Management's Discussion & Analysis

MACROECONOMIC CONDITIONS & OUTLOOK

Global Economy Performance & Outlook

The year was marked by a buoyant global economy. Global economic growth accelerated to 3.8% in 2017 from 3.2% in 2016 on account of a broad-based global recovery. OECD economies witnessed a steep acceleration in growth, with growth rate rising to 2.3% in 2017 from 1.7% recorded in 2016. Non-OECD economies also witnessed acceleration in growth, economic activity rose by 4.8% in 2017 from 4.4% in 2016.

The year was marked by rising purchasing managers indices, rising consumer confidence, growing industrial production, rising commodity prices and growing trade volumes across majority of countries. Further, rising commodity prices, especially energy prices, supported growth in commodity exporting countries like Brazil and Russia. Private consumption and exports drove growth in China, which re-emerged as the fastest growing large economy in 2017. Pick-up in investment and accommodative monetary policies supported growth in OECD economies. The progressively improving labour market conditions and inflation situation in the US also warranted gradual withdrawal of monetary support.

Looking ahead, global growth is expected to accelerate further in the next two years. The prevailing buoyancy in global economic activity, favourable market sentiment, financial conditions and implementation of expansionary fiscal policy in the United States are expected to support global growth. However, rise in protectionist measures, sanctions, worsening of geo-political conditions could act as key downside risks to the prospects of the global economy.

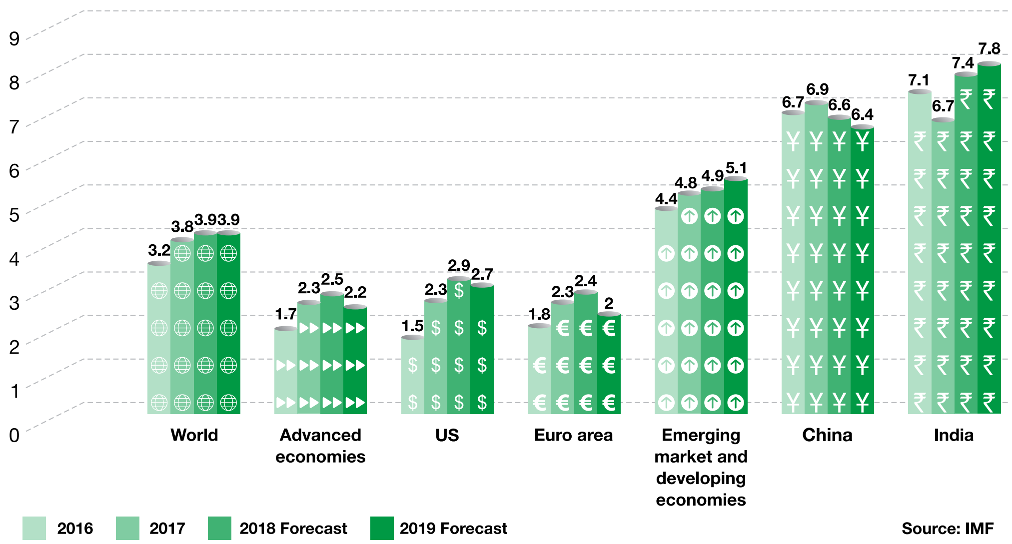
Indian Economy Performance & Outlook

During the year, GDP growth slipped marginally to 6.7% from 7.1% in 2016-17. Slippage in growth was seen in agriculture and manufacturing sectors. It was the services sector that provided support to the overall GDP growth, wherein growth accelerated to 7.9% from 7.5% in the previous year.

Looking at the economy's performance from the demand side, India's consumption growth weakened in both private and government space. This segment has been the key driver of GDP growth and a slowdown here played a significant role in bringing down the growth rate. Besides, the performance on investment front was also below expectation. Growth in gross fixed capital formation was above the average growth rate in previous 5 years but lower than last year. In addition, muted exports growth and resurgence in import demand mainly on account of pricier oil imports and higher gold imports also weighed on the growth in aggregate demand.

In terms of performance of macroeconomic parameters, the performance during the year was mixed. Retail inflation slowed down to 3.6% in 2017-18 from 4.5% in the previous year. However, the decline was far from smooth, with inflationary pressures building up midcourse. Fiscal Deficit in 2017 - 18 was 3.5% of GDP, unchanged from 2016-17 level, but above the budget estimate of 3.2% of GDP for 2017-18. Subdued export performance and rising imports weighed on growth and current account deficit deteriorated to 1.9% of GDP from 0.7% of GDP in 2016-17. There was a slight dip in net foreign direct investment (FDI) inflows as well, which have dipped to \$31 billion, from the level of \$36 billion in previous two years. While Rupee remained stable, on overall terms it appreciated to ₹64.44/US\$ during the year from

Global GDP Growth (y-o-y) %



Source: IMF

Note: Data for India is on fiscal year basis

₹67.09/US$ in 2016-17. Net Portfolio flows remained buoyant and almost tripled from 2016-17 levels.

In the current year, prospects are looking up for the economy. Growth is expected to accelerate to around 7.4% in 2018-19 driven by improving global demand, investment revival, which is becoming visible with the sustained expansion in capital goods production and rising imports. Rejuvenation of rural demand propelled by healthy monsoons and rural & infrastructure sector focused budget schemes and reforms also expected to drive growth, besides, continued implementation of structural reforms will be a key facilitator of growth. The transitory effects of demonetization and GST are expected to diminish and the positive gains from implementation of GST by reducing internal barriers to trade are expected to kick in by raising efficiency levels and tax compliance. Key risks to the outlook emanate from distressed banking sector assets and rising international crude oil prices.

INDUSTRY STRUCTURE & DEVELOPMENTS

Global Energy Scene

During the year, primary energy consumption grew by 2.2% up from 1.2% in 2016 and the fastest since 2013 propelled by a thriving global economy. While there was a rise in prices of fossil fuels, they remained lower than the historical highs, and the falling costs of wind and solar continued to provide support to energy demand. In 2017, global clean energy investment rose by 3% from 2016 and was at the second highest annual figure ever.

Global energy sector is at an interesting juncture today, where far-reaching transformations are gaining shape and over the long term have the potential to significantly alter the global energy system. Key global shifts which are viewed as pivotal to this transformation are - rising population, urbanization and GDP growth in the developing world, with India being at the forefront, rising share of natural gas, shale revolution, rising dominance of US as an oil producer and exporter, climate change and air pollution concerns, rapidly falling costs of renewable energy, falling battery costs and rising energy density of batteries, rising energy efficiency and rising share of electricity in the final energy demand.

Global Oil Market

Consumption

Global oil consumption in 2017 increased by 1.6 million barrels per day (mbpd) to 97.8 mbpd from 96.2 mbpd in 2016, registering growth of 1.7% from previous year. Recovery in world economy and low oil price gave impetus to oil consumption growth. In terms of country grouping, OECD demand grew by 0.5 mbpd to 47.4 mbpd, an increase in demand for third consecutive year, while non-OECD demand increased by 1.1 mbpd to 50.4 mbpd in 2017, contributed mainly by emerging economies of Asia. With projections of strong growth in most countries, particularly in advanced economies, global oil demand is expected to rise by 1.5 mb/d to 99.3 mb/d in 2018.

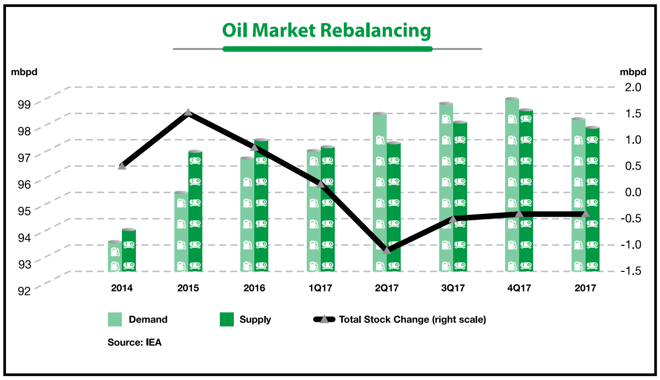
Production

On the supply side, the average output increased by only 0.4 mbpd in 2017 to 97.4 mbpd from 2016 level, a weak growth in overall supply due to agreed supply cuts by OPEC and certain/-non-OPEC countries. OPEC production declined by 0.4 mbpd, from 39.6 mbpd in 2016 to 39.2 mbpd in 2017, the first annual decline since 2013, in compliance with supply cuts put in place at the start of the year. Saudi Arabia produced below its agreed supply target every month of the year. Non-OPEC production, on the other hand, after falling in 2016, increased by 0.7 mbpd in 2017, led by US. Annual average U.S. crude oil production reached 9.3 million barrels per day (b/d) in 2017, an increase of 464,000 b/d from 2016 levels.

In November 2017, monthly U.S. crude oil production reached 10.07 million b/d, the highest monthly level of crude oil production in U.S. history. Recent hike in crude oil price is expected to drive non-OPEC production growth in 2018.

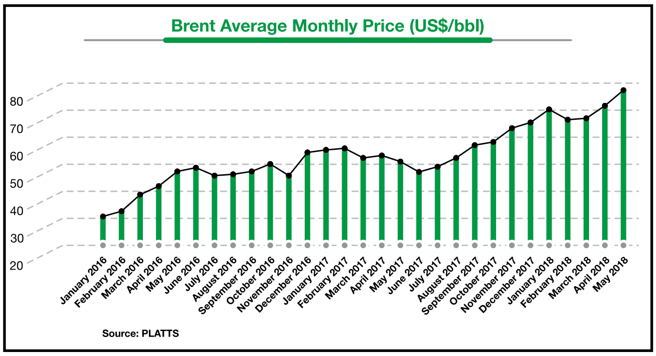
Inventories

The surplus in the oil market witnessed in the previous years disappeared, with demand exceeding supply by 0.5 mbpd in 2017 as a whole. The agreed supply cut and robust growth in global oil demand helped the market rebalance.



Prices

Brent crude oil prices averaged $54.4/barrel in 2017, the first annual increase since 2012, moving up by almost $10/barrel from 2016 average. The Brent-WTI price spread was more than $3.3/barrel in 2017 from the average price difference of less than $1/b in 2016. Despite relatively higher U.S. crude oil production in 2017, curtailments in production by members of the Organization of the Petroleum Exporting Countries (OPEC) and growth in global demand supported crude oil price rise in 2017. The OPEC



agreement to restrict crude oil production in 2017 and subsequent extension of that agreement through 2018 tightened crude oil supplies, which put upward pressure on oil prices. Brent crossed the $70/barrel in January 2018 and has further strengthened in the current year crossing $80/barrel. Re-imposition of sanctions by US on Iran, unplanned output losses in Venezuela, and escalation in geopolitical tensions in Syria, North Korea among other factors have driven up oil prices.

Global Gas Market

Natural gas consumption grew by 3% in 2017 reaching 3670 bcm, making it the fastest growing fossil fuel in 2017. The consumption growth in 2017 was distinctly above the average annual growth rate of 2.3% witnessed in the previous 10 years. China alone accounted for nearly 30% of global growth in 2017, with more than 30 bcm of incremental consumption coming from China, out of 96 bcm of global incremental consumption.

Natural gas production increased by 4% in 2017, which was almost double the average annual growth rate in the previous 10 years. OECD natural gas production grew by 2.4% and Non-OECD production grew by 4.9%. Largest production increases were in Russia (46 bcm), followed by Iran (21 bcm).

During the year, gas trade surged with 6.2% growth in 2017 over 2016. Growth in LNG trade at 10%, which was the highest since 2010, drove the global gas trade. Start-up of new LNG supplies from Australia and the US along with rising LNG demand from China significantly contributed to expansion in LNG trade.

Gas price bounced back in all markets in 2017, as global markets tightened. Gas prices in the US averaged $2.96 per million British thermal units (mmBtu), up by $0.47 compared with 2016 ($2.49). Natural Gas LNG Japan price rebounded to $8.04/mmBtu in 2017 from $6.89/mmBtu in 2016. The price was driven by stronger Asian LNG demand from China, Japan, Korea and Pakistan.

Global Renewables Sector

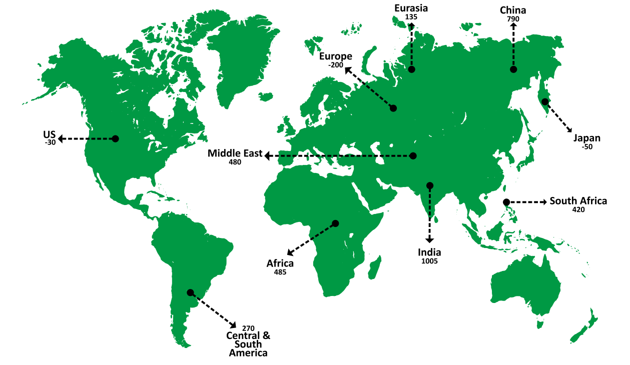
Renewable generation capacity has been growing at 8-9% per annum in the recent years. The trend continued in 2017 as well, with capacity rising to 2179 GW by the end of 2017. During 2017, additional capacity of 167 GW was added, implying a growth of 8.3% over previous year. Capacity expansion continued to be driven mostly by new installations of solar and wind energy, together accounting for 85% of all new capacity installed in 2017. Solar energy capacity increased by 94 GW (+32%), followed by wind energy with an increase of 47 GW (+10%). Hydropower and bioenergy capacities increased by 21 GW (+2%) and 5 GW (+5%) respectively.

Solar capacity expansion was mostly contributed by Asia, with a 72 GW increase. China alone accounted for more than half of all new solar capacity installed in 2017, with capacity addition of 53 GW. India added 9.3 GW of solar capacity in 2017. Three-quarters of new wind energy capacity was installed in five countries: China (15 GW); USA (6 GW); Germany (6 GW); UK (4 GW); and India (4 GW). Brazil and France also installed more than 1 GW.

Global Energy Outlook

Latest energy sector long term outlooks by different independent agencies, such as BP, Exxon Mobil and International Energy Agency (IEA) project growth in global energy demand in coming decades, driven by growth in India and China. Oil and gas together are projected to account for the largest share of the energy mix across a range of scenarios, albeit with a bigger share of renewables and fall in share of coal. Even in high electric vehicles penetration scenarios, while moderation is projected in oil demand, liquids will still continue to be the major fuel catering to transportation demand.

Change in Primary Energy Demand 2016-2040 (Mtoe), Source: World Energy Outlook, New Policy Scenario, IEA



Global Primary Energy Demand projected to rise from 13760 mtoe in 2016 to 17584 mtoe in 2040

Developments in the Indian Energy Sector

Indian energy mix is dominated by coal, followed by oil. Natural Gas still has a small share, while traditional energy forms continue to cater to a large chunk of the energy demand. Renewable energy has a small but rapidly growing presence. India is the world's third largest energy consumer, but in per capita terms, with energy consumption of 637 kgoe/capita, it is way below its peers such as China, Russia and Brazil and is 1/10th of the levels in the United States.

Key developments in the Indian energy sector that marked the year, particularly with reference to the areas in which the Corporation operates were-

- BS-IV grade fuel launched across the country, April 2017
- Ban on sale of vehicles not compliant with BS-IV standards, April 2017
- Roll-out of Corporate Average Fuel Efficiency norms for light duty vehicles, April 2017
- India's first electric mass transport project launched in Nagpur, May 2017
- Solar power tariffs touched a record low of Rs. 2.44/ kWh at Bhadla Park, Rajasthan, May 2017
- Pan India roll-out of dynamic pricing of retail prices of petrol and diesel, June 2017
- NITI Aayog releases the draft National Energy Policy (NEP) an

omnibus policy to achieve the goal of energy security through coordination between different ministries, June 2017

- Signing of Joint Venture (JV) agreement between PSU Oil Marketing Companies to create the world's largest green field refinery cum petrochemicals complex in Maharashtra, June 2017
- Rosneft-led consortium acquires Essar Oil, August 2017
- Government tenders for 10,000 electric vehicles from EESL, August 2017
- India receives its first shipment US crude oil, October 2017
- Ban on use of Pet Coke & Furnace Oil (FO) in NCR and Rajasthan, Haryana and Uttar Pradesh, October 2017
- Announcement of advancing of BS VI deadline for NCT, November 2017
- Extension of Urja Ganga Gas pipeline in the East to the North East and creation of a gas grid connecting all NE states, January 2018
- Oil and Natural Gas Corporation Limited (ONGC), acquired 51.11% stake in Hindustan Petroleum Corporation Limited (HPCL), January 2018
- Target of Pradhan Mantri Ujjwala Yojana (PMUY) upscaled from five crore to eight crore beneficiaries to be achieved by 2020, February 2018.

Heightened environmental concerns, need for a comprehensive energy policy, rising competition levels, renewable energy tending towards grid parity, investment for meeting future demand, and rising interest in electric vehicles were the themes that defined the Indian energy sector during the year.

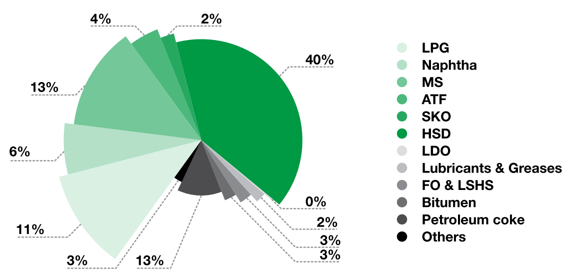
Oil Market - Domestic

Demand Side

During FY 2017-18, petroleum product consumption was 204.9 MMT, registering a growth of 5.3% as compared to 5.4% growth during 2016-17.

Consumption of automotive fuels grew at a much faster rate, with combined MS and HSD consumption registering a 7.5% growth during the year. MS consumption registered a growth of 10.1% in 2017-18 as compared to the previous year. HSD consumption recorded a growth of 6.6% in 2017-18. Domestic commercial vehicle sales increased by 19.9% in 2017-18 compared to 4.1% growth in 2016-17. There was a dip in growth of domestic passenger car sales during the year, growing by 3.3% compared to 3.9% growth in 2016-17 and 7.9% in 2015-16. Domestic two and three-wheeler sales had a robust growth during the year growing by 14.8% compared to 6.9% in the previous year. It was the highest ever growth after 2010-11.

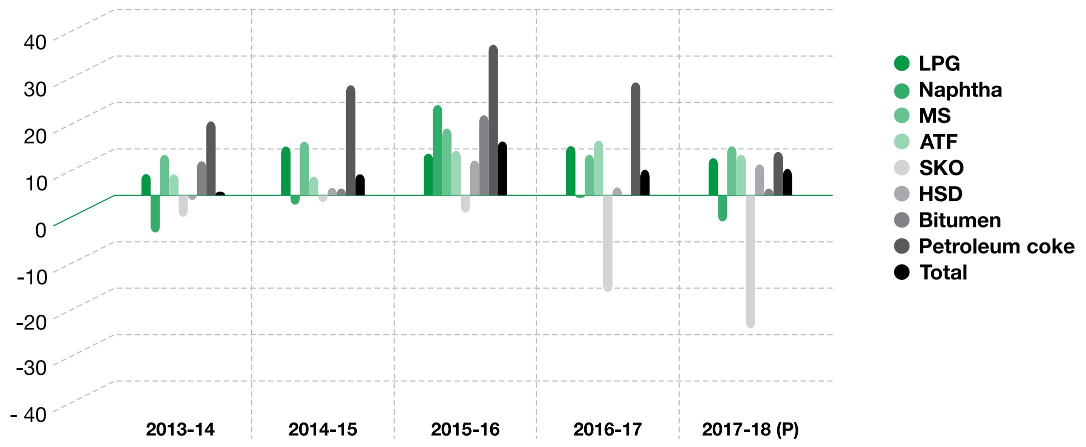
Share of Petroleum Products' Consumption in 2017-18



Source: PPAC

Growth story of civil aviation sector continued during the year, with traffic registering double digit growth. During the year, growth in ATF consumption soared to 8.9% as compared to last year. The continued high growth in domestic passenger traffic has resulted in increasing demand for ATF with a CAGR of 4.9% in the last five years.

Growth Rates of Major POL Products (%)



Source: PPAC

LPG consumption continued in the growth phase. Government's push to providing a clean fuel like LPG to the marginalised sections of society through PMUY also drove up the demand. LPG consumption recorded a positive growth of 8.0% for 2017-18 after recording a 10.1% growth in the previous year. LPG-Packed domestic consumption registered a growth of 7.8% for the year 2017-18. During 2017-18, 68.8 lakh DBCs and 284.7 lakh new connections were released out of which 155.7 lakh were released under PMUY. With this, the total connections released under PMUY till 31.03.2018 since inception was 356.0 lakh.

Growth in Petcoke and FO consumption slowed down during the year. The Supreme Court order banning the use of FO and Petcoke as fuels in Delhi, Uttar Pradesh, Rajasthan and Haryana affected the consumption of both the products in the industries in these regions. The ban gave a boost to LDO demand as a replacement of FO in the affected areas. SKO consumption continued to decline on account of reduced allocation to states and voluntary surrender of quota by few states/UTs.

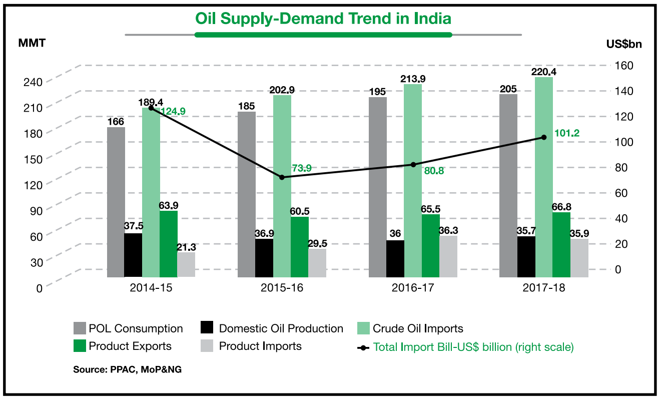
Supply Side

Domestic crude oil production declined by 0.9% to 35.68 MMT as declining phase of many fields continued. The percentage share of crude oil and condensate production of PSU companies increased to 71.8% during 2017-18 against 70.8% during the previous year. However, with Government's thrust on ramping up domestic production through investment-friendly policies, improvement in production levels is expected in the near future.

On the refining front, with capacity addition of 13.6 MMPTA through various revamps, India's refining capacity increased to 247.6 MMTPA at the end of 2017-18. Growth in domestic demand was met by the Indian refiners by increasing their refinery throughput by 2.7%. During the year, Indian refiners processed 251.9 MMT of crude oil as compared to 245 MMT in 2016-17, out of which 74.7% was high sulphur crude oil against 72.3% during 2016-17.

Import Export

Crude oil imports posted a 3.04 per cent growth over previous year in quantity terms, rising to over 220.4 MMT. With the rise in international oil prices in value terms as well, the crude oil import



bill rose to US$ 87.8 billion from US$70.2 billion in 2016-17. On the other hand, product imports remained flat at 35.9 MMT in 2017-18 almost same as last year. However, product imports bill expanded from US$10.6 billion in 2016-17 to US$ 13.4 billion in 2017-18. Export of POL products registered a growth of 1.9% during 2017-18 over the previous year. HSD exports increased by 8.7% during 2017-18 as compared to 2016-17. In value terms total product export amounted to US$34.9 bn compared to US$29.1 bn in the previous year.

Pricing & Subsidy Administration

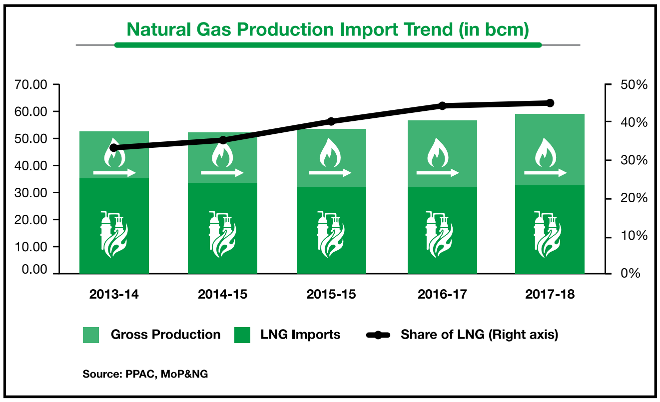
During the year, Indian Crude Basket averaged at $56.43/barrel, rising by more than 18% from 2016-17 levels. With the deregulation of diesel prices in 2014, subsidies to only LPG (Domestic) and Kerosene supplied through the public distribution system are applicable. During the year, gross under-recoveries increased to ₹25,552 crore, from ₹20,500 crore in the previous year. Under recovery under SKO (PDS) was down to ₹4,672 crore, from ₹7,595 crore in 2016-17, whereas under recovery under PaHaL increased to ₹20,880 from ₹12,905 crore in 2016-17. Government has been taking steps towards reducing the gap between the market price and subsidized price. During the year, the Government had allowed PSU OMCs to increase prices of SKO (PDS) by ₹0.25/Litre on fortnightly basis w.e.f. 01.4.2017. The increase in price is being continued in 2018-19. Price of Domestic subsidised LPG was allowed to be increased by ₹2/cylinder every month w.e.f. 1.4.2017. Monthly price increase of ₹2/cylinder was later revised to ₹4/cylinder w.e.f 1.6.2017 and continued till September 2017.

During the year, daily price revision of Petrol and Diesel was introduced based on prices of respective products in international oil market, rupee - dollar exchange rate and market conditions prevailing in domestic market. Daily price revision on a pilot basis was introduced in Udaipur, Jamshedpur, Puducherry, Chandigarh and Vishakhapatnam w.e.f. 1.5.2017. Later on, it was implemented in the entire country w.e.f. 16.6.2017. The revised pricing mechanism has resulted in making the retail prices more reflective of the prevailing market conditions and minimized volatility in selling prices of Petrol and Diesel. This has also ensured smoother flow of products from refinery/depots to Retail Outlets.

Gas Market-Domestic

During 2017-18, natural gas consumption in the country surged to around 52.3 bcm registering a 5.2 per cent growth compared to 6.4 per cent growth witnessed last year. On the supply side, domestic gas production increased during 2017-18 by 2.4 per cent amounting to 32.7 bcm compared to 31.9 bcm in 2016-17, highest since 2014-15. LNG import rose to 26.3 bcm in 2017-18 compared to 24.7 bcm in 2016-17, expanding by 6.7 per cent from the previous year. India is the fourth largest Liquefied Natural Gas (LNG) importer after Japan, South Korea and China, and accounts for 5.7 per cent of the total global import.

Goverment of India is taking a number of steps to improve the gas infrastructure and has even provided budgetary grant. The share of gas in primary energy mix is targeted to be raised to 15% from 6.5% at present in the next three to four years. City Gas Distribution, which is another focus of development is being scaled up, with a target of 10 million connections by 2020.



Renewable Energy-Domestic

To counter climate change and at the same time to reduce dependence on fossil fuels, the Government of India has set a target of 175 GW renewable power installed capacity by the end of 2022. This includes 60 GW from wind power, 100 GW from solar power, 10 GW from biomass power and 5 GW from small hydro power. During 2017-18, 11.8 GW of renewable energy capacity was installed taking cumulative capacity to 69.68 GW. In terms of wind power installed capacity, India is globally placed at the fourth position after China, USA and Germany, and placed in global solar power installed capacity.

India's Installed Renewable Energy Capacity

Installed Capacity (MW)	FY 2017-18	Cumulative as on 31.03.2018
Wind Power	1,766	34,046
Solar Power	9,363	21,652
Small Hydro	106	4,486
Bio-Power (Biomass, Waste to Power etc)	553	9,502
Total	**11,788**	**69,685**

Source: MNRE

During the year, renewable energy tariff hit a new record, touching as low as Rs. 2.44/KWh for solar and Rs. 2.64/ unit for wind, achieved through transparent bidding and facilitation.

Indian Energy Outlook

India is expected to be the largest growth market for global energy over the long term. India has been one of the fastest growing energy consumers in the last decade and as projected by various agencies, it is expected to grow at rates faster than other major economies in the world upto 2040. Coal is projected to stay the dominant source of energy, albeit with decline in share in the energy mix in the pro-climate and sustainable development scenarios. Oil demand is set to post robust growth in India. Projections by various agencies, even in scenarios with high global EV penetration and proactive climate action vouch for oil's growth in India up to 2040. Natural Gas is set to see a significant scaleup in the energy mix. Renewable energy in India is projected to witness the highest growth rates amongst energy types across a range of scenarios.

STRENGTHS & WEAKNESSES

The Corporation is the flagship energy company of the country, with one third of country's refining capacity (including its subsidiary) and over 49% of downstream marketing infrastructure in the country. Its wide network of pipelines and marketing infrastructure mark its unmatched outreach. The Corporation's integration into Petrochemicals , Exploration & Production and Gas business has emerged as a major area of strength.

Another area of strength for the Corporation lies in its extensive Research and Development capabilities. The Corporation's R&D centre is recognized as one of Asia's finest and its focus areas are proprietary research in lubricants, catalyst, refining technologies and pipelines operations. It is also expanding into research in alternate energy, petrochemicals, bioenergy and nanotechnologies. In the area of refining technology, an area which is dominated by foreign technology suppliers, the Corporation has reached a stage where a number of technologies developed by it are getting commercialized.

The Corporation has over 33,000 employees, who run its country-wide and overseas operations. With a low attrition rate of 0.8% and employee-centric policies, the Corporation has been adjudged as the best Public Sector Company to work for in India in a study conducted by Great Place to Work Institute in association with Economic Times. To make the workforce future ready, innovative learning and development interventions like Competency based Learning, initiatives such as e-Learning have been introduced. Avenues for higher education, in collaboration with premium management and technical institutions of the country, are also provided. The skills, experience and prowess of its manpower resource is the key strength of the Corporation. In recent years, the Corporation has been recruiting talent across the country, with an average intake of more than 1,750 recruits per year in the last three years. A structured and robust Succession Planning Framework is also in place for identification and development of Leadership Pipeline.

Another area of strength for the Corporation is its network of dealers, distributors, transporters, contractors and vendors, which ably support it in day-to-day operations of logistics and delivery. The Corporation has built and nurtured this relationship and it plays a crucial role in timely and safe delivery of its products and services.

While the Corporation's core business of refining and marketing of petroleum products is inherently a low margin business, its focus on operational efficiency, cost optimization, and diversification have been pivotal in ensuring its growth and competiveness. Some of the Corporation's refineries are quite old and have small capacities while these have been augmented and modernized from time to time; their sizes remain sub-optimal in the present context.

IndianOil - Future-Ready

Human Capital	• Best Public Sector Company to work for in India by Great Place to Work Institute in association with Economic Times • Highly skilled and motivated workforce; Low attrition rate • Employee centric policies to achieve right balance between work and life • Robust & Transparent Performance Management System • Effective succession plan
Reach: Touching lives in every corner of the country	• 43.3% of the total ROs in the country: Over 27000 & expanding • 50.7% of total in the country: 10200+ LPG Distributors & expanding • 81.5% in the country: 6650 Consumer Pumps & expanding
Robust Infrastructure	• 11 refineries with 80.7 MMTPA capacity • 125 out of 302 POL terminals & depots in the country • 91 LPG Bottling plants out of 190 in country • 107 AFS out of 210 • 13300+ km pipelines length including 140 km gas pipline
Large Customer Base	• Market share of over 44% in 2017-18 • 12. 7 crore domestic LPG Customers with market share of 48.4% • City Gas Distribution in 11 GAs and expanding
Global Presence	• Highest ranked Indian Company in Fortune 500 list • Petrochemicals export to 75 countries • 9 overseas assets under E&P • 7 overseas subsidiaries and 1 JV
Vertically Integrated	• Petrochemicals PBT: 15.5% of Corporation's PBT • Upstream Integration Ratio: 5.36%
Diversified Portfolio	• Petroleum Products • Petrochemicals • Natural Gas • CGD, LNG at doorstep • Lubricants • Solar and Wind Energy • Overseas Business • Technological licensing • Biofuels
Cutting Edge Technology	• Indigenously developed refining technologies- INDMAX, OCTAMAX, Delayed Coker Technology, Ind-Coker^{AT} Technology, INDAdept^{G} • Real Time Data Base Management & Real time optimizers in refinery units • Automation of retailling, smart terminalling, Customer Relationship Management and Social Relationship Management initiative, digital payments • Augmented reality/ virtual reality for defect assessment of submarine pipelines
Fostering Innovation	• 82 Patents filed during the year taking total to 837 as on 31.3.18 • Promoting enterpreneurial prowess of India through IndianOil Start-up Scheme- ₹ 30 crore revolving Start-up fund • First mover in Fuel at Doorstep • India`s first fuel cell powered bus

OPPORTUNITIES, CHALLENGES & THREATS

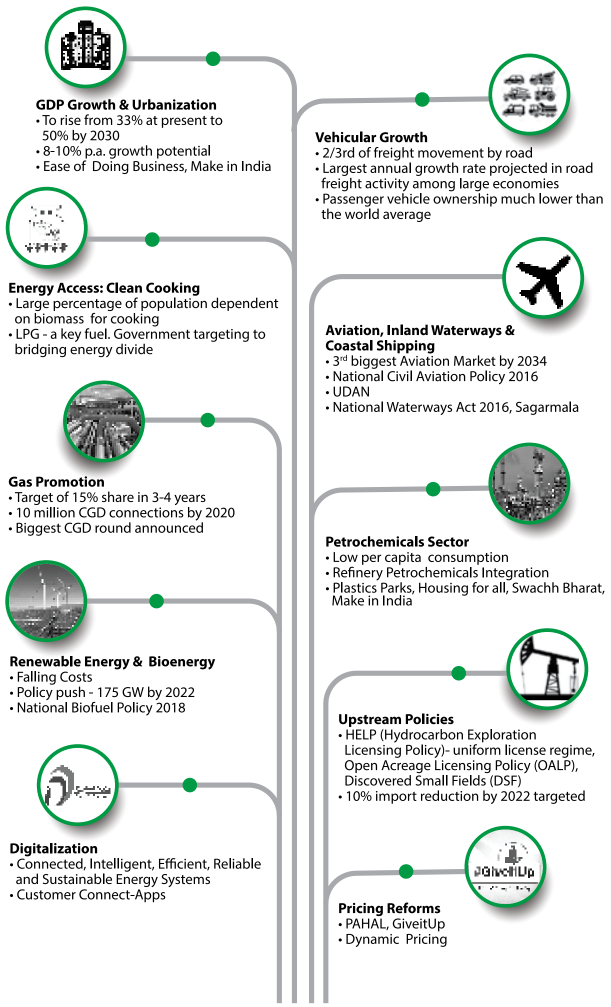
The Corporation understands that the future is of competitive energy where each energy type will compete for meeting consumer needs and within each energy type also, competitive forces will be pervasive. In this context, the vision of being the Energy of India, adopted almost a decade ago is a testimony to its understanding of the essence of the business. IndianOil has emerged as an integrated and diversified energy conglomerate with a rising global reach. And in the years to come, the Corporation envisages further scaling up the asset base and revenue generation from across existing and new businesses.

Indian Growth Story

Long term trend: Growth opportunities abound

Today, India is a major economic growth centre and the long term growth outlook for the Indian economy is reckoned to be bright, with the potential of 8-10% per annum growth. With initiatives like Make in India, the share of manufacturing in the GDP is set to

OPPORTUNITES FOR GROWTH



rise from the current 16% to 25% by 2030. Investment climate in India is improving with various initiatives and reforms addressing the ease of doing business. Further, India is set to become the most populated nation overtaking China in the next decade, be home to many mega cities, with urbanization rate rising from 33% at present to 50% in 2030.

Energy will be a critical component of the Indian growth story. India is expected to have the fastest growth rates of energy over the long term. Being the flagship energy company of India, this puts the Corporation in a position which is plush with growth opportunities. The Corporation has sizeable investment plans across the energy value chain to service the growing energy needs to the growing Indian economy.

During 2012-13 to 2016-17, the Corporation's average annual capital expenditure was Rs. 16,500 crore. This was almost 40 percent higher than its average annual capital expenditure in the previous five years period (2007-08 to 2011-12). Taking this further, the Corporation has ambitious plans to double its capital expenditure over the next five to seven years. A major chunk of investment is directed to fuel quality upgradation projects and brown-field refinery expansions along with associated pipeline and marketing facilities to meet the growing fuel demand in the country through cleaner fuels. In addition to this, the Corporation also has plans in place for sizeable investments in Petrochemicals, E&P and Gas along with Wind & Solar Power projects.

Downstream Oil Demand:

Long Term Trend: Opportunities from rising oil demand in India

The Corporation has a long history of servicing petroleum demand of the country and is the face of downstream oil in the country. India is third-largest oil consuming nation in the world and in the future it is set to experience one of the fastest growth rates in oil demand. Rising per capita income, growing demand for road freight, aviation and petrochemicals will be the key drivers & over the next 15-20 years. Further, their impact is expected to more than outdo the dent in oil demand from rising vehicular efficiency and the expected rise of electric passenger vehicles and shared mobility.

The product surplus in domestic refining is slowly dwindling in face of growing domestic demand for refined products. The Corporation has plans in place to expand its refining capacity through expansions at existing locations and is also leading the ambitious west coast refinery project, which is set be the world's largest integrated green field Refinery cum Petrochemical Complex to be built at estimated cost of US$ 40 bn and with the capacity to process 1,200,000 barrels per day (60 MMTA) of crude oil and produce over 18 MMTA of petrochemicals. In addition, plans for concomitant investments in distribution and marketing infrastructure are afoot to cater to the growing demand.

Aviation Business

Short & Medium Term: High growth opportunity in the Aviation Sector

Indian aviation sector has exhibited double digit growth in the last four years and is expected to continue being on the growth trajectory. As per the projection of International Air Transport

Association, India is amongst the three fastest growing markets in terms of additional passengers per year up to 2034. Further, key reforms such as the National Civil Aviation Policy and Regional Connectivity Scheme-UDAN are expected to give a major fillip to aviation business in the country.

The Corporation is the market leader in aviation fuel business in the country and has been gaining market share despite 60% of the industry volume being under Common User Facility (CUF) concept. The Corporation has been able to maintain its leadership position in face of rising competition by offering competitive prices and unmatched services. In the near future, Government is planning implementation of CUF at other airports covering another 15-20% of industry volume. Backed by a strong aviation infrastructure and cost effective logistics, the Corporation is confident of getting better of the rising competition in the sector.

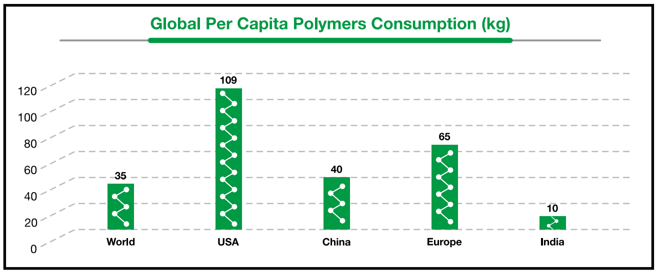
The Corporation is the leader in setting up refuelling facilities at Regional Connectivity Scheme Airports under the UDAN scheme. The Corporation has also pioneered development of low cost fuelling infrastructure models for smaller airports through in-house expertise of its Cryogenics vertical.

Petrochemicals

Long Term Trend: Opportunity to cater to the rising petrochemicals demand in India

Petrochemicals business has emerged as major contributor to the Corporation's bottom-line and investment in this business is an important tenet of the Corporation's growth strategy. Presently, India trails the global per capita polymer consumption. At 10 kg, Indian per capita polymer consumption is one-third of the world average of 35 kg, one-fourth of consumption levels in China and one-tenth of the US consumption levels.

In the last 5 years, petrochemicals consumption in India grew at



8% annually, which was 2.5 times faster than the global growth rate and demand in this sector is expected to grow at a similar pace in the next 10-15 years. Further, at present the domestic capacity falls short of demand and imports have a significant share in the market. Growth in petrochemicals demand in the country is set to not only provide a key demand segment for the Corporation's refineries but also act as a hedge to cyclical performance, provide better returns and benefits of integrated utility management to refineries. Investment in integrated refinery and petrochemicals project is viewed as a compelling strategic choice by the Corporation. In fact, refinery and petrochemical integration is the way forward for all refinery expansion plans of the Corporation. Another important part of petrochemicals strategy is to make products that meet customer and market requirements. In this context, the Corporation's state of the art Product Application and Development Centre (PADC), which acts as an interface between polymer plants, marketing and customers is a critical link. PADC has been designing applications in line with customer requirements, and will be expanded as the Corporation's polymer production base expands.

Natural Gas

Medium Term Trend - Opportunity to scale up share of Gas in the Energy Mix

Gas is another major tenet of the Corporation's growth strategy. Gas meets more than one fifth of the global energy requirements. However, India lags significantly behind the global trend, with gas meeting only 6.5% of the country's energy requirements. Globally, the share of gas is expected to rise at the expense of coal and oil. In India, gas will play a major role in de-carbonising growth and there is major policy drive to push up its usage rates. Government of India is incentivising investment in gas infrastructure through policy reforms and fiscal incentives and aspires to increase the share of gas in primary energy to 15% in the near future. While raising domestic gas production will be critical to increasing penetration of gas, the global LNG boom, especially powered by supplies from USA and Australia is playing a major role in fulfilling India's gas ambitions.

The Corporation has invested in gas business across the value chain and is fully geared up to take up the slew of opportunities coming up in this sector. The Corporation's first co-owned LNG Terminal at Ennore, Tamil Nadu is set to come on stream by the end of 2018, and has recently booked 3 MMTPA regasification capacity at Dhamra LNG Terminal and is also actively negotiating capacity booking in other upcoming terminals. Investment in cross country gas pipelines and CGD business are set to scale up. In addition to ongoing projects, the Corporation is partnering in the development of North East Gas Grid and would be bidding in the current CGD bidding round of 86 GAs and subsequent rounds for expansion of its CGD network.

Shifts in Global Oil Trade

Medium & Long Term Trend: Emerging Opportunities from India's Growing Influence in the Global Oil Market

There has been a fundamental shift in the international oil market and at the very core is the Shale revolution. On the supply side, soaring Shale oil production is expected to turn United States, the second biggest oil importer today into a net oil exporter by the late 2020s. On the demand side, growing crude oil imports by Asia, led by India and China are expected to account for increasing proportion of supplies from Middle East. According to IEA, by 2040, 70% of world oil imports will be accounted for by Asia. Asia's dominance as a major demand centre is on the rise and growing production in US is creating opportunities for Asian countries to look beyond OPEC for crude oil imports. In 2017, China accounted for 17% of crude oil export from US, where as India accounted for about 3% of total export from US.

The Corporation imported India's first shipment of US Shale oil during the year. With growing energy demand from Asian countries, and as the market provides more sources of crude oil, the bargaining power for major oil buyers, such as India is going to get stronger, providing opportunities for realizing lower import costs , better terms, greater security, and investment inflows.

Upstream Oil & Gas

Medium & Long Term Trend: Opportunity to Reduce Import Dependency

With a view to source oil & gas to meet its own and country's energy requirements and to reduce India's import dependency, the Corporation has been making concerted efforts and investments in upstream oil and gas. Integrated energy operations are the backbone of the Corporation's growth strategy for the benefits of diversification of risks it offers. The Corporation has judiciously nurtured its E&P portfolio and its oil & gas production from international and domestic assets is expected to be over 4 MMTPA in 2018-19. The Corporation's strategy has been two-pronged, consisting of participation in Indian and international licensing/ bidding rounds and acquisition of commercially prospective E&P opportunities in geo-politically stable countries worldwide. By 2022-23, the Corporation is targeting increasing hydrocarbon production to meet over 7% of its requirements and further to over 10% by 2029-30 mainly by acquisition of producing/near-term producing/under development/discovered upstream assets, either alone or in consortium with other National Oil Companies or International Oil Companies. It will also continue participating in Indian and international licensing/bidding rounds.

Bioenergy

Medium & Long Term Trend: Opportunity for meeting energy security and climate change goals

Modern bioenergy has significant potential in meeting India's climate change and energy security objectives and the Corporation is proactively partnering with the Government in development of this option as a part of the solution. Advanced biofuels using lignocellulosic feedstocks, waste and algae have the potential of offering a range of low carbon renewable resources for fuelling transport, cooking and electricity generation. The DBT-IOC centre for Advanced Bioenergy Research, which is jointly and equally funded by Department of Biotechnology, Government of India and the Corporation is committed to advanced Bioenergy research addressing second and third generation biofuels. Presently, the Corporation is working on 2nd Generation Ethanol and CBG (Compressed Bio-Methane Gas). In order to increase the availability of ethanol, the Corporation is setting up 2nd Generation Ethanol production plants in Uttar Pradesh, Haryana, and Gujarat. These projects will not only provide a low carbon fuel but also reduce emissions due to crop burning and create value in the rural economy. The Corporation is also exploring opportunities for facilitation of production and retailing of CBG across India and has signed 9 MoUs for retailing of Bio-CNG and Compost through its retail channels. An inoculum for CBG production has been developed by IndianOil R&D in this regard. Production of CBG from waste/biomass will reduce the import of natural gas, utilize waste productively and will reduce pollution, apart from providing rural employment. Further, the Corporation's R&D is working on $C0_2$ gas fermentation technology for production of biofuels, once proven this technology has the potential to be scaled up and be a game changer in biofuel segment.

Digitalization

Short Term to Long Term: Leveraging the opportunities presented

The way business is done has changed dramatically in past few years due to digital innovation. Digital technologies are set to make energy systems around the world more connected, intelligent, efficient, reliable, and sustainable. These technologies not only help companies to reach people faster but also help in optimising, automating and improving business efficiencies and enhancing the overall potency of complex operations in the oil and gas industry the world over. However, digitalization also brings with it new security and privacy risks.

The Corporation recognizes the importance of the digital revolution and has embarked into digital transformation of its business processes to further leverage technology and strengthen multiple business capabilities to get competitive advantage. The emerging digital technologies will help in dealing with complex business operations and processes such as upstream operations, reducing unplanned refinery outages, refinery production scheduling, predictive maintenance, knowledge management, workflow automation, supply chain management, to understand customer need and behaviour, to enhance customer experience and to ensure safety of operations. The corporation is also exploring several digital disruptors and their applicability in the business processes such as Blockchain, Robotics, AR and VR, Analytics, IoT for Predictive Maintenance, Mobile App Augmentation etc.

During the year, Project ePIC (e-Platform for IndianOil Customers) was launched by the Corporation, which envisages creating a 360 degree view of customers, integration, and standardization of marketing efforts across product lines, better handling of customer service requests including grievances and presenting a unified customer experience across various access devices such as mobile phones, tablets, and desktops. Cloud computing and data analytics are areas where the corporation is already working and has plans for the future. Corporation's Start-up Scheme also looks for entrepreneurs with ideas on Digital Platforms, which will help in surveillance, automation, efficiency improvement, process improvement, and customer retention among many others. Besides, the Corporation is maintaining and enhancing its vigil on data security and privacy on a continuous basis.

Cooperation between CPSEs

Medium and Long Term Trend: Opportunities for collaborative growth

Central Public Sector Enterprises (CPSEs) have a long legacy of serving the nation in the critical areas of the economy. Energy is one such sector where CPSEs have and will continue to play an indispensable role. The way forward for CPSEs is to come together in investing in infrastructure, research and development, skill development and knowledge sharing for meeting national objectives, such as reduction in oil import dependency, increasing geo-strategic reach, scaling up renewable energy, development of gas infrastructure, among others and leveraging the synergy amongst themselves.

The Corporation has been partnering with other CPSEs for upstream oil & gas in global and domestic bidding rounds and acquisitions, cross country gas pipelines, CGD networks, among others. And, recently has also ventured into fertilizers sector in partnership with other CPSEs to strengthen its diversification drive. The Corporation has formed a JV company - Hindustan Urvarak & Rasayan Limited, which plans to commission three fertilizer plants by 2021. The Corporation is also keenly looking at avenues of collaboration with other CPSEs for collective growth and nation building.

Alternative Energy

Long Term Trend: Growth opportunities presented by rising penetration of renewables

Globally, costs of solar and wind based power generation has been falling and attaining grid parity. Renewable energy is an important part of Corporation's climate and growth strategy. The Corporation has been one of the early investors in the renewable energy business in the country and today boasts of a growing portfolio of wind and solar power capacity, which has crossed 200 MW. Looking ahead, the Corporation targets bringing solar power to all its refineries, installations and office buildings in the near future and further expanding its wind and solar portfolio. In addition to this, the Corporation is the industry leader in solarised retail network, with more than one third of its retail outlets running on solar energy. The Corporation has been on a massive solarization drive in the last 5 years and plans to fully solarise its retail network in the near future. The Corporation is also actively exploring the area of waste to energy and has already commissioned three waste-to- energy plants, under Swachh Bharat Abhiyan.

LPG Business

Short & Medium Term Trend: High Growth Opportunity

A very large percentage of households in India, especially in the rural areas continue to be dependent on biomass. Bridging this 'energy divide' by providing access to clean and affordable energy for cooking is a major policy objective of the Indian Government. LPG is the key fuel being targeted for bringing out this transition through the Pradhan Mantri Ujjwala Yojana (PMUY) scheme, which aims at providing LPG connections to 8 crore women belonging to the Below Poverty Line (BPL) families between 2016 and 2020.

The Corporation has been at the forefront for implementation of PMUY in terms of allocation of new LPG distributorships, releasing new connections and also strengthening its supply chain. Further, the Corporation has been witnessing healthy growth in non-PMUY LPG sales propelled by urbanization, rising per capita income, preference for cleaner fuels, among others. India has been running a deficit in LPG and, in 2017-18, almost half of the domestic LPG demand was met through imports. Going forward, investing and building adequate LPG import infrastructure is a major priority for the sector, along with strengthening of supply chain and distribution infrastructure. Accordingly, the Corporation is investing in new LPG import terminals, expanding existing terminals, augmenting and laying new LPG pipelines and constructing new bottling plants apart from augmenting capacities at existing plants. Further, the Corporation has been deploying technologies, such as its in-house INDMAX technology for enhancing LPG production from its refineries. Along with this, the Corporation is also continually working for providing quality service, facilitating digital payments and web booking, and enhanced customer safety and convenience. The Corporation has been working to address customer requirements and provides specialized offerings such as NanoCut additized LPG for metal cutting applications in the industry, introduction of 5 Kg cylinder for domestic customers, Indane Jumbo for industrial customers, etc.

Electric Mobility

Long Term Trend: Rising interest in electric vehicles, a potential threat and also a growing opportunity

Falling battery prices and zero tailpipe emissions from electric vehicles are driving the rising interest in electric vehicles (EVs) globally. Automakers across the globe are coming out with EV models and Governments too are pushing for EV adoption. Indian Government is also incentivising EVs through NEMMP (National Electric Mobility Mission Plan, 2013) and FAME (Faster Adoption and Manufacturing of Hybrid & Electric Vehicles, 2015) and is undertaking mass procurement of EVs for its vehicle fleet. Recent assessments by various agencies show that EV penetration in India would significantly lag the projected global rates. Moreover, as rising per capita vehicle ownership, and rising demand from road freight, aviation and petrochemicals are set to drive oil demand growth in India, and impact of EVs on oil demand in India is expected to limited at be least over the next 15-20 years.

Nevertheless, EVs do represent a growing segment of the energy business in India and the Corporation is actively looking for growth opportunities in this area. The Corporation's Research and Development is actively working on energy storage devices, Hydrogen and fuel cells. The Corporation recently launched India's 1st hydrogen fuel cell powered bus EV in collaboration with Tata Motors. The Corporation has the biggest hydrogen production, high pressure storage and dispensing infrastructure in the country and is pioneering the hydrogen & fuel cell research in India. Besides this, the Corporation is also exploring business models and avenues across the EV value chain such as manufacture and retail of lithium-ion batteries for electric vehicles and setting up of charging stations and battery swapping facilities at its retail outlets. A pilot Charging Station was set up during the year at an IndianOil Retail Outlet in Nagpur in collaboration with Ola.

Oil Price Volatility

Short Term Trend: The challenge of high price volatility

Geo-political tensions have the power to pull up oil prices in a jiffy and oil prices are also extremely sensitive to economic news and production and inventory number releases. Oil price volatility along with exchange rate fluctuations is a challenge that the Corporation faces regularly. Operational excellence, cost optimization, diversified crude supply, use of cheaper heavy crude varieties, energy efficiency have been the hallmarks of refinery operations and have been pivotal to margin protection in the short term, especially in a scenarios of high price volatility. The Corporation is also focusing on benchmarking against global standards and this will also hold the Corporation in good stead in the long run.

Domestic Petroleum Products Market

Short & Medium Term Trend: The challenge of rising competition levels in retail & institutional business

Deregulation and shift towards market prices has raised competition levels significantly with entry of private players. The Corporation's thrust has been on providing best-in-class services to its customers at the most competitive price. In the retail segment, the Corporation has adopted a strategy for Retail Transformation with key initiatives such as Look N' Feel, network augmentation, highway proposition, customer loyalty programmes, rural penetration, automation, and use of app. based applications.

In the institutional business, where price discounts had been the traditional way of doing business, service quality, complete fuel solutions and technical support are now emerging as the key differentiators.

In lubricants business, which is a high value segment, the Corporation's strategies of centralized tie-ups, value-added services, approvals from major global OEMs, dynamic incentive schemes, special RO initiatives for lube sales, close customer connect, automation and cost optimization are showing encouraging results.

New business models are also being explored by the Corporation, which are based on smart marketing and aim at adding to customer convenience. In line with this the Corporation has pioneered with door delivery of diesel in Pune catering to mobile towers, factories/ buildings having DG Sets and Construction sites.

Cleaner Fuels

Short & Medium Term: The challenge of delivering cleaner and greener fuels

Globally, air pollution is the fourth greatest overall risk factor for human health. India is home to the most polluted cities in the world - 14th out of top 20. Pollution from road vehicles is a major source of ambient air pollution. While, the Indian Government has been implementing Bharat Stage (BS) vehicular emission norms since the year 2000, it lags the standards in place in other major economies. India at present is on Euro-IV levels for auto fuels. While India has lagged EU standards by 5 years, it is now leapfroging from BS-IV to BS-VI emission standards by 2020. This will be the first instance of a country moving from Euro/BS-IV to Euro/BS-VI standards in less than three years. This move highlights the increased urgency in policy quarters regarding the issue of air pollution; it is expected to contribute to improvement in the air quality over the long-run.

The Corporation is the biggest refiner in the country and has geared up to this challenge. Investment in cleaner fuels is the way forward. The Corporation is implementing fuel quality upgradation projects across its refineries and confident of delivering BS-VI compliant fuels by 2020. The Corporation has already started supplying ultra clean BS-VI MS & HSD in the NCT of Delhi from April 2018 and will include many more districts of NCR before 2020. Additionally, within the automotive fuel segment, the Corporation is already supplying CNG and expanding its supplies and reach for this fuel. It has plans for scaling up Auto-LPG in areas which are not expected to shift to CNG in the near future and has also recently pioneered with the "LNG on Board" initiative, which aims at supplying LNG for use as an automotive fuel and has plans for scaling it up through its retail network.

Environmental vigilance on the quality of bunkering and industrial fuels is also on the rise. The Corporation is committed to providing cleaner fuels such as Low Sulphur LSHS, LDO, LNG, HSD etc. for replacement of unclean fuels such as FO and Petcoke.

Climate Change & Sustainable Development

Long term trend: The challenge of reducing carbon footprint of operations & offerings

The Paris Agreement marks a major milestone for global consensus on climate change. Energy, accounting for around 80% of global GHG emissions is an important part of the Paris Climate Agreement. United Nations Sustainable Development Goals (SDGs) targeting the year 2030 have Goals 7 & 13 of "Affordable and Clean Energy" and "Climate Action", respectively which are directly linked to energy. India ratified the Paris Climate Agreement in 2016, taking target to reduce its carbon emission intensity (emission per unit of GDP) by 33-35% from 2005 levels by the year 2030 and pledged to have 40% of installed electricity capacity running on non-fossil fuel energy sources by 2030.

The Corporation is persistently working in making its operations greener and reducing its carbon footprints. The Corporation has adopted a long-term plan on reduction of specific carbon footprint by 18% and specific water footprint target by 20% up to 2019-20, with 2012-13 as the base year. Further, the Corporation envisages reducing specific carbon emissions by further 5% from 2019-20 to 2029-30. The Corporation's refineries are big energy consumers and work is underway to make them more energy efficient through various ENCON measures and other measures such as integration of smaller units in older refineries in to single units for efficient energy utilization. Consequently, specific energy consumption of its refineries has been consistently falling. Besides the Corporation has been increasing usage of gas as a fuel in its refineries and plans to bring all its refineries on gas as the national gas grid expands. Shift to gas will not only contribute to lesser emissions but also to profitability. Additionally, the Corporation has been increasing product transportation through pipelines, by augmenting its pipeline infrastructure, increasing capacity of renewable energy systems at its locations , replacing conventional lighting with LED lights across its installations, and planting trees

In terms of green offerings, the Corporation is a major supplier of RLNG in the country, is retailing ethanol blended petrol, has invested in 2 G ethanol projects and working on advanced biofuel technologies, CBG, among others. Over and above this, the Corporation is the largest supplier of LPG in the country. LPG is the main fuel being targeting for bringing transition to clean cooking fuels in India. LPG does away with indoor pollution and has much lower carbon emissions than the biomass it is replacing as a cooking fuel in the rural areas and addresses both SDG 7 and SDG 13.

RISKS

In its endeavour to attain sustainable growth, the Corporation constantly scans its external and internal business environment. The Corporation recognises that risk is an integral component of business and is committed to manage the risk in a proactive and effective manner. Risks can originate both internally and externally, further at the global level, a growing number of challenges affecting the environmental, economic, technological and institutional systems pose risk to the future growth and prosperity. The dynamic risk landscape presents a unique challenge to the Corporation, which it is committed to manage strategically.

Following are the risks which are reviewed by the Corporation on periodic basis:

High Risk	Medium Risk	Low Risk	Risk on Radar
• Threat to market share due to competition • Erosion in Margins • Cost and time overruns in Projects • Lack of adequate infrastructure impacting operational cost & timely supply of products: LPG/ATF/Export • Equity/Asset investment in producing assets not yielding desired returns	• Data Leakage: Compromise of operational data and intellectual property • International compliance risk for overseas JVs & subsidiaries: Non compliance to international laws & regulations • Inability to meet demand due to product unavailability • Investments in Subsidiaries and JVs not resulting in desired returns • Brand value risk	• Unplanned shutdown of refinery • Pilferages in Oil & Gas Cross-country Pipelines • Reduction in margin on account of upgradation in fuel quality • Threat of alternative fuel	• Electric mobility • Environmental Risk • Cyber security • Tax disputes and litigation • Safety Risk: Damage to property & people at IndianOil

The Corporation's Enterprise Risk Management involves Risk Identification, Assessment and Categorisation (based on risk appetite) and is reviewed by risk owners to optimise risks with appropriate mitigation plan on a regular basis through periodic reviews, during strategy setting and in event of significant changes in internal / external environment e.g. regulatory changes, major policy decisions, etc.

FINANCIAL REVIEW

Operating Performance (Segment-wise)

The operational performance of the Corporation across various segments during the year is as under:

MMT

Standalone	FY 2017-18	FY 2016-17	Variation
A. Sale of Petroleum Products			
Sale Volume	84.32	78.83	7.0%
Refineries Throughput	69.00	65.19	5.8%
Pipelines Throughput	85.68	82.49	3.9%
B. Sale of Petrochemicals	2.37	2.58	(8.4%)
C Other Businesses *			
Sales of Gas (Inc. Upstream Sales)	1.90	1.92	(0.8%)
Sale of Explosives	0.18	0.16	12.0%

With full steam operation at Paradip Refinery, the Corporation's Refineries achieved a record crude oil throughput of 69.00 MMT during the year 2017-18 as against the previous year's throughput of 65.19 MMT. IndianOil pipelines achieved the highest-ever throughput of 85.675 MMT during the year, surpassing the previous record by 3.9%. The Corporation registered the highest ever sale volume of 84.315 MMT of Petroleum Products with a growth of 7% over previous year. The Petrochemical segment registered lower sales volume compared to previous year due to reduction in production on account of shut down of petrochemical plants.

Financial Performance (Segment-wise) (₹ crore)

Standalone	FY 2017-18	FY 2016-17	Variation
Revenue from Operations (Segment-wise)	**506,428**	**445,442**	**60,986**
Sale of Petroleum Products	481,168	419,510	61,658
Sale of Petrochemicals	18,034	19,802	(1,768)
Other Businesses*	7,226	6,130	1,096
Profit Before Tax (Segment-wise)	**32,564**	**26,321**	**6,243**
Sale of Petroleum Products	27,567	19,977	7,590
Sale of Petrochemicals	5,226	6,822	(1,596)
Other Businesses*	408	(32)	440
Other un-allocable expenditure/income	(637)	(446)	(191)
Depreciation and Amortisation	7,067	6,223	844
Finance Costs	3,448	3,445	3
Profit After Tax	21,346	19,106	2,240
Borrowings	58,030	54,820	3,210
Gross Fixed Assets (Inc. CWIP)	146,034	129,447	16,587
Investments	47,488	47,305	183
Debt Equity Ratio	0.53:1	0.55:1	
Long term Debt to Equity Ratio	0.19:1	0.25:1	

*Other Business comprises Sale of Gas, Explosives & Cryogenics, Wind Mill & Solar Power Generation and Oil & Gas Exploration Activities

Revenue from Operations

- The petroleum segment revenue registered a growth of 14.7% driven by increase in sale volume as well as increase in international oil prices.
- The reduction in petrochemical segment is mainly due to lower sales volume on account of shutdown of petrochemicals plants during the year.
- Revenue from other businesses is also higher mainly due to increase in prices during the year.

Profit before Tax

- The Corporation registered a Profit before Tax of ₹32,564 crore in 2017-18 as compared to ₹26,321 crore in 2016-17.
- The Profit before tax from petroleum business is increased by ₹7,590 crore mainly due to write back of provision on Tax disputes of ₹2814 crore and higher refining margins US$ 8.49/bbl during current year (Previous year- US$ 7.77/bbl).
- The petrochemical business registered lower profit mainly due to lower sales volume on account of shutdown of petrochemicals plants.
- Profit from Other Business segment is also higher mainly due to write back of ship or pay liability in Gas business.

Depreciation and Amortization

The Depreciation and Amortization for the year is higher by ₹844 crore mainly due increase in capitalizations in petroleum business (LPG cylinders & pressure regulators, marketing infrastructure, Refinery and Pipeline assets).

Investments

Investments as on 31st March 2018 were ₹47,488 crore as compared to ₹ 47,305 crore as on 31st March 2017. The aggregate market value of quoted investments as on 31st March 2018, i.e., investments made in ONGC Ltd., GAIL(India) Ltd., Oil India Ltd., Chennai Petroleum Corporation Ltd., Petronet LNG Ltd. and Lanka IOC Plc. and Government Securities is ₹ 38,999 crore (as against the carrying amount of ₹ 32,428 crore).

INTERNAL CONTROL SYSTEMS

The Corporation has well-established internal control systems for smooth and efficient conduct of its business. The Corporation has laid down various policies as well as detailed manuals which cover almost all the aspects of the business. The internal processes and policies are reviewed from time to time and revision is carried out to align with the changing business needs. The Corporation has been one of the first companies in India to institutionalise e-tendering for its procurements whereby a dedicated website was created for e-tendering. The IT team continuously extends IT-enabled services across the entire procurement-to-pay process chain. The Corporation has put in place adequate internal controls which are commensurate with its operations. The Corporation has an independent Internal Audit Department which is headed by Chief General Manager who reports to the Chairman directly. The Internal Audit Department comprises of officers from Finance and technical functions. The audit assignments are carried out as per the Annual Audit Programme approved by the Chairman and the Audit Committee of the Board. Internal Audit carries out extensive audits throughout the year covering each and every aspect of the business. The statutory auditors are also required to issue the Independent Auditor's Report on the Internal Financial Controls of the Corporation under Clause (i) of Sub-Section 3 of Section 143 of the Companies Act, 2013. The report issued thereupon has been attached alongwith the standalone and consolidated Financial Statements respectively.

HUMAN RESOURCES

IndianOil has always assigned very high importance towards developing its Human Resources with focus on its core values of Care, Innovation, Passion and Trust. The HR systems and practices of the Corporation focus on diversity and inclusion in all initiatives to build a cohesive workforce. The challenges surrounding the present business scenario can be best mitigated by a workforce which is motivated, adaptive to change, innovative and fast in learning.

Learning forms an integral part of the growth and enrichment of the workforce. The Corporation has adopted Innovative Learning and Development interventions like Competency based Learning apart from the regular programs for upgrading functional skills for developing its human resources. Initiatives such as E- Learning are being introduced and avenues for higher education are being expanded in collaboration with reputed management and technical institutes of the Country, making the workforce future ready. IndianOil has recently bagged the ISTD Award for Innovative Training practises. The Corporation has a structured and robust Succession Planning Framework for identification and development of Leadership Pipeline. IndianOil has not only groomed several Visionary leaders who have led & transformed the Corporation over the years but also proved to be a nursery for grooming leaders for both public and private sectors.

The employees of IndianOil are passionate about their responsibility towards the society at large. The engagement and motivation of the employees is always benchmarked with the national and international standards. IndianOil has been adjudged as the best Public Sector Company and amongst the Top - 50 Companies to work for in India in a study conducted by Great Place to Work Institute in association with Economic Times.

IR CLIMATE

The industrial relations climate in the Corporation has traditionally been harmonious. A collaborative and seamless IR climate has been maintained in the Corporation so that IndianOil people are ready for the challenges faced by the Corporation due to changes in business environment, technology, competition, regulations etc. This has been made possible by sharing the changes in business environment, consequent changes required in strategy and business models of the Corporation, resultant impact on current business and people along with future plans with the Collectives and inviting suggestions, views from them through periodic structured communication meeting with the collectives. The management and the collectives have mutual respect for each other's perspectives and regular structured meetings are held to discuss and deliberate on issues like productivity, welfare and the need to build a responsive and responsible organization. The collectives have always steadfastly supported the Management in overcoming any external challenges faced by the Corporation. The employee strength of the Corporation as on 31st March 2018, was 33,157, which comprises 17,123 executives and 16,034 non-executives.

OTHER INFORMATION

Details regarding the Corporation's CSR programmes, environment protection & Conservation initiatives, technology absorption & adoption efforts, forays into renewable energy and foreign exchange conservation have been included in the Directors' Report and annexure thereto.

CAUTIONARY STATEMENT

Statements in the Management's Discussion & Analysis describing the Company's objectives, expectations or anticipations may be forward looking within the meaning of applicable securities, laws and regulations. Actual results may differ materially from the expectations. Critical factors that could influence the Company's operations include global and domestic demand and supply conditions affecting selling prices of products, input availability and prices, changes in Government regulations/tax laws, economic developments within the country and factors such as litigation and industrial relations.