2016 Industry Review

The world economy witnessed continued sluggish growth in 2016, and the oil and gas industry struggled forward in the process of rebalancing. Oil prices slumped and then rebounded. The prices of Brent and WTI crude futures fell to USD 27.88 and USD 26.21 per barrel respectively at the beginning of the year, the lowest since 2003, before climbing gradually and averaging at USD 45.13 and USD 43.47 respectively, almost doubled but still down by15.80% and 10.86% respectively from 2015.

The growth of global oil demand slowed from 1.7 million bbl/d in 2015 to 1.3 million bbl/d. The oil market did not achieve the expected balance due to continuous increase in the OPEC oil supply, but the oversupply was reduced slightly to 600,000 bbl/d throughout the year. At the end of 2016, OPEC reluctantly gave up its policy of maintaining market share by increasing supply and came to terms with some non-OPEC producers on output reduction.

In 2016, global natural gas consumption increased by 1.8% to approximately 3.53 trillion cubic meters, lower than the 10-year average growth of 2.2%. Gas production increased to 3.66 trillion cubic meters, up 2.2%. Newly added LNG liquefaction capacity was 22.6 million tons, 1.6 times greater than that in 2015, boosting the total annual capacity to 310 million tons. The gas market glut deepened, with gas prices falling almost to a 10-year low and bottoming out in the second half of the year. Global gas trade witnessed an increase of 7% in size, greater flexibility in LNG trading, and narrowed price spreads between the US, Europe and Asia-Pacific markets.

Due to sustained lower oil prices, global upstream investment declined for two consecutive years, falling 23% to USD 375.2 billion in 2016, resulting in a 33% shrinkage in the oilfield service market. Oil and gas discoveries continued to decline, but growth was maintained in the world's remaining proven recoverable reserves, registering 241.58 billion tons for oil and 191.2 trillion cubic meters for gas, up 0.2% and 0.3% year-on-year respectively.

Global refining capacity rose to 4.87 billion tons in 2016, with a net increase of 36.3 million tons. Total crude runs of major refineries were 79.18 million bbl/d, almost the same as the previous year. Globally, the utilization rate of refineries was 82.5% on average, down from 84% in 2015. The gross margins showed varying degrees of decline, i.e. 41%, 40.3%, 29.6% and 23.4% in Northwestern Europe, Central United States, the US Gulf of Mexico and Singapore respectively. The global net ethylene production capacity rose by 3Mt/a in 2016, about half of that in the previous year, reaching 162Mt/a. Global demand for ethylene was 153 million tons, an increase of 5.2 million tons from the previous year, while the supply was still tight.

In 2016, the global market saw a growing glut in refined products with inventory level remaining high, and the overall price of refined products was lower than that in the same period of the previous year. Total demand for refined products was approximately 82.76 million bbl/d, an increase of 990,000 bbl/d compared with 2015. The total supply was approximately 83.80 million bbl/d, 1.08 million bbl/d more than last year. Excess supply was 1.04 million bbl/d, 90,000 bbl/d more than that in last year. Supply and demand of gasoline was roughly balanced. Diesel, aviation kerosene and residual fuel oil were in oversupply, but there was a supply shortage in naphtha. The trading scale of refined products expanded with more diversified markets.

Oil and gas companies experienced a continued decline in their operating performance in 2016. Having gradually adapted to the low oil price environment with effective short-term counter measures, their decline in profits was narrowed and losses were reduced. Due to sustained low oil prices, the economy of producing countries and their payment capacity was weakened. Operational risks in oil and gas cooperation were increased partly because a number of resource countries imposed huge fines on oil companies for environmental damage and improper business activities such as unreasonable tax avoidance. With Donald Trump being the US president, the US energy policies might see material change and thus impact global energy transition and greenhouse gas emission reduction process. In addition, the further release of US oil and gas potential (including shale oil and gas) may offset the efforts of other oil producers to raise prices by cutting output.

Year 2016 saw China's economy grew steadily at slower rate with energy consumption increased slightly. Preliminary results were achieved in the supply-side structural reform and the energy structure continued to be optimized. The 13th Five-Year Plan of China's energy industry was issued where greater reforms were drafted and clearer picture were seen in energy development concepts and objectives, as well as the future direction and roadmap of reforms.

China's oil consumption growth slowed remarkably in 2016, with annual apparent oil consumption stood at 556 million tons, an increase of 2.8% year-on-year, and 1.5 percentage points below the 2015 level. Net oil imports grew by 9.2% to 356 million tons, 3.3 percentage points more than the previous year. Oil dependence rate was 64.4%, 3.8 percentage points above the 2015 level. Consumption of refined products decreased for the first time, and consumption growth of the top three oil products reduced on the whole. There was a deepened glut in refined products in 2016. The annual apparent consumption of refined products dropped 1% year-on-year to approximately 313 million tons, and its growth rate fell by 6.2 % against 2015. Meanwhile China's output of refined products increased by 2.4% to 345 million tons. Net exports of refined products rose from 21.35 million tons in 2015 to 32.55 million tons in 2016, achieving a stunning 52.4% increase over the 2015 results. China's share in total Asia-Pacific net exports climbed from 12.7% to 17.9%, replacing Singapore as the third-largest exporter of refined products in the Asia-Pacific region.

China's natural gas consumption growth was lower than expected in 2016, with apparent consumption of around 204 billion cubic meters, increasing by 6.5% year-on-year. Domestic gas production in slack season declined due to lower demand and increased gas imports. The annual domestic gas production growth rate was 1.4%, down from 3.9% in 2015; natural gas imports rose 19% to 73.3 billion cubic meters, and the natural gas dependence rate soared to 36.6%. The market-oriented reform on natural gas was accelerated with more diversified market entities, and the LNG business layout was expedited.

In 2016, investment in the upstream sector continued to shrink significantly. Newly added proven oil and gas in place still exceeded 1 billion tons and 500 billion cubic meters respectively. The first three quarters saw overall losses occurred in domestic oil and gas exploration and development for the first time since the turn of the century. Focus was shifted to fine exploration of mature oilfields and scaled development of efficient reserves. We reduced high-cost oil and gas production and costly EOR measures. Domestic crude production was approximately 198 million tons for the year, a sharp decrease of 7.1%. National gas production growth continued to slow down, with annual output declined to 137.8 billion cubic meters, only 2.1% higher than that in the previous year.

In 2016, China's annual refining capacity increased slightly to 750 million tons, and the oversupply situation remained prominent. Annual crude runs were 539 million tons, up by 3.2%; and refinery utilization rate edged up 1.3 percentage points to 76.7%. The diesel and gasoline production ratio in refineries decreased slightly, offsetting to some extent the oversupply of domestic diesel in the market. In 2016, the ethylene production capacity totaled 23.1 million tons, and the output increased 4.4% to 17.9 million tons.

The global energy market is heading for a new round of changes in 2017, and the oil and gas industry is expected to see recovery. A modest increase is expected in global oil demand. The oil market will see a better balance between supply and demand, with a substantial rebound in oil prices. Natural gas will be further oversupplied globally, and will take time to rebalance.

Source: *Report on Oil & Gas Industry Development in 2016* by CNPC ETRI