CHINA PETROLEUM & CHEMICAL CORP
Form 20-F
April 24, 2017
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, 2016
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 FORM ____________ TO __________
COMMISSION FILE NUMBER 1-15138

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)

Mr. Huang Wensheng
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The People's Republic of China
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(Name, Telephone, Email and/or Facsimile number and Address of Company Contact Person)
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Securities registered or to be registered pursuant to Section 12 (b) of the Act.

Title of Each Class	Name of Each Exchange On Which Registered
American Depositary Shares, each representing 100 H Shares of par value RMB 1.00 per share	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 Depository 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 X 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 X
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 X No__
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post such files)*
Yes__ No__
*This requirement does not apply to the registrant in respect of this filing.
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer X 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 which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ___	International Financial Reporting Standards X 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 X

(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.”, “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 7.22, 7.21 and 7.20 barrels for the years ended December 31, 2014, 2015 and 2016, 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 were made at the averages of mid-point exchange rates of Renminbi as published by the PRC State Administration of Foreign Exchange (SAFE) for the past five years.

The following table sets forth the noon buying rate for US dollars in Renminbi for the periods indicated, as provided by the H.10 statistical release of the U.S. Federal Reserve Board. We do not represent that Renminbi or US dollar amounts could be converted into US dollars or Renminbi, as the case may be, at any particular rate, the rates below or at all. On April 17, 2017, the noon buying rate was RMB 6.8835 to US$1.00.

	Noon Buying Rate[(1)]			
Period	End	Average[(2)]	High	Low
	(RMB per US$1.00)			
2012	6.2301	6.2990	6.3879	6.2221
2013	6.0537	6.1412	6.2438	6.0537
2014	6.2046	6.1704	6.2591	6.0402
2015	6.4778	6.2869	6.4896	6.1870
2016	6.9430	6.6549	6.9580	6.4480
October 2016	6.7735	6.7303	6.7819	6.6685
November 2016	6.8837	6.8402	6.9195	6.7534
December 2016	6.9430	6.9198	6.9580	6.8771
January 2017	6.8768	6.8907	6.9575	6.8360
February 2017	6.8665	6.8694	6.8821	6.8517
March 2017	6.8832	6.8940	6.9132	6.8687
April 2017 (through April 17, 2017)	6.8835	6.8899	6.8988	6.8832

(1) The exchange rates reflect those set forth in the H.10 statistical release of the U.S. Federal Reserve Board.

(2) Annual averages are determined by averaging the rates on the last business day of each month during the relevant period. Monthly averages are calculated using the average of the daily rates during the relevant period.

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 ¾ 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,
- 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, 2014, 2015 and 2016, and the selected consolidated balance sheet data as of December 31, 2015 and 2016 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, 2012 and 2013 and the selected consolidated balance sheet data as of December 31, 2012, 2013 and 2014 are derived from our audited consolidated financial statements which are not included elsewhere in this annual report.

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,				
	2012	2013	2014	2015	2016
	(RMB in millions, except per share, per ADS data and number of shares)				
Consolidated Statement of Income Data[1]:					
Operating revenues	2,787,684	2,881,928	2,827,566	2,020,375	1,930,911
Operating expenses	(2,689,080)	(2,785,165)	(2,754,127)	(1,963,553)	(1,853,718)
Operating income	98,604	96,763	73,439	56,822	77,193
Earnings before income tax	91,012	95,444	65,818	56,411	80,151
Tax expense	(23,846)	(24,763)	(17,571)	(12,613)	(20,707)
Net income attributable to equity shareholders of the Company	64,082	66,348	46,639	32,512	46,672
Basic earnings per share[2]	0.568	0.571	0.399	0.269	0.385
Basic earnings per ADS[2]	56.78	57.14	39.92	26.90	38.55
Diluted earnings per share[2]	0.546	0.536	0.399	0.269	0.385
Diluted earnings per ADS[2]	54.63	53.59	39.89	26.90	38.55
Cash dividends declared per share	0.231	0.240	0.200	0.150	0.249
Segment Operating Income/(Loss)					
Exploration and production	70,054	54,793	47,057	(17,418)	(36,641)
Refining	(11,444)	8,599	(1,954)	20,959	56,265
	42,652	35,143	29,449	28,855	32,153

Marketing and distribution					
Chemicals	1,120	846	(2,229)	19,476	20,623
Corporate and others	(2,443)	(3,412)	(1,063)	384	3,212
Elimination of inter-segment sales	(1,335)	794	2,179	4,566	1,581
Operating income	98,604	96,763	73,439	56,822	77,193
Shares					
Basic weighted average number of A and H shares	112,853,724,741	116,102,910,373	116,822,487,451	120,852,547,200	121,071,209,646
Diluted weighted average number of A and H shares	118,412,133,133	121,858,818,276	117,242,396,710	120,852,547,200	121,071,209,646

	As of December 31,				
	2012	2013	2014	2015	2016
	(RMB in millions)				
Consolidated Balance Sheet Data[1]:					
Cash and cash equivalents	12,124	16,336	10,526	68,933	124,468
Total current assets	366,961	374,578	361,559	333,657	412,261
Total non-current assets	895,761	1,012,703	1,094,035	1,113,611	1,086,348
Total assets	1,262,722	1,387,281	1,455,594	1,447,268	1,498,609
Total current liabilities	(513,704)	(572,018)	(604,451)	(462,832)	(485,543)

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	As of December 31,				
	2012	2013	2014	2015	2016
	(RMB in millions)				
Short-term debts and loans from Sinopec Group Company and its affiliates (including current portion of long-term debts)	(115,982)	(163,870)	(178,148)	(115,446)	(74,819)
Long-term debts and loans from Sinopec Group Company and its affiliates (excluding current portion of long-term debts)	(162,116)	(145,590)	(150,932)	(139,746)	(117,446)
Total equity attributable to equity shareholders of the Company	(513,315)	(571,087)	(595,255)	(676,197)	(710,994)
Total equity	(552,401)	(625,778)	(649,603)	(788,161)	(831,235)

	Year Ended December 31				
	2012	2013	2014	2015	2016
	(RMB in millions)				
Statement of Cash Flow and Other Financial Data(1):					
Net cash generated from operating activities	142,622	151,470	148,019	165,740	214,543
Net cash generated from/(used in) financing activities	5,272	31,146	(21,524)	9,093	(93,047)
Net cash used in investing activities	(161,792)	(178,322)	(132,321)	(116,719)	(66,217)
Capital expenditure					
Exploration and production	79,071	105,311	80,196	54,710	32,187
Refining	32,161	26,064	27,957	15,132	14,347
Marketing and distribution	31,723	29,486	26,989	22,115	18,493
Chemicals	23,692	19,263	15,944	17,634	8,849
Corporate and others	2,397	5,076	3,648	2,821	2,580
Total	169,044	185,200	154,734	112,412	76,456

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(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. The financial condition and results of operation of Gaoqiao are presented in Note 1 to the consolidated financial statements.

(2) 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 shares. The weighted average number of shares for the years prior to January 1, 2013 has been retrospectively adjusted as a result of the issuance of bonus shares and re-capitalization in 2013, and accordingly, the basic earnings and diluted earnings per share have been adjusted retrospectively.

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. 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 reservoirs 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. Some exploration projects are not viable at the current crude oil price level and 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 materially and 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 purchase a significant portion of crude oil and other feedstock from outside suppliers located in different countries and regions in the world, of which an insignificant amount of the crude oil processed by our refinery business was sourced from countries or regions that are on the sanction list published and administered by the Office of Foreign Assets Control, or OFAC, of the US Department of Treasury, including Iran and Sudan. 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.

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 involves 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 following 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 and environment (HSE) management system within our company 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 reliability of reserves estimates depends on:
· 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
· extensive engineering judgments.
In addition, new drilling, testing and production results following 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:
· unexpected drilling conditions;
· pressure or irregularities in geological formations;
· equipment failures or accidents;
· oil 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, 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 its 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 its ability to influence or adjust plans for exploration and development related expenditures is limited under joint operating agreements for those projects in which it has partners;
- government approvals required for exploration and development-related expenditures and investments in jurisdictions in which it conducts business; and
- economic, political and other conditions in jurisdictions in which it conducts 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 or reservoir characteristics, pressure or irregularities in geological formations, accidents, mechanical and technical difficulties and industrial action. 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 projects that we undertake may not yield adequate 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.

As 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 by 195 nations 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. It could result in our substantial capital expenditure from compliance with these measures, and our revenue generation and strategic growth opportunities could also be adversely impacted. In addition, China has undertaken to peak the CO2 emissions by 2030 or earlier, if possible, and to increase the non-fossil fuel share of all energy to around 20 percent by 2030. China has also announced to implement a national emissions trading scheme in 2017. We are expected to be recognized as an emission-control enterprise as are most of the Chinese enterprises, which could have adverse effect on our business, financial condition and results of 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 and Central Asia and certain other regions, some of which are deemed to be subject to a high degree of political risk. These countries have experienced and/or may experience in future political instability, changes to the regulatory environment, changes in taxation and foreign exchange controls, disease outbreaks, deterioration in social security and environmental risks. Any of these conditions occurring could disrupt or curtail our operations or development activities. These events may also cause our production to decline, 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.

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.

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 passive foreign investment company, or 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, 2016 and do not anticipate becoming a PFIC 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 spend 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 gain 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 gain or distribution is 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."

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. Although nations around the world have adopted various economic policies to mitigate the negative influences caused by factors such as the slowdown of world economic development, it is uncertain how soon the world economy can be fully recovered. The Chinese economy has entered the "new normal" stage with more moderate economic growth. Our operations may also be adversely affected by factors such as foreign countries' trade protection policies and regional trade agreements which may adversely affect our export and import activities.

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 general 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 cyclicality 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 gradually eased the restrictions on the right to use imported crude oil and relaxed control over the right to import refined oil products. This development may lead to refining overcapacity in China and intensify competition among local refineries. The relaxation of import control may drive up cost of crude oil imports and reduce the prices of refined oil products, thus adversely impact our refining margin. The Chinese crude oil and refined oil product markets are becoming increasingly dynamic and internationalized with implementation of tariff concessions and relaxation of market access as part of China's commitment for its accession to the WTO. In the wholesale market of refined oil products previously dominated by PetroChina and us, we are facing stronger competition with new players and imported products entering the market. 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 also expect to face competition in both domestic and international 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 community 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 compete or are likely to compete with our business.

Sinopec Group Company has interests in certain businesses, such as oil refining, petrochemical producing 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. In 2015, we acquired a 10% shareholding stake in PAO SIBUR Holding (Sibur Holding). Starting from 2014, OFAC imposed economic sanctions against Russia focusing on trading activities involving certain Russian financial and energy entities. We currently do not believe that our investment in Sibur Holding will result in any direct sanctions imposed by OFAC. However, events in or relating to Russia, including further trade restrictions and other sanctions, could adversely impact our investment in Russia. In addition, the United States may expand its sanctions regime to include other countries or regions where Sinopec Group Company or its affiliates, including us, may have assets or operations, or may unilaterally reinstate its sanction regime in Iran, where most U.S. secondary sanctions (i.e., those covering non-U.S. persons) have been suspended since January 16, 2016 pursuant to the terms of the Joint Comprehensive Plan of Action (the JCPOA), in the event of a dispute over Iran's compliance with its nuclear commitments under the JCPOA. We cannot predict the interpretation or implementation of government 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, including us, 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 or reinstated in the case of

Iran, or the impact that such actions may have on Sinopec Group Company and us. 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

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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. Furthermore, if the most extreme sanction measures under U.S. sanctions laws were applied to the properties of Sinopec Group Company and its controlled subsidiaries, Sinopec Group Company could be prohibited from engaging in business activities in the United States or with U.S. individuals or entities, and U.S. transactions in our securities and distributions to U.S. individuals and entities with respect to our securities could also be prohibited.

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 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, further improvement of pricing mechanism of refined oil products, reforming and improvement of pricing mechanism of natural gas, and reforming in resource tax and environmental tax, which could impact our production and operations. 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 imposition of pollution charge for the discharge of waste substances;
- the levy of fines and payments for damages for serious environmental offenses;
- the government, at its discretion, to seal up or close down any facility which has cause or may cause environmental damage and require it to correct or stop operations causing environmental damage; 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. However, 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, which, in turn, would require us to incur additional expenditures on environmental matters. 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 and expensive technologies. As a result, our unconventional oil and gas operations are subject to the limitations of unproven technology and expose us to higher environmental compliance standards and requirements. In the event of any failure to comply with such standards and requirements, we may be subject to public concerns about our unconventional oil and gas operations, which may also harm our corporate reputation.

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 are 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 U.S. 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. 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. Most of our crude oil purchases are settled in foreign currencies calculated on the basis of prices in U.S. dollar. Fluctuations in the exchange rate of the Renminbi against the U.S. dollars and certain other foreign currencies may adversely affect our oil and gas business, financial condition and results of operations. Meanwhile, prices of refined oil products are guided by the PRC Government and are pegged to the exchange rate of the Renminbi against the U.S. 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 independent registered public accounting firm that issues the audit reports included in our annual reports filed with the SEC, as an auditor of companies that are traded publicly in the United States and a firm registered with the Public Company Accounting Oversight Board, or PCAOB, is required by the laws of the United States to undergo regular inspections by PCAOB to assess its compliance with the laws of the United States and professional standards. Because our auditor is located in China, a jurisdiction where PCAOB is currently unable to conduct inspections without the approval of the PRC authorities, our auditor, like other independent registered public accounting firms, is currently not inspected by PCAOB.

Inspections of other firms that PCAOB has conducted outside of China have identified deficiencies in those firms’ audit procedures and quality control procedures, which may be addressed as part of the inspection process to improve future audit quality. The lack of PCAOB inspections in China may prevent PCAOB from regularly evaluating our auditor’s audits and quality control procedures. The inability of PCAOB to conduct inspections of auditors in China makes it more difficult to evaluate the effectiveness of our auditor’s audit procedures or quality control procedures. As a result, investors may be deprived of the benefits of PCAOB inspections.

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 requires 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. If the firms fail to comply with the documentation production procedures that set forth in the settlement agreement or if these required information fails to be provided to the SEC by the CSRC for reasons out of these firms’ control, the SEC could impose penalties such as suspensions, or it could restart the administrative proceedings.

In the event that the SEC restarts the administrative proceedings, depending upon the final outcome, listed companies in the United States with major 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, including possible delisting. Moreover, any negative news about the proceedings against these audit firms may cause investor uncertainty regarding China-based, United States-listed companies and the market price of our ADSs may be adversely affected.

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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 the delay or abandonment of this offering, 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 United States, located at 515 Madison Avenue, Suite 27 West, New York, NY 10022, USA (telephone number: (212) 759-5085; fax number: (212) 759-6882) as our agent for service of processes for actions brought under the U.S. securities laws.

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;
- 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.

On February 19, 2014, our board of directors unanimously approved a proposal to restructure our marketing and distribution business and to diversify the ownership of this segment by way of introducing private capital investments. In April 2014, our ownership, management and control of the assets in the marketing and distribution segment have been transferred to Sinopec Marketing Co., Ltd., one of our wholly owned subsidiaries. On September 12, 2014, Sinopec Marketing Co., Ltd. entered into a capital injection agreement with 25 domestic and foreign investors, pursuant to which the investors will subscribe for certain equity interest in Sinopec Marketing Co., Ltd. As of March 6, 2015, the 25 investors have made an aggregate capital contribution of RMB 105.04 billion, representing 29.58% equity interest in Sinopec Marketing Co., Ltd.

On September 12, 2014, in connection with our plan to spin off Sinopec Yizheng Chemical Fibre Company Limited (Yizheng Chemical), in which we originally owned 40.25% equity interest, we entered into a disposal agreement and a share repurchase agreement with Yizheng Chemical, pursuant to which Yizheng Chemical agreed to transfer to us all of its assets and liabilities. As consideration, our 40.25% equity interest in Yizheng Chemical was repurchased and cancelled by Yizheng Chemical. Subsequently, through a series of inter-group company restructuring steps, Yizheng Chemical was spun off from us in December 2014.

On October 30, 2014, Sinopec Overseas Investment Holdings Limited (SOI) and Sinopec Chemical Commercial Holdings Company Limited (SCC), two of our wholly-owned subsidiaries, entered into acquisition agreements with two subsidiaries of Sinopec Group Company, pursuant to which SOI and SCC acquired 99% and 1% membership interests in Sinopec Century Bright Capital Investment (Netherlands) Cooperation U.A. (COOP), respectively, from the two subsidiaries of Sinopec Group Company with an aggregate consideration of US$562 million. Upon completion of the acquisition, we indirectly held 100% interest in COOP, which holds 37.5% interest in Yanbu Aramco Sinopec Refining Company (YASREF) Limited (YASREF). The remaining 62.5% interest in YASREF is held by Saudi Arabian Oil Company. YASREF is mainly engaged in the production and sale of gasoline and diesel oil, petroleum coke and sulfur, benzene and other products in Saudi Abrabia and has a designed processing capability of 3,890 thousand barrels per day.

On July 8, 2015, Sinopec Group Company informed us that it planned to increase its shareholding in the Company in the next twelve-month period through acquisitions of our ordinary shares on the secondary market in its own name or through other concerting parties, but its increased shareholding in the Company would not exceed 2% (inclusive of the shares acquired on July 8, 2015) of our issued and outstanding shares. As of July 7, 2016, Sinopec Group Company had increased its shareholding in the Company by way of acquiring 72,000,000 A shares, representing approximately 0.06% of our issued and outstanding shares. Immediately following the shareholding increase, Sinopec Group Company directly and indirectly held 86,345,821,101 shares of the Company, representing approximately 71.32% of our issued and outstanding shares.

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, 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 us hold 43.86%, 6.14% and 50% equity interest in Sichuan-to-East China Pipeline Co., respectively.

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, 2016, we held 211 production licenses in China, with an aggregate acreage of 28,436 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, 2016, we held 236 exploration licenses in China for various blocks in which we engaged in exploration activities, with an aggregate acreage of approximately 742,600 square kilometers and with the maximum term of seven years. Our exploration licenses may be renewed upon our application at least 30 days prior to the expiration date, with each renewal for a maximum two-year term. We are obligated to make an annual minimum exploration investment in each of the exploration blocks which we obtained the exploration licenses. We are also obligated to pay an annual exploration license fee ranging from RMB 100 to RMB 500 per square kilometer. Under the PRC laws and regulations, however, we are entitled for reduction and exemption of exploration license fee for exploration in the western region, northeast region and offshore of China.

As of December 31, 2016, our overseas subsidiary held one production license, with an acreage of 323 square kilometers. It currently does not have exploration licenses. Our overseas equity-accounted investments held 71 production licenses, with an aggregate acreage of 4,546 square kilometers, and one exploration license.

Properties

We currently operate 295 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 2,549 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 2016, Shengli production field produced 169 million barrels of crude oil and 14.26 billion cubic feet of natural gas, with an average daily production of 470.16 thousand BOE.

As of December 31, 2016, the total acreage of our oil and gas producing fields and blocks in China was 13,927 square kilometers, including 8,479 square kilometers of developed acreage, all of which were net developed acreage; and 5,448 square kilometers of gross undeveloped acreage, all of which were net undeveloped acreage.

As of December 31, 2016, the total acreage of our oil and gas producing fields and blocks of our overseas subsidiary was 323 square kilometers, including 169 square kilometers of developed acreage, of which 169 square kilometers were net developed acreage; and 153 square kilometers of gross undeveloped acreage, of which 153 square kilometers were net undeveloped acreage.

As of December 31, 2016, the total acreage of our oil and gas producing fields and blocks of our overseas equity-accounted investments was 1,690 square kilometers, including 1,582 square kilometers of developed acreage, of which 765 square kilometers were net developed acreage; and 108 square kilometers of gross undeveloped acreage, of which 54 square kilometers were net undeveloped acreage.

Oil and Natural Gas Reserves

As of December 31, 2016, our estimated proved reserves of crude oil and natural gas in China were 2,410 million BOE (including 1,216 million barrels of crude oil and 7,160 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 339 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, 2016.

Crude Oil Proved Reserves	As of December 31, 2016 (in millions of barrels)
Developed	
Subsidiaries	
China	
Shengli	801
Others	279
Overseas	40
Subtotal	1,120
Equity-accounted investments	
China	-
Overseas	273
Subtotal	273

Total Developed	1,393
Undeveloped	
Subsidiaries	
China	
Shengli	37
Others	99

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Overseas	-
Subtotal	136
Equity-accounted investments	
China	-
Overseas	23
Subtotal	23
Total Undeveloped	159
Total Oil Proved Reserves	1,552

Natural Gas Proved Reserves	As of December 31, 2016 (in billions of cubic feet)
Developed	
Subsidiaries	
China	
Puguang	2,330
Fuling	1,226
Others	2,880
Overseas	-
Subtotal	6,436
Equity-accounted investments	
China	-
Overseas	18
Subtotal	18
Total Developed	6,454
Undeveloped	
Subsidiaries	
China	
Puguang	-
Fuling	-
Others	724
Overseas	-
Subtotal	724
Equity-accounted investments	
China	-
Overseas	-
Subtotal	-
Total Undeveloped	724
Total Natural Gas Proved Reserves	7,178

As of December 31, 2016, approximately 159 million barrels of our crude oil proved reserves and 724 billion cubic feet of our natural gas proved reserves were classified as proved undeveloped reserves in China and overseas. An insignificant amount of crude oil or natural gas proved reserves in China have been classified as proved undeveloped for more than five years.

During 2016, a total of 621 wells were drilled by us in China and 99 wells were drilled overseas. We converted 71 million barrels of proved undeveloped crude oil reserves and 358 billion cubic feet of proved undeveloped natural gas reserves into proved developed reserves in 2016. Total capital expenditure incurred in converting proved undeveloped reserves into proved developed reserves amounted to RMB 8.6 billion, including RMB 8.2 billion and RMB 0.4 billion incurred in connection with our operations in China and overseas, respectively, in 2016.

We manage our reserves estimation through a two-tier management system. The Oil and Natural Gas Reserves Management Committee, or the RMC, at our headquarters level oversees the overall reserves estimation process and reviews the reserves estimation of our company. Each of our Branches has a reserves committee that manages the reserves estimation process and reviews the reserves estimation report at the branches level.

Our RMC is co-led by several of our senior vice presidents and the head of our exploration and production segment. The current chairman of our RMC, Mr. Wang Zhigang, holds a Ph.D. degree in geology from Geology and Geo-physics Research Institute of the China Academy of Science and has over 30 years of experience in the oil and gas industry.

The rest of the members of our RMC are all senior management members in charge of exploration and development activities at production bureau level. 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, engineering 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. Exploration and development divisions collectively prepare the initial report on reserves estimation. Together with technical experts, 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. At our headquarters level, the RMC is primarily responsible for the management and coordination of the reserves estimation process, review and approval of annual changes and results in reserves estimation and disclosure of our proved reserves. 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 2016, we produced an average of 1,039 thousand BOE per day in China, of which approximately 66.6% was crude oil and 33.4% was natural gas. We produced an average of 142 thousand BOE per day overseas, of which 97.2% was crude oil and 2.8% was natural gas.

The following tables set forth our average daily production of crude oil and natural gas for the years ended December 31, 2014, 2015 and 2016. The production of crude oil includes condensate.

	Year Ended December 31,		
	2014	2015	2016
	(in thousands of barrels)		
Average Daily Crude Oil Production			
China	852	812	692
Subsidiaries	852	812	692
Shengli	542	527	464
Others	310	285	228
Overseas	137	146	138
Subsidiary	42	54	51
Equity-accounted investments	95	92	87
Total Crude Oil Production	989	958	830

	Year Ended December 31,		
	2014	2015	2016
	(in millions of cubic feet)		
Average Daily Natural Gas Production			
China	1,951	1,952	2,083
Subsidiaries	1,951	1,952	2,083
Puguang	761	530	362
Fuling	105	306	486
Others	1,085	1,116	1,235
Overseas	11	11	10

Equity-accounted investments	11	11	10
Total Natural Gas Production	1,962	1,963	2,093

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, 2014, 2015 and 2016.

	Weighted Average (RMB)	China	Overseas(1)
For the year ended December 31, 2016			
Average petroleum lifting cost per BOE	108.21	112.19	77.62
Average realized sales price			
Per barrel of crude oil	240.70	246.10	213.41
Per thousand cubic meters of natural gas	1,266.03	1,266.03	-
For the year ended December 31, 2015			
Average petroleum lifting cost per BOE	109.70	111.56	72.20
Average realized sales price			
Per barrel of crude oil	283.72	280.74	316.15
Per thousand cubic meters of natural gas	1,519.83	1,519.83	-
For the year ended December 31, 2014			
Average petroleum lifting cost per BOE	113.10	113.40	105.07
Average realized sales price			
Per barrel of crude oil	554.71	552.73	597.24
Per thousand cubic meters of natural gas	1,598.99	1,598.99	-

1) The exchange rates we used for overseas data in this table were exchange rates for each year ended December 31, 2014, 2015 and 2016, which were RMB 6.1428 to US$1.00, RMB 6.2284 to US$1.00 and RMB 6.6400 to US$ 1.00, respectively.

Exploration and Development Activities

In the low oil price environment in 2016, we prioritized high-efficiency exploration activities. We continued our efforts in exploration activities and led to a number of new discoveries of oil resources in Tahe of Xinjiang, Beibu Gulf of Guangxi and Yin'e Basin of Inner Mongolia, and of shale gas resource in Yongchuan area of Sichuan Basin. With respect to development activities, we focused on increasing efficiency and effectiveness by adjusting our development structures, reducing our inefficient crude oil production and high cost activities. We significantly advanced the construction of the second phase of our Fuling shale gas project to improve the production volume, which has reached an annual production volume of 247.2 billion cubic feet in 2016.

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, 2014, 2015 and 2016.

	As of December 31,											
	2014				2015				2016			
Number of Drilled Wells	Exploratory		Development		Exploratory		Development		Exploratory		Development	
	Productive	Dry	Productive	Dry	Productive	Dry	Productive	Dry	Productive	Dry	Productive	Dry
China	334	187	3,641	56	373	195	1,801	25	266	149	801	6
Subsidiaries	334	187	3,641	56	373	195	1,801	25	266	149	801	6
Shengli	141	64	2,027	30	150	73	1,020	18	166	73	462	5
Others	193	123	1,614	26	223	122	781	7	100	76	339	1
Overseas	3	-	323	-	-	1	149	1	2	1	99	-
Subsidiaries	-	-	6	-	-	-	5	-	-	-	-	-
Equity-accounted investments	3	-	317	-	-	1	144	1	2	1	99	-
Total	337	187	3,964	56	373	196	1,950	26	268	150	900	6

The following table sets forth the number of wells being drilled by us as of December 31, 2016, as compared to December 31, 2015:

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	As of December 31,							
	2015				2016			
Number of Drilling Welling	Gross		Net		Gross		Net	
	Exploratory	Development	Exploratory	Development	Exploratory	Development	Exploratory	Development
China	110	152	110	152	78	138	78	138
Subsidiaries	110	152	110	152	78	138	78	138
Shengli	35	23	35	23	28	21	28	21
Others	75	129	75	129	50	117	50	117
Overseas	-	3	-	1	-	2	-	2
Subsidiaries	-	-	-	-	-	-	-	-
Equity-accounted investments	-	3	-	1	-	2	-	2
Total	110	155	110	153	78	140	78	140

The following table sets forth our number of productive wells for crude oil and natural gas as of December 31, 2016, as compared to December 31, 2015:

	As of December 31,			
	2015		2016	
Productive Wells for Crude Oil	Gross	Net	Gross	Net
China	49,662	49,662	49,921	49,921
Subsidiaries	49,662	49,662	49,921	49,921
Shengli	31,547	31,547	32,019	32,019
Others	18,115	18,115	17,902	17,902
Overseas	6,913	3,122	7,432	3,614
Subsidiaries	28	15	28	14
Equity-accounted investments	6,885	3,107	7,404	3,600
Total	56,575	52,784	57,353	53,535

	As of December 31,			
	2015		2016	
Productive Wells for Natural Gas	Gross	Net	Gross	Net
China	4,758	4,727	4,966	4,932
Subsidiaries	4,758	4,727	4,966	4,932
Puguang	55	55	57	57
Fuling	175	175	253	253
Others	4,528	4,497	4,656	4,622
Total	4,758	4,727	4,966	4,932

Refining

Overview

In 2016, our refinery throughputs were approximately 236 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, 2014, 2015 and 2016.

	Year Ended December 31,		
	2014	2015	2016
	(in million tonnes)		
Gasoline	51.22	53.98	56.36
Diesel	74.26	70.05	67.34
Kerosene and jet fuel	20.75	24.35	25.47

Light chemical feedstock	39.17	38.81	38.54
Liquefied petroleum gas	11.25	11.58	12.12
Fuel oil	2.48	1.48	0.94

Gasoline and diesel are our largest revenue-generating products, and are sold mostly through our marketing and distribution segment 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 32 refineries in China. As of December 31, 2016, our total primary distillation capacity of crude oil was 295 million tonnes per annum.

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, 2014, 2015 and 2016.

	As of and for the Year Ended December 31,		
	2014	2015	2016
Primary distillation capacity of crude oil (million tonnes per annum)(1)	292.40	293.20	294.7
Refinery throughputs (million tonnes)(2)	235.38	236.49	235.5

Notes:

(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 2016, measured by the total output from our refineries, our gasoline yield was 22.1%, diesel yield was 26.4%, kerosene yield was 10.0%, and light chemical feedstock yield was 15.1%. Other products include lubricant, liquefied petroleum gas, solvent, asphalt, petroleum coke, paraffin and fuel oil. For the years ended December 31, 2014, 2015 and 2016, our overall yield for all refined oil products at our refineries was 94.66%, 94.75% and 94.70%, respectively.

The following table sets forth the primary distillation capacity per annum as of December 31, 2016 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, 2016 (in million tonnes per annum)
Maoming	23.5
Zhenhai	23.0
Jinling	21.0
Shanghai	16.0
Qilu	14.0
Yangzi	14.0
Fujian	14.0
Tianjin	13.8
Guangzhou	13.2
Gaoqiao	13.0
Qingdao	12.0
Changling	11.5
Yanshan	11.0
Shijiazhuang	10.0
Jiujiang	10.0
Hainan	9.2
Luoyang	8.0
Wuhan	8.0

In 2016, our primary distillation capacity of crude oil increased by 1.5 million tonnes per annum. In addition, in 2016, our hydrofining capacity increased by 9.9 million tonnes per annum. The revamping projects for a number of refining facilities to improve refined oil product quality were also completed and put into operation.

Source of crude oil

In 2016, approximately 87.1% of the crude oil required for our refinery business was sourced from international suppliers.

Marketing and Sales of Refined Oil Products

Overview

We operate the largest sales and distribution network for refined oil products in China. In 2016, we distributed and sold approximately 170 million tonnes of gasoline, diesel, jet fuel and kerosene. Most of the refined oil products sold by us are produced internally. In 2016, approximately 71.9% of our gasoline sales volume and approximately 74.0% 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 2014, 2015 and 2016.

	As of December 31,		
	2014	2015	2016
Total sales volume of refined oil products (in million tonnes)	189.17	189.33	194.84
Domestic sales volume of refined oil products (in million tonnes)	170.97	171.37	172.70
Retail	117.84	119.03	120.14
Wholesale and Distribution	53.13	52.34	52.56
Average annual throughput of service stations (in tonnes per station)	3,858	3,896	3,926

	As of December 31,		
	2014	2015	2016
Total number of service stations under Sinopec brand	30,551	30,560	30,603
Self-operated service stations	30,538	30,547	30,597

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 2016, we sold approximately 120.14 million tonnes of gasoline, diesel and kerosene through our retail network, representing approximately 69.6% 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, 2016, we had 6 franchised service stations that are owned and operated by third parties. In 2016, the average annual throughput of our service stations increased slightly from 2015, and we have further strengthened our leading position in our principal market, and further improved our brand awareness and customer loyalty.

Wholesale and Distribution

In 2016, we sold approximately 52.56 million tonnes of refined oil products, including 7.23 million tonnes of gasoline, 29.86 million tonnes of diesel and 15.47 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 367 storage facilities with a total capacity of approximately 16.89 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 in China. We produce a full range of chemical products including intermediate petrochemicals, synthetic resins, synthetic fiber monomers and polymers, synthetic fibers and synthetic rubber. Synthetic resins, synthetic fibers, synthetic rubber and some intermediate petrochemicals comprise a significant majority of our external sales. Synthetic fiber monomers 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 with our refining businesses, which supply a significant portion of our chemical feedstock such as naphtha. Due to the high demand in China, we sell substantially all 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, 2016 was 10.69 million tonnes per annum. In 2016, we produced 11.06 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. We are the largest aromatics producer in China.

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, 2016 for our principal intermediate chemical products.

	Our Rated Capacity (thousand tonnes per annum)	Our Production (thousand tonnes)	Major Plants of Production
Ethylene	10,694	11,059	Yanshan, Shanghai, Yangzi, Qilu, Maoming, Guangzhou, Tianjin, Zhongyuan, SECCO*, BASF-YPC*, Fujian, Zhongsha (Tianjing)*, Zhenhai, Sino-Korean (Wuhan)* and Great Wall EC*
Propylene	9,924	8,988	Yanshan, Shanghai, Yangzi, Qilu, Maoming, Guangzhou, Tianjin, Zhongyuan, SECCO*, BASF-YPC*, Gaoqiao*, Anqing, Jinan, Jingmen, Fujian, Zhongsha (Tianjing)*, Zhenhai, Sino-Korean (Wuhan)* and Great Wall EC*
Benzene	5,363	4,001	Yanshan, Shanghai, Yangzi, Qilu, Guangzhou, Zhenhai, Tianjin, Luoyang, SECCO*, BASF-YPC*, Fujian*, Maoming, Hainan and Sino-Korean (Wuhan)*
Styrene	2,196	2,118	Yanshan, Qilu, Guangzhou, Maoming, SECCO*, Zhenhai and BASF-YPC*
Para-xylene	4,839	4,331	Shanghai, Yangzi, Qilu, Tianjin, Luoyang, Zhenhai, Jinling, Fujian* and Hainan
Phenol	757.5	613	Yanshan, Gaoqiao* and Zhongsha (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, 2016.

	Our Rated Capacity (thousand tonnes per annum)	Our Production (thousand tonnes)	Major Plants of Production
Polyethylene	7,190	7,272	Yanshan, Shanghai, Yangzi, Qilu, Maoming, Guangzhou, Tianjin, Zhongyuan, SECCO*, BASF-YPC*, Fujian, Zhongsha (Tianjing)*, Zhenhai, Sino-Korean (Wuhan)* and Great Wall EC*
Polypropylene	7,415	6,489	Yanshan, Shanghai, Yangzi, Qilu, Guangzhou, Maoming, Tianjin, Zhongyuan, SECCO*, Jingmen, Fujian, Zhongsha (Tianjing)*, Zhenhai, Sino-Korean (Wuhan)* and Great Wall EC*
Polyvinyl chloride	600	231	Qilu
Polystyrene	698	588	Yanshan, Qilu, Maoming, Guangzhou, and SECCO*
Acrylonitrile butadiene styrene	200	166	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. Based on our 2016 production, we are the largest producer of ethylene glycol and caprolactam in China. Most of our production of synthetic fiber monomers and polymers are used as feedstock for synthetic fibers.

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, 2016 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	3,119	2,494	Shanghai, Yangzi, Yizheng, Tianjin and Luoyang
Ethylene glycol	3,209	2,432	Yanshan, Shanghai, Yangzi, Tianjin, Maoming, BASF-YPC*, Zhongsha (Tianjing)*, Zhenhai
Acrylonitrile	1,070	952	Shanghai, Anqing, Qilu and SECCO*
Caprolactam	709	557	Shijiazhuang and Baling
Polyester	3,378	2,798	Shanghai, Yizheng, Tianjin and Luoyang

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

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Synthetic Fibers

We are the largest producer of acrylic fibers in China. 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, 2016.

	Our Rated Capacity (thousand tonnes per annum)	Our Production (thousand tonnes)	Major Plants of Production
Polyester fiber	1,220	1,004	Yizheng, Shanghai, Tianjin and Luoyang
Acrylic fiber	265	233	Shanghai, Anqing and Qilu

Synthetic Rubbers

Our principal synthetic rubbers are cis-polybutadiene rubber, styrene butadiene rubber, or SBR, styrene butadiene-styrene thermoplastic elastomer and isobutadiene isoprene rubber, or IIR. Based on our 2016 production, we are the largest producer of SBR and cis-polybutadiene rubber 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, 2016 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	359	Yanshan, Qilu, Maoming and Yangzi
Styrene butadiene rubber	430	357	Qilu, Gaoqiao* and Yangzi
Styrene-butadiene-styrene thermoplastic elastomers	140	98	