sale by the Seller of the Target Assets as set forth in the Appendix 2 owned by the Seller, and the proposed acquisition and takeover by the Purchaser of such Target Assets subject to the terms and on the conditions hereunder.
Reorganization	means a combination of this Transaction and the proposed equity investment by the Relevant Investors into PipeChina, either in cash or in kind. Upon the completion of this Reorganization, the registered capital of PipeChina will be RMB500 billion.
Relevant Investors	means all investors set forth in the Appendix 3 (other than the Seller) which propose to participate in this Reorganization through in-kind (with certain oil and gas pipelines assets) and/or cash contribution.
Target Assets/Appraised Assets	means, as set forth in the Article 1.1, assets the Seller proposes to sell to the Purchaser, as set forth in the Appendix 2, i.e., the equity interests in the Target Companies owned by the Seller (which Target Companies own and operate oil and gas pipelines, gas storages and LNG terminals and its ancillary facilities, pipeline inventory and other related assets).
Target Assets List	means the target assets list set forth in the Appendix 2.
Target Company/Companies	means, in whole or in part, target companies within the scope of the Target Assets.
Transaction Consideration	has the meaning set forth in Article 2.
Equity Consideration	has the meaning set forth in Article 2.
Cash Consideration	has the meaning set forth in Article 2.
Valuation Date	means the valuation date set forth in the Valuation Report, i.e., December 31, 2019
Valuation Report	means the Report with Respect to the purchase by China Oil & Gas Pipeline Network Corporation of Certain Oil and Gas Pipeline Assets owned by Sinopec Natural Gas Limited Company through Issuance of Equity and Payment of Cash numbered “Zhong Lian Ping Bao Zi [2020]897,” issued by China United Assets Appraisal Group Co., Ltd. on July 23, 2020.

Execution Date	means the date when the legal representative or authorized representative of the Parties execute this Agreement and affix the official chops of the Parties.
Closing	means the closing of transfer of Target Assets set forth in Article 5.
Closing Date	means September 30, 2020.
Transition Period	means the period starting from the Valuation Date (exclusive) through the Closing Date (inclusive).
Handover	has the meaning set forth in Article 5.4.
Transaction Documents	means this Agreement and all appendix thereto, any supplemental agreements entered by and between Parties from time to time, and the Valuation Report (including the specifics of the Appraised Assets).
Conditions Precedent	means closing conditions set forth in Article 4.1, and a “Condition Precedent” means any one of such Conditions Precedent.
Third Party/Parties	means any entity or individual other than the Parties hereunder.
Third-Party Claim	means the disputes, controversies, litigations or arbitrations raised (by Third Parties) in relation to the Target Assets, and the liabilities and indemnification obligations in relation thereto.
Seller’s Shareholding Adjustment	has the meaning set forth in Article 7.3.
Representative(s)	means, with respect to a Party and/or its Affiliates, its and or its Affiliate’s director, senior management, employee, agent, counsel, accountant and consultant.
Provider	has the meaning set forth in Article 13.1.
Recipient	has the meaning set forth in Article 13.1.
Transferring Construction in Progress into Fixed Assets	means, after the completion of the construction in progress, and upon the final acceptance of the construction, the construction in progress is put into use and be recorded as fixed assets on the book(s) of the Seller.
Affiliates	means, with respect to any Party, any entity controlled by such Party, controlling such Party or under common control with such Party.
Liability	means all current or future, actual, potential or debitive, liability, obligation and debts in all nature, incurred as a result of agreements, operations of law or other reason, and incurred jointly or separately either as a debtor or a guarantor.

Material Adverse Change/Material Adverse Effect	means incident(s) that, individually results in an actual or reasonable foreseeable loss of no less than RMB3.6 billion to the assets sold by the Seller and its Affiliates to the Purchaser and business in relation thereto, or in aggregate result in an actual or reasonable foreseeable loss of no less than RMB6 billion to the assets sold by the Seller to the Purchaser and business in relation thereto.
Major Loss(es)	means, accumulative and actual losses of more than RMB6 billion to the assets sold by the Seller and its Affiliates to the Purchaser and business in relation thereto.
Dispute	has the meaning set forth in Article 23.2.
CIETAC	has the meaning set forth in Article 23.3.
Intellectual Property Rights	means patents, trademarks, service marks, company logos, trade names, domain names, design rights, copyrights (including but not limited to computer software copyrights) and database rights, semiconductor circuit rights, utility models, design rights, invention rights, proprietary technology rights, and other intellectual property rights (regardless of whether it has been registered or not) and all rights or forms of protection that have equivalent or similar utility anywhere in the world, and the term “registration” includes registration and application for registration.
Tax	shall include (a) taxes levied on total or net income, profits and gains, and (b) all other taxes, levies, tariffs, import taxes, charges and withholding taxes (if applicable) of any nature, including any consumption tax, value-added tax and its additional taxes, corporate income tax, personal income tax (if applicable), real estate tax, land value-added tax, deed tax, farmland occupation tax, urban land use tax, environmental protection tax, stamp duty, etc., or withholding of any nature (including any related fines, penalties, late fees or interest).
Confidential Information	means, (i) with respect to the Purchaser’s obligation, any materials received or held by PipeChina (or any of its Representatives) that are relating to the Seller or the Target Assets, or any materials with respect to the Target Assets received or held prior to the Closing; (ii) with respect the Seller’s obligation, any materials received or held by the Seller (or any of its Representatives) that are relating to PipeChina, or any materials with respect to Target Assets received or held prior to and after the Closing; or any materials in relation to this Agreement or other Transaction Documents and the negotiation thereof.

Force Majeure	means unforeseeable, unavoidable and insurmountable objective conditions, including natural disasters such as earthquakes, typhoons, floods, and heavy rains (subject to the information issued by the local government or functional management departments such as meteorology), fires, wars, plagues (including COVID-19 pandemic), any government actions, any changes and promulgation of laws, etc., that directly affects the performance of this Agreement (or cause the performance of this Agreement deviates from the terms thereunder).
PRC/China	means the People's Republic of China (for the sole purpose of this Agreement, excluding the applicable laws of Hong Kong Special Administrative Region of China, Macao Special Administrative Region of China and Taiwan).
RMB	means the legal currency of China.
Day(s)	means, unless otherwise specified, calendar Days, provided that in any circumstances, if the last day of a given period hereunder is a holiday, then the last day of such period shall be the next day immediately following such holiday. Unless otherwise specified, "prior to a certain day" shall mean a period ending on such day, while "after a certain day" shall mean a period starting from the next day of such day.
Business Day(s)	means any day other than a Saturday, Sunday or a national holiday determined by the PRC government.

2. Interpretation. Unless otherwise specified, under this Agreement:

- (1) a "person" shall mean any individual, business name, organization, company (whether legal person or not), government (including but not limited to central and local governments and their constituent departments), any joint venture, association, partnership enterprises, institutions, work councils or employee representative organizations (regardless of whether they have independent legal personality or not);
- (2) an "Article" shall be an article hereunder;
- (3) headings are set for the ease of references only and shall not affect the interpretation of this Agreement;
- (4) in order to facilitate the payment in RMBs, any other amounts denominated in foreign currencies shall be converted into RMBs at the exchange rate on such date;
- (5) words introduced by terms like "including," "includes" or "especially" or other similar terms shall be deemed as explanatory only and does not limit the meaning of the words prior to such terms; and

- (6) for laws and regulations, including laws, administrative regulations, administrative rules, local regulations, etc., unless otherwise expressly provided in this Agreement, any explicit reference to a regulation (including any regulation in any jurisdiction) shall include: (a) the laws and regulations as revised, merged or re-enacted before or after the Execution Date; (b) the laws and regulations that were re-promulgated (whether revised or not); and (c) any supplementary regulations (including regulations) formulated in accordance with the laws and regulations (before or after the Execution Date) that have been revised, merged or re-enacted as described in paragraph (a) or (b) above, unless any matters mentioned in paragraphs (a) to (c) appear after the date of the Execution Date, and increase or change the Purchaser's or Seller's responsibilities hereunder.
3. Appendix. Appendices shall be deemed as an integral part of this Agreement.
4. Inconsistence. If any defined terms in this Appendix 1 is inconsistent with any articles or terms set forth in other Appendices, for the interpretation of such Articles or Appendices, the definition in such Articles or Appendix.

Appendix 2: Target Assets, Appraised Value, Pricing and Payment of Consideration

Appendix 3: Post-reorganization Capital Structure

Appendix 4: Account and Contact Information

Appendix 5: Seller Representations and Warranties

China Oil & Gas Pipeline Network Corporation

AND

Sinopec Marketing Co., Limited

Agreement on Cash Payment to Purchase Relevant Oil and Gas Pipeline Assets

July 2020

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This agreement ("Agreement") is entered into by and between the following parties in Beijing of People's Republic of China ("PRC") on July 23, 2020.

The Purchaser:

Name: China Oil & Gas Pipeline Network Corporation ("PipeChina")

Legal Representative: ZHANG Wei

Registered Address: Room 08-10, 6/F Block A, 5 Dongtucheng Road, Chaoyang District, Beijing

The Seller:

Name: Sinopec Marketing Co., Limited

Legal Representative: ZHAO Rifeng

Registered Address: 18/F, 22, Chaoyangmen North Street, Chaoyang District, Beijing

Each defined term in the Agreement shall have the meaning ascribed to it as set forth in the Appendix 1 to the Agreement.

WHEREAS:

- (A) As of the date hereof, the registered capital of the Purchaser is RMB20 billion, and its scope of business includes pipeline transportation; storage services; equipment import; technology import and export; technology research; informatization research and application; technology consulting, technology services, technology transfer, technology promotion. 100% of registered capital in Purchaser is held by the State Council.
- (B) The Seller proposes to sell Target Assets to the Purchaser owned by the Seller as listed in Appendix 2 of the Agreement, including 41 refined oil pipelines and their auxiliary facilities, 4 oil storages, independent stations and detachable oil transportation and production facilities of non-independent stations, and pipeline inventory, all of which are non-equity assets. PipeChina will purchase and receive such Target Assets pursuant to the terms and conditions set forth hereof (the "Transaction").

The Seller and the Purchaser shall be referred to hereinafter each as a "Party" and collectively, the "Parties."

NOW, THEREFORE, in consideration of the purpose of this Transaction, based on friendly negotiation and to achieve mutual benefits, the Parties have reached the arrangement as the following:

- 1. TARGET ASSETS
- 1.1 The Seller shall, subject to the terms and conditions herein, sell to the Purchaser the Target Assets set forth in Appendix 2, the specific scope of which shall be subject to the scope of Appraised Assets as set forth in the corresponding Valuation Report.

2. TRANSACTION CONSIDERATION AND PAYMENT METHOD

- 2.1 According to the Valuation Report, the appraised value of the Target Assets with respect to the Transaction is RMB30,813,130,000, which is set forth in the Appendix 2.
- 2.2 After negotiation, the Parties agreed that the Transaction Consideration to be paid by Purchaser for the purchase of the Target Assets under this Transaction is RMB30,813,130,000, provided, that the final consideration to be paid for the Target Assets shall be its appraised value with the approval/filing procedures performed in accordance with PRC laws and regulations.
- 2.3 The Parties hereby agree that the Purchaser shall pay the Transaction Consideration to the Seller in cash.
- 2.4 The Parties hereby agree that, for the Cash Consideration, the Purchaser shall pay 90% of the aggregate Cash Consideration under the Transaction by October 15, 2020 (inclusive), as well as the interest thereof as calculated at the rate of demand deposits of the bank for the same period from October 1, 2020 until the payment receipt date. The Purchaser shall pay the remaining 10% of Cash Consideration within 10 Business Days from the issuance of the Closing Audit report as set forth in Article 3.2, as well as the interest thereof as calculated at the rate of the demand deposits of the bank for the same period from October 1, 2020 until the payment receipt date.
- 2.5 Unless otherwise notified in writing, the cash consideration payable under the Transaction shall be paid by the Purchaser to Seller's designated bank account (details as set out in Appendix 4).

3. PROFIT AND LOSS DURING THE TRANSITION PERIOD

- 3.1 The Transition Period shall refer to the period from the Valuation Date (exclusive) to the Closing Date (inclusive) under this Agreement.
- 3.2 The Parties hereby agree that, within 60 Days from the Closing Date, the Parties shall perform an audit on the Target Assets and have an auditor's report issued ("Closing Audit") to determine the profit and loss of the Target Assets during the Transition Period. Such Closing Audit shall be completed by an accounting firm with securities and futures business qualifications jointly appointed by the Parties, the audit fees for which shall be borne by the Parties at a 50-50 split.
- 3.3 The Purchaser shall pay to the Seller, in cash, the profit generated by the Target Assets or the corresponding portion of the net assets increased due to other reasons during the Transition Period, and the Seller shall pay to the Purchaser, in cash, the loss incurred by the Target Assets or the corresponding portion of the net assets decreased during the Transition Period, each amount to be determined by the Closing Audit report. The Parties hereby agree that such payment shall be made within 10 Business Days after the issuance date of the Closing Audit report pursuant to Article 3.2 of this Agreement.

3.4 The Parties hereby agree that, the matters related to the pipeline inventory (including but not limited to scope of assets and prices) that the Purchaser proposes to purchase from the Seller shall be agreed by the Parties separately under relevant agreements.

4. CONDITIONS PRECEDENT

4.1 The Closing is conditioned upon the following Conditions Precedent being satisfied or waived by applicable parties/governmental authorities (if applicable):

- (1) The representations, covenants and warranties made by the Parties on the Execution Date shall have remained true and accurate, without misleading statements, misrepresentations and material omissions in all material respects as of the Closing Date;
- (2) The Seller shall have approved the Transaction in accordance with its constitutional document;
- (3) The Purchaser shall have approved the Transaction in accordance with its constitutional document;
- (4) Declaration of concentration of business operators in respect of the Transaction shall have been filled and approved.
- (5) The Valuation Report on the Target Assets under this Agreement shall have been approved or filed in accordance with the PRC laws and regulations;
- (6) All other applicable approvals, permits, filings and registrations from or with the relevant authorities with respect to the Transaction shall have been obtained or completed;
- (7) The Parties or their subsidiaries shall have entered into relevant oil and gas pipeline facility service contracts in accordance with Article 5.4 (6) of this Agreement.

For the Conditions Precedent above, the Seller is responsible for condition (2), the Purchaser is responsible for condition (3), and both Parties are responsible for conditions (1), (4), (5), (6), (7). For the avoidance of doubt, the Condition Precedent to be solely handled by one Party can only be waived by the other Party, provided that conditions (2), (3), (4), (5) and (6) cannot be waived.

4.2 The Parties hereby agree to cause all the Conditions Precedent as set forth under Article 4.1 to be satisfied as soon as practicable prior to the Closing Date. If the satisfaction of any Condition Precedent applicable to one Party needs the assistance from the other Party, the other Party shall provide such assistance. The Parties shall remain in communication on the related matters in relation to each closing Condition Precedent, and coordinate and solve the problems encountered during this process in a timely manner. After the Execution Date, neither Party shall engage in any conduct with the purpose to prevent or restrict the satisfaction of each Condition Precedent set forth under Article 4.1.

5. CLOSING AND HANDOVER

5.1 The Parties hereby confirm and agree that, the ownership of, and the obligations, responsibilities and risks in relation to, the Target Asset shall be transferred from the Seller to the Purchaser at 24:00 on September 30, 2020 (the "Closing Date").

5.2 Transfer of Target Assets and relevant responsibilities on the Closing Date. Upon 24:00 on the Closing Date, the Target Assets and the businesses and employees in relation thereto shall be deemed received and lawfully owned by the Purchaser on an "as-is" basis, and the obligations, responsibilities and risks in relation to the Target Assets shall be assumed by the Purchaser. Unless otherwise stipulated hereunder, after the Closing Date (excluding the Closing Date), the obligations, responsibilities and risks in relation to the Target Assets shall no longer be assumed by the Seller.

Within three years after the Closing Date, for any Major Loss(es) incurred by the Purchaser as a result of Third-Party Claims or administrative penalties arising from any violation of the law by the Seller prior to the Closing Date in the operation and management of the Target Assets or any major defect of the Target Assets (except for those have been disclosed to the Purchaser and reflected in the financial accounts, audit reports and Valuation Report), the Parties shall amicably negotiate a solution in good faith.

5.3 The Parties hereby agree to work together to streamline the preparation for the handover of the Target Assets, and jointly complete the handover of the Target Assets starting from 24:00 on the Closing Date. The Purchaser shall ensure compliance with safety production system of the Seller during the preparation for the handover of the Target Assets, and shall assume responsibility for any safety production accidents caused by faults of the Purchaser.

The Parties hereby agree that they shall complete the handover of the Target Assets within no later than 60 Days from the Closing Date, and deal with specific handover proceedings subject to the procedures set forth in Appendix 3 or otherwise agreed by the Parties. If the handover is not completed in full before the expiry of the period mentioned above due to the Seller's fault, the Seller shall be subject to responsibilities of breach of contract in accordance with Article 9.2; and if the handover is not completed in full before the expiry of the period mentioned above due to reasons which cannot be attributed to the Seller, the Parties agree to work together to complete the handover as soon as possible in accordance with an alternative arrangements.

5.4 Special provisions

(1) For the handover of the land use rights, real properties and other related assets, ownership certificate documents shall be handed over. For the land use rights and real properties with complete ownership, the Seller and the Purchaser shall jointly handle the registration and transfer procedures in relation to the ownership certificate documents. For certain assets of lands and real properties within the scope of Target Assets, the ownership of which cannot be evidenced by ownership certificate documents of the Seller, the Parties agree to handover on an "as-is" basis, and the Purchaser may continue using such assets in its ordinary course. The value and any third-party claims or administrative penalties arising from the flaws of the ownership certificate documents of such assets shall be dealt by the Parties in accordance with the principles as agreed under Article 5.2. The Seller shall provide necessary assistance to the Purchaser with respect to the application of ownership certificate documents thereof.

- (2) For all credits included in the Target Assets, the Seller shall notify the corresponding debtors on a timely basis after the date hereof, and such credits shall be enjoyed by the Purchaser from the Closing Date. For all debts included in the Target Assets, the Seller shall use its best reasonable efforts to obtain the consents of the corresponding creditors after the date hereof, such that such debts shall be assumed by the Purchaser. If such creditor's consent cannot be obtained and a third-party claim needs to be indemnified pursuant to the agreement thereof, the Parties shall negotiate a solution in good faith.

Specifically, the agreement signed by the Seller with unrelated Third Parties with respect to the Target Assets shall in principle be assigned to the Purchaser ("Assignable Contracts"). The rights and obligations in relation to the Assignable Contracts are allocated as follows: the Seller's original rights and obligations before the Closing Date shall be enjoyed and borne by the Seller; and the original Seller's rights and obligations after the Closing Date under such Assignable Contract shall all be enjoyed and borne by the Purchaser. If on the Closing Date, any agreements with respect to Target Assets are not, with consents from the parties thereto, officially assigned to the Purchaser from the Seller, such contract shall be deemed as "Unassignable Agreements" with the Seller being the nominal contracting party thereto. The rights or obligations, gains or losses under the Unassignable Agreement as held by the Seller since 24:00 from the Closing Date shall all belong to the Purchaser. The Purchaser shall indemnify and compensate the Seller for the losses and reasonable additional expenses incurred by the Seller due to its nominal contracting party status to such Unassignable Agreement, except for those caused by the Seller.

- (3) If the Seller needs to obtain consent from, or deliver notice to, any Third Party with respect to the disposal, sale or transfer of the Target Assets pursuant to the agreements entered therewith, the Seller shall identify all such relevant agreements before the Closing Date. If any Third Party does not consent to the transfer of the Target Assets to the Purchaser, as a result of which such Third Party is entitled to any indemnification under applicable agreement(s), the Parties shall negotiate for a solution.
- (4) The Parties hereby agree that the transfer of the relevant employees and other personnel in relation to the Target Assets shall be completed following the general principle of "personnel go with assets (business)," and in accordance with the management memorandum with respect to the transfer of personnel to be entered into as appropriate.

- (5) With regard to the assets transfer accompanied with the transfer of responsible person, the Seller shall propose a list of assets that are managed by such responsible person and are proposed to be transferred before the Closing Date, check the completeness of the assets and suitability for handover, and have such responsible person confirm and sign within 60 Days after the Closing Date. For this part of the Target Assets, except for the follow-up procedures including renaming or registration/filing of transfer of ownership, the handover shall be deemed completed when the employment relationship of the relevant responsible person is transferred to the Purchaser, and such person will continue to complete the follow-up procedures including renaming or registering the transfer of ownership where the Parties shall cooperate with each other accordingly. The Parties shall otherwise negotiate a solution if there is a need to execute the "Handover Confirmation Letter."
- (6) The Parties hereby agree that, upon 24:00 on the Closing Date, the Seller shall have the right to continue to use the refined oil pipelines and its ancillary facilities, and other related assets under the Target Assets as per the agreement between the Parties. The Purchaser shall undertake to duly perform the relevant oil and gas network service contracts to be entered into by the Parties or their respective subsidiaries after the Closing Date, so as to ensure after the Closing Date: (1) the proper operation of the business in relation to the Target Assets; (2) that the pipeline transportation services and other services to be provided by the Purchaser to the Seller shall meet the existing standards implemented by, and the need of business operations of, the Seller; and (3) service price in relation to refined oil pipeline and storage and transportation facilities shall be agreed upon by and between the Parties under a separate agreement.
- (7) With regard to issues such as insufficient safety spacing after the detachment of the non-independent stations, if such issues have not been effectively resolved within a reasonable time, Seller's production and operation will be significantly influenced, which shall in turn cause economic losses. Therefore, the Purchaser is obliged to use its best efforts to cooperate with the Seller to solve the issues to avoid the influence and losses on the Seller's production and operation.
- (8) If the Transaction causes the Parties to share the facilities to ensure ordinary operation, the use of such shared facilities shall in principle remain in its ordinary course, and the Parties shall otherwise negotiate an economic compensation plan.
- (9) If the Target Assets have the trademark or logo of the Seller, the use of such Target Assets by the Purchaser after receiving the Target Assets and before such trademark or logo is removed shall not be deemed as infringement to the Seller's relevant Intellectual Property Rights or goodwill. The Purchaser shall remove any and all related trademark and logo within six months after the Closing Date. Starting from the Closing Date, any and all legal liabilities arising from the Target Assets (including but not limited to any liability for tort and breach of contract) shall be borne by the Purchaser even if the Target Assets have the trademark or logo of the Seller.

(10) The Parties hereby agree to otherwise amicably negotiate on the use of the Seller's patents, copyrights and other Intellectual Property Rights by the Purchaser for fees.

6. ARRANGEMENT ON HANDOVER AND JOINT WORK ORGANIZATION

- 6.1 The Parties hereby agree to cooperate with each other and use their reasonable efforts to prepare, provide and submit all the necessary documents in a timely manner so as to complete all necessary applications, notices, requests, filings and other documents, and to obtain as soon as practicable all licenses, consents, approvals and authorizations necessary or applicable to the Closing of this Transaction from all the Third Parties and governmental authorities. For the avoidance of doubt, the Purchaser shall lead and take responsibility for organizing the declaration of concentration of business operators for this Transaction, and the Seller shall cooperate as necessary.
- 6.2 The Seller shall undertake to, during the transition period, provide the Purchaser with all the necessary assistance for the inventory and handover of the Target Assets and personnel, allow the Purchaser's Representatives, upon reasonable notice, to enter into the entities (and its premises) that manage or operate the Target Assets, and provide necessary information, materials and assistance to the Purchaser.
- 6.3 In order to secure the smooth handover and operations of the Target Assets and personnel, the proper operations of the business dependent on the Target Assets, and to maintain the quality of the service, so as to avoid Material Adverse Effects on the orderly operation of the Parties' business, the Seller hereby agrees that, prior to the completion of the handover of the Target Assets, the Target Assets shall be operated in a manner following the Seller's ordinary course of business, and the Seller shall use commercially reasonable efforts to secure the proper operation of all key assets and prevent any Material Adverse Effects on the Target Assets. If the Seller has knowledge of any incident that may lead to any Material Adverse Effects on the Target Assets, it shall promptly notify the Purchaser and negotiate with the Purchaser within 10 Days upon the discovery of such incident.
- 6.4 As of the Execution Date, if the Seller needs to complete internal reorganization of certain assets, Liabilities and personnel outside the Target Assets, the Seller shall use reasonable best efforts to complete such internal reorganization prior to the Closing Date and handover the Target Assets to the Purchaser pursuant to the terms hereof. If, due to reasons beyond control of the Parties, the Seller fails to complete the above mentioned internal reorganization prior to the Closing Date, the Parties shall separately negotiate a plan to complete the internal reorganization as soon as possible by a practicable date after the Closing Date. If the Seller is unable to handover any part of the Target Assets due to the failure to complete its internal reorganization, the Parties shall negotiate a solution separately.

6.5 In order to secure the smooth operation and transition of the Target Assets and personnel in relation thereto, the Parties hereby agree to establish a joint work organization to perform their responsibilities respectively. The Parties shall negotiate separately the scope of work of the joint work organization.

7. REPRESENTATIONS AND WARRANTIES OF THE SELLER

7.1 As of the Execution Date and the Closing Date, and immediately prior to the handover of the Target Assets, the Seller makes the following representations and warranties to the Purchaser that, subject to the disclosure otherwise made hereunder:

- (1) it is a company limited by shares with full civil capacity in accordance with PRC law, with right, power and legal capacity to enter into this Agreement and perform all the obligations and responsibilities under this Agreement. The execution and performance of the Agreement by the Seller will not conflict with, or violate:
 - i. the provisions of its internal constitutional documents and other relevant documents, or any applicable laws, regulations or rules;
 - ii. orders, judgments and decrees issued by any court, governmental authorities and regulatory authorities prior to the execution of this Agreement;
 - iii. any necessary procedures required by applicable laws and/or binding agreements and documents, except for those not having a Material Adverse Effect on the Purchaser's operation of the Target Assets.
- (2) it has obtained the necessary licenses, authorizations and approvals for the execution and performance of this Agreement in accordance with the current laws and regulations, and will take all practicable measures to obtain such licenses, authorizations and approvals essential for the performance of the Agreement but not yet obtained.
- (3) all the representations and warranties set forth in Appendix 5.
- (4) the Seller will complete the Closing and handover as soon as possible in accordance with the terms and conditions hereunder.
- (5) if certain unforeseeable condition occurs to the Seller after the Execution Date but prior to the Closing Date, which will cause any aspect of any representations, warranties and covenants that is material to the financial or operational condition of the Target Assets to become untrue, inaccurate or misleading, the Seller shall give a written notice to the Purchaser within 15 Days after it becomes aware of the above-mentioned changes.

- (6) prior to the completion of the Handover, except for the internal reorganization made by the Seller pursuant to Article 6.4 of this Agreement within the scope of Target Assets, or the normal provision of depreciation and amortization, depletion, abandonment, recovery of accounts receivable, settlement of due liabilities, Transferring Construction in Progress into Fixed Assets and other ordinary disposal situations in the process of production and operation, the Seller undertakes that it will not make decisions to implement the following conducts: making material adjustment to the Target Assets, setting up external guarantees on Target Assets, make material business change in relation to Target Assets or adjust principal business, making material adjustment to accounting principles related to the Target Assets (except as required by laws and regulations) and other conducts that will cause Material Adverse Change to the ordinary operation of the Target Assets.

8. REPRESENTATIONS AND WARRANTIES OF THE PURCHASER

8.1 As of the Execution Date and the Closing Date, and immediately prior to the Handover of the Target Assets, the Purchaser makes the following representations and warranties:

- (1) it is a limited liability company with full civil capacity in accordance with PRC law, with right, power and legal capacity to enter into this Agreement and perform all the obligations and responsibilities under this Agreement. The execution and performance of this Agreement will not conflict with, or violate
 - i. the provisions of its internal constitutional documents and other relevant documents, or any applicable laws, regulations or rules;
 - ii. orders, judgments and decrees issued by courts, governmental authorities and regulatory authorities before the execution of the Agreement;
 - iii. any necessary procedures required by applicable laws and/or binding agreements and documents prior to the Closing Date.
- (2) it has obtained the necessary licenses, authorizations and approvals for the execution and performance of this Agreement in accordance with the current laws and regulations, and will take all practicable measure to obtain licenses, authorizations and approvals essential to the performance of the Agreement but not yet obtained.
- (3) the Purchaser will pay Transaction Consideration subject to the terms and conditions of this Agreement and complete the Closing and handover as soon as possible.

- (4) the Purchaser will operate in the ordinary course of business, enter into business contracts following general commercial principles and on the basis of fair and reasonable commercial terms, and make Commercially reasonable efforts to ensure the smooth operation of all key assets, to ensure (i) there will be no Material Adverse Effects on the Purchaser's operation, (ii) the service quality will not be lower than the existing standards, and (iii) there will be no significant adverse acts or omission affecting the normal use of the Target Assets by the Seller for production and operation, provided, that for any Purchaser's failure to fulfil the representation and warranties under this paragraph due to the facts or circumstances existing before the Closing Date (subject to the decisions of the judicial authorities or government authorities), the Parties shall amicably negotiate a solution in good faith.
- (5) if certain unforeseeable condition occurs to the Purchaser after the Execution Date but prior to the Closing Date, which will cause any material aspect of any representations, warranties and undertakings to become untrue, inaccurate or misleading, the Purchaser shall give a written notice to the Seller within 15 Days after it becomes aware of the above-mentioned changes.

9. LIABILITIES FOR BREACH OF THE AGREEMENT

- 9.1 If any representations and/or warranties made by any Party hereunder contains, in any material aspects, intentional misrepresentations, intentional omission or misleading statements, or is in breach of any covenants made therein, or if any Party is in breach of any agreements or other terms hereunder, such Party shall be deemed to have breached this Agreement, and be responsible to indemnify direct damages incurred by the non-defaulting Party.
- 9.2 If the Seller refuses to hand over the Target Assets and relevant businesses and employees thereunder within the agreed time limit pursuant to the terms of this Agreement, the Seller shall pay an overdue penalty amounting to 0.05% of the consideration for the assets failed to be handed over as agreed per day, except for the cases where the delayed handover of the Target Assets is not due to the Seller's faults (including but not limited to third-party reasons, Force Majeure or any reasons due to the Purchaser), provided, that the liabilities to be borne by the Seller as a result of failure to complete handover for any given Target Asset(s) under this article shall not, in aggregate, exceed 1% of the appraised value of such Target Asset(s).
- 9.3 If the Purchaser fails to pay the consideration pursuant to the terms of this Agreement, the Purchaser shall pay an overdue penalty amounting to 0.05% of the overdue consideration to the Seller per day, except for the cases where such failure are due to the Seller's faults.

10. THIRD-PARTY CLAIMS AND ADMINISTRATIVE PENALTIES

- 10.1 Any controversy, dispute and administrative penalty (if any) occurs after the Closing Date that arises from the reasons and facts in relation to the Target Assets before the Closing Date shall be resolved in accordance with the principles under Article 5.2 of the Agreement.

10.2 If a Party is aware of any litigation, arbitration or controversy raised by a Third Party, it shall promptly notify the other Party and make all reasonable efforts to avoid and mitigate losses.

11. ANNOUNCEMENT

11.1 Without prior consent of the other Party (which shall not be unreasonably withheld or delayed), neither Party (and any of their respective Affiliates) shall publish any announcement or issue any circular regarding the existence of the Agreement (or any other transaction document) or its subject matters.

11.2 If the laws or a stock exchange with appropriate jurisdiction or any regulatory or other supervisory institutions or authorities require (regardless of the validity of such requirements) the issuance of any notice, announcement or circular, the restrictions under Article 11.1, Article 12.1 and Article 12.5 shall not be applied.

12. CONFIDENTIALITY

12.1 The information provided by the Party of the Agreement who owns the information (the "Provider") to the other Party (the "Recipient") in accordance with this Agreement, including but not limited to any material related to the Target Assets or terms and relevant negotiations under this Agreement and other transaction agreements (hereinafter collectively as "Confidential Information"), shall only be used by the Recipient and its personnel for the purpose of this Agreement. Except as otherwise provided in this Agreement, for any Confidential Information provided by the Provider, the Recipient and its personnel who are aware of the Confidential Information shall not directly or indirectly provide, disclose or otherwise transfer to any Third Party, or permit Third Party to use, or provide any opinion or suggestion to any Third Party using, the Confidential Information without written consent of the Provider. In this Article, the "Third Party" refers to any natural person, legal person or other organizations other than the Parties to the Agreement, other than the Affiliates of the Parties.

12.2 Confidential Information provided or disclosed by the Provider to the Recipient shall only be disclosed by the Recipient to certain of its designated employees for the purpose of the performance of this Agreement, and such disclosure shall be made only within the scope required for such performance, provided, that the Recipient shall not disclose any Confidential Information to such employees without taking all reasonable precautions, which includes but not limited to notifying the confidential nature of the information to be disclosed to such employees and have such employees make confidential commitments as at least strict as the confidential obligations of the Agreement, so as to prevent such employees from using Confidential Information for personal interests or making any unauthorized disclosures to any Third Parties. Any violation of the confidentiality obligations by the Recipient's employees shall be deemed as the violation of the confidential obligations by the Recipient.

12.3 Where the Recipient's lawyers, accountants, contractors and consultants need to know the Confidential Information to provide professional assistance, the Recipient may disclose Confidential Information to such parties, provided that it shall require the above-mentioned parties to enter into confidential agreements or to perform confidential obligations in accordance with relevant professional ethical standards.

- 12.4 If the securities regulatory rules of the place(s) where the Company's shares are listed, or relevant governmental or regulatory authorities require the Recipient to disclose any Confidential Information, the Recipient may disclose within the scope required by such securities regulatory rules or governmental or regulatory authorities without being subject to liabilities hereunder, provided, that the Recipient shall immediately notify the information to be disclosed to the Provider in writing so that the Provider may take necessary protective measures, and such notification shall be made to the extent possible before the information is disclosed. The Provider shall cooperate to provide to the Recipient the materials and information needed for the purpose of publishing announcements or circulars.
- 12.5 The term of the confidential obligations under this Article is three years.
- 12.6 The confidential obligations under this Article do not apply to the following information:
- (1) Information that is publicly available when disclosed by one Party, or becomes publicly available after the disclosure (other than due to the negligence of the Recipient or its employees, lawyers, accountants, contractors, consultants or other personnel);
 - (2) Information was, as proved by written evidence, already known by the Recipient upon the disclosure by the Provider, which did not come directly or indirectly from the Provider;
 - (3) Information was, as proved by written evidence, already disclosed by a Third Party to the Recipient, which does not have confidential obligations and is entitled to make the disclosure.
- 12.7 When the Agreement is rescinded or terminated, the Recipient shall immediately cease using and shall not permit any Third Party to use the Confidential Information provided by the Provider, and, upon the Provider's written request, shall delete or destroy the Confidential Information provided by the Provider or return to the Provider, without retaining any information in any form.
- 13. NO ASSIGNMENT**
- 13.1 Except as contemplated hereunder or with written consent by the Parties, no one shall transfer, assign or otherwise dispose all or part of its rights under this Agreement, nor shall it grant, establish or dispose any rights, interests or obligations therein. Any transfer in conflict with this Article is invalid.
- 14. FURTHER ASSURANCE**
- 14.1 The Parties shall each execute (or cause to be executed) other documents as required by relevant laws and regulations or deemed necessary for the effectiveness or performance of this Agreement or make the Agreement valid.

15. TAXES AND EXPENSES

- 15.1 The Parties shall bear and pay all taxes arising under this Agreement or any other Transaction Documents in accordance with laws, regulations and relevant rules or decisions, and all fees collected by governmental authorities, regulatory institutions and stock exchanges.
- 15.2 Subject to Article 15.1, unless otherwise provided hereunder (or under any other Transaction Documents), each Party shall be responsible for its own costs, expenses and other payments incurred in relation to the Transaction.
- 15.3 With respect to the Transaction, unless otherwise required by laws and regulations and/or agreed by the Parties, all expenses incurred due to the transfer of the Target Assets shall be reasonably arranged and resolved through negotiation by and between the Parties.
- 15.4 The Parties shall negotiate amicably, and deal with tax matters regarding the transfer of the Target Assets in accordance with Value-Added Tax ("VAT") Regulations and relevant regulations. If the PRC taxation authority believes that the Transaction is within the VAT taxation scope, the Seller shall take the appraised asset value as the VAT-excluded price and invoice the Purchaser based on such price at the tax rate provided by relevant tax laws, and the Purchaser shall pay the price with tax included.

16. NOTICE

- 16.1 Any notice related to this Agreement shall be written in Chinese, and delivered via designated courier, fax, email or express delivery by a courier company recognized by both Parties. The notice is effective upon receipt and is deemed to have been received at the following time: (a) if via designated courier or express delivery, on the third day after it is delivered to the recipient or sent out by the courier company; (b) if via fax, at the time the sender sends the notice with the notice showing that it has been delivered; or (c) if via email, when the relevant email reaches that recipient's email address. In each case, if it is delivered out of the business hours, the notice shall be deemed to be received at the beginning of the business hours on the next business day.
- 16.2 For the purposes of Article 16.1, contact information such as the addresses of the Parties are set forth in Appendix 4.

17. CONFLICT WITH OTHER AGREEMENTS

- 17.1 The Agreement and its appendices constitute all the legal document with respect of the Transaction. If any oral discussion and written agreement entered into by the Parties before the execution of the Agreement is inconsistent with the Agreement, the content of the Agreement shall prevail, unless the Parties expressly agreed otherwise.

18. WAIVER, RIGHTS AND REMEDIES

- 18.1 Unless otherwise expressly provided in the Agreement, no waiver, failure or delay by any Party in exercising any right, power or remedy hereunder or under any other Transaction Documents shall be deemed as a waiver thereof, nor shall preclude any future exercise of such right, power or remedy and no single or partial exercise of any such right, power or remedy shall preclude any other or future exercise thereof.

19. TEXTS

- 19.1 This Agreement is prepared in Chinese. The Agreement is made in nine originals with each Party holding three copies, and the remaining copies reserved for approvals and/or filings by the governmental authorities. The aforementioned texts of the Agreement have the same legal effect.

20. EFFECTIVE DATE AND AMENDMENT

- 20.1 This Agreement shall be established upon the execution by the legal representatives or authorized representatives of the Parties and the affixation of the official chops of both Parties, and shall enter into force upon the satisfaction of the following conditions:

- (1) the Purchaser's shareholder has decided to approve the Transaction;
- (2) the Seller's board of directors and the shareholders' meeting of the Seller's controlling shareholders have approved the Transaction.

- 20.2 Upon the date of establishment of this Agreement, Articles 11 (Announcement), 12 (Confidentiality), 13 (No assignment), 15 (Taxes and expenses), 16 (Notice), 17 (Conflict with other agreements), 18 (Waiver, rights and remedies), 20 (Effective date and amendment), 21 (Invalidity), 22 (Jurisdiction and arbitration) and Appendix 1 (Definition and interpretation) shall be legally binding upon the Parties.

- 20.3 Upon the execution of this Agreement, any amendment to this Agreement (or any other Transaction Document) shall be made in writing, and effective upon the execution by the legal representatives or authorized representatives of the Parties and the affixation of the official chops of both Parties. For affairs uncovered, the Parties shall otherwise agree by signing supplemental agreements in writing.

21. INVALIDITY

- 21.1 The provisions of this Agreement and other Transaction Documents are severable. If any such provision is deemed to be or become invalid or unenforceable in any respect in accordance with laws and regulations, it shall be ineffective in that respect, and the Parties shall make reasonable efforts to replace such provision with a valid and enforceable alternative provision whose effect is as close as possible to the intended.

22. JURISDICTION AND ARBITRATION

- 22.1 This Agreement is governed by, and shall be interpreted in accordance with, the PRC laws and regulations.
- 22.2 The Parties shall use good faith to resolve any dispute, controversy or claim ("Dispute") arising from, or in connection with the interpretation or performance of this Agreement through amicable negotiation, during which the Parties may consult the regulatory authority. If a settlement cannot be reached through negotiation within sixty Days after one Party has brought the matter to the other Party, the Parties may refer such matter to arbitration.
- 22.3 The Dispute shall be submitted to China International Economic and Trade Arbitration Commission ("CIETAC") for arbitration in accordance with its rules in force at the time of arbitration. The Dispute shall be decided by three arbitrators. Each Party shall appoint one arbitrator, and the third arbitrator shall be appointed by the other two arbitrators, provided that if the other two arbitrators cannot decide on the choice of the third arbitrator, such arbitrator shall be appointed by CIETAC.
- 22.4 The arbitration proceedings shall be presided over by CIETAC as the presiding authority and shall be conducted in Chinese. The arbitration proceedings shall be held in Beijing.
- 22.5 The arbitration award made in accordance with the above arbitration procedures shall be final and binding upon the Parties, and shall be enforceable in accordance with its provisions.
- 22.6 The arbitration fees shall be borne by the losing Party. The Parties agree that if it is necessary for one party to enforce the arbitral award through legal proceedings of any type, the Party subject to enforcement shall pay all reasonable fees and expenses as well as legal fees in connection with the enforcement of the arbitral award.
- 22.7 During the dispute resolution, the Parties shall continue to implement this Agreement in all other aspects except for the matter in dispute.

23. FORCE MAJEURE

- 23.1 In the event of a Force Majeure event that either Party is in whole or in part unable to perform its obligations under this Agreement due to the influence of such event, it shall be exempted from the liabilities in whole or in part according to the circumstances affected by Force Majeure. The performance of the obligations by the Parties under this Agreement may be suspended during the delay period caused by Force Majeure, and shall be automatically extended for a period equal to the delay period. The Party suffering from Force Majeure shall notify the other Party in writing as soon as possible and provide valid proof documents certifying the occurrence and time of Force Majeure within 15 Days. The Party suffering from Force Majeure shall take all reasonable measures to mitigate the consequences of Force Majeure as soon as possible. In the event of a Force Majeure event, the Parties shall negotiate immediately in order to find a fair solution and make their best effort to mitigate the consequences caused by Force Majeure.

(The remainder is intentionally left blank. Appendices and signature pages to follow)

The Parties have executed the “Agreement on Cash Payment to Purchase Related Assets of Oil and Gas Pipelines” on the date indicated at the beginning of the document as a proof.

/s/ China Oil & Gas Pipeline Network Corporation (Official Seals)

(Signed by Legal Representative or Authorized Representative)

The Parties have executed the “Agreement on Cash Payment to Purchase Related Assets of Oil and Gas Pipelines” on the date indicated at the beginning of the document as a proof.

/s/ Sinopec Marketing Co., Limited (Official Seals)

(Signed by Legal Representative or Authorized Representative)

Appendix 1: Definition and Interpretation

1. Definition. The following defined terms shall have corresponding meanings ascribed to it as set forth below in the table.

This Agreement	means this Agreement on Cash Payment to Purchase Relevant Oil and Gas Pipeline Assets
Purchaser/PipeChina	means China Oil & Gas Pipeline Network Corporation
Seller/Sinopec Marketing	means Sinopec Marketing Co., Limited
This Transaction	means, as contemplated hereunder, the proposed sale by the Seller of the Target Assets as set forth in the Appendix 2 owned by the Seller, and the proposed acquisition and takeover by the Purchaser of such Target Assets subject to the terms and on the conditions hereunder.
Target Assets/Appraised Assets	means, as defined by Article 1.1, the non-equity assets including 41 refined oil pipelines and their auxiliary facilities, 4 oil storages, independent stations and detachable oil transportation and production facilities of non-independent stations, and pipeline inventory, etc., as set forth in Appendix 2 of this Agreement
Target Assets List	means the assets list set forth in the Appendix 2.
Transaction Consideration/Cash Consideration	has the meaning set forth in Article 2.
Valuation Date	means the valuation date set forth in the Valuation Report, i.e., December 31, 2019
Valuation Report	means the Report with Respect to the Purchase by China Oil & Gas Pipeline Network Corporation of Certain Oil and Gas Pipeline Assets owned by Sinopec Marketing Co., Limited through Payment of Cash, numbered “Zhong Lian Ping Bao Zi [2020]898” issued by China United Assets Appraisal Group Co., Ltd. on July 23, 2020.
Execution Date	means the date when the legal representative or authorized representative of the Parties execute this Agreement and affix the official chops of the Parties.
Closing	means the closing set forth in Article 5.
Closing Date	means September 30, 2020.
Transition Period	means the period starting from the Valuation Date through the Closing Date.
Handover	means the handover of Target Assets, personnel, relevant materials and agreements by the Parties pursuant to Appendix 3 and subsequent agreements.
Completion of Handover	means, except for otherwise agreed by the Parties, the employment relation of the relevant responsible person has been transferred to the Purchaser.

Transaction Documents	means this Agreement and all appendix thereto, any supplemental agreements entered by and between Parties from time to time, Target Assets list, and the Valuation Report (including the specifics of the Appraised Assets) and other relevant documents.
Closing Conditions	means closing conditions set forth in Article 4.1, and a “Closing Condition” means any one of such Closing Conditions.
Third Party	means any entity or individual other than the Parties hereunder.
Assignable Agreement	shall have the meaning in Article 5.4(2).
Nonassignable Agreement	shall have the meaning in Article 5.4(2).
Representative(s)	means, with respect to a Party and/or its Affiliates, its and/or its Affiliate’s director, senior management, employee, agent, counsel, accountant and consultant.
Transferring Construction in Progress into Fixed Assets	means, after the completion of the construction in progress, and upon the final acceptance of the construction, the construction in progress is put into use and be recorded as fixed assets on the book(s) of the Seller.
Affiliates	means, with respect to any Party, any entity controlled by such Party, controlling such Party or under common control with such Party.
Liability/Liabilities	means all current or future, actual, potential, debitive or uncertain, liability, obligation and debts in all nature, incurred as a result of agreements, operations of law or other reason, and incurred jointly or separately either as a debtor or a guarantor.
Material Adverse Change/Material Adverse Effect	means incident(s) that, individually results in an actual or reasonable foreseeable loss of no less than RMB3.6 billion to the assets sold by the Seller and its Affiliates to the Purchaser and business in relation thereto, or in aggregate result in an actual or reasonable foreseeable loss of no less than RMB6 billion to the assets sold by the Seller to the Purchaser and business in relation thereto.
Major Loss(es)	means, accumulative and actual losses of more than RMB6 billion to the assets sold by the Seller to the Purchaser and business in relation thereto.
CIETAC	has the meaning set forth in Article 22.3.

Intellectual Property Rights	means patents, trademarks, service marks, company logos, trade names, domain names, design rights, copyrights (including but not limited to computer software copyrights) and database rights, semiconductor circuit rights, utility models, design rights, invention rights, proprietary technology rights, and other intellectual property rights (regardless of whether it has been registered or not) and all rights or forms of protection that have equivalent or similar utility anywhere in the world, and the term “registration” includes registration and application for registration.
Tax	shall include (a) taxes levied on total or net income, profits and gains, and (b) all other taxes, levies, tariffs, import taxes, charges and withholding taxes (if applicable) of any nature, including any consumption tax, value-added tax and its additional taxes, corporate income tax, personal income tax (if applicable), real estate tax, land value-added tax, deed tax, farmland occupation tax, urban land use tax, environmental protection tax, stamp duty, etc., or withholding of any nature (including any related fines, penalties, late fees or interest).
Confidential Information	shall have the meaning in Article 12.1.
Force Majeure	means unforeseeable, unavoidable and insurmountable objective conditions, including natural disasters such as earthquakes, typhoons, floods, and heavy rains (subject to the information issued by the local government or functional management departments such as meteorology), fires, wars, epidemic, any government actions, any changes and promulgation of laws, etc., that directly affects the performance of this Agreement (or cause the performance of this Agreement deviates from the terms thereunder).
PRC/China	means the People’s Republic of China (for the sole purpose of this Agreement, excluding Hong Kong Special Administrative Region of China, Macao Special Administrative Region of China and Taiwan).
RMB	means the legal currency of China.
Day(s)	means, unless otherwise specified, calendar days, provided that in any circumstances, if the last day of a given period hereunder is a holiday, then the last day of such period shall be the next day immediately following such holiday. Unless otherwise specified, “prior to a certain day” shall mean a period ending on such day, while “after a certain day” shall mean a period starting from the next day of such day.
Business Day(s)	means any day other than a Saturday, Sunday or a national holiday determined by the PRC government.

2. Interpretation. Unless otherwise specified, under this Agreement:

- (1) a “person” shall mean any individual, business name, organization, company (whether legal person or not), government (including but not limited to central and local governments and their constituent departments), any joint venture, association, partnership enterprises, institutions, work councils or employee representative organizations (regardless of whether they have independent legal personality or not);
- (2) an “Article” shall be an article hereunder;
- (3) headings are set for the ease of references only and shall not affect the interpretation of this Agreement;
- (4) in order to facilitate the payment in RMBs, any other amounts denominated in foreign currencies shall be converted into RMBs at the exchange rate on such date;
- (5) words introduced by terms like “including,” “includes” or “especially” or other similar terms shall be deemed as explanatory only and does not limit the meaning of the words prior to such term; and
- (6) for laws and regulations, including laws, administrative regulations, administrative rules, local regulations, etc., unless otherwise expressly provided in this Agreement, any explicit reference to a regulation (including any regulation in any jurisdiction) shall include: (a) the laws and regulations as revised, merged or re-enacted before or after the Execution Date; (b) the laws and regulations that were re-promulgated (whether revised or not); and (c) any supplementary regulations (including regulations) formulated in accordance with the laws and regulations (before or after the Execution Date) that have been revised, merged or re-enacted as described in paragraph (a) or (b) above, unless any matters mentioned in paragraphs (a) to (c) appear after the date of the Execution Date, and increase or change the Purchaser’s or Seller’s responsibilities hereunder.

3. Appendix. Appendices shall be deemed as an integral part of this Agreement. If there is any inconsistency between the Appendix and main text, the main text shall prevail.

4. Inconsistence. If any defined terms in this Appendix 1 is inconsistent with any articles or terms set forth in other Appendices, for the interpretation of such Articles or Appendices, the definition in such Articles or Appendix.

Appendix 2: Target Assets, Appraised Value, Pricing and Payment of Consideration

Appendix 3: Handover Working Procedure for Handover

Appendix 4: Account and Contact Information

Appendix 5: Seller Representations and Warranties

China Oil & Gas Pipeline Network Corporation

AND

Sinomart KTS Development Limited

Agreement on Cash Payment to Purchase 100%
Equity in Sinopec Yu Ji Company

July 2020

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This agreement ("Agreement") is entered into by and between the following parties in Beijing of People's Republic of China ("PRC") on July 21, 2020.

The Purchaser:

Name: China Oil & Gas Pipeline Network Corporation ("PipeChina")

Legal Representative: ZHANG Wei

Registered Address: Room 08-10, 6/F Block A, 5 Dongtucheng Road, Chaoyang District, Beijing

The Seller:

Name: Sinomart KTS Development Limited

Legal Representative: YE Zhijun

Registered Address: 34/F, Citicorp Centre, 18 Whitfield Rd, Causeway Bay, Hong Kong

Each defined term in the Agreement shall have the meaning ascribed to it as set forth in the Appendix 1 to the Agreement.

WHEREAS:

- (A) As of the date hereof, the registered capital of the Purchaser is RMB20 billion, and its scope of business includes pipeline transportation; storage services; equipment import; technology import and export; technology research; informatization research and application; technology consulting, technology services, technology transfer, technology promotion. 100% of registered capital in Purchaser is held by the State Council.
- (B) As of the date hereof, the Seller is a limited liability company duly incorporated and validly existing under the laws of Hong Kong, and a wholly-owned subsidiary of Sinopec Kantons Holdings Limited (a Hong Kong listed company), and holds 100% of equity interests in Sinopec Yu Ji Pipeline Company Limited (the "Target").
- (C) As of the date hereof, the Target is a limited liability company established and validly existing under the laws of the PRC with a registered capital of RMB1,000,000,000, 100% equity interests of which is held by the Seller.
- (D) Following the principle of voluntariness, and subject to and pursuant to the terms and conditions herein, the Purchaser intends to purchase, and the Seller intends to sell to the Purchaser, 100% equity interests of the Target held by the Seller (the "Transaction").

The Seller and the Purchaser shall be referred to hereinafter each as a "Party," and collectively, the "Parties."

NOW, THEREFORE, in consideration of the purpose of this Transaction, based on friendly negotiation and to achieve mutual benefits, the Parties have reached the arrangement as the following:

1. TARGET ASSETS

- 1.1 The target asset of the Transaction is 100% equity interests in the Target, other than the Excluded Assets set forth under Article 1.2 of this Agreement (the "Target Assets").
- 1.2 As contemplated in the Transaction, certain assets owned by the Target (including without limitation the Qingfeng Line of Yulin-Jinan Pipeline, Office Building Properties, and ancillary facilities of Henan Management Office, collectively hereinafter the "Excluded Assets") are not included in the scope of the appraisal for 100% equity interests in the Target and, as of the date hereof, the Target has entered into an agreement with certain Third Party in relation to the sale of the Excluded Assets (the "Excluded Assets Sale Agreement"), pursuant to which the Target will receive consideration of RMB179,139,100 for the sale of the Excluded Assets (the "Sale Price of the Excluded Assets") prior to the Closing of the Transaction.

2. TRANSACTION CONSIDERATION AND PAYMENT METHOD

- 2.1 According to the Valuation Report, the appraised value of the Target Assets with respect to the Transaction is RMB3,220,388,400.
- 2.2 After negotiation, the Parties agreed that the Transaction Consideration to be paid by Purchaser for the purchase of the Target Assets under this Transaction is RMB3,220,388,400, provided, that the final consideration to be paid for the Target Assets shall be its appraised value with the approval/filing procedures performed in accordance with PRC laws and regulations.
- 2.3 The Parties hereby agree that the Purchaser shall to pay the Transaction Consideration to the Seller in cash to purchase 100% of equity interests in the Target.
- 2.4 The Parties hereby agree that, for the Transaction Consideration, the Purchaser shall pay 90% of the aggregate Transaction Consideration under the Transaction by October 23, 2020 (inclusive), as well as the interest thereof as calculated at the rate of demand deposits of the bank for the same period from October 1, 2020 until the payment receipt date. The Purchaser shall pay the remaining 10% of Transaction Consideration within 15 Business Days from the issuance of the Closing Audit report as set forth in Article 3.2, as well as the interest thereof as calculated at the rate of the demand deposits of the bank for the same period from October 1, 2020 until the payment receipt date. If, due to reasons with respect to the governmental review and approval, the Purchaser has not completed the payment by the deadline above, the deadline for payment shall be postponed accordingly, but under no circumstances shall such postponement exceed 5 Business Days.
- 2.5 Unless otherwise notified in writing, the Transaction Consideration payable under the Transaction shall be paid by the Purchaser pursuant to Article 2.4 hereunder to Seller's designated bank account (details as set out in Appendix 4).

3. PROFIT AND LOSS DURING THE TRANSITION PERIOD

3.1 The Transition Period shall refer to the period from the Valuation Date (exclusive) to the Closing Date (inclusive) under this Agreement.

3.2 The Parties hereby agree that, within 60 Days from the Closing Date, the Parties shall perform an audit on the Target and have an auditor's report issued ("Closing Audit") to determine the profit and loss of the Target during the Transition Period (for the avoidance of doubt, such profit and loss shall include the profit and loss of the Target Assets during the Transition Period, the Sale Price of the Excluded Assets and profit and loss incurred from the sale of Excluded Assets). Such Closing Audit shall be completed by an accounting firm with securities and futures business qualifications jointly appointed by the Parties, the audit fees for which shall be borne by the Parties at a 50-50 split.

Such profit and loss mentioned above shall be enjoyed and borne by the Seller, with each amount to be determined by the Closing Audit report and to be paid in cash. The payment shall be made within 15 Business Days after the issuance date of the Closing Audit report pursuant to Article 3.2 of this Agreement.

4. CONDITIONS PRECEDENT

4.1 The Closing is conditioned upon the following Conditions Precedent being satisfied or waived by applicable parties/governmental authorities (if applicable):

- (1) The representations, covenants and warranties made by the Parties on the Execution Date shall have remained true, accurate and complete, without misleading statements, misrepresentations and material omissions in all material respects as of the Closing Date;
- (2) The Seller and its sole shareholder Sinopec Kantons Holdings Limited shall have approved the Transaction in accordance with their constitutional document, respectively, and has been approved by the relevant regulatory authorities (including but not limited to the Hong Kong Stock Exchange) in accordance with relevant regulations, such as the Hong Kong Listing Rules;
- (3) The Purchaser shall have approved the Transaction in accordance with its constitutional document;
- (4) Declaration of concentration of business operators in respect of the Transaction shall have been filled and approved;
- (5) The Valuation Report on the Target Assets under this Agreement shall have been approved or filed in accordance with the PRC laws and regulations;
- (6) All other applicable approvals, permits, filings and registrations from or with the relevant authorities with respect to the Transaction shall have been obtained or completed.

For the Conditions Precedent above, the Seller is responsible for condition (2), the Purchaser is responsible for condition (3), and both Parties are responsible for conditions (1), (4) (5) and (6). For the avoidance of doubt, the Condition Precedent to be solely handled by one Party can only be waived by the other Party, provided that conditions (2), (3), (4), (5) and (6) cannot be waived.

4.2 The Parties hereby agree to cause all the Conditions Precedent as set forth under Article 4.1 to be satisfied as soon as practicable prior to the Closing Date. If the satisfaction of any Conditions Precedent applicable to one Party needs the assistance from the other Party, the other Party shall provide such assistance. The Parties shall remain in communication on the matters in relation to each Condition Precedent, and coordinate and solve the problems encountered during this process in a timely manner. After the Execution Date, neither Party shall engage in any conduct with the purpose to prevent or restrict the satisfaction of each Condition Precedent set forth under Article 4.1.

5. CLOSING AND HANDOVER

5.1 The Parties hereby confirm and agree that, the ownership of, and the obligations, responsibilities and risks in relation to, the Target Asset shall be transferred from the Seller to the Purchaser at 24:00 on September 30, 2020 (the "Closing Date").

5.2 Transfer of Target Assets and relevant responsibilities on the Closing Date. Upon 24:00 on the Closing Date, the Target Assets and the businesses and employees in relation thereto shall be deemed received and lawfully owned by the Purchaser on an "as-is" basis, and the obligations, responsibilities and risks in relation to the Target Assets shall be assumed by the Purchaser. Unless otherwise stipulated hereunder, after the Closing Date (excluding the Closing Date), the obligations, responsibilities and risks in relation to the Target Assets shall no longer be assumed by the Seller.

Within three years after the Closing Date, for any Major Loss(es) incurred by the Purchaser as a result of Third-Party Claims or administrative penalties arising from any violation of the law by the Seller prior to the Closing Date in the operation and management of the Target Assets/Target Companies or any major defect of the Target Assets (except for those have been disclosed to the Purchaser and reflected in the financial accounts, audit reports and Valuation Reports of the Seller and the Target Companies), the Parties shall amicably negotiate a solution in good faith.

5.3 The Parties shall work together to assist the Target to complete the change of the registration with Administration for Market Regulation with respect to the Target Assets within no later than 30 Days from the Closing Date, including but not limited to the completion of procedures of registration of change of shareholders, filing of amendment to articles of association, change of directors, supervisors and senior management and filing with Administration for Market Regulation, change of company's name (excluding words like "Sinopec") and other Administration for Market Regulation registration/filing procedures. The Handover obligation under this Agreement shall be deemed to have been completed by Target's obtaining of a new business license (the "Handover").

- 5.4 The Parties hereby agree that the transfer of the employees and other personnel in relation to the Target Assets shall be completed following the general principle of “personnel go with assets (business),” and in accordance with the management memorandum with respect to the transfer of personnel to be entered into as appropriate.
- 5.5 If the Target Assets have the trademark or logo of the Seller, the use of such Target Assets by the Purchaser after receiving the Target Assets and before such trademark or logo is removed shall not be deemed as infringement to the Seller’s relevant Intellectual Property Rights or goodwill. The Seller shall remove any and all related trademark and logo within six months after the Closing Date. Starting from the Closing Date, any and all legal liabilities arising from the Target Assets (including but not limited to any liability for tort and breach of contract) shall be borne by the Purchaser even if the Target Assets have the trademark or logo of the Seller.
- 6. ARRANGEMENT ON HANDOVER**
- 6.1 The Parties hereby agree to cooperate with each other and use their reasonable efforts to prepare, provide and submit all the necessary documents in a timely manner so as to complete all the necessary applications, notices, requests, filings and other documents, and to obtain as soon as practicable all the licenses, consents, approvals and authorizations necessary or applicable to the Closing of this Transaction from all the Third Parties and governmental authorities. For the avoidance of doubt, the Purchaser shall lead and take responsibility for organizing the declaration of concentration of business operators for this Transaction, and the Seller shall cooperate as necessary.
- 6.2 The Seller undertakes to, during the transition period, provide the Purchaser with all the necessary assistance for the inventory and handover of the Target Assets and personnel, allow the Purchaser’s Representatives, upon reasonable notice, to enter into the entities (and its premises) that manage or operate the Target Assets, and provide necessary information, materials and assistance to the Purchaser.
- 6.3 In order to secure the smooth handover and operations of the Target Assets and personnel, the proper operations of the business dependent on the Target Assets, and to maintain the quality of the service, so as to avoid Material Adverse Effects on the orderly operation of the Parties’ business, the Seller hereby agrees that, prior to the completion of the handover of the Target Assets, the Target Assets shall be operated in a manner following the Seller’s ordinary course of business, and the Seller shall use commercially reasonable efforts to secure the proper operation of all key assets and prevent any Material Adverse Effects on the Target Assets. If the Seller has knowledge of any incident that may lead to any Material Adverse Effects on the Target Assets, it shall promptly notify the Purchaser and negotiate with the Purchaser within 10 Days upon the occurrence of such incident.
- 6.4 As of the Execution Date, the Seller is undertaking internal reorganisation of the certain assets, Liabilities and personnel outside the Target Assets. The Parties agree that the Seller shall use reasonable best efforts to complete such internal reorganisation prior to the Closing Date and handover the Target Assets to the Purchaser pursuant to the terms hereof.

- 6.5 In order to secure the smooth operation and transition of the Target Assets and personnel in relation thereto, the Parties hereby agree to perform their responsibilities respectively to facilitate a smooth Handover.
7. REPRESENTATIONS AND WARRANTIES OF THE SELLER
- 7.1 As of the Execution Date and the Closing Date, and immediately prior to the Handover of the Target Assets, the Seller makes the following representations and warranties to the Purchaser that, subject to the disclosure otherwise made hereunder:
- (1) it is a company with limited liability with full civil capacity in accordance with Hong Kong law, with rights, power and legal capacity to enter into this Agreement and perform all the obligations and responsibilities under this Agreement. The execution and performance of the Agreement by the Seller will not conflict with, or violate:
 - i. the provisions of its internal constitutional documents and other relevant documents, or any applicable laws, regulations or rules;
 - ii. orders, judgments and decrees issued by any court, governmental authorities and regulatory authorities prior to the execution of this Agreement;
 - iii. any necessary procedures required by applicable laws and/or binding agreements and documents, except for those not having a Material Adverse Effect on the Purchaser's operation of the Target Assets.
 - (2) it has obtained the necessary licenses, authorizations and approvals for the execution and performance of this Agreement in accordance with the current laws and regulations, and will take all practicable measures to obtain such licenses, authorizations and approvals essential for the performance of the Agreement but not yet obtained.
 - (3) all the representations and warranties set forth in Appendix 3.
 - (4) the Seller will complete the Closing and Handover as soon as possible in accordance with the terms and conditions hereunder.
 - (5) if certain unforeseeable condition occurs to the Seller after the Execution Date but prior to the Closing Date, which will cause any aspects of any representations, warranties and covenants that is material to the financial or operational condition of the Target Assets to become untrue, inaccurate or misleading, the Seller shall give a written notice to the Purchaser within 15 Days after it becomes aware of the above-mentioned changes.
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- (6) prior to the completion of the Handover, except for the internal reorganisation in relation to certain assets, Liabilities and personnel outside the scope of Target Assets to be made by the Seller pursuant to Article 6.4 of this Agreement, or the normal provision of depreciation and amortization, depletion, recovery of accounts receivable, settlement of due liabilities, Transferring Construction in Progress into Fixed Assets and other ordinary disposal situations in the process of production and operation, the Seller undertakes that it will not make decisions to implement the following conducts: making material adjustment to the Target Assets, setting up external guarantees on Target Assets, make material business change in relation to Target Assets or adjust principal business, making material adjustment to accounting principles related to the Target Assets (except as required by laws and regulations) and other conducts that will cause Material Adverse Change to the ordinary operation of the Target Assets.

8. REPRESENTATIONS AND WARRANTIES OF THE PURCHASER

8.1 As of the Execution Date and the Closing Date, and immediately prior to the Handover of the Target Assets, the Purchaser makes the following representations and warranties:

- (1) it is a limited liability company with full civil capacity in accordance with PRC law, with right, power and legal capacity to enter into this Agreement and perform all the obligations and responsibilities under this Agreement. The execution and performance of this Agreement will not conflict with, or violate
- i. the provisions of its internal constitutional documents and other relevant documents, or any applicable laws, regulations or rules;
 - ii. orders, judgment and decrees issued by courts, governmental authorities and regulatory authorities before the execution of the Agreement;
 - iii. any necessary procedures required by applicable laws and/or binding agreements and documents prior to the Closing Date.
- (2) it has obtained the necessary licenses, authorizations and approvals for the execution and performance of this Agreement in accordance with the current laws and regulations, and will take all practicable measures to obtain licenses, authorizations and approvals essential to the performance of the Agreement but not yet obtained.
- (3) the Purchaser will pay Transaction Consideration subject to the terms and conditions of this Agreement and complete the Closing and Handover as soon as possible.
- (4) it shall complete the Handover as soon as possible pursuant to the terms hereunder.

- (5) if certain unforeseeable condition occurs to the Purchaser after the Execution Date but prior to the Closing Date, which will cause any mater aspect of any representations, warranties and undertakings to become untrue, inaccurate or misleading, the Purchaser shall give a written notice to the Seller within 15 Days after it becomes aware of the above-mentioned changes.

9. LIABILITIES FOR BREACH OF THE AGREEMENT

- 9.1 If any representations and/or warranties made by any Party hereunder contains, in any material aspects, intentional misrepresentations, omission or misleading statements, or is in breach of any covenants made therein, or if any Party is in breach of any agreements or other terms hereunder, such Party shall be deemed to have breached this Agreement, and be responsible to indemnify direct damages incurred by the non-defaulting Party.
- 9.2 If the Seller refuses to complete the Administration for Market Regulation registration process within the agreed time limit pursuant to the terms of this Agreement, the Seller shall pay an overdue penalty amounting to 0.05% of the Transaction Consideration for the assets failed to be handed over as agreed per day, except for the cases where the delayed handover of the Target Assets is not due to the Seller's faults (including but not limited to Force Majeure or any reasons due to the Purchaser), provided, that the liabilities to be borne by the Seller as a result of failure to complete handover for any given Target Asset(s) under this article shall not, in aggregate, exceed 1% of the appraised value of Target Assets.
- 9.3 If the Purchaser fails to pay the Transaction Consideration pursuant to the terms of this Agreement, the Purchaser shall pay an overdue penalty amounting to 0.05% of the overdue consideration to the Seller per day.

10. THIRD-PARTY CLAIMS AND ADMINISTRATIVE PENALTIES

- 10.1 Any controversy, dispute and administrative penalty (if any) occurs after the Closing Date that arises from the reasons and facts in relation to the Target Assets/Target before the Closing Date shall be resolved in accordance with the principles under Article 5.2 of the Agreement. If a Party is aware of any litigation, arbitration or controversy raised by a Third Party, it shall promptly notify the other Party and make all reasonable efforts to avoid and mitigate losses.

11. ANNOUNCEMENT

- 11.1 Without prior consent of the other Party (which shall not be unreasonably withheld or delayed), neither Party (and any of their respective Affiliates) shall publish any announcement or issue any circular regarding the existence of the Agreement (or any other transaction document) or its subject matters.
- 11.2 If the laws or a stock exchange with appropriate jurisdiction or any regulatory or other supervisory institutions or authorities require (regardless of the validity of such requirements) the issuance of any notice, announcement or circular, the restrictions under Article 11.1, Article 12.1 and Article 12.5 shall not be applied.

12. CONFIDENTIALITY

- 12.1 The information provided by the Party of the Agreement who owns the information (the “Provider”) to the other Party (the “Recipient”) in accordance with this Agreement, including but not limited to any material related to the Target Assets or terms and relevant negotiations under this Agreement and other transaction agreements (hereinafter collectively as “Confidential Information”), shall only be used by the Recipient and its personnel for the purpose of this Agreement. Except as otherwise provided in this Agreement, for any Confidential Information provided by the Provider, the Recipient and its personnel who are aware of the Confidential Information shall not directly or indirectly provide, disclose or otherwise transfer to any Third Party, or permit Third Party to use, or provide any opinion or suggestion to any Third Party using, the Confidential Information without written consent of the Provider. In this Article, the “Third Party” refers to any natural person, legal person or other organizations other than the Parties to the Agreement, other than the Affiliates of the Parties.
- 12.2 Confidential Information provided or disclosed by the Provider to the Recipient shall only be disclosed by the Recipient to certain of its designated employees for the purpose of the performance of this Agreement, and such disclosure shall be made only within the scope required for such performance, provided, that the Recipient shall not disclose any Confidential Information to such employees without taking all reasonable precautions, which includes but not limited to notifying the confidential nature of the information to be disclosed to such employees and have such employees make confidential commitments as at least strict as the confidential obligations of the Agreement, so as to prevent such employees from using Confidential Information for personal interests or making any unauthorized disclosures to any Third Parties. Any violation of the confidentiality obligations by the Recipient’s employees shall be deemed as the violation of the confidential obligations by the Recipient.
- 12.3 Where the Recipient’s lawyers, accountants, contractors and consultants need to know the Confidential Information to provide professional assistance, the Recipient may disclose Confidential Information to such parties, provided that it shall require the above-mentioned parties to enter into confidential agreements or to perform confidential obligations in accordance with relevant professional ethical standards.
- 12.4 If the securities regulatory rules of the place(s) where the Company’s shares are listed, or relevant governmental or regulatory authorities require the Recipient to disclose any Confidential Information, the Recipient may disclose within the scope required by such securities regulatory rules or governmental or regulatory authorities without being subject to liabilities hereunder, provided, that the Recipient shall immediately notify the information to be disclosed to the Provider in writing so that the Provider may take necessary protective measures, and such notification shall be made to the extent possible before the information is disclosed. The Provider shall cooperate to provide to the Recipient the materials and information needed for the purpose of publishing announcements or circulars.

- 12.5 The term of the confidential obligations under this Article is three years.
- 12.6 The confidential obligations under this Article do not apply to the following information:
- (1) Information that is publicly available when disclosed by one Party, or becomes publicly available after the disclosure (other than due to the negligence of the Recipient or its employees, lawyers, accountants, contractors, consultants or other personnel);
 - (2) Information was, as proved by written evidence, already known by the Recipient upon the disclosure by the Provider, which did not come directly or indirectly from the Provider;
 - (3) Information was, as proved by written evidence, already disclosed by a Third Party to the Recipient, which does not have confidential obligations and is entitled to make the disclosure.
- 12.7 When the Agreement is rescinded or terminated, the Recipient shall immediately cease using and shall not permit any Third Party to use the Confidential Information provided by the Provider, and, upon the Provider's written request, shall delete or destroy the Confidential Information provided by the Provider or return to the Provider, without retaining any information in any form.
- 13. NO ASSIGNMENT**
- 13.1 Except as contemplated hereunder or with written consent by the Parties, no one shall transfer, assign or otherwise dispose all or part of its rights under this Agreement, nor shall it grant, establish or dispose any rights, interests or obligations therein. Any transfer in conflict with Article 13 is invalid.
- 14. FURTHER ASSURANCE**
- 14.1 The Parties shall each sign (or urge to sign) other documents as required by relevant laws and regulations or deemed necessary to execute the Agreement or make the Agreement valid.
- 15. TAXES AND EXPENSES**
- 15.1 Subject to Article 15.2, unless otherwise stipulated in the Agreement (or any other Transaction Documents), each Party shall be responsible for its own costs, expenses and other payments incurred in relation to the Transaction.

- 15.2 The Parties shall both bear and pay all taxes arising under the Agreement or any other Transaction Documents in accordance with laws and regulations and relevant national rules or decisions and all fees collected by governmental authorities, regulatory institutions and stock exchanges. Considering the Seller is a Hong Kong company and subject to foreign exchange control in respect of the payment of domestic taxes, the Purchaser agrees to withhold and pay on behalf of the Seller applicable domestic taxes and fees payable by the Seller, which withholding taxes and fees could be deducted by the Purchaser from the consideration of the Transaction in one lump sum. Upon confirmation by the Seller, the Purchaser, as the Seller's withholding agent, shall declare or file with the competent tax authorities under the State Administration of Taxation of the PRC (including necessary negotiations or discussions with the tax authorities) all domestic taxes and fees arising from the Transaction and pay the taxes and fees in accordance with the arrangements herein, for which the Seller shall provide assistance and cooperation. The costs and expenses incurred by the Purchaser for the withholding and payment matters under this Article (including without limitation engaging tax intermediaries to handle the relevant tax payments) shall be borne by the Seller.
- 15.3 With respect to the Transaction, unless otherwise required by laws and regulations and/or agreed by the Parties, all expenses incurred due to the transfer of the Target Assets shall be reasonably arranged and resolved through negotiation by and between the Parties.
- 16. NOTICE**
- 16.1 Any notice related to this Agreement shall be written in Chinese, and delivered via designated courier, fax, email or express delivery by a courier company recognized by both Parties. The notice is effective upon receipt and is deemed to have been received at the following time: (a) if via designated courier or express delivery, on the third day after it is delivered to the recipient or sent out by the courier company; (b) if via fax, at the time the sender sends the notice with the notice showing that it has been delivered; or (c) if via email, when the relevant email reaches that recipient's email address. In each case, if it is delivered out of the business hours, the notice shall be deemed to be received at the beginning of the business hours on the next business day.
- 16.2 For the purposes of Article 16.1, contact information such as the addresses and fax numbers of the Parties are set forth in Appendix 2.
- 17. CONFLICT WITH OTHER AGREEMENTS**
- 17.1 The Agreement and its appendices are the legal document of the Transaction. If any oral discussion and written agreements reached by the Parties before the signing of the Agreement are inconsistent with the Agreement, the content of the Agreement shall prevail, unless the Parties expressly agreed otherwise.
- 18. WAIVER, RIGHTS AND REMEDIES**
- 18.1 Unless otherwise expressly provided in the Agreement, no waiver, failure or delay by any Party in exercising any right, power or remedy hereunder or under any other Transaction Documents shall be deemed as a waiver thereof, nor shall preclude any future exercise of such right, power or remedy and no single or partial exercise of any such right, power or remedy shall preclude any other or future exercise thereof.

19. TEXTS

- 19.1 This Agreement is prepared in Chinese. The Agreement is made in eight originals with each Party holding three copies, and the remaining copies reserved for approvals and/or filings by the governmental authorities. The aforementioned texts of the Agreement have the same legal effect.

20. EFFECTIVE DATE AND AMENDMENT

- 20.1 This Agreement shall be established upon the execution by the legal representatives or authorized representatives of the Parties and the affixation of the official chops of both Parties, and shall enter into force once the internal corporate governance procedures of each Party respectively has been completed (including the shareholder's approval for the Purchaser and the EGM of Sinopec Kantons Holdings Limited).
- 20.2 Upon the date of establishment of this Agreement, Articles 11 (Announcement), 12 (Confidentiality), 13 (No assignment), 15 (Taxes and expenses), 16 (Notice), 17 (Conflict with other agreements), 18 (Waiver, rights and remedies), 20 (Effective date and amendment), 21 (Invalidity), 22 (Jurisdiction and arbitration) and Appendix 1 (Definition and interpretation) shall be legally binding upon the Parties.
- 20.3 Upon the execution of this Agreement, any amendment to this Agreement (or any other Transaction Document) shall be made in writing, and effective upon the execution by the legal representatives or authorized representatives of the Parties and the affixation of the official chops of both Parties.

21. INVALIDITY

- 21.1 The provisions of this Agreement and other Transaction Documents are severable. If any such provision is deemed to be or become invalid or unenforceable in any respect in accordance with laws and regulations, it shall be ineffective in that respect, and the Parties shall make reasonable efforts to replace such provision with a valid and enforceable alternative provision whose effect is as close as possible to the intended.

22. JURISDICTION AND ARBITRATION

- 22.1 This Agreement is governed by, and shall be interpreted in accordance, with the PRC laws and regulations.
- 22.2 The Parties shall use good faith to resolve any dispute, controversy or claim ("Dispute") arising from, or in connection with the interpretation or performance of this Agreement through amicable negotiation, during which the Parties may consult the regulatory authority. If a settlement cannot be reached through negotiation within sixty Days after one Party has brought the matter to the other Party, the Parties may refer such matter to arbitration.

- 22.3 The Dispute shall be submitted to China International Economic and Trade Arbitration Commission (“CIETAC”) for arbitration in accordance with its rules in force at the time of arbitration. The Dispute shall be decided by three arbitrators. Each Party shall appoint one arbitrator, and the third arbitrator shall be appointed by the other two arbitrators, provided that if the other two arbitrators cannot decide on the choice of the third arbitrator, such arbitrator shall be appointed by CIETAC.
- 22.4 The arbitration proceedings shall be presided over by CIETAC as the presiding authority and shall be conducted in Chinese. The arbitration proceedings shall be held in Beijing.
- 22.5 The arbitration award made in accordance with the above arbitration procedures shall be final and binding upon the Parties, and shall be enforceable in accordance with its provisions.
- 22.6 The arbitration fees shall be borne by the losing party. The Parties agree that if it is necessary for one Party to enforce the arbitral award through legal proceedings of any type, the Party subject to enforcement shall pay all reasonable fees and expenses as well as legal fees in connection with the enforcement of the arbitral award.
- 22.7 During the dispute resolution, the Parties shall continue to implement this Agreement in all other aspects except for the matter in dispute.
- 23. FORCE MAJEURE**
- 23.1 In the event of a Force Majeure event that either Party is in whole or in part unable to perform its obligations under this Agreement due to the influence of such event, it shall be exempted from the liabilities in whole or in part according to the circumstances affected by Force Majeure. The performance of the obligations by the Parties under this Agreement may be suspended during the delay period caused by Force Majeure, and shall be automatically extended for a period equal to the delay period. The Party suffering from Force Majeure shall notify the other Party in writing as soon as possible and provide valid proof documents certifying the occurrence and time of Force Majeure within 15 Days. The Party suffering from Force Majeure shall take all reasonable measures to mitigate the consequences of Force Majeure as soon as possible. In the event of a Force Majeure event, the Parties shall negotiate immediately in order to find a fair solution and make their best effort to mitigate the consequences caused by Force Majeure.

(The remainder is intentionally left blank. Appendices and signature pages to follow)

The Parties have executed the “Agreement on Cash Payment to Purchaser 100% Equity in Sinopec Yu Ji Company” on the date indicated at the beginning of the document as a proof.

/s/ China Oil & Gas Pipeline Network Corporation (Official Seals)

(Signed by Legal Representative or Authorized Representative)

The Parties have executed the “Agreement on Cash Payment to Purchaser 100% Equity in Sinopec Yu Ji Company” on the date indicated at the beginning of the document as a proof.

/s/ Sinomart KTS Development Limited (Official Seals)

(Signed by Legal Representative or Authorized Representative)

Appendix 1: Definition and Interpretation

1. Definition. The following defined terms shall have corresponding meanings ascribed to it as set forth below in the table.

Agreement	means this Agreement on Cash Payment to Purchase 100% Equity in Sinopec Yu Ji Company
Purchaser/PipeChina	means China Oil & Gas Pipeline Network Corporation
Seller	means Sinomart KTS Development Limited
Target Assets	has the meaning set forth in Article 1.
Target	Sinopec Yu Ji Pipeline Co., Ltd.
Transaction	means, as contemplated hereunder, the proposed sale by the Seller of the 100% equity interests in the Target owned by the Seller, and the proposed acquisition and takeover by the Purchaser of such Target Assets subject to the terms and on the conditions hereunder.
Transaction Consideration	has the meaning set forth in Article 2.
Valuation Date	means the valuation date set forth in the Valuation Report, i.e., December 31, 2019
Valuation Report	means the Report with Respect to the purchase by China Oil & Gas Pipeline Network Corporation of Gas Pipeline Assets owned by Sinopec Yu Ji Pipeline Company Limited owned by Sinopec Marketing Co., Limited through Payment of Cash numbered “Zhong Lian Ping Bao Zi [2020]899,” issued by China United Assets Appraisal Group Co., Ltd.
Execution Date	means the date when the legal representative or authorized representative of the Parties execute this Agreement and affix the official chops of the Parties.
Closing	means the closing of the transfer of Target Assets as set forth in Article 5.
Closing Date	means September 30, 2020.
Excluded Assets	has the meaning set forth in Article 1.2.
Excluded Assets Sale Agreement	has the meaning set forth in Article 1.2.
Sale Price of Excluded Assets	has the meaning set forth in Article 1.2.
Transition Period	has the meaning set forth in Article 3.1.
Closing Audit	has the meaning set forth in Article 3.2.
Office Building Properties	means the office building located at Floor 1 Control Center, 77 Tianchen Road, Lixia District, Jinan City, Shandong Province, China, and the corresponding land use right, with an aggregate area of 15,891 square meters of land, 8,381.29 square meters of the building (area entitled to use of 8,474 square meters and proprietary area of 8,474 square meters)

Henan Management Office	means the management office located at 10 Xindong Road, Industry Development District, Puyang City, Henan.
Yulin-Jinan Pipeline	means gas pipeline connecting Yulin, Shaanxi and Jinan Shandong (via Shaanxi, Shanxi, Henan and Shandong) and relevant facilities.
Qingfeng Line of Yulin-Jinan Pipeline	means gas pipeline located in Puyang, Henan, connecting Nanle station and Liutun booster station (via Qingfeng station) with a length of 35.07 kilometer and relevant facilities.
Handover	has the meaning set forth in Article 5.3.
Transaction Documents	means this Agreement and all appendix thereto, any supplemental agreements entered by and between Parties from time to time, and the Valuation Report.
Conditions Precedent	means Conditions Precedent set forth in Article 4.1, and a "Condition Precedent" means any one of such Conditions Precedent.
Third Party	means any entity or individual other than the Parties hereunder.
Third-Party Claim	means taking legal responsibility and indemnification for controversies, disputes, lawsuits or arbitrations arising from the Target Assets.
Representative(s)	means, with respect to a Party and/or its Affiliates, its and/or its Affiliate's director, senior management, employee, agent, counsel, accountant and consultant.
Provider	has the meaning set forth in Article 12.1.
Recipient	has the meaning set forth in Article 12.1.
Transferring Construction in Progress into Fixed Assets	means, after the completion of the construction in progress, and upon the final acceptance of the construction, the construction in progress is put into use and be recorded as fixed assets on the book(s) of the Seller.
Affiliates	means, with respect to any Party, any entity controlled by such Party, controlling such Party or under common control with such Party.
Liability/Liabilities	means all current or future, actual, potential or debitive, liability, obligation and debts in all nature, incurred as a result of agreements, operations of law or other reason, and incurred jointly or separately either as a debtor or a guarantor.
Material Adverse Change/Material Adverse Effect	means incident(s) that, individually results in an actual or reasonable foreseeable loss of no less than RMB100 million to the assets sold to the Purchaser and business in relation thereto, or in aggregate result in an actual or reasonable foreseeable loss of no less than RMB500 million to the assets sold by the Seller to the Purchaser and business in relation thereto.

Major Loss(es)	means, accumulative and actual losses of more than 5% of the consideration to the Target Assets and relevant business.
Disputes	has the meaning set forth in Article 22.2.
CIETAC	has the meaning set forth in Article 22.3.
Intellectual Property Rights	means patents, trademarks, service marks, company logos, trade names, domain names, design rights, copyrights (including but not limited to computer software copyrights) and database rights, semiconductor circuit rights, utility models, design rights, invention rights, proprietary technology rights, and other intellectual property rights (regardless of whether it has been registered or not) and all rights or forms of protection that have equivalent or similar utility anywhere in the world, and the term “registration” includes registration and application for registration.
Tax	shall include (a) taxes levied on total or net income, profits and gains, and (b) all other taxes, levies, tariffs, import taxes, charges and withholding taxes (if applicable) of any nature, including any consumption tax, value-added tax and its additional taxes, corporate income tax, personal income tax (if applicable), real estate tax, land value-added tax, deed tax, farmland occupation tax, urban land use tax, environmental protection tax, stamp duty, etc., or withholding of any nature (including any related fines, penalties, late fees or interest).
Confidential Information	means, with respect to the Purchaser, any material received or owned by PipeChina (or its representatives) that is relating to the Seller or Target Assets, or any material received or owned prior to the Closing that relates to Target Assets, and with respect to the Seller, any material received or owned by the Seller (or its representatives) that is relating to the Purchaser or Target Assets, or any material received or owned prior to and after the Closing that relates to the Target Assets, or any material that relates to the terms of this Agreement or other transaction documents.
Force Majeure	means unforeseeable, unavoidable and insurmountable objective conditions, including natural disasters such as earthquakes, typhoons, floods, and heavy rains (subject to the information issued by the local government or functional management departments such as meteorology), fires, wars, epidemic (including COVID-19 pandemic), any government actions, any changes and promulgation of laws, etc., that directly affects the performance of this Agreement (or cause the performance of this Agreement deviates from the terms thereunder).

Hong Kong Stock Exchange	means the Stock Exchange of Hong Kong Limited.
Listing Rules	means the listing rules of the Hong Kong Stock Exchange.
PRC/China	means the People's Republic of China (for the sole purpose of this Agreement, excluding the applicable laws of Hong Kong Special Administrative Region of China, Macao Special Administrative Region of China and Taiwan).
RMB	means the legal currency of China.
Day(s)	means, unless otherwise specified, calendar days, provided that in any circumstances, if the last day of a given period hereunder is a holiday, then the last day of such period shall be the next day immediately following such holiday. Unless otherwise specified, "prior to a certain day" shall mean a period ending on such day, while "after a certain day" shall mean a period starting from the next day of such day.
Business Day(s)	means any day other than a Saturday, Sunday or a national holiday determined by the PRC government.

2. Interpretation. Unless otherwise specified, under this Agreement:

- (1) a "person" shall mean any individual, business name, organization, company (whether legal person or not), government (including but not limited to central and local governments and their constituent departments), any joint venture, association, partnership enterprises, institutions, work councils or employee representative organizations (regardless of whether they have independent legal personality or not);
- (2) an "Article" shall be an article hereunder;
- (3) headings are set for the ease of references only and shall not affect the interpretation of this Agreement;
- (4) in order to facilitate the payment in RMBs, any other amounts denominated in foreign currencies shall be converted into RMBs at the exchange rate on such date;
- (5) words introduced by terms like "including," "includes" or "especially" or other similar terms shall be deemed as explanatory only and does not limit the meaning of the words prior to such term; and
- (6) for laws and regulations, including laws, administrative regulations, administrative rules, local regulations, etc., unless otherwise expressly provided in this Agreement, any explicit reference to a regulation (including any regulation in any jurisdiction) shall include: (a) the laws and regulations as revised, merged or re-enacted before or after the Execution Date; (b) the laws and regulations that were re-promulgated (whether revised or not); and (c) any supplementary regulations (including regulations) formulated in accordance with the laws and regulations (before or after the Execution Date) that have been revised, merged or re-enacted as described in paragraph (a) or (b) above, unless any matters mentioned in paragraphs (a) to (c) appear after the date of the Execution Date, and increase or change the Purchaser's or Seller's responsibilities hereunder.

3. Appendix. Appendices shall be deemed as an integral part of this Agreement.
4. Inconsistence. If any defined terms in this Appendix 1 is inconsistent with any articles or terms set forth in other Appendices, for the interpretation of such Articles or Appendices, the definition in such Articles or Appendix.

Framework Agreement

on

Operation of Oil and Gas Pipeline Network Facilities

Entered into between

China Petroleum & Chemical Corporation

and

China Oil & Gas Pipeline Network Corporation

August 2020

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This agreement (this “**Agreement**” or “**Framework Agreement**”), dated as of August 13, 2020, is made in Beijing of People’s Republic of China (“**PRC**”) by and between:

The Shipper:

China Petroleum & Chemical Corporation
Legal Representative: ZHANG Yuzhuo
Registered Address: 22, Chaoyangmen North Street, Chaoyang District, Beijing

The Carrier:

China Oil & Gas Pipeline Network Corporation
Legal Representative: ZHANG Wei
Registered Address: Room 08-10, 6/F Block A, 5 Dongtucheng Road, Chaoyang District, Beijing

For the purpose of ensuring orderly operation of the oil and gas pipeline network facilities, China Petroleum & Chemical Corporation (the “**Shipper**”) and China Oil & Gas Pipeline Network Corporation (the “**Carrier**”) entered into the following framework agreement regarding the operation of oil and gas pipeline network facilities through friendly negotiations based on the principle of reciprocity and equal cooperation:

I. General Principles

1. To abide law and respect existing operation practice. This Framework Agreement is entered into in accordance with the general requirements of reform of the national oil and gas pipeline network operation mechanism and pursuant to applicable national laws and regulations, and shall be performed with respect for existing operation practice of the Shipper.
2. Systematic coordination and contractual service. The Parties shall establish a systematic coordination mechanism to carry out production and operation coordination based on circumstances and needs of the existing business. Any particular matter contemplated herein may be agreed by the parties relating thereto in separate oil and gas pipeline network facilities service agreement (the “**Service Agreement**”) and other related agreements at respective levels.
3. To secure existing services for existing users and first-come-first-serve basis for additional service capacities. The Carrier shall be responsible to ensure safe operation of the oil and gas pipeline network facilities and coordinate emergency supply, and is obliged to cooperate with the Shipper to ensure stable supply in the Shipper’s regional market and smooth transportation of oil and gas resources to entities. The Parties shall comply with applicable national laws and regulations regarding fair access to the oil and gas pipeline network facilities market, and the Carrier undertakes to provide services to the Shipper with the quantity no lower than that prior to its acquisition of pipeline facilities from the Shipper, and shall satisfy the Shipper’s additional demand in accordance with its policy for key account customers.
4. Government pricing and mutual negotiations. The natural gas and crude oil pipeline transportation service fee and LNG receiving terminal usage fee shall be priced pursuant to government policy, and refined oil pipeline transportation service fee shall be negotiated by both Parties with reference to the pricing principle applicable to natural gas pipeline transportation service fee; other storage and transportation facility usage fee, together with the details of the settlement of above-mentioned fees shall be determined through friendly negotiations between the financial departments of the Parties and specified in the Service Agreement.

5. To ensure quality and improve efficiency. The Carrier warrants that the quality of crude and refined oil shipped by the Shipper shall satisfy the Shipper's standards and natural gas shipped by the Shipper shall satisfy national standards, respectively, throughout the delivery, and warrants that the service quality and facility service efficiency shall maintain at the level prior to its acquisition of pipeline facilities from the Shipper. The Parties shall comply with applicable national laws and regulations regarding fair access to the oil and gas pipeline network facilities market. If the Carrier proposes to use the oil and gas pipeline network facilities originally owned by the Shipper to provide services to third parties and add new openings, the plan thereof shall be finalized by the Carrier through friendly negotiations between the Parties based on full assessment of safety and quality risks; and the Shipper's request for adding new openings on the Carrier's oil and gas pipeline network facilities shall be negotiated by the Parties on a case-by-case basis.
6. Safety as priority and smooth transition. The Parties agree to finalize the production and operation mechanism with the view to ensuring smooth handover of assets and personnel without affecting ordinary course of existing business operations. Pursuant to the actual business needs, day-to-day operation coordination and metering of natural gas and refined oil upon transfer will follow the Shipper's practice prior to its sale of assets to the Carrier; and the operation of crude oil transportation business will be adjusted based on actual circumstances and be specified in the Service Agreement. The Parties may negotiate promptly to make adjustment in the operation of any above mentioned business, if necessary.

II. Operational Organization

1. The Parties hereby agree to coordinate at three levels, with plans formulated by headquarters, administered by business departments and implemented by the subsidiaries of both Parties.
2. Headquarters level. The production and operation management department of the Shipper will work with the production and operation headquarter of the Carrier to form a group-level consultation mechanism, of which responsibilities will generally include:
 - (1) Negotiation, execution and interpretation of framework agreements.
 - (2) Planning and management of oil and gas pipeline network facilities operation, and organizing headquarter-level planning meeting.
 - (3) Negotiation of any additional opening at oil and gas transmission sites.
 - (4) Establishing a joint emergency supply response mechanism to support preparation of respective emergency supply plans of the Parties and strengthen emergency coordination.
 - (5) Carry out study on construction of new pipeline and renovation of pipeline network interconnection.
 - (6) Other matters need to be coordinated at the headquarters level.

3. Business departments level. The applicable business department of the Shipper or its designated entity will work with the production and operation headquarter of the Carrier (the oil and gas control center) or its designated entity, to handle the workstreams of:
 - (1) The Shipper's Oilfield Exploration and Development Division, Refining Division and Oil Products Sales Division are responsible for negotiation and interpretation of Service Agreements and operation-related agreements under the subject of natural gas, crude oil and refined oil business, respectively, and organize execution thereof by subsidiaries of the Shipper.
 - (2) Preparation and coordination of the business plans, and guidance of the execution of such plans by subsidiaries.
 - (3) Define the scope of respective responsibilities of the Parties in relation to specific safety and environmental protection management in Service Agreements and operation related agreements.
 - (4) Other matters which are in need of coordination at the business departments level.
4. Subsidiaries level. The subsidiaries of the Shipper with shipping needs (including, among others, branches of, and enterprises controlled, invested or managed by the Shipper) will work with the production and operation headquarter (oil and gas control center), regional companies of the Carrier or their designated entities, to handle the workstreams of:
 - (1) Execution of Service Agreements.
 - (2) Execution of operation related agreements to clarify matters such as oil and gas metering upon transfer, scheduling and operation, oil mixing treatment, safety, fire prevention, environmental protection management, housing and land leasing.
 - (3) Implementation of the general plans and day-to-day or instalment schedules prepared based on business needs.
 - (4) Preliminary coordination for additional opening at oil and gas transmission sites.
 - (5) Step-by-step implementation of daily production and operation plan and adjustment of operational parameters.
 - (6) Collection of relevant production and operation information, and information sharing and exchange under the guidance of headquarters and business departments.
 - (7) Other matters which are in need of coordination at the subsidiaries level.
5. The Carrier, if necessary, will appoint key account customer managers to coordinate planning and operation, handle daily issues and other key account customer services, for whom the Shipper will provide the requisite working environment.

III. Plan Management

1. Annual plan (including monthly pre-arrangement). The annual plan will be prepared by the production and operation management department of the Shipper and the production and operation headquarters of the Carrier. The Parties shall organize relevant departments to coordinate and reach an agreement before November 20, and confirm and issue the annual plan before November 30, of each year respectively. The Carrier shall use the best reasonable efforts to meet the Shipper's demand.

The annual plan shall include, among others, service demands for pipeline transportation, injection and extraction from gas storage depots, and external transmission from LNG receiving stations; arrangements for use of storage capacity of gas storage depots, LNG receiving stations, crude oil and refined oil depots of the Carrier; arrangements for annual inspection and maintenance of relevant facilities of the Parties, commissioning of new pipelines and other storage facilities, and arrangements for reconstruction and expansion of pipeline interconnections; in each case subject to adjustment of the Parties based management needs.

2. Monthly plan. The monthly plan will be prepared by the relevant business departments of the Shipper and the production and operation headquarter of the Carrier, with the relevant business departments of the Shipper reporting to the production and operation management department of the Shipper.

The Parties will coordinate and reach an agreement before 28th of each month, which is subject to confirmation by the production and operation management departments of the Shipper and the production and operation headquarters of the Carrier before the last day of each month.

The monthly plan shall cover, among others, service demands for pipeline transportation, specific type of transportation demands, specific pipeline routing, specific uploading and downloading points, vessel schedule, storage depot injection and extraction, external transmission arrangement of LNG receiving station; turnaround arrangement for using the Carrier's crude oil/refined oil storage area, arrangement for use of the Carrier's LNG receiving station vessel schedule, receiving and unloading/external transmission, injection and extraction using the Carrier's storage depot; monthly inspection and maintenance of relevant facilities of the Parties, commissioning of new pipelines and other storage facilities, and reconstruction of pipeline interconnection, in each case subject to adjustment of the Parties.

3. Instalment and day-to-day plan. Crude oil and refined oil operations are organized and implemented in instalments based on monthly plan. Crude oil operations are coordinated between the Shipper's crude oil sales company and the Carrier's oil and gas control center or its designated entity. Refined oil operations are coordinated between the Shipper's oil sales regional company and the Carrier's oil and gas control center or its designated entity. Natural gas pipeline transportation, LNG receiving stations and gas storage depots are organized and implemented daily based on monthly plan, which shall be coordinated by the natural gas branch of the Shipper and the oil and gas control center of the Carrier or its designated entity. The plan will be implemented by applicable entities after due coordination and confirmation of the Parties.
4. Special plan (contingency plan) for natural gas supply during the heating season. The production and operation management department of the Shipper and the production and operation headquarters of the Carrier shall coordinate for the matter. The Parties shall coordinate and reach an agreement before October 20, and confirm and issue the plan by October 30, respectively for each year. The content of the special plan (contingency plan) for natural gas supply during the heating season shall be determined by the Parties through mutual agreement.

5. Plan adjustment. The Parties shall organize applicable departments at the headquarters level to review production and operation results and make adjustment to annual plan in line with annual plan confirmation and issuance process. If there occurs any change of market conditions, unexpected event or change of policy in connection with implementation of the monthly plan which has a significant impact on the implementation of the production and operation plan, the Parties may propose and, upon mutual agreement, make adjustments to the plan.
6. Review of the plan. The Parties shall establish a review and inspection mechanism for implementation of the plan at the headquarters level, and regularly review and assess the implementation of the plan to make its planning more scientific and reasonable.

IV. Operation, Inspection and Maintenance

1. Inspection and maintenance shall be planned in accordance with the principle of synchronized inspection and maintenance of upstream, midstream and downstream operations without effect on safety and market-based supply, and Parties shall make efforts to make the inspection and maintenance schedule more seriously observed, and make the plan more scientific and reasonable. The responsibility for safety and environmental protection in connection with operation inspection and maintenance will be allocated to the organizing, implementing and operating entities involved in the inspection and maintenance and comply with safety and environmental protection management requirements of the applicable entities.
2. The Parties shall strive to synchronize inspection and maintenance of crude oil pipelines and storage tanks with those of terminals, oil fields, refineries and other related facilities; inspection and maintenance of refined oil pipelines and storage tanks with those of refineries and oil depots and other related facilities; and inspection and maintenance of natural gas pipelines with those of gas fields, receiving stations, gas storage depots and other related facilities. Inspection and maintenance of natural gas storage and transportation facilities shall be scheduled during the off-peak season of natural gas demand as much as possible.
3. All off-plan inspection and maintenance operations are contingent ones; for any contingent inspection and maintenance operation under emergency, the operating Party shall inform the other Party immediately, and any non-emergency temporary inspection and maintenance shall not be conducted without mutual agreement of the Parties.
4. If any Party needs to carry out temporary inspection and maintenance which may affect the production and operation of the other Party, it shall inform the other Party's plan implementing department immediately with a copy to the production and dispatch command center/oil and gas control center.
5. The Parties shall establish a communication and coordination mechanism for inspection and maintenance operations, under which the Parties shall maintain cooperation during inspection and maintenance, designate the contact person and communication channel, and the operating Party shall inform the other Party of the progress of on-site inspection and maintenance promptly.

V. Measurement and Quality

1. The Parties shall jointly coordinate the measurement operations based on the principle of "measurement by the transferring Party under supervision of the receiving Party with data sharing and joint management." The measurement at the pipeline injection point shall be mainly conducted by the Shipper under supervision of the Carrier, while the measurement at the pipeline downloading point shall be mainly conducted by the Carrier under supervision of the Shipper.

2. If the measurement facilities of the transferring Party cannot satisfy the needs in connection with the transportation, the receiving Party's facilities which satisfy the transfer requirements shall be used as the measurement transfer point. If neither Party's facilities satisfy the transportation requirements, the Parties shall resolve such issue through negotiations. The Party involved in connection with the measurement shall enter into measurement transfer agreement or have relevant issues agreed upon in applicable Service Agreements.
3. Measurement data shall be subject to confirmation of the Shipper, the Carrier and other related parties. The relative measurement instruments shall be subject to verification by the qualified institutions acceptable to the Parties (in principle, such verification shall be conducted online), of which certification and calibration curves shall comply with applicable national standards with information. The materials and monitoring data of equipment operating status shall be disclosed to the other Party.
4. The Parties shall, in accordance with applicable national policies, measure the piped natural gas (including gas injection and extraction from gas storage) by volume and liquid LNG in mass. Where special circumstances arise, the Parties shall decide on the measuring units through mutual agreement. The Parties will jointly promote measurement of piped natural gas by calorific value.
5. The Parties shall take into full consideration the products to be transported, features of the pipeline network/pipeline, professional management and actual operations to determine reasonable oil and gas pipeline transport loss calculation methods and loss rate standards, which shall be specified in the Service Agreements or measurement agreements.
6. The Carrier shall, based on "labelling transportation principle," implement labelling management for pipelined crude oil and refined oil to ensure that the quality of pipelined crude oil and refined oil is under control. The quality of the pipelined refined oil into pipeline shall satisfy the requirements of sequential transportation and the quality standards agreed by the Parties, and the injection/downloading transfer tank shall be used as the quality transfer point to ensure that the quality of the sampled refined oil is representative and consistent. The quality of crude oil for distribution and into the pipeline shall be generally consistent. The quality of natural gas for pipeline distribution shall satisfy the national quality standards for natural gas. The details will be provided under the Service Agreement.
7. Under the condition where the Shipper satisfies the requirement of the Carrier to use the oil mixing tank before the transfer of pipeline facilities from the Shipper to the Carrier, the Carrier shall be responsible for oil mixture with support from the Shipper. The methods and costs of such oil mixture will be specified by the Parties in the oil mixture agreement.

VI. Information Sharing

1. The Parties shall specify the matters relating to information sharing in the Service Agreements, and share the operational data of the main oil and gas pipeline network facilities associated with the transfer point and its vicinity. The Parties shall take technical measures to ensure traceability of the shared data, with the traceability period of key data not less than one month.

2. The production and dispatching command center of the Shipper and the oil and gas control center of the Carrier shall be responsible for information sharing, provide guidance to and organize the business departments and subsidiaries to carry out information sharing and exchange at different levels in line with organization structure.

VII. Safety, Environmental Protection and Emergency Management

1. Improve respective safety and environmental protection management system. The Parties shall, in accordance with applicable national laws and regulations and their respective safety and environmental management requirements for pipeline business, field operations and management after transfer of the pipeline assets, develop clear safety and environmental protection responsibilities, and delineate the responsibility for occurrence of any safety and environmental incidents within the scope of management of any Party due to non-compliance with applicable rules and regulations by the other Party.
2. The Parties shall specify the risk transfer point between the Carrier and the Shipper for the subjects of pipeline network services, and the responsibility for control and management of all risks of the subjects (including without limitations quality, quantity, leakage, environmental protection, and transportation safety, etc.) shall be specified in the Service Agreements. The Service Agreements and operation-related agreements shall include safety and environmental protection management provisions to clarify the responsibilities and rights of the Parties in connection with specific business execution and working process.
3. In respect of production and operation facilities under management of the other Party, the Parties shall clarify management requirements of fire prevention, temporary storage of hazardous waste, emission standards, etc., and to carry out such requirements in accordance with the other Party's safety and environmental protection management regulations. The Parties shall establish processing and operation coordination mechanism for the Carrier's station and the Shipper's tank farm. The Parties shall provide advance notice to the other Party and carry out processing adjustment and control measures prior to conduct of any special or high-risk operation at field stations and oil depots.
4. Improve emergency management. The Carrier and the Shipper shall develop systematic safety and environmental protection emergency plans and joint emergency response and communication mechanism, conduct regular joint protection and rescue drills to enhance the overall emergency rescue capabilities, and initiate appropriate and joint response to any emergency at different level.

VIII. Miscellaneous

1. All disputes arising from or related to this Framework Agreement, the Service Agreements and operation related agreements between the Parties shall first be resolved by friendly negotiation at the appropriate and respective levels. At the headquarters level, if the Parties fail to reach a written agreement within one month after commencement of the negotiation, either Party shall have the right to submit the dispute to the National Development and Reform Commission, the National Energy Administration and other applicable government agency for mediation.

2. If there occurs any change in national laws, regulations and policies or other circumstances during performance of this Framework Agreement, which would have material adverse impact on the performance of various binding terms of this Agreement, render such terms inapplicable, or result in unenforceable of some or all of such terms, after notice of such change by either Party to the other Party, the Parties may take any of the following actions by mutual agreement: (1) make amendment to some or all of such terms; (2) terminate this Agreement and enter into new definitive agreement(s); and (3) enter into definitive agreement(s) mandatorily required by the government.
3. The Parties undertake to keep in confidence this Agreement and any contractual arrangement contemplated hereunder, technical and commercial documents and information exchanged in the course of their cooperation (collectively, the “**Confidential Information**”). The term of confidentiality shall be permanent. Neither Party shall provide the Confidential Information, in whole or in part, to any third party without prior written consent of the other Party. Neither party shall make announcement or press releases relating to this Agreement without agreement of the Parties in writing.
4. The Parties shall carry out preliminary preparations to perform this Agreement as of the date hereof. This Agreement shall become effective as of the date of transfer of the assets until December 31, 2023. This Framework Agreement will be amended by the Parties one month prior to its expiration in line with general principles and with due consideration of national policy changes and business needs.

This Agreement is executed in six counterparts with three thereof for each Party. Any outstanding matter shall be subject to mutual agreement of the Parties through negotiation, for which a supplemental agreement may be executed if necessary, and such supplement shall have the same effect with this Framework Agreement.

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/s/ China Petroleum & Chemical Corporation (seal)	/s/ China Oil & Gas Pipeline Network Corporation (seal)
signed by authorized representative	signed by authorized representative

[Signature page to Framework Agreement]

LIST OF SUBSIDIARIES

A list of China Petroleum & Chemical Corporation's principal subsidiaries is provided in Note 39 to the consolidated financial statements included in this annual report following Item 19.

Certification by Principal Executive Officer
Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as amended

I, Zhang Yuzhuo, certify that:

1. I have reviewed this annual report on Form 20-F of China Petroleum & Chemical Corporation (the “Company”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The company’s other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company’s internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting; and
5. The Company’s other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company’s auditors and the audit committee of company’s board of directors (or persons performing the equivalent function):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company’s ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company’s internal control over financial reporting.

Date: April 20, 2021

By: /s/ Zhang Yuzhuo
 Zhang Yuzhuo, Chairman of the Board

Certification by Principal Executive Officer
Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as amended

I, Ma Yongsheng, certify that:

1. I have reviewed this annual report on Form 20-F of China Petroleum & Chemical Corporation (the “Company”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The company’s other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company’s internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting; and
5. The Company’s other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company’s auditors and the audit committee of company’s board of directors (or persons performing the equivalent function):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company’s ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company’s internal control over financial reporting.

Date: April 20, 2021

By: /s/ Ma Yongsheng
 Ma Yongsheng, Director and President

Certification by Principal Financial Officer
Pursuant to Rule 13a-14(a) under the Securities Exchange Act of 1934, as amended

I, Shou Donghua, certify that:

1. I have reviewed this annual report on Form 20-F of China Petroleum & Chemical Corporation (the “Company”);
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the Company as of, and for, the periods presented in this report;
4. The Company’s other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the Company and have:
 - (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the Company, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - (c) Evaluated the effectiveness of the Company’s disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - (d) Disclosed in this report any change in the Company’s internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting; and
5. The Company’s other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the Company’s auditors and the audit committee of company’s board of directors (or persons performing the equivalent function):
 - (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the Company’s ability to record, process, summarize and report financial information; and
 - (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the Company’s internal control over financial reporting.

Date: April 20, 2021

By: /s/ Shou Donghua
 Shou Donghua, Chief Financial Officer

**Certification of CEO and CFO Pursuant to
18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002
and Pursuant to Rule 13a-14(b)
under the Securities Exchange Act of 1934, as amended (Exchange Act)**

In connection with the Annual Report on Form 20-F of China Petroleum & Chemical Corporation (the “Company”) for the year ended December 31, 2020 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), Zhang Yuzhuo, as Chairman of the Board of the Company, Ma Yongsheng, as Director and President of the Company, and Shou Donghua, as Chief Financial Officer of the Company, each hereby certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, and Rule 13a-14(b) under the Exchange Act, that, to the best of his knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d), as applicable, of the Exchange Act; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

By: /s/ Zhang Yuzhuo

Name: Zhang Yuzhuo
Title: Chairman of the Board
Date: April 20, 2021

By: /s/ Ma Yongsheng

Name: Ma Yongsheng
Title: Director and President
Date: April 20, 2021

By: /s/ Shou Donghua

Name: Shou Donghua
Title: Chief Financial Officer
Date: April 20, 2021

This certification accompanies the Report pursuant to Rule 13a-14(b) under the Exchange Act and 18 U.S.C. Section 1350 and shall not be deemed “filed” by the Company for purposes of §18 of the Exchange Act, or otherwise subject to the liability of that section.

April 20, 2021
Securities and Exchange Commission
100 F Street, N.E.
Washington, DC 20549

Commissioners:

We have read the statements made by China Petroleum & Chemical Corporation (copy attached) pursuant to Item 16F of Form 20-F, which we understand will be filed with the Securities and Exchange Commission as part of the annual report on Form 20-F of China Petroleum & Chemical Corporation dated April 20, 2021. We agree with the statements concerning our Firm contained therein, and we have no basis to agree or disagree with other statements contained therein.

Very truly yours,

/s/PricewaterhouseCoopers Zhong Tian LLP
Shanghai, the People's Republic of China

Attachment
