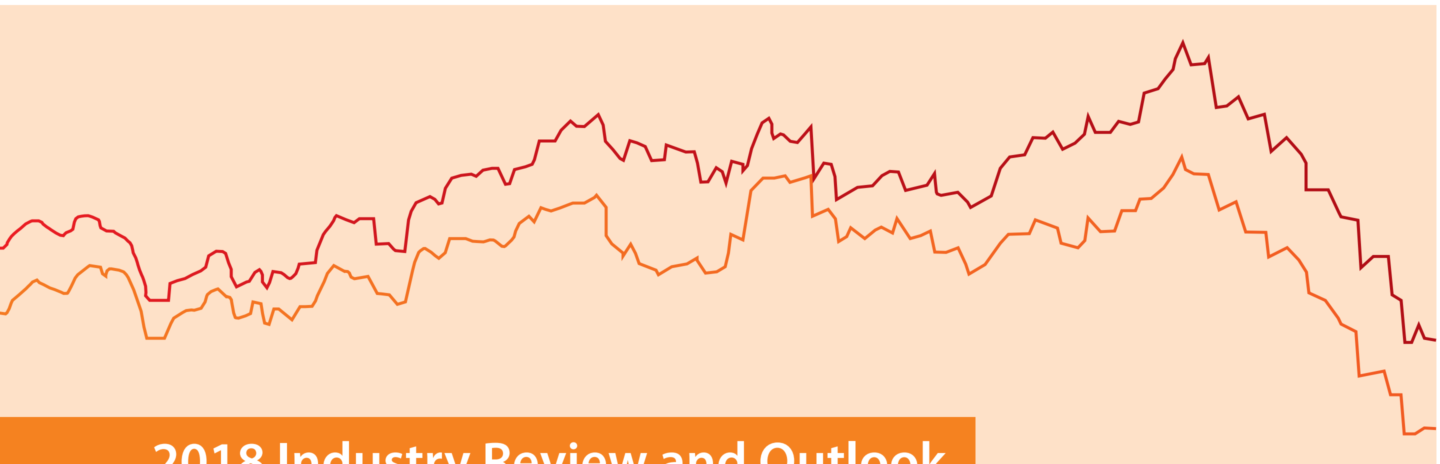

# 2018 Industry Review and Outlook

**Recoveries around the world continued in 2018, with the order being restored in the oil and gas industry. Oil prices rallied as a whole and the markets were buoyant. The shift to low-carbon fossil fuels was a key driver of the global energy transition.**

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**Energy mix continued to improve and new challenges occurred in the energy transition.** As the world economy experienced a moderate pick-up in growth, global primary energy consumption grew by approximately 2.4% to 13.34 billion tons of oil equivalent in 2018. In particular, fossil fuel consumption rose by more than 2.4%; non-fossil fuel consumption increased by 2.1%, with significantly lower year-on-year growth rate. The low-carbon pathway for energy consumption highlights changes in the mix of fossil energy sources, i.e. coal's share shrank while natural gas rose. Addressing climate change and promoting energy transition have been a consensus of the international community as well as the energy industry. However, there are still disagreements among governments and their low-carbon energy policies were restricted by various uncertainties.

**Oil prices slumped after surging, with an average rise of 30%.** Brent and WTI crude futures averaged at USD 71.69 and USD 64.90 per barrel in 2018, up 31.0% and 27.6% respectively year-on-year. Oil prices rose and then crashed in 2018, with a noticeable rally in the average annual prices. From the perspective of demand, given the weakening growth prospects of the world economy, the pace of oil demand growth slowed down. From the perspective of supply, as the global market slipped back into oversupply, OECD countries saw the amount of oil sitting in storage since October standing above the five-year average again.

**Growth in global gas consumption hit a five-year high and an easing of supply and demand remained.** Globally, natural gas consumption hit a five-year high in 2018, growing by 5.3% to 3.86 trillion cubic meters. Natural gas consumption rebounded sharply in North America, slowed down in Europe and increased the most in Asia Pacific. U.S. and China showed the biggest increases, i.e. 11% and 16.6% respectively. As global capacity additions continued, natural gas output rose by 4.5% to 3.97 trillion cubic meters, resulting in a supply glut. North America and Eurasia delivered half of global gas production. The natural gas liquefaction capacity rose by 7.8% to 383 million tons per year to maintain adequate LNG supply. Newly built capacity was mainly found in U.S., Russia and Australia.

**E&P investment picked up and oilfield service market ramped up.** Global oil and gas investments soared up along with a rally in oil prices. Oilfield service market continued to ramp up and expand. In 2018, global E&P spending grossed USD 427.2 billion, up 14% year-on-year, with North America onshore and Latin America offshore topping the list of spending increases. The global oilfield service market expanded to USD 265.1 billion, up 11.7% year-on-year, while staying focused on maintaining/boosting oil and gas output and remaining prudent about prospecting and capacity building.

**Refining/ethylene capacity kept increasing and facilities ran smoothly.** In 2018, global oil products markets saw a glut bigger than 2017. Global refining capacity reached 4,964 million tons per year, an increase of 45.3 million tons largely from China and Vietnam. Asia Pacific's share in global refining capacity continued to rise. The refining industry thrived as a whole with daily crude runs hitting an all-time high of 81.88 million barrels, up 1.8% year-on-year, despite a decrease in utilization rate and refining margin. Global demand for ethylene reached 164 million tons per year. Global ethylene capacity rose to 177 million tons per year, with capacity increment mainly found in North America and Asia- Pacific. The share of North America and Asia Pacific in global capacity continued to rise. Governments pushed ahead with cleaner fuels in response to the stricter marine fuel standards.

**China's petroleum industry reform gathered pace amidst an economic slowdown in 2018. China became, for the first time, the world's largest oil and gas importer with a fast-growing dependence on foreign resources. The oil and gas sector moved forward in support of opening-up and foreign/private capital inflows to create a pluralistic landscape of investment.**

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**China saw fast-growing energy consumption and an improved energy mix.** Along with the transition of the Chinese economy from high-speed growth to high-quality growth, China's energy consumption stayed in the fast lane in 2018. The full-year energy consumption rose by 4.8% to 4.71 billion tons of standard coal, marking the highest growth rate over the past seven years. The shift to a low-carbon energy mix was accelerated, with coal's share shrinking, for the first time, to less than 60%. Natural gas and non-fossil fuels were the key drivers of such energy structure transformation, with their shares rising by 0.8% and 0.4% respectively.

**China's crude runs and apparent oil consumption both exceeded 600 million tons, with a nearly 70% dependence on foreign oil.** China's apparent oil consumption rose by 7% to 625 million tons in 2018, mainly as a result of refining capacity additions and surging crude runs in local refineries. The full-year oil imports were approximately 440 million tons, up 11% year-on-year. The dependence on foreign oil hit 69.8%, 2.6% higher than the previous year. Growth in demand for oil products slowed to 0.6%, with full-year apparent oil products consumption at approximately 324 million tons, due to economic restructuring, declining appetite of traditional oil-demanding sectors and shrinking car sales, etc. Domestic crude runs exceeded, for the first time, 600 million tons, rising by 6.7% to 606 million tons. The total output of oil products reached 365 million tons, up 1.8% year-on-year, resulting in net exports at record-high levels. Meanwhile, the Shanghai crude futures started trading and opened up to foreign investors. Regulatory efforts were stepped up. Local refineries grabbed a larger slice of the market. The process of marketization in the oil sector was further accelerated.

**Growth in China's gas consumption remained robust with a dramatic increase in import dependence ratio.** As Chinese economy functioned smoothly in 2018, environmental policies contributed to a thriving natural gas market. A set of environmental policies targeting air pollution were launched to push ahead with the shift from coal to natural gas as the energy source for residential, heating and industrial purposes. There was a corresponding surge in natural gas consumption. The full-year natural gas consumption rose 16.6% to 276.6 billion cubic meters, accounting for 7.8% of China's primary energy consumption. The full-year natural gas supply was 282.7 billion cubic meters, up 16.4% year-on-year. Natural gas imports soared by 31.7% with an ever-increasing dependence on foreign gas up to 45.3%. The natural gas market remained tight. Seasonal peaks in demand eased thanks to an improved supply system.

**China's proven oil and gas reserves continued to increase and the gas output grew rapidly.** CNPC, Sinopec and CNOOC strengthened their E&P activities in 2018, resulting in a number of major breakthroughs in the Bohai Bay, Xinjiang, Sichuan and Chongqing. The continuous fall of the crude output was arrested. Natural gas production continued to soar. In particular, shale gas output stood for the first time above 10 billion cubic meters, with an over 20% increase.

**Structural surplus tended to be worse for China's refining capacity and a more diversified market landscape was taking shape.** China's crude processing capacity grew rapidly in 2018 to 830 million tons per year, adding 22.25 million tons per year. The structural overcapacity in refining got worse. Domestic refineries had a less run rate than the world average. As local refineries grew at a faster pace and international companies found their way into China, a more diversified market landscape was taking shape.

## 2019 Outlook

With the global recovery losing traction and trade tensions escalating in 2019, the global oil market will be faced with more uncertainties and elevated volatility. Global oil demand growth will continue to slow with a sustained glut. Wide swings in oil prices are possible, with Brent crude futures expected to fall to USD 60–65 for the coming year. Globally, excess natural gas supply will continue. Global natural gas demand is expected to hit 3.98 trillion cubic meters and global natural gas output will expand, leading to a narrowing glut. Worldwide, E&P investment will continue to grow and the oilfield service market will remain buoyant. A dramatic rise in refining capacity is expected and the tight supply of ethylene is likely to ease.

China's primary crude processing capacity will continue to expand in 2019 to fuel a rapid growth in apparent oil consumption, with full-year apparent oil demand estimated to be 668 million tons. Both natural gas demand and imports will grow at double-digit rates. The dependence on foreign gas will climb further to 46.4%. Domestic E&P investment will continue to pick up. Crude production is expected to rebound and natural gas production enjoys fairly large growth potential. China's refining sector will see fast expansions. The share of private refineries is expected to reach 27.2%. The overcapacity problem in oil refining will worsen.

Source: *2018 Report on Oil and Gas Industry Development* by CNPC ETRI