

Sustainable Development Report 2017-18



Energising Responsible Growth





Theme

India is one of the fastest growing economies of the world. There has been an incremental growth in the infrastructure development and manufacturing. As the country develops the appetite for consumption of energy also increases. It has become imperative to balance development with growing energy demand in a sustainable manner. The Government has advanced towards implementation of Intended Nationally Determined Contributions (INDCs). The nation-wide target capacity installation for renewable energy is 175 GW by 2022. The nation is also participating actively in initiatives like Swachh Bharat Mission, cleaning of rivers, Zero Effect Zero Defect, Make in India, Smart Cities Mission, Housing for All.

The good governance practices maintained at BPCL manifest its adherence to good governance principles such as transparency, accountability, responsibility, ethics and integrity towards all its stakeholders. BPCL, being a responsible corporate, manages its operations and processes in a manner which renders minimal impact on the society and environment. It contributes significant participation in line with the Government's commitments and initiatives to meet SDGs (Sustainable Development Goals). BPCL endeavours to reduce the burden on the environment and address its ESG responsibilities.

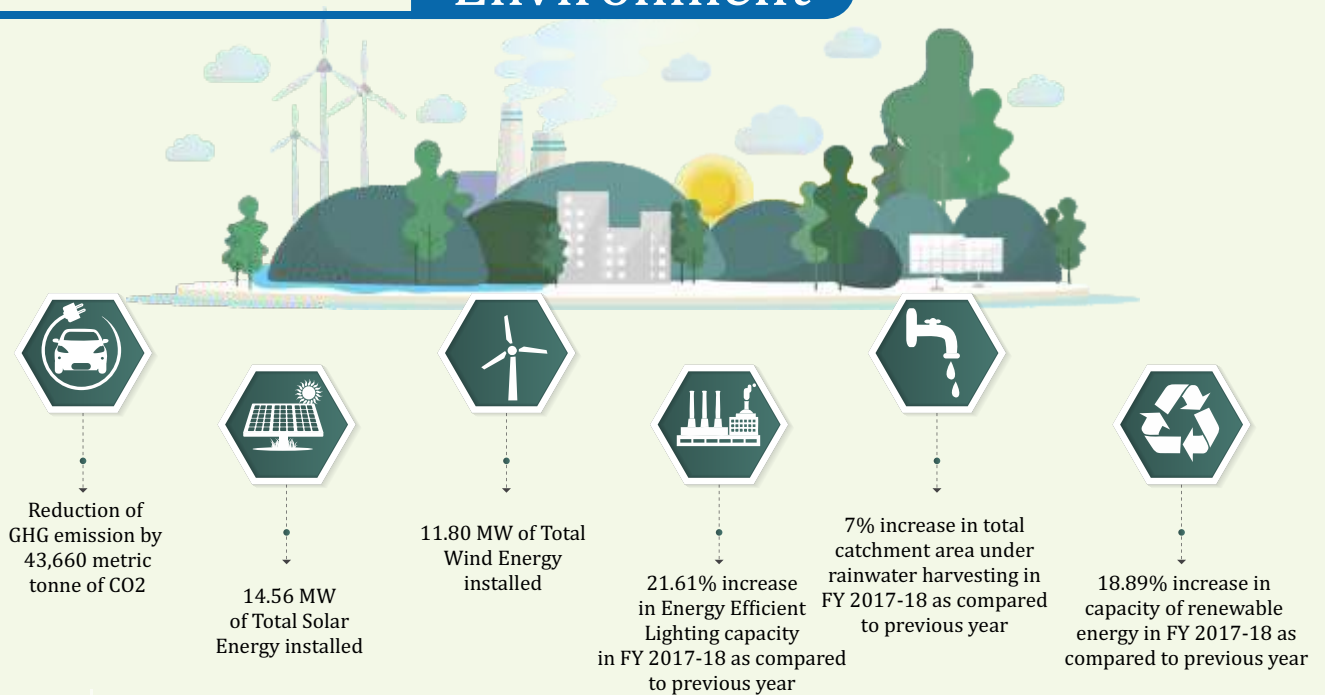


Table of Contents

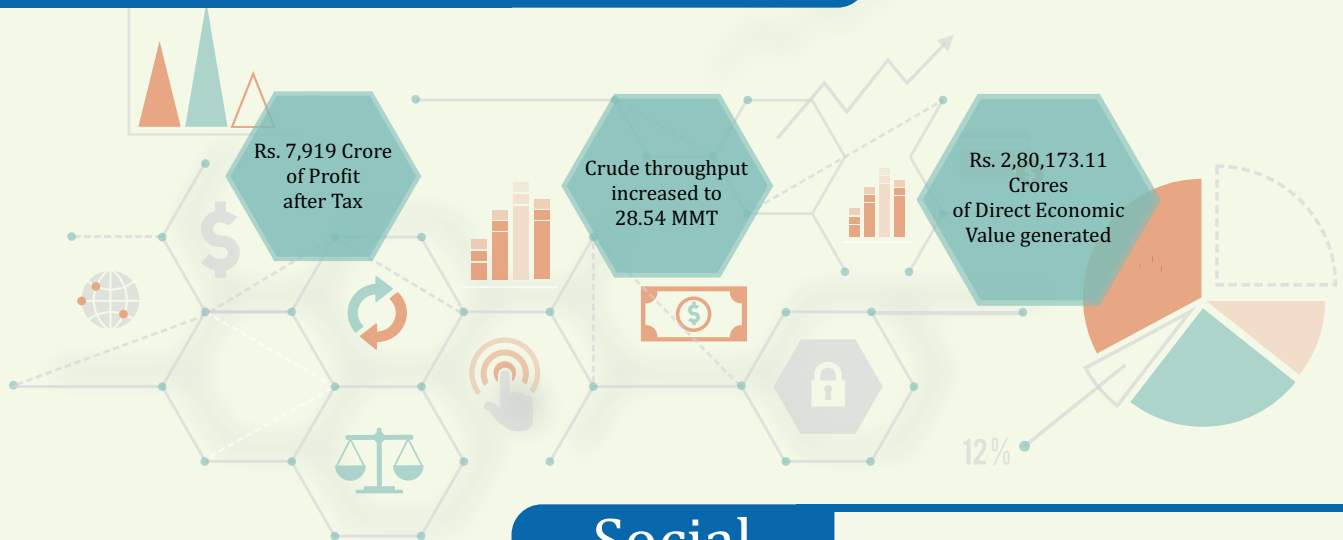
1. History and Journey of BPCL	1
2. Messages from the Leadership	3
3. About this Report	10
4. BPCL at a Glance	12
5. Corporate Governance and Ethics	21
6. Opportunities, Risk and Challenges	28
7. Achievements of the Year – 2017-18	34
8. Stakeholder Engagement and Materiality	41
9. Growth Profile	51
10. Harmonising with Workforce	56
11. Approach towards Safety	68
12. Connecting with Communities- CSR Programmes	77
13. Minimising Environmental Impact	88
14. Operations of BPCL	110
15. Annexures	122
Annexure 1:Material Usage Breakup	123
Annexure 2A: GHG Calculation Quantification Methodology	125
Annexure 2B: Water Calculation Quantification Methodology	126
Annexure 3: Hazardous and Non-hazardous Waste Breakup	126
Annexure 4: Employee Representation	130
Annexure 5: Stakeholder Engagement and Materiality	131
Annexure 6: BPCL's Policies	131
16. Glossary	133
17. Acknowledgement	134
18. GRI Content Index	135
19. Linkage with Sustainable Development Goals	143

BPCL Sustainability Highlights

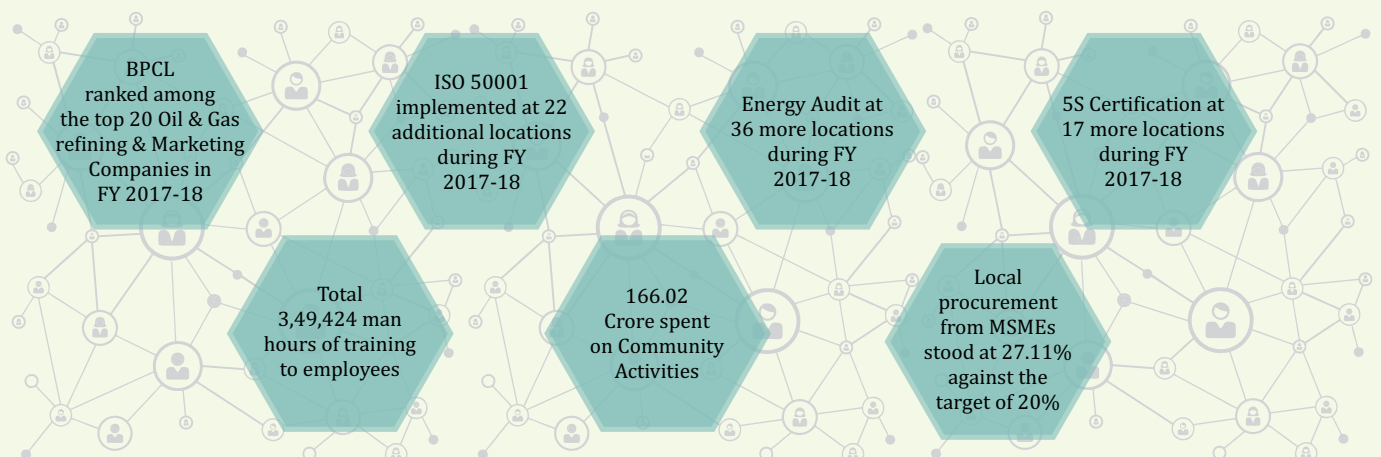
Environment



Economic



Social





History and Journey of BPCL



History and Journey of BPCL



A Glorious Heritage (1860 - 1871)

Around 1860's, the world witnessed extensive industrial development that ultimately led to an increase in the number of petroleum refineries. This was also the time that the Company's historical journey began as Burma Oil Company. Although incorporated in Scotland in 1886, the Burma Oil Company became an important player in the South Asian market that grew out of an enterprise named Rangoon Oil Company (formed in 1871) to refine crude oil produced from primitive hand dug wells in Upper Burma independently.



Breaking Ground (1886 - 1889)

The search for oil and gas in India began in 1886, when Mr. Good enough of Mc Killop Stewart Company successfully drilled a well near Jaypore, Upper Assam, striking oil. However, it wasn't until 1889 when the Assam Railway and Trading Company (ARTC) struck oil at Digboi that a chain reaction sparked off, marking the beginning of oil production in India.



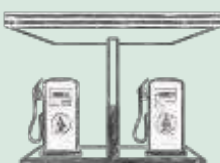
The Birth of a Titan (1928)

While discoveries were being made and industries expanded, John D. Rockefeller and his business associates acquired control over numerous refineries and pipelines. With these acquisitions under their belt, they went on to form the Standard Oil Trust - a giant in its own right. Observing this and to counter the growing significance of Standard Oil, three largest rivals - Royal Dutch, Shell and Rothschild's - came together to form a single organisation called Asiatic Petroleum to market petroleum products in South Asia. In 1928, Asiatic Petroleum (India) joined hands with the Burmah Oil Company, an active producer, refiner and distributor of petroleum products, particularly in Indian and Burmese markets to form the Burmah-Shell Oil Storage and Distributing Company of India Limited.



A Pioneering Approach

Burmah Shell began its operations with the import and marketing of kerosene and soon proved itself to be a pioneer in more ways than one. The Company imported oil products in bulk and transported them in 4-gallon and 1-gallon tins all over India. The Company also took up the challenge of reaching out to people in remote villages to ensure every home was supplied with kerosene. Thus, the development and promotion of efficient kerosene-burning appliances for lighting and cooking became an important part of its kerosene selling activity.



The Retail Revolution (1930)

With the advent of motor cars, came canned Petrol to be subsequently followed by fuel service stations. In the 1930s, retail sale points were built with driveways set away from the road. As more such service stations began to appear, they soon became an accepted part of road infrastructure and development. Post war, Burmah Shell established efficient and up-to-date fuel service and filling stations to give its customers the highest possible standard of service facilities.



From the ground to the sky (1932 - 1962)

On 15th October 1932, when civil aviation arrived in India, Burmah Shell had the honour of fuelling J.R.D. Tata's historic solo flight in a single-engine De Havillan Puss Moth from Karachi to Bombay via Ahmedabad. Thirty years later, i.e. in 1962, Burmah Shell again had the privilege of fuelling Mr. Tata's re-enactment of the original flight. The Company also fuelled the erstwhile flying boats that carried airmail, at slightly higher rates than sea transport, across several locations.



A New Beginning in a New Nation

Showcasing its pioneering spirit, the Company introduced LPG as a cooking fuel to Indian homes in the mid-1950s. As always, it went beyond selling petroleum, educating customers and offering better services and products. Besides selling Bitumen, the Company pioneered desert road construction and imparted training road engineers. It provided free technical services to industrial customers - big and small - and over time, this spirit of collaboration became part of the Company culture.



Messages from the Leadership



Message from the C&MD



Dear Stakeholders,

Today, sustainability is globally acknowledged as one of the key priority areas, irrespective of company's size, geography or operations. Embracing sustainability practices in core businesses leads to long-term sustainable business performance. In other words, Sustainability and Profitability are to a large extent inseparable. We, at BPCL are continuously striving to align our business practices to global sustainability standards. In this regard, we are happy to present you the twelfth consecutive Annual Sustainability Report of BPCL, for the FY 2017-18, detailing out the Company's performance on environmental, social and financial parameters.

The year 2017-18 has witnessed several significant milestones for BPCL. With exceptional performance, BPCL has realized its dream of attaining the coveted 'Maharatna' status.

We have been also conferred with the prestigious 'Star PSU' Award at the Business Standard Annual Awards for Corporate Excellence for 2017.

On financial performance, FY 2017-18 has been a significant one for the BPCL Group Companies, during which we have recorded the highest ever profit after tax of Rs. 9,009 crores. Gross Revenue from Operations stood at Rs. 2,79,312.70 crore as compared to Rs. 2,43,747.46 crore recorded in 2016-17. Our market sales went up to 41.38 MMT as compared to 37.74 MMT during 2016-17.

On environmental responsibility vertical, being cognizant of the impact of business operations on physical and biological environment as well as on the local communities, BPCL has been taking active measures to foster innovation in dealing with these challenges. The ambitious target of roll out of BS IV across the country has been meticulously achieved by the refinery and

marketing teams. Mumbai Refinery has successfully implemented the production of superior quality hexane as a by-product from Isomerization Unit and this has been highly appreciated and recognized by Centre for High Technology, Ministry of Petroleum & Natural Gas. We have increased capacity of renewable energy from 22.17 MW to 26.36 MW registering an increase in capacity of 18.89% as compared to previous year.

Rainwater harvesting, and installation of energy efficient lighting are a few other steps taken toward reduction in carbon footprint. Last year witnessed an increase in total catchment area under rainwater harvesting to 7,73,427 m² from 7,22,800 m² an increase of 7%, while energy efficient lighting capacity has also been increased from 6.2 MW to 7.54 MW, an increase of 21.61%. Through such initiatives, we have achieved an annual reduction of GHG emission by 43,660 MTCO₂e. We are happy to inform that Treated Effluent Water Quality and Ambient Air Quality at both the refineries are well within prescribed standard limits. However, we strongly believe that still a lot to be done and we are fully committed to minimize carbon footprint across our touch points.

With its motto "Safety First, Safety Must", BPCL continues to drive safety consciousness across its operating locations and offices. We understand and strongly advocate adherence of safety standards not only by employees and contract workmen, but also by channel and business partners. We continually engage with our people and partners to increase awareness on safety in all areas of operations.

In line with our vision to 'Energise Lives' we made significant progress in CSR thrust areas of Education, Water Conservation, Skill Development, Health & Hygiene and Community Development. The Company partners with several capable organizations, thereby supporting projects that benefit the underprivileged and marginalized sections of society.

Some of the flagship projects like Computer Assisted Learning (CAL) enhancing digital literacy for students, "Saksham" an initiative to enhance competency level of school teachers, BOOND a water conservation project through rain water harvesting have been very effective in addressing the needs of communities. We have also made significant contributions towards skilling and employment, integrated community development, health services, Swachh Bharat and conservation of cultural heritages across multiple locations. With all these efforts, BPCL was adjudged as the 12th Best Company in Responsible Business Rankings (first among PSUs and the oil industry).

We are thankful to our stakeholders who have trusted and recognized our abilities to face the challenges. Going forward, we appreciate that business models are changing at an incredible pace in this disruptive business environment. Therefore, adopting innovative and disruptive sustainability concepts would keep us ahead of our peers. I am confident that BPCL will successfully continue in its journey towards enduring excellence and delivering value to all its stakeholders.

Warm Regards,



D. RAJKUMAR
Chairman & Managing Director

Message from Director - Refineries

Dear Stakeholders,

At BPCL, we are aware that our refineries are major contributors towards BPCL's business as well as its environmental footprint. We are continuously striving for maintaining a balance in improving performance of the refineries while ensuring our responsibility towards the environment.

On performance front, Mumbai and Kochi Refineries achieved the highest ever crude processing of 28.15 MMT as against 25.39 MMT in 2016-17 with the successful commissioning of Isomerization and Diesel Hydrotreater units at Mumbai Refinery and all the process units of the Integrated Refinery Expansion Project at Kochi Refinery.

BPCL refineries are producing environment friendly BSIV quality fuels. To provide better environment, BSVI fuels will be produced from our Refineries bypassing BSV grades. The projects are expected to be completed well ahead of the ambitious target deadline of April 2020 set by the Government of India. Mumbai Refinery has been successful in achieving production of superior quality hexane as a by-product from Isomerization Unit. Focused initiatives have also been taken up along energy conservation front.

BPCL is continuously working on to reduce environmental pollution and reducing Greenhouse gas emissions (from burning of the residual agricultural waste) by setting up three Bio-Refineries at Bargarh in Orissa, Bina in Madhya Pradesh and Khamgaon in Maharashtra. Feed stock for the Refineries is agricultural waste. These refineries will produce ethanol which will be blended in Motor Spirit to reduce environmental pollution. Water conservation is given high priority and both the refineries are expanding volumes of the rain water harvesting. Mumbai Refinery, fully utilizing rainwater harvesting facilities, achieved harvesting of more than 66,000 KL in FY 2017-18. At Kochi Refinery rainwater harvesting of around 76,933 KL was achieved through roof top collection systems and open quarries. More than 30,000 trees



have been planted by the refineries in FY 2017-18. A new solar power plant of 85,000 kWh capacity was inaugurated during April 2017 in Kochi Refinery.

Other Go Green initiatives - installation of effective Energy Management Systems, better Effluent Treatment Plants, Monitoring Systems, Bio Remediation to name a few were also taken up in the refineries. Our refineries have been intensifying their social responsibility activities over the last years. Focused interventions in the areas of education, skill development, health and hygiene, cleanliness, community development are carried out, thereby reaching out to thousands of people.

We are thankful to our stakeholders who have put their utmost efforts to bring BPCL to the present status. We are committed to the vision of attaining excellence and at the same time being one of the most responsible corporate entity.

I wish all stake holders of BPCL a very prosperous and safe year ahead.

Warm Regards,

R. RAMACHANDRAN
Director (Refineries)

Message from Director – Marketing

Dear Stakeholders,

For BPCL, 2017 was another year of strong performance. BPCL's market sales volume increased by 9.37% to 41.38 MMT as compared to 37.74 MMT in the previous year. BPCL's market share amongst public sector oil companies stood at 23.75% as on 31st March 2018, as compared to 22.77% as on the end of the previous year. For its outstanding global, financial and industry performance, BPCL has been ranked among the top 20 Oil and Gas Refining and Marketing companies in the Platts Top 250 Global Energy Company Rankings for 2017. BPCL ranks 5th in Oil & Gas Refining and Marketing in the Asia/Pacific Rim; 7th in Oil & Gas Refining and Marketing globally; and 10th in overall performance in the Asia/Pacific Rim. On an overall global performance, Bharat Petroleum has been ranked 27th. Further for the 8th consecutive year, BPCL was awarded the 'Best LPG Marketing Organization' by Oil Industry Safety Directorate (OISD).

BPCL has been conferred with the coveted Star PSU Award at the Business Standard Annual Awards for Corporate Excellence 2017. Apart from financial metrics and competitive advantage, the criteria for selection included scale, sustainability, leadership and innovation, bearing testimony to BPCL's capabilities in these diverse spheres and to our commitment to be a responsible supplier to meet the energy needs of the country.

To meet this commitment, we strive to constantly innovate, follow sustainable practices of operations & doing business and focusing on impact driven CSR with deep commitment from our team – from the staff working in our refineries to driving our trucks to our most senior leadership.

BPCL is looking at various options to play in the Electric Vehicle (EV) value chain. BPCL is also working on scenario planning to visualize and plan for the changed macro-economic environment 15 years into the future. Several scenario-planning workshops have been conducted to identify future scenarios affecting the energy business, BPCL's strategic



choices in various scenarios and making BPCL future ready.

On the sustainability front, BPCL has carried out many projects in refineries and marketing locations for renewable energy and clean technology. Giving credence to such initiatives were our efforts for certifications, ISO 50001 was implemented at 22 additional locations, Energy Audit at 36 more locations, and 5S certification at 17 more locations. With the spirit of taking the growth to the local & small producers, local procurement from MSMEs stood at 27.11 % against the target of 20%. Further to encourage this momentum, A national level premier vendor workshop was organized by Central Procurement Office-Marketing (CPO-M) and Central Procurement Office Refineries (CPO-R) for MSME enterprises where a capacity building exercise was conducted.

Continuing its CSR efforts, UJJWALA PLUS FOUNDATION (UPF) A Joint Venture Company was formed for charitable purposes among three PSU Oil Marketing Companies viz. BPCL, HPCL & IOCL (in the ratio of 25:25:50) under Section 8 of the Companies Act, 2013 on non-profit basis which aims to provide LPG connections to Below Poverty Level (BPL) households not covered under Pradhan Mantri Ujjwala Yojana. Multiple CSR Projects are carried out by the Company that are based on extensive need assessment and focuses on providing sustainable solutions that engage

the community that is benefitted and lays the foundation for sustainability of the projects through a constructive exit strategy. Through “Umang”, BPCL aspires to bring to the rural population a wide range of services round the clock through technology, thereby making their lives easier as well as meeting the corporate vision of financial inclusion.

BPCL's Start-up initiative “Project Ankur” aims to develop a supportive ecosystem that nurtures entrepreneurship in the country, by backing innovative ideas and concepts that have the potential to grow and become a successful commercial venture. During the year FY 2017-18, twenty proposals have been shortlisted by the steering committee for funding, out of which six start-up initiatives have been provided with a cumulative funding of Rs. 4.2 Crores. Also, to build the ideas pipeline, BPCL has entered into MOUs with Incubation hubs such as KSUM (Kerala Start-Up Mission), Invest India, IIT Madras and KIIT Bhubaneswar.

With the customer at the centre, The Citizen's Charter is published on the BPCL website that provides details of a range of services offered to the customers, with an overview of the marketing activities of the Corporation, policy guidelines and processes on marketing of petroleum products.

It covers the mandate of the Corporation, customer rights with respect to standards,

quality, time-frame for service delivery, the grievance redressal mechanism and other such topics. A technology initiative, BPCL's Customer Care System (CCS) provides a single window to address the concerns of its customers across all BUs and geographies. It is an integrated platform for customer interactions across all channels such as email, website, social media, Vigilance, National Consumer Helpline as well as walk-ins. CCS has registered its highest ever 0.9 million (with 38% CAGR) interactions during FY 2017-18. It has now evolved into a robust platform and certainly the most preferred choice of customers, resulting in substantial improvement in the Customer Satisfaction Index.

I believe that our committed sustainability plan would bring positive development not only for BPCL, but also for the countries we invest in. We also firmly believe that each section of society must work together to create the balance in equal harmony among economic, environmental and social factors our country and the world requires for a sustainable future.

Warm Regards,

ARUN SINGH
Director (Marketing)

Message from Executive Director – HSSE and Advanced Liquid Biofuels

Dear Stakeholders,

Sustainability is a journey of evolution at BPCL. We adopt better technologies and methods which help us meet our aspiration of sustainable development on an annual basis. BPCL significantly contributes towards the progress of the nation by catering to its energy demands. It does so in a responsible manner keeping a strong focus on safety, health and well-being of its people and communities.

In FY 2017-18, Mumbai and Kochi Refinery completed 31 and 53.57 million man-hours without Lost Time Accident respectively. A total of 3,070 man-days of HSSE training was imparted to BPCL employees at Mumbai Refinery alone. Implementation of safety audit recommendations was 96.2% during the year. Kochi Refinery imparted HSSE training to 18,898 contract employees. Fire and Safety training were also imparted to 2,153 BPCL employees. Mumbai and Kochi Refineries and Retail Operations are certified for Integrated Management System.

We acknowledge that Climate Change has become a cause of global concern. Numerous initiatives have been taken up to minimize our impact towards global warming. We have implemented various initiatives on renewable energy which emphasizes on increased use on solar / wind power. The capacity of Renewable Energy has been increased from 22.17 MW to 26.36 MW and efficient lighting has been increased from 6.2 MW to 7.54 MW in FY 2017-18. Also, the rainwater harvesting capacity has been increased to 7,73,427 sqm. from 7,22,800 sqm. With these initiatives we have achieved an annual reduction of emission by 43,660 MTCO₂e. To reduce the Sulphur content in the fuels and environmental pollution, we are currently producing low Sulphur BS IV auto fuel. Our refineries are in the process of transitioning from producing BS IV to BS VI (MS / HSD) grade auto fuel i.e. by April 2020 as per Government directive. Recognizing the gravity of the situation we had undertaken a study on climate change risk preparedness for the Oil and Gas sector. This study was initiated in collaboration with peer Oil and Gas PSUs, through The Energy and Resources Institute (TERI) which provided a



comprehensive analysis of threats from climate change to our locations and provided a way forward to tackle the challenges.

Bio-Fuels, the cleaner alternative energy, have been growing steadily in the world market to tackle carbon imbalance in environment while also meeting growing energy needs. Biofuels in India is of strategic importance as it augers well with the ongoing initiatives of the Government such as Make in India & Swachh Bharat Abhiyan and offers great opportunity to integrate with the ambitious targets of doubling of Farmers Income, Import Reduction, Employment Generation, Waste to Wealth Creation. BPCL proposes to set up 3 nos. Bio-Refineries in Odisha, Madhya Pradesh & Maharashtra for production of Second Generation (2G) Ethanol, which will be blended with MS. The National Policy on Biofuels -2018 sets the new agenda consistent with the redefined role of emerging developments in the Renewable Sector, including Bio-CNG & Bio-Diesel.

Our Sustainability Report highlights the processes and the people within and outside the organization who have effectively contributed to build the strong fundamentals of BPCL, which makes it responsible and a sustainable organization. This also explains how we are working towards improving our safety performance and minimizing our impact on the environment and communities.

Warm Regards,

M. S. PATKE
ED (HSSE and Advanced Liquid Biofuels)



About this Report



About this Report

Bharat Petroleum Corporation Limited (BPCL) has endured towards bringing about phenomenal growth and change in the Oil and Gas sector of India. Upholding its aspirations and values, the Company has been working towards fuelling a billion lives. BPCL is delighted to publish its 12th Annual Sustainable Development Report for FY 2017-18 centred around the theme 'Energising Responsible Growth'. BPCL has been on its sustainability journey for more than a decade now. It has a robust mechanism for reporting on the triple bottom line i.e. Economic, Environment and Social. Data/information which forms a part of this report is collected on a software tool, p3 (acronym for People, Planet, Profit) at the corporate and operative levels.

'This report has been prepared in accordance with the GRI Standards: Comprehensive option'. BPCL needs to report on all indicators of each identified material aspect along with their management approach to obtain the 'Comprehensive' criteria. The report has been developed in adherence to all the reporting principles with respect to content and quality as per GRI Standards. BPCL also adheres to disclose on the Oil and Gas Sector Supplement (OGSS), the International Petroleum Industry Environmental Conservation Association (API/IPIECA/OGP) and the American Petroleum Institute's Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (2010), Sustainable Development Goals (SDGs), NVG of SEBI and the Citizen Charter.

BPCL has appointed M/s NextGen PMS Pvt. Ltd. for providing advisory services to develop this report. The information in the report is assured by a third party, KPMG in India, appointed through e-tendering process. The assurance is conducted as per International Standard on Assurance Engagement (ISAE) 3000 (revised) and AA1000 (2008) Assurance Standard Limited (Type 2) at moderate level.

BPCL seeks assurance for their Sustainable Development Report every year and the assurance process is facilitated by the Corporate HSSE Team.

Previously published Sustainability Development Reports are available on the link below:

<https://www.bharatpetroleum.co.in/sustainability/sustainability-reports.aspx>

The most recent Sustainable Development Report was published in December 2017.

Reporting Boundary:

During FY 2017-18, there has been no significant change in terms of organization, size, structure, ownership structure or supply chain. Pipeline has been added to the report boundary of BPCL. The report boundary comprises of the directly controlled seven Strategic Business Units (SBUs) operating in India, namely Refineries, Retail, Lubricants, Industrial and Commercial, LPG, Aviation and Gas. In consultation with the Senior Management, it has been decided that BPCL will report only on the high priority material topics.

In the report, local refers to India. Mumbai Refinery (MR) and Kochi Refinery (KR) are the most significant area of operations. The boundary excludes BPCL's Retail Outlets, LPG Distributors, Joint Ventures, Subsidiaries and In-transit product movement. As per the requirement of GRI Standards, management approach for each material topic has been included in each section of this report.

BPCL appreciates feedback and suggestions from all internal and external stakeholders. Please reach out to the address given below:

Ashish Gupta
Corporate HSSE, Bharat Petroleum Corporation Limited,
Sewree Fort Road, Sewree East, Mumbai - 400015
Email: guptaashi@bharatpetroleum.in



BPCL at a Glance

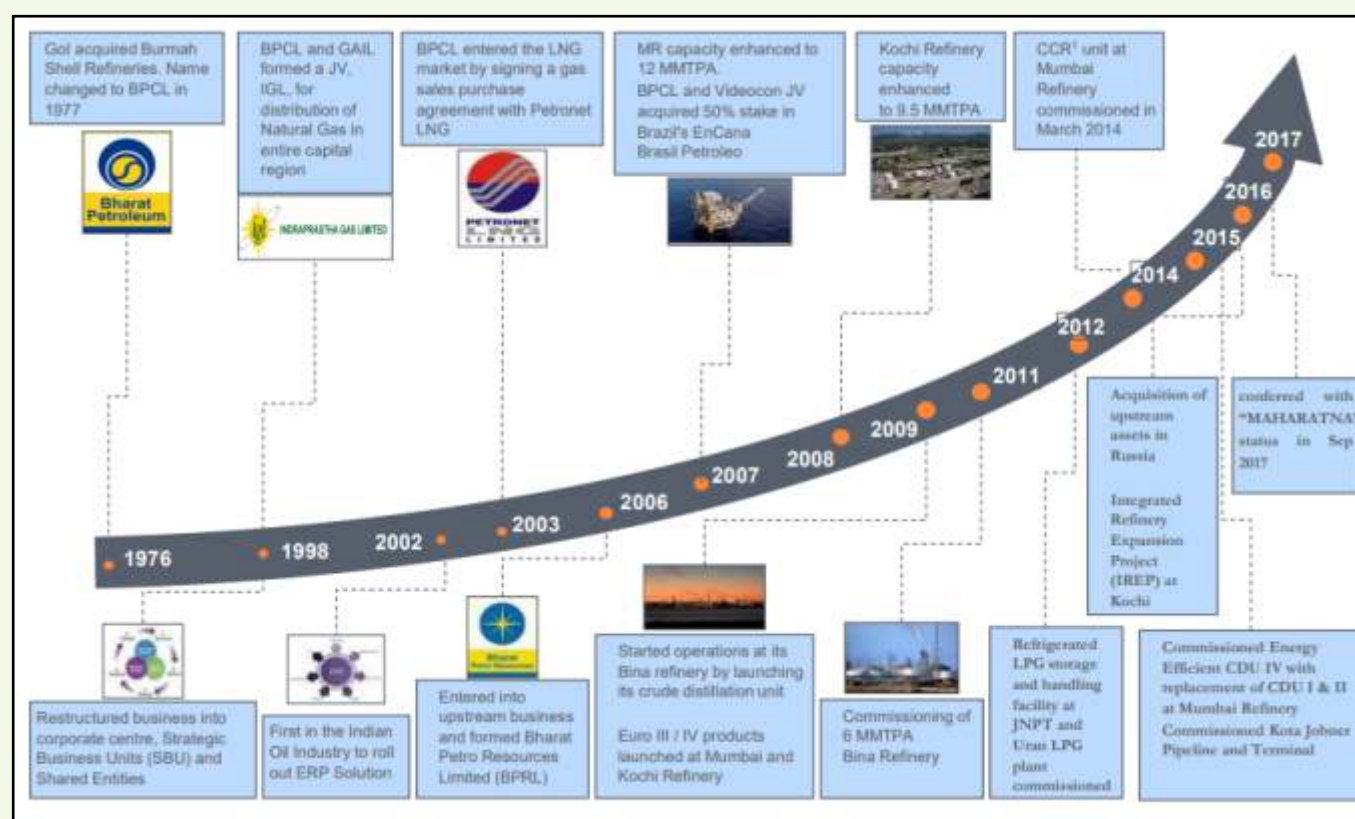


BPCL at a Glance

Bharat Petroleum Corporation Limited (BPCL) is India's 'best performing' Maharatna public-sector enterprise operating in the Oil and Gas sector. BPCL started its journey under the name of Bharat Refineries Ltd. which was formed when Government of India undertook

Burma Shell Refineries Limited (BSR) in 1952. It was later renamed as Bharat Petroleum Corporation Limited in 1977. BPCL's refinery was the first in India to process the newly found indigenous crude (Bombay High).

Important Milestones

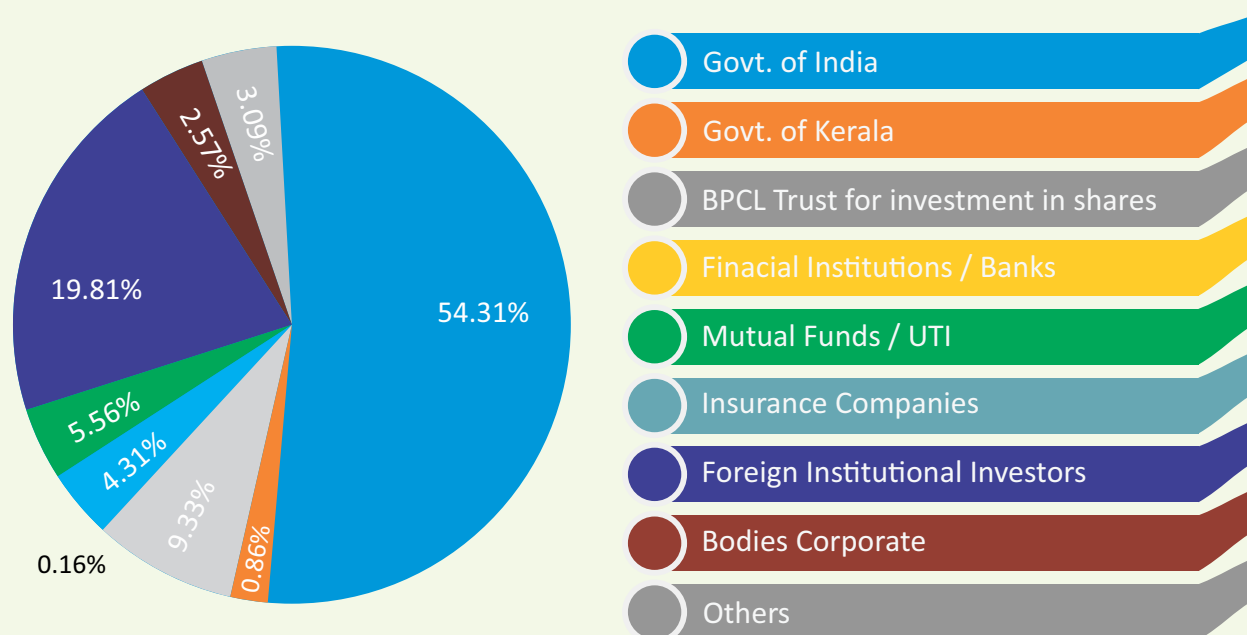


BPCL enterprises through seven strategic business segments namely Refinery, Retail, Lubricants, Industrial and Commercial, Liquefied Petroleum Gas, Aviation, and Gas. It offers a comprehensive range of products from lubricants, solvents, petrochemicals to aviation fuel. The Company is head-quartered in Mumbai, Maharashtra, India with operations across the nation. It has four regional offices in Delhi, Mumbai, Kolkata and Chennai and has a pipeline network of 2,241 kms.

BPCL as a responsible organisation has been enduring numerous initiatives to deliver its social, economic and environmental responsibilities. In FY 2017-18, it has advanced to identify further opportunities to sustain value. Therefore, it has initiated the process of adopting an integrated approach for formulating its Sustainable Development Report. This process focuses on distinguishing and enriching the value creation for all stakeholders beyond the financial value generated.

Shareholding Pattern of BPCL as on 31st March 2018 (Percentage)

Shareholding Pattern of BPCL



A broad overview of BPCL's operational presence is mentioned below:



Note:

*Retail Operations : stopped at 7 locations due to various business reasons.

Aviation: 17 new units opened

Presence Across Value Chain and Diversified Product Offering

As an Oil sector company, BPCL serves the nation across sectors from household requirements to industrial usage of fuel.

REFINERIES:

Mumbai Refinery - Mumbai Refinery achieved the highest ever crude processing of 14.1 MMT and total throughput of 14.29 MMT (crude oil and other feedstocks) as against crude processing of 13.54 MMT & total throughput of 13.60 MMT achieved in FY 2016-17. The capacity utilization in this financial year was of 119%, as compared to 113.3% in the previous year. The Gross Refining Margin (GRM) for FY 2017-18 achieved by Mumbai Refinery was the highest ever at USD 7.26 per barrel, as compared to USD 5.36 per barrel realized in 2016-17. The overall gross margin for the refinery in 2017-18 amounted to Rs. 5,023 Crores (37% higher) as compared to Rs. 3,671 Crores in 2016-17.

Kochi Refinery - Kochi Refinery achieved the highest ever crude processing of 14.1 MMT and total throughput of 14.25 MMT (crude oil and other feedstocks) with the successful commissioning of all the process units of the Integrated Refinery Expansion Project as against crude processing of 11.82 MMT and total throughput of 11.79 MMT achieved in 2016-17. This represents a capacity utilization of 115%, as compared to 107.5% in the previous year. The Gross Refining Margin (GRM) for the year also increased to USD 6.44 per barrel, as against USD 5.16 per barrel realized in FY 2016-17. The gross margin for the Refinery in FY 2017-18 is Rs. 4,333 Crores (41.5% higher), as against the previous financial year figure of Rs. 3,061 Crores.

PIPELINES: BPCL has a network of 2,241 km of multiproduct product pipelines with design capacity of 17.84 MMT and total 3,173 km inclusive of Vadinar- Bina Pipeline (VBPL) crude oil pipeline.

They have been operational and servicing the refineries and marketing Business Units for two decades. Pipelines are the most economic, environment friendly and safe mode of transportation for various petroleum products. BPCL pipelines have been accredited to Integrated Management System (ISO 9001:2015, ISO 14001:2015 & OHSAS 18001:2007 Certificates) for their operations and maintenance across the country since 2010. At Mumbai and Bijwasan state-of-the-art SCADA system with first ever dual Master Control Stations was implemented, which also has a proven leak detection system. BPCL was first in India to get the benchmarking study completed through M/s Solomon Associates for all its pipelines for the year 2015-16.

Pipelines have achieved a throughput of 14.97 MMT in the year 2017-18 which is about 6% higher than previous highest which was achieved in year 2016-17. Petroleum product movements through pipelines was 5,728 MMTKM across northern, central, western and southern parts of the country. First Parcel of BS VI products for National Capital Territory (NCT) was launched from Bina in this reporting year. Total 38 TMT of BSVI products delivered at Delhi. The pumping of ATF started at ex-Bina Refinery in August 2017 and 36 TMT of ATF has been delivered to Delhi market in FY 2017-18. Product pumping ex- Mumbai Refinery has crossed the 7.0 MMT mark for the first time in any financial year, reaching the highest ever figure of 7.015 MMT products in this year. Product pumping ex-Bharat Oman Refinery Limited also crossed the 3.0 MMT mark for the first time, reaching the highest ever figure of 3.388 MMT products.

RETAIL: BPCL's retail sales of petroleum products during FY 2017-18 grew at 6.1% while the major products, petrol and diesel, put together grew at 6.5%, with corresponding PSUs growth at 5.7%. BPCL's retail business registered a total sale of 26.5 MMT with an overall growth of 5.4% in FY 2017-18 against PSU growth of 3.7%. The sales volume of MS at 6.9 MMT was 8.9% higher than 6.4 MMT achieved last year. HSD sales volume stood at 18.6 MMT, as against 17.6 MMT last year, reflecting growth of 5.6%. In the alternate fuels segment, BPCL recorded a growth of 11.2% on the sale of Compressed Natural Gas (CNG) and the sales volumes for the year stood at 383 TMT. Auto LPG grew at 3.4%, recording a sales volume of 33 TMT. Government policy linked SKO performance stood at 554 TMT, degrowing at 31.0%. Focus on the sale of core retail products was coupled with a sustainable focus on environmentally friendly endeavours. Premium branded fuel 'Speed' sales were 567 TKL with a conversion of 5.7%. The 'Speed 97' network was expanded to 40 and the product was repositioned as the highest-Octane Unleaded Petrol. 32 CNG stations have been added across the country. In FY 2017-18, 464 New Retail Outlets (NROs) were commissioned, 129 of which were in key priority rural markets. The total Retail Outlet network after the annual addition stood at 14,447 at the end of FY 2017-18. Besides NRO commissioning, 120 Retail Outlets have been revived towards creating a healthier and more effective network.

At the end of FY 2017-18, 8,046 Retail Outlets across the country offer Pure for Sure (PFS) service standards. These certifications are given by an independent agency to the Retail Outlets, maintaining the business promise of quality and quantity assurance in refuelling. Retail Outlets that not only ensure quantity and quality but surpass prevalent standards of high-tech facilities are awarded the PFS Platinum certification. As of 31st March 2018, BPCL has 1,506 PFS Platinum Outlets across India, equipped with fully automated and

computerized offerings monitored through CCTV, assuring the promise of purity with higher service levels.

LPG: The LPG SBU registered a sale of 6 MMT and for the second consecutive year, registered the highest growth of 9.98%, thereby increasing market share by 0.36% during FY 2017-18. Record performances of LPG BU observed in the areas of new distributorship commissioning, customer enrolment, commercial sales, plant filling etc. The 'Pradhan Mantri Ujjwala Yojana' (PMUY) this year as well, has continued the momentum of new customer acquisition in rural areas, enabling extensive enrolment of new customers. The use of digital technology and social media on a mass scale enabled the business in expanding LPG footprints across the country. New customer enrolment of 76 Lakhs during FY 2017-18 has taken the domestic customer base to 670 Lakhs by the end of the financial year. Also, second cylinders were supplied to 19.90 Lakh customers. BPCL added 406 new distributorships, taking the total distributor network to 5,084. Under the successfully accomplished PAHAL project of the Government of India, so far 202.05 million customers have been enrolled on an Industry basis as Cash Transfer Compliant, out of which BPCL enrolled 51.41 million customers. BPCL had transferred Rs. 17,221 Crores directly into the customer accounts.

LUBRICANTS: The "MAK" brand delivered a strong performance in FY 2017-18, with a higher growth rate as compared to the peers, it increased its market share with 0.9%. Apart from the domestic markets, MAK lubricants have fared well in a challenging and competitive environment by recording a growth of 8.9% in exports during FY 2017-18. Seamless transition to the GST regime demonstrated the ability of Supply Chain Management (SCM) to overcome challenges and deliver growth in a changing environment. Network management and expansion ensured that the Reseller channel grew by 4.5% in FY

2017-18. The Retail channel, comprising over 14,000 petrol pumps and the Bazaar channel comprising over 700 active distributors. Marketing in the Direct channel with supplies to flagship customers consolidated the presence of “MAK” in the B2B segment. BPCL was awarded as the best and consistent quality supplier globally at Bangkok by Showa Japan for supplies to their Indian partner. MAK lubricants is at the forefront of capturing the new opportunities in the dynamic lubricant market with a very robust and innovative Product and Application Development (P&AD) department. New products like MAK Steel EP100, MAK Knit22 plus, MAK Textrol EE10, MAK EDM Oil, MAK Film bear, MAK Drillol were introduced to tap the potential in the direct market. The new products introduced to OEM customers were KOEL care premium, ELGI Airlube ECO, TVS Tru4 Skutta etc. Value added services to customers was a key focus area in the Retail and Bazaar channels. The Quick Oil Change (QOC) corner has been established as a strong service initiative for 2-wheeler and 4-wheeler customers. In the Bazaar segment, Mechanics from Non-Franchise Workshops (NFW) are key influencers in the customers' buying decision of Lubricants. A series of programs have been designed at various levels, to educate this set of 68 Bharat Petroleum Corporation Limited influencers and enhance their knowledge of Lubricants - MAK Shagun, MAK Milan and culminating with 'MAK Manthan'.

INDUSTRIAL AND COMMERCIAL (I&C): The journey of an Industrial and Commercial (I&C) business in the financial year 2017-18 became momentous. It crossed the 5 million tonnes mark in sales volume. An overall sale of 5,301 TMT was recorded and an unparalleled growth of 24.3% was registered to become the industry growth leader. Furthermore, the BU's market share in the industry, including private players, saw a quantum leap from 8.9% in 2016-17 to 10.6% in 2017-18, a phenomenal increase of 1.7% in a single year.

AVIATION: Aviation segment of BPCL recorded the highest ever sales of 1,790 TMT in FY 2017-18 with an increase in market share to 25.66% from 25.03% in the previous year amongst PSUs. Sales growth of 15.7% was achieved against the PSU growth of 13.0% during FY 2017-18. In the civil segment, BPCL's market share grew from 26.61% to 27.13% with a growth of 26.6% in the domestic segment and 11.0% in the international segment. The defence segment had negative growth due to reduction in flying operations. BPCL's aviation segment has expanded its customer portfolio with acquisition of new customers while retaining all its major customers in this year. A pilot project on automation at AFS and refuelling vehicles is in progress. It is proposed to be implemented at all locations in a phased manner.

GAS: BPCL handled 1,872 TMT of Gas in the year 2017-18, as against 1,371 TMT in the previous year, a growth of approx. 26%. Out of 1,872 TMT, 357 TMT of gas was supplied to Mumbai Refinery and 479 TMT was supplied to Kochi Refinery to meet their internal requirements. The remaining 1,036 TMT of Gas was supplied to various customers in fertilizer, power, City Gas Distribution (CGD), steel and other industries across the country and for the first time since inception, the Gas BU surpassed 1 TMT in customer sales. BPCL imported 5 cargoes of LNG in the last financial year at Dahej Terminal in FY 2017-18. Around 99% of BPCL's supply has been through pipelines to its various consumers. However, to take care of customers located far from the pipelines, BPCL supplied around 12 TMT of LNG through Tank Trucks.

Products Sold Directly	Sold through Retail Dealers & Distributors
<ul style="list-style-type: none"> 🔥 Fuel Oils (FO/LSHS/HPS) 🔥 Toluene 🔥 Benzene 🔥 Naptha 🔥 Solvents 🔥 Aviation Turbine Fuel (ATF) 🔥 Bitumen 🔥 Sulphur 	<ul style="list-style-type: none"> 🔥 Motor Spirit (MS) 🔥 High Speed Diesel (HSD) 🔥 Superior Kerosene Oil (SKO) 🔥 Mineral Turpentine Oil (MTO) 🔥 Liquefied Petroleum Gas (LPG) 🔥 Lubricants

BPCL's Network

Subsidiaries – Indian: 5

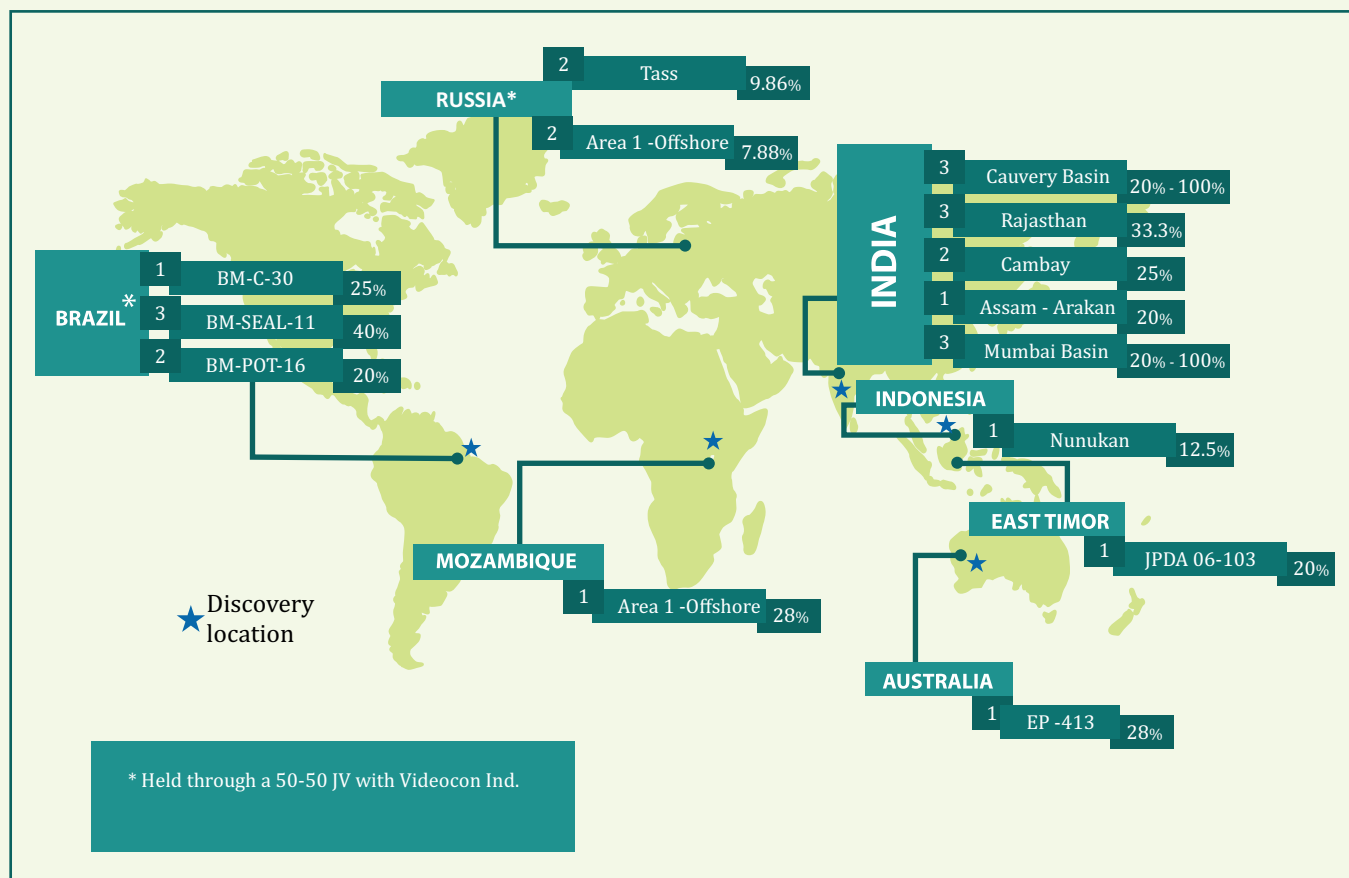
- Numaligarh Refinery Limited (NRL)
- Bharat Petroresources Limited (BPRL)
- Bharat PetroResources JPDA Ltd
- Petronet CCK Limited (PCCKL)
- BPCL-Kial Fuel Farm Private Limited (BKFFPL)

Subsidiaries – Foreign: 6

- BPRL International BV (subsidiary of BPRL)
- BPRL Ventures BV

- BPRL Ventures Mozambique BV
- BPRL Ventures Indonesia BV
- BPRL International Ventures Limited (subsidiaries of BPRL International BV) - Netherlands
- BPRL International Singapore Pte Ltd. (BISPL) – Singapore

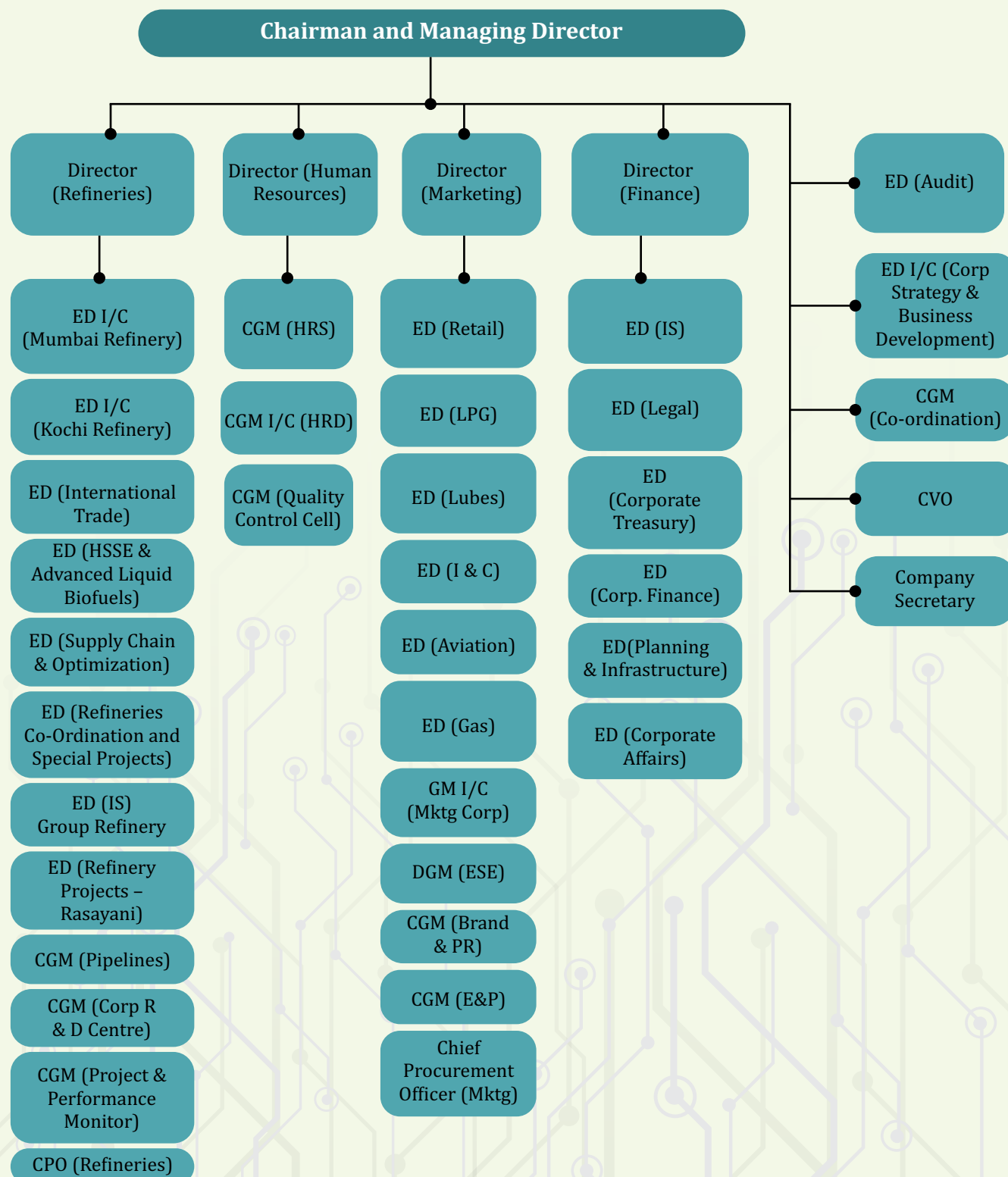
BPCL serves the local, state, national and international markets and extends its products to customers from all segments. BPCL has its presence in 6 countries, but does not own any reserves in India.



The World map represents the number of countries and locations in which BPCL operates, including the number of discoveries in FY 2017-18 which has increased from 22 to 26.

BPCL has a presence in 24 blocks in 8 countries. BPCL does not undertake any direct operations at its international locations. Only the subsidiaries have overseas operations.

Organisational Structure



Values, Vision, Mission, and Culture

VALUES

1. Trust is the bedrock of our existence
2. Customer centricity is intrinsic to our achievements
3. Development of people is the only way to success
4. Ethics govern all our actions
5. Innovation is our daily inspiration
6. Collaboration is the essence of individual action
7. Involvement is the way we pursue our organizational goals

VISION

1. We are the most admired global energy Company leveraging talent and technology
2. We are the first choice of customers, given our constant pursuit for customer service quality excellence
3. We exploit profitable growth opportunities outside energy to give back to society and environment
4. We are role models for implementing efficient Health Safety, Security and Environment initiatives
5. We are a great organisation to work for as we ensure both personal and professional growth equally
6. We are an organisation that constantly learns, improves and innovates
7. We take social responsibility seriously as a model corporate entity

MISSION

1. Participate prominently in nation-building by meeting its growing energy needs, and to support this endeavour, pursue the creation of economic surplus by efficiently deploying all available resources and aiming towards global competitiveness in the energy sector
2. Strengthen and expand areas of core competencies throughout the country, total quality management in all spheres of business and maintain the status of a leading national Company
3. Create awareness among people on the imperatives of energy conservation and efficient consumption of petroleum resources, by disseminating information through appropriate media
4. Availing ourselves of new opportunities for expansion / diversification arising from the liberalization of the economy to achieve a global presence
5. Promote ecology, environmental upgradation and national heritage

CULTURE

1. We care for people
2. We enrol people through open conversations
3. We remain result focused with accountability for governance
4. We proactively embrace change
5. Our every action delivers value to the customer
6. We collaborate to achieve organisational goals



Corporate Governance and Ethics



BPCL's philosophy on Code of Governance ensures fairness to the stakeholders through transparency, full disclosure, empowerment of employees and collective decision making. Commitment to the highest standards of corporate governance is critical in establishing trust with the stakeholders. The reputation and integrity of the organisation depends on the conduct of all its employees and other involved stakeholders. Corporate governance goes beyond compliance, it is embodied in the culture of BPCL.

Board of Director Composition

An active, well-informed Board is necessary to ensure highest standards of corporate governance. The Board of Directors is the highest Governance body at BPCL. Multidisciplinary discussions are conducted with the aim to improve its independence and to allow for transparent decision-making. The Board of Directors are selected based on their competencies and qualifications as reviewed by Nomination and Remuneration Committee.

The nomination of the Director is suggested to the Board and shareholders for approval under the provision of Companies Act, 2013. The process of appointment of Directors (Whole-time Directors, Nominee Directors and Independent Directors), however, is done by the Government of India in line with the Directorate of Public Enterprises (DPE) Guidelines applicable for Central Public-Sector Enterprises (CPSEs). BPCL Board encompasses 14 Directors represented by 5 Whole-time (Executive) Directors including Chairman & Managing Director, 2 Part-time (Ex-Officio) Directors (Government Directors) and 7 Part-time (Non-official) Directors (Independent Directors) including two female Directors. BPCL does not engage in or support direct or indirect discrimination in appointment of the Board members, compensation, termination or retirement based on caste, religion, disability, gender, age, race, colour, ancestry, marital status or affiliation with a religious or union organisation or minority group. In FY 2017-18, there were no incidents of discrimination reported in the Company.

Note:

1. Board Composition and the various committees of the Board and their responsibilities are available in the Annual Report 2017-18.

Link: <https://www.bharatpetroleum.com/pdf/OurFinancial/Annual-report-f6fce7.pdf>

2. The details regarding selection procedure, qualification, remuneration determination process and training of the Directors is available in the Annual Report 2017-18

Link: <https://www.bharatpetroleum.com/pdf/OurFinancial/Annual-report-f6fce7.pdf>

3. The details regarding Conflicts of Interest, collective knowledge of highest Governance body, evaluating the highest governance body performance are available in the Annual Report 2017-18.

Link: <https://www.bharatpetroleum.com/pdf/OurFinancial/Annual-report-f6fce7.pdf>

S.No	Name of Director	Gender	Designation
1	Shri. D. Rajkumar	Male	Chairman & Managing Director
2	Shri S. P. Gathoo	Male	Director (HR) (up to 31.10.2017)
3	Shri. K. Padmakar	Male	Director (Human Resources) (w.e.f. 1.2.2018)
4	Shri P. Balasubramanian	Male	Director (Finance) (up to 30.4.2017)
5	Shri. K. Sivakumar	Male	Director (Finance) (w.e.f. 1.5.2017 up to 7.5.2018)
6	Shri. S. Ramesh	Male	Director (Marketing)
7	Shri. R. Ramachandran	Male	Director (Refineries)
8	Shri. P. H. Kurian	Male	Government Director(up to 18.4.2017)
9	Shri. Paul Antony	Male	Government Director (w.e.f. 19.4.2017 up to 19.3.2018)
10	Dr. K. Ellangovan	Male	Government Director(w.e.f. 20.3.2018)
11	Shri. Anant Kumar Singh	Male	Government Director (up to 27.11.2017)
12	Shri. Rajiv Bansal	Male	Government Director (w.e.f. 28.11.2017)
13	Shri. Rajesh K. Mangal	Male	Independent Director
14	Shri. Deepak Bhojwani	Male	Independent Director
15	Shri. Gopal C. Nanda	Male	Independent Director
16	Shri. Vishal Vinod Sharma	Male	Independent Director
17	Shri. Vinay Sheel Oberoi	Male	Independent Director (w.e.f. 21.9.2017)
18	Ms. Jane Mary Shanti Sundharam	Female	Independent Director (w.e.f. 21.9.2017)
19	Dr. Tamilisai Soundrarajan	Female	Independent Director (w.e.f. 28.9.2017)

Percentage of male individuals within the Board of Directors	85.72%
Percentage of female individuals within the Board of Directors	14.28%
Percentage of below 30 individuals within the Board of Directors	0%
Percentage of 30-50 years individuals within the Board of Directors	0%
Percentage of 50+ years individuals within the Board of Directors	100%

Committees of the Board

The Board Committees comprise of the Board of Directors. They were set up to ensure swift and efficient decision-making. The various Board Committees are constituted in line with the requirements of the organisation. The committees exist with different roles under the provisions of Department of Public

Enterprises (DPE) Guidelines/Companies Act. Notably, the Committees gather feedback from wide ranging stakeholders and to integrate economic, social, and environmental impact into the business conduct. In FY 2017-18, the Board met fifteen times.



BPCL is committed to be a responsible corporate citizen, leading to sustainable growth and economic development for the nation and its stakeholders. The Board of Directors have adopted and delegated the implementation of a Business Responsibility Policy to the Sustainable Development Committee (SDC). The policy is based on the principles of National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of business as issued by the Ministry of Corporate Affairs, Government of

India. The SD Committee reports directly to the Board and met 3 times in FY 2017-18. The SD Committee also reviews the initiative of sustainable development, materiality topics and ESG parameters driven by Corporate HSSE department. The knowledge enhancement of the SD Committee on sustainability parameters takes place during the development of the Business Responsibility Report (BRR) and Sustainable Development Report (SDR).

Compensation/ Remuneration of the Board of Directors

BPCL is a CPSE, therefore the appointment/nomination of all the Directors is made by President of India through the Ministry of Petroleum and Natural Gas (MoPNG) including fixation of remuneration of the whole-time Directors and employees. Stakeholders' views are not considered during determination of the remuneration of Directors. The Part-time (Independent) Directors received sitting fees for each Board/Audit Committee/other committee meetings attended by them during FY 2017-18. For computing the compensation, only regular heads of compensation (one-time payments and perquisites are excluded) are considered. The major components are salary and allowances, contribution to Provident

Fund and other funds, other benefits and perquisites and performance related pay. The fixed remuneration component is accompanied by a variable pay component, based on the performance of the Management. The Performance Related Incentive Scheme for Management Staff (PRISM) is evaluated based on targets in the MOU with MoPNG. At the beginning of each financial year, BPCL signs a Memorandum of Understanding (MOU) with the MoPNG. The MOU specifies targets for various parameters including physical, financial, social and environmental parameters. The process of Board evaluation can be referred to as reported in Annual Report, FY 2017-18. The Board is evaluated on numerous parameters but not with respect to governance of economic, environmental, and social topics.

Corporate memberships

BPCL is a part of various industrial and trade associations. Major ones are listed below:

- Confederation of Indian Industry (CII)
- Federation of Indian Chambers of Commerce and Industry (FICCI)
- Bombay Chamber of Commerce and Industry
- ASSOCHAM
- Indian Merchant Chambers
- United Nations Global Compact
- World Energy Council-Indian Member Committee
- World LP Gas Association
- Petroleum Federation of India
- Bio Diesel Association of India
- National Safety Council
- World Economic Forum
- The Advertising Standards Council of India
- National Accreditation Board for Testing and Calibration Laboratories

Ethics and Integrity

Ethics and integrity are entrenched as a core value in BPCL's work culture. It is mandatory for all management, non-management and contract employees to comply with all the applicable laws. BPCL has formulated specific procedures, processes and systems to adopt the "Code of Conduct, Procedure and Disclosures for Prevention of Insider Trading in the Securities of BPCL" and "Code of Corporate Disclosure Practices".

The policy formulated by BPCL on Ethics, Prevention of Corruption and Bribery covers its entire operations. BPCL ensures transparency of revenue flow from sector to the host Governments. BPCL has taken implementation of Government policies in a proactive manner and has also provided relevant information regarding ethical conduct to the employees through intralink. BPCL follows a rigorous mechanism to

communicate concerns with its stakeholders. The primary level of grievance redressal is done at the BU level. In the event that the grievance stays unresolved, it is then taken up by the Committee of Functional Directors. Post review of the Concern Committee, the discussion is initiated with the Board of Directors. 100% of the operations are assessed for risks related to corruption. There significant risks related to corruption are identified through the risk assessment process. The aggregate number of concerns raised during FY 2017-18 cannot be disclosed due to confidentiality reasons. BPCL abides by the rules of the Competition Commission of

India and has also signed a voluntary code of Transparency International's Integrity Pact Programme (IPP). BPCL stands upto the requirements not only on paper but in spirit by not getting involved in any anti-competitive behaviour. However, the cases filed by stakeholder against BPCL, regarding unfair trade practices, irresponsible advertising and/or anti-competitive behaviour during the last five years and pending as on end FY 2017-18 are mentioned below. No case regarding anti-competitive behaviour has been filed in FY 2017-18, though there are pending cases regarding the same. The details of which are mentioned in the table below:

	No. of cases filed in the last five years	No. of cases pending as on end of FY 2017-18
Unfair Trade Practices	Nil	Nil
Irresponsible Advertising	Nil	Nil
Anti-competitive Behaviour	5	5

Details of cases regarding Anti-competitive behaviour are as follows:

- RIL /Essar/Shell had filed a complaint before the Petroleum & Natural Gas Regulatory Board (PNGRB) against PSU (Public Sector Undertaking) OMCs (Oil Marketing Companies) and upstream Companies alleging collusion, cartelization and predatory pricing for MS and HSD-Sub Judice.
- A complaint was filed by RIL before the Competition Commission of India alleging cartelization and misuse of its dominant position-Sub Judice.
- India Glycols Ltd Vs Indian Sugar Mills Associates & Ors. alleging that (ISMA) on behalf of member companies (including BPCL) have lobbied with Govt. of India for increasing the price of Ethanol from various suppliers- Sub Judice (multiple cases are filed on this issue in several forums).
- CCI (Competition Commission of India) vide its own cognizance started an enquiry against OMCs by observing that OMCs are behaving like a cartel by fixing petrol prices. A preliminary objection was taken by Respondent OMCs that CCI does not have jurisdiction and PNGRB has jurisdiction to hear this issue. The Commission ordered DG investigation which should cover the entire value chain of price build up. BPCL challenged the said order in the Delhi High Court vide WP 7303/2013 and Delhi High Court vide order dated 22.11.2013 ordered a stay in the said proceedings- Sub Judice.
- Appeal filed against order dated 11.2.2014 passed by CCI in suo-motu case no. 95/2013. Federation is alleging unfair terms in Dealership Agreements for :

- a) Not allowing to use petroleum products of other OMCs.
- b) Reserving Dealer land just for selling oil and impose condition to give land to OMC when dealership is terminated- Sub Judice.

Vigilance Mechanism

BPCL inculcates the culture for proactive and preventive efforts to promote good governance and ethical standards in all its business processes. Raising awareness has been quintessential and therefore, there has been a focus in FY 2017-18 on regular interactions with employees and other stakeholders. Vigilance Awareness Week, an annual outreach program instituted by Central Vigilance Commission is celebrated for the staff of the organizations/ departments and general public to rededicate their commitments towards Honesty, Probity and Ethical values.

The integrity Pledge was administered to 15,500 employees on the first day. Efforts were maximised to ensure wide coverage and enhance participation of the public for their commitment to the vision of 'Corruption Free India' by taking the E-Integrity Pledge on the CVC Website by sending 4 Crore SMS messages in Hindi and English to more than 4 Crore customers, vendors and business associates; playing the message in Hindi and English at Customer Helpline and other IVRS systems, providing the E-Integrity Pledge link on all BPCL's corporate websites; printing e-pledge message on all LPG refill invoices and organising several competitions at various company offices and many schools across the country. As a part of preventive vigilance, awareness sessions were conducted for BPCL employees working at operating locations and regional offices by Vigilance officers during their visits to enhance knowledge & awareness on the operational aspects of various guidelines and standard operating procedures in vogue.

This was done with a premise to promote clean business transactions, professionalism, productivity, promptness and ethical practices. Corporate Vigilance was also carried out thorough investigations into the Complaints and Source Information. All employees (100%) are communicated about the anti-corruption policy and procedure regularly and are imparted exclusive trainings on the same. There is no specific number available for anti-corruption trainings, but the total number of trainings conducted include those. Complaints including those received online, were investigated both directly by Team Vigilance and through Businesses/ Entities within the stipulated time frame.

The 8th edition of Vigilance Plus was released this year and was well received by the stakeholders. This magazine contains articles on good governance, ethics and values, experiences of individuals, poems and highlights of the activities conducted during the year as well as an overview of Vigilance Awareness Week 2017.

The Vigilance function has closely interacted with the Businesses/ Entities to ensure all facets are covered while arriving at justified conclusions of cases. In matters referred by CVC and MoP&NG, necessary investigations were carried out and recommendations were given within the prescribed time-frame.



BPCL Vigilance Administration



Opportunities, Risk and Challenges

17 PARTNERSHIPS
FOR THE GOALS



13 CLIMATE
ACTION



Opportunities, Risk and Challenges

Oil has been at the core of most important commodities traded since last 150 years. The oil market is constantly evolving and churning out opportunities in abundance. However, trading of hydrocarbons remains difficult due to the presence of various interconnected players and processes, it requires specialised skills to capture potential and create value. The Oil & Gas sector globally is in a constant state of complexity, due to the bizarre trend of the geopolitical forces. Globally, the oil inventories have decreased whereas the demand has increased. This has created pressure on the market equilibrium.

17% of the world's population resides in India and is one of the fastest growing economies. The tremendous increase in the infrastructure and manufacturing development in India has led to increased economic activities, urbanization and industrialization. This results in making India energy intensive, oil being the major source. As over the last few decades India has been amongst the world's fastest growing economies its Oil and Gas companies are under immense pressure to prepare for a possible low-carbon future. BPCL contributes to the energy requirements of the nation. It recognises risk identification as an integral component of business. It identifies and manages its risks in accordance with the regulatory requirements laid down by Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015; Department of Public Enterprises (DPE) Guidelines, May 2010 and Companies Act, 2013. It also adheres to all regulations and takes all measures to prevent any harm caused to the environment and society due to its operations. The risks are reviewed, and procedures/processes are established to ensure proper risk management. This process helps in identification of the mitigation plans.

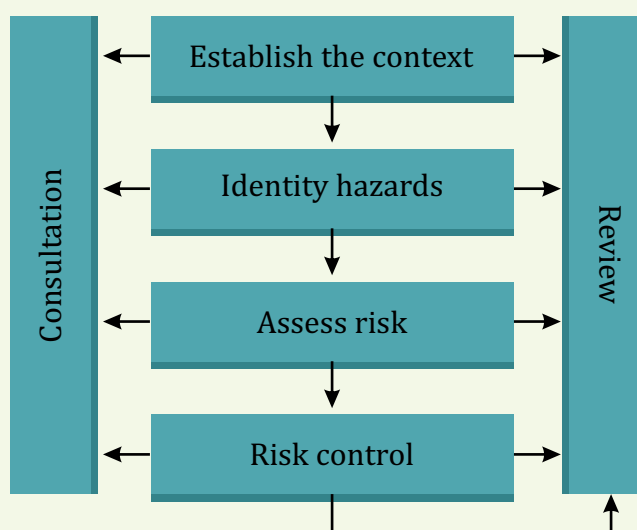
Risk Management Framework:

Risk assessment is the overall process of risk identification, risk analysis, and risk assessment. Risks can be assessed at an organizational level or a departmental level for projects, individual activities, or specific risks. Different tools and techniques may be appropriate in different contexts. Risk assessment provides an understanding of risks, their causes, consequences, and their probabilities.

The figure below provides an illustrative view of BPCL Risk Assessment & Management Framework as applicable to all project stages namely

1. Planning / Design & Engineering (including management of change)
2. Construction and Commissioning
3. Operation & Maintenance
4. Decommissioning and asset disposal

Risk management framework comprises of following steps:



BPCL Risk Assessment & Management Framework

The main objectives for carrying out a risk assessment is to ensure that human health, assets, and the environment are protected, and the necessary resources are allocated in a prioritised and defensible manner to ensure that any unacceptable risks identified will be reduced to acceptable levels.

BPCL's Board of Directors have the overall responsibility for the establishment and oversight of its risk management framework. The Risk Management Committee of the Board has defined roles and responsibilities, which includes reviewing and recommending the risk management plan and the risk management report for approval of the Board with the recommendation of the Audit Committee. BPCL has adopted a Risk Management Charter and Policy for self-regulatory processes and procedures for ensuring the conduct of the business in a risk conscious manner. BPCL has exposure to the following risks arising from financial instruments:

- Credit risk
- Liquidity risk
- Market risk
- Currency risk

The critical risks identified for FY 2017-18 are enlisted below:

1. Loss of Profitability and/or Market share:

BPCL executes planning for optimising inventory holding well in advance. To ensure a minimal effect of this risk on the operations, coordination with crude oil suppliers, SCO, refineries, crude chartering and crude operations teams was brought about to ensure nil dry outs and no loss of production. Commodity price hedging is also undertaken to protect refinery margins. BPCL attempts to attract fleet operators by increased OSTs offerings e.g. Project 'Rainbow Rise' and "Drive Bonanza" (Retail) to increase market share and registering substantial growth. It also initiates various steps to secure the sites for retail outlets



Uran border

2. Non-compliance of various laws and statutes applicable:

There are regular workshops conducted in collaboration with external consultants for increasing awareness on topics such as corporate taxation and GST.



Dharmendra Pradhan at GST Outreach Program for Oil Industry Stakeholders, Mumbai

3. HSSE Risks:

Non-adherence to laid down standard operating procedures and lack of understanding of operational / work place hazards of accidents. To monitor that no such incident occurs BPCL has laid down a process of quarterly reviewing the HSSE performance and imparting safety awareness at field level. BPCL treads towards enhancing HSSE Governance by improvement on online accident reporting and implementing online work permits. To ensuring adequacy of safety systems at locations, BPCL conducts HSSE audits and capability enhancing sessions. To minimise environmental pollution (air, water and soil) leading to non-compliance to the laws of the land incurring product loss, brand image, impact on staff/property BPCL undertakes Sustainable Development initiatives.



Display of 12 Life Saving Rules at BPCL - Mumbai Refinery

Issuance of informative circulars to SBU's / entities on amendments and changes of tax laws is a regular affair at BPCL



GST Outreach Program for Oil Industry Stakeholders held at Mumbai - 28th June 2017

4. Infrastructure risk:

Oil & Gas sector has a fundamental requirement of robust infrastructure. India has made several advancements in upstream, has an impressive refining capacity that's slated to increase, has made significant progress in storage, especially with the strategic crude oil storage plans, a strong distribution network and reasonable road infrastructure to facilitate transportation of products. Gas demand have also been projected to grow remarkably. To cater to this demand, major investments in development of gas infrastructure (Pipelines, Terminals and CGD Networks) will be required. These avenues together form an attractive pool of greater profitability by 2025. The risks related to infrastructure are inadequate logistics infrastructure for planned / anticipated growth, delay in competition of project and inability to evacuate product under certain circumstances.

5. Human resource risk:

Succession planning for key positions in SBUs / entities and non-availability of strategy professionals for new business areas are the major challenges faced by BPCL. These risks may impact the business performance. Also, engagement of contract labour leading to distortion of direct to indirect labour ratios is realised as a challenge. This may lead to high risk of labour costs being equalized with company employees and all other associated compliance and litigation issues.

6. Threats due to alternative sources of energy:

Another plausible situation is where Oil & Gas sector deals with renewable energy. There has been a notable increase in the consumption of renewables globally.

Renewables increased by 17% from 417.40 million tons of oil equivalent (mtoe) in 2016 to 486.80 mtoe in 2017, constituting 3.6% of the global energy mix. India also has taken several steps to encourage proliferation of renewables. Both solar and wind energy, hybrid solar-wind projects and Waste to Energy (WTE) units are being installed across the nation depending upon the location's capacity to produce the type of clean energy. Therefore, it shows India has assumed greater responsibility and is moving forward with the ambitious target of 175 GW Renewable energy target to be achieved by 2022.



Photovoltaic Solar Module Array at Mumbai Refinery

7. Performance of subsidiaries and joint venture companies:

The performance of the subsidiaries and joint venture companies is reviewed on a quarterly basis to minimize the risk. In the current scenario digitalisation is a key enabler for cost reduction, enhanced decision making and increased workforce productivity. There have been significant advancements in terms of

digital in the Oil and Gas, yet the sector has been slow to seize the opportunity. There is a huge potential of utilising data for decision making for optimizing assets and operations, which is easily obtained by miniscule levels of equipment connectivity. Also, the increase of global connectivity there is abundant amount of information available to improve safety, reliability, asset health, operational efficiency and profitability.

Threat to the environment is one of the most severe forms of challenges that the Oil & Gas sector needs to effectively manage. Climate change is posing risks for any of the physical assets of BPCL exposed to the influence of natural calamities because of climate change.

BPCL together with other Oil & Gas PSUs has undertaken a study on “Climate Change Risks: Preparedness for Oil and Gas Sector” through TERI, New Delhi to act against consequences of climate change. The study has provided a comprehensive analysis of threats from climate change and a way forward to tackle the challenges. Further the study is being undertaken in which the financial implications arising from climate change will be worked out.

Oil is one of the biggest drivers of any economy, thus any fluctuation in the oil prices has far reaching consequences. As BPCL holds huge oil inventory in its refinery tanks, pipelines feeding inland refineries and in transit any sharp variation in oil prices results in a huge inventory gain/loss depending upon price movement.

Volatility in the global financial markets and consequently in exchange rate movement and capital flows pose a risk to the Company. Given the high dependency on import of crude oil and exposure to foreign borrowings, sharp fluctuations in these have a bearing on the Company's financials. As India is still dependent on imports for 80% of its crude requirements, thus making it more vulnerable to the international oil scenario.

The Oil & Gas sector is in dire need of improved integration, enhanced infrastructure and a conducive fiscal and regulatory landscape. This would be a key to attract investments across the value-chain. Variations in policy, regulations, tax rates and delays in project clearances pose profit and investment risks.

Active steps in improving the country's Oil & Gas infrastructure through fiscal incentives and policy reforms would improve growth in energy consumption coupled with increased investments in the Indian Oil & Gas sector. The Indian Government has committed to ensuring conducive regulatory and policy reforms for fostering innovative and sustainable business models for strengthening the case for energy efficiency. Any innovation on technological front can redefine the foundation of any business. For example, shale gas revolution and ever improving economics of renewable energy. There is an urgent need to address the changing talent profile required by the Oil & Gas industry. The traditional disciplines require to be complemented by expertise in analytics and digital operations. A fine balance between technical skills and technological proficiency will necessarily have to be maintained for the growth and profitability of the sector.

The outlook for the Oil & Gas sector locally and globally indicates a positive inclination towards reduced costs, enhanced efficiency, increased investments, cleaner fuels and greater likelihood of sustainability, supported by an evolving energy mix with an increasing share of renewable energy.



Solar panel - Pipeline, Chennai



**Achievements of the
Year – 2017-18**



Achievements of the Year – 2017-18



BPCL Receives the 'Star PSU' Award from Business Standard for Corporate Excellence on 31.03.2018



BPCL Mumbai refinery wins Second Prize for the Swachhata Award for FY 2017-18



BPCL LPG Marketing Receives OISD Safety Award for Best Performance on 13.01.2018





BPCL Mumbai Refinery Received First Prize for the 'Refinery Performance Improvement & Innovation Awards' 2016-17



BPCL's Internal Audit team wins the 'Award of Excellence' Under the Category of 'AGILE TECHNOLOGY'



Bharat Petroleum Sparkles with ABCI Silver Award (Communication Award) on 22.12.2017



BPCL Honoured as 'Project Management Company of the Year - 2016' on 08.08.2017



BPCL's Brand Quiz programme
Baadshah Enters
INDIA BOOK OF RECORDS



Green Initiatives of BPCL Kochi Refinery win KMA Excellence Awards 2017 on 05.06.2017





BPCL receives the Best Corporate Communication Campaign/ Programme 2017 (Internal) for the brand quiz Baadshah



BPCL Mumbai Refinery Bags Award for Energy Performance



NIPM declares BPCL Kochi Refinery as "Best Corporate Citizen" in Kerala
Event Date: Friday, 30 June 2017



BPCL Mumbai Refinery Wins
'Challenger's Award' Under
"Sustainability 4.0 Awards - 2017"



BPCL (MR)'s Employee Health
Management System entry was
awarded the First Prize in the
5th International
Best Practices Competition



BPCL – Kochi Refinery received
the "Business Award" for the
Business House that Handled
Highest Cargo of Cochin Port






BPCL bags First award in IDEAS'16 Creative Stroke (Marketing - Technical)



BPCL Corporate R&D Centre received "Innovation Award 2015/16 -Best Innovation in R&D" instituted by Ministry of Petroleum and Natural Gas for development of "BPMARRK on 01.05.2017



BPCL Receives IDC Digital Transformation Award 2017 under the category Leader Dx – IDC Digital Operational Transformation Award on 4 August, 2017



Stakeholder Engagement and Materiality

12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Stakeholder Engagement and Materiality

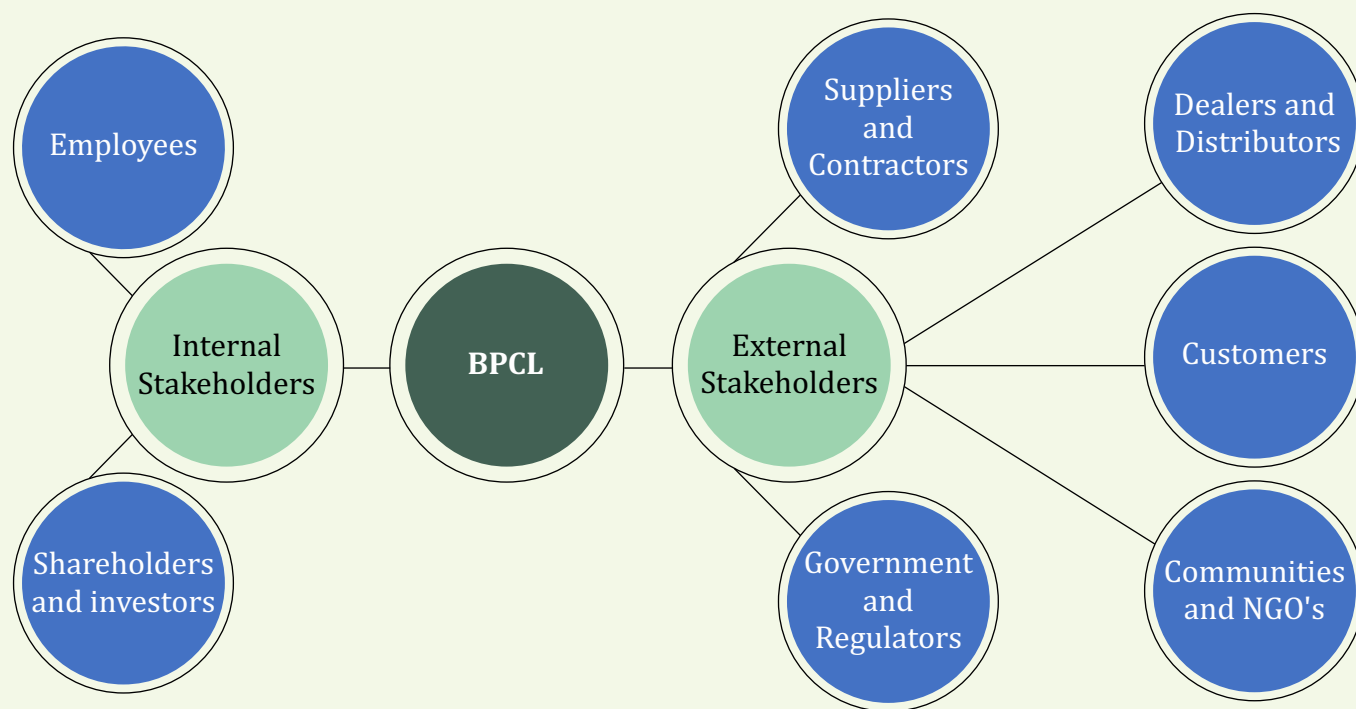
BPCL endeavour to have sustained engagement with all their stakeholders. The engagements are to understand their perspective on the economic, environmental and social topics that are significant to them. This exercise helps to develop a trust-based and transparent relationship with the stakeholders.

BPCL has taken a moderate and organised approach towards materiality assessment and stakeholder engagement. This engagement is about integrating the expectations and interests of the stakeholders into governance, organizational and management strategy for

effective decision making. This process is integral in driving the sustainability vision throughout the Company.

Stakeholder Bifurcation and Mapping

The stakeholder engagement and materiality determination process start by identifying the key stakeholders. The key stakeholders are essentially identified internally in consultation with Business Units and Corporate office. BPCL have identified the following as their key internal and external stakeholders.



Stakeholder engagement

Engaging with relevant stakeholders is an inclusive and continuous process at BPCL. It helps to build sustainable relationships with their stakeholders. BPCL takes a structured approach to engage with their stakeholders and address their key concern.

The Company aims to understand different viewpoints and address them properly. The success of this process is attributed to the constructive dialogue with the stakeholders.

The below sections have addressed the key stakeholder concerns and the response of BPCL towards those concerns.








Stakeholders		Key Topics and Concerns	BPCL Response
	Shareholders and Investors	Compliance, Governance, Ethical Operations, Economic performance	Growth and profitability, Sustainable Development practices
	Employees	Career progression, Occupational Safety, Wellness and benefits	Safe and healthy work environment, Encourage a culture of continuous learning, Prompt grievance redressal
	Suppliers and Contractor	Training and capacity building, Transparency in bidding process, Occupational health and safety, Timely payment of dues	E-tendering, Training Sessions, Implemented OHS policy, supply Chain Advisory Note time to time
	Customers	Competitive pricing, Grievance Redressal, Quality and quantity of Product, Quality of service	Process innovations, Adoption of green Technologies, Quality products and services
	Government and Regulatory	Target vs. achievement as per the Memorandum of Understanding	Create systems and processes to implement Board approved policies
	Dealers and Distributors	Local employment, Training and Inclusive growth, Long term Engagement with NGO's	CSR programs implemented to foster Community development, Skills training to improve livelihood opportunities
	NGOs & Communities	Product quality and continuous supply, Facility maintenance, Safety during product handling, Technological improvements	Timely supply of products, Maintenance of facilities

Fig: Stakeholder Concerns

The order of the above-mentioned stakeholders as per prioritisation. The below table depicts the frequency and mode of engagement of BPCL with its various stakeholders.

Stakeholders	Frequency and mode of engagement		
	Annual	Periodic	Needs Based
Customers	Customer meeting Customer Satisfaction survey	Online communication Customer feedback Satisfaction survey	Customer Meeting
Communities and NGO's		Project reviews are undertaken periodically	Interaction with community focus groups
Dealers and Distributors		Meetings and training sessions	Individual Interactions with Dealers and Distributors Vendor Meets
Employees	Performance appraisal	Training, Wellness programs, online Communication	
Government and Regulators	Memorandum of Understanding with Regulators		Meetings for new policy developments and Ministry Directives
Shareholders and Investors	Annual General Meeting (AGM) for shareholders	Quarterly reports, Quarterly investor meets, Press releases	
Suppliers and Contractors	Vendor meets	Inspection visit to facility, emails and phone calls	Vendor meets

Stakeholder engagement process and Materiality Matrix

Stakeholder Identification

Stakeholders are any individuals or groups that may affect or be affected by the Company's activities. The key stakeholders for BPCL were identified from the complete list of stakeholders.

The criteria used to prioritize stakeholders from all the identified ones for stakeholder

engagement is mentioned below:

- Willingness to engage
- Ease of access
- Impact on BPCL
- Impacted by BPCL
- Knowledge of the context

Material Topic Prioritisation and Analysis

Material topics are the ones having the potential to significantly affect sustainability performance of a company. To understand the material topics for BPCL, a universal list of material topics was compiled with the reference to the study of primary and secondary sources. From this universal list of topics, top material topics were finalized

based on stakeholder engagement responses and feedback from senior management of BPCL. Responses were obtained from the stakeholder groups on the specific questionnaires formulated for them. The responses of the stakeholder engagement exercise were collated and analysed.

Materiality Matrix

The Materiality Matrix is the result of Stakeholder Engagement process. The Material topics identified through Stakeholder engagement process and the resultant Materiality Matrix is presented below:

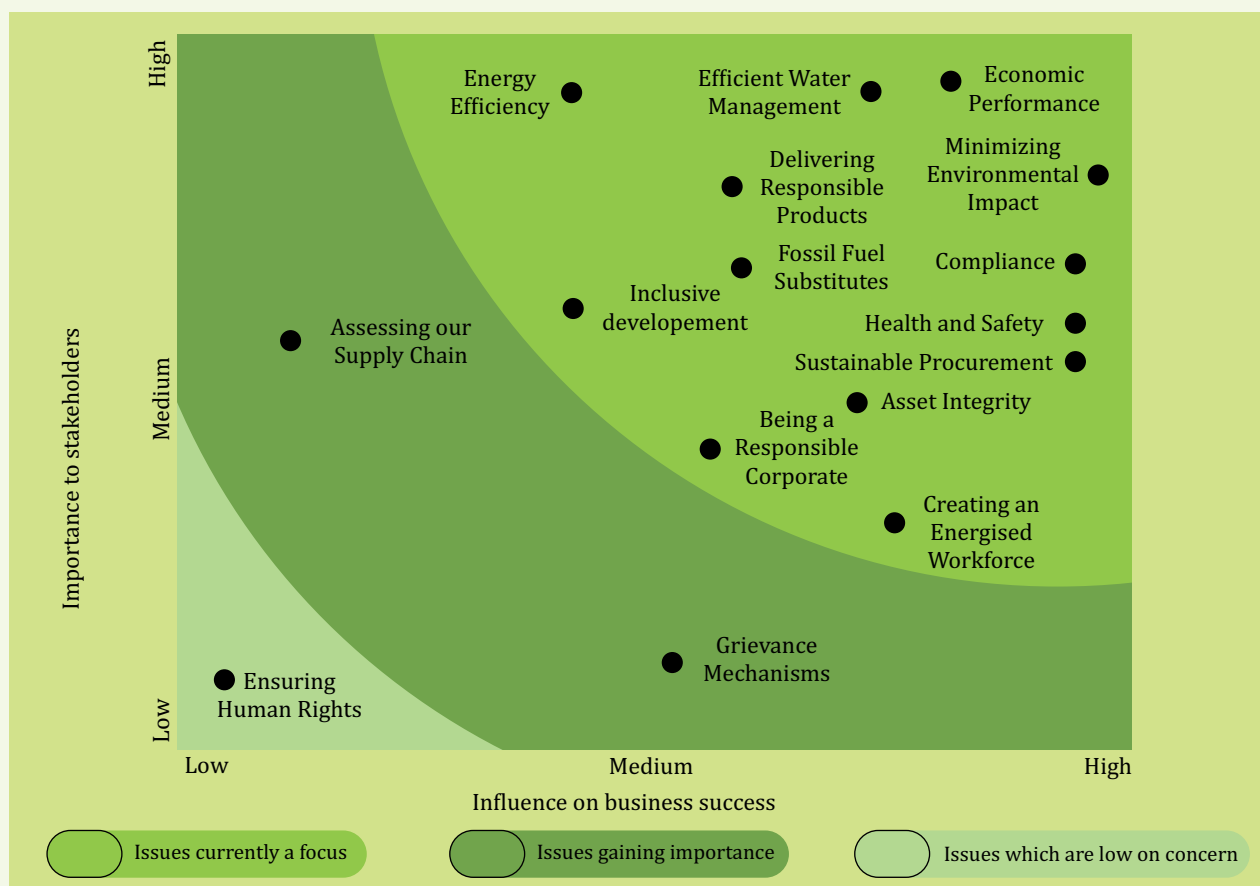


Fig: Materiality Matrix

In this report, BPCL have followed GRI Standards to identify key material issues. In consultation with the Senior Management, it has been decided that BPCL will report only on the high priority material topics. Each material topic has been discussed in detail in the subsequent chapters. The categorization under low, medium and high demonstrates

the relative importance of aspects and does not necessarily depict that an aspect rated as 'low' has low impact or relevance. In FY 2017-18 based on the discussion with Senior Management, BPCL has reported only on the issues which are a current focus for the Company and its stakeholders.

GRI Category	Material topic	GRI Topic	Boundary	Impact by BPCL
Economic	Economic performance	GRI: 201: Economic performance	Internal	Direct and Indirect
	Sustainable Procurement	GRI 204: Procurement practices	Internal and External	Direct and Indirect
	Economic Compliance	GRI 419: Socioeconomic compliance	Internal and External	Direct
Environment	Energy efficiency	GRI 302: Energy	Internal and External	Direct
	Efficient Water Management	GRI 303: Water	Internal and External	Direct
	Minimizing Environmental Impact	GRI 301: Material GRI 305: Emissions GRI 306: Effluents and Waste	Internal and External	Direct and Indirect
	Fossil Fuel Substitutes	GRI OG2, OG3 and OG14	Internal and External	Direct and Indirect
	Environmental Compliance	GRI 307: Environmental compliance	Internal and External	Direct
	Environmental Grievance	GRI 103-2: Management approach	Internal and External	Indirect
Social	Delivering Responsible Products	GRI 416: Customer health and safety	Internal and External	Direct and Indirect
	Inclusive Development	GRI 413: Local communities	Internal and External	Indirect
	Creating an Energized Workforce	GRI 401: Employment GRI 402: Labour/Management Relations GRI 404: Training and Education	Internal	Direct
	Health and Safety	GRI 403: Occupational Health and Safety	Internal and External	Direct and Indirect
	Asset Integrity and Process Safety	GRI OG13: Asset Integrity and Process Safety	Internal and External	Direct and Indirect
	Being a Responsible Corporate	GRI 205: Anti-corruption GRI 206: Anti-competitive behaviour GRI 415: Public Policy	Internal and External	Direct
	Social Compliance	GRI 419: Socioeconomic compliance	Internal and External	Direct
Social Grievance	GRI 103-2: Management approach	Internal and External	Indirect	

The data and information presented in the report is collected on a regular basis. BPCL has considered all their strategic Business Units in India which includes, Refineries (Mumbai & Kochi), Aviation, Retail, LPG, Gas, Industrial, Commercial and lubricants as the boundary for each material aspect.

The joint ventures, LPG Distributors, retail outlets and subsidiaries are excluded from the boundary of material aspect. There are no significant changes from previous reporting periods in the Scope and Aspect Boundaries.

GRI Category	Material Topics	GRI Topic	Management Approach
Economic	Economic Performance	Economic Performance	<p>Economic performance is of paramount importance for stability of the organisation. Strong financial performance gives stakeholders the confidence and helps to achieve long-term sustainable growth. This year BPCL has attained several milestones and shown exceptional economic performance. The Company is energising the Indian economy and acting as a building block for the nation</p> <p>For Details on Management Approach refer chapter Growth Profile</p>
	Sustainable Procurement	Procurement practices	<p>Sustainable procurement practice serves as one of the most important aspects for transitioning towards a sustainable business. BPCL makes sure that it procures its products in the most sustainable, economical and responsible way. The Company envisages to extend the sustainable procurement to the entire value chain.</p> <p>For details on Management Approach refer chapter Operations at BPCL</p>
	Economic Compliance	Socioeconomic compliance	<p>BPCL follows compliance not just in letter but also in spirit. The Company has policies, systems and adequate monitoring mechanism for sustained and effective compliance uniformly across the Corporation</p> <p>For Details on Management Approach refer chapter Growth Profile</p>
Environment	Energy efficiency	Energy	<p>BPCL has taken various energy conservation initiatives and benchmarked them with global standards. Further, BPCL's refineries have undergone structural changes to improve energy efficiency, resulting in fuel saving. BPCL publicly reports scope 1, Scope 2 and Scope 3 emissions according to the Greenhouse Gas (GHG) Protocol Standard</p> <p>For Details on Management Approach refer chapter Minimising Environmental impact</p>

	Efficient Water Management	Water	<p>BPCL manages its natural capital ably and works towards minimising impacts of its operations on nearby water resources. The Company has taken several initiatives such as rain water harvesting system and reusing/recycling of water wherever possible etc. in various Business Units to reduce water consumption. The Company works with preventive and mitigating activities based on an evaluation of areas with the highest water-related risks.</p> <p>For Details on Management Approach refer chapter Minimising Environmental impact</p>
	Minimizing Environmental Impact	Material Emissions Effluents and Waste	<p>Due to the nature of the business, BPCL recognises that it has an impact on the environment. Therefore, BPCL strives to operate with the lowest possible ecological impact and handles each activity with utmost care. The significant locations of operations- the Mumbai refinery and Kochi refineries have ISO 9001, 14001, OSHAS 18001 certifications for quality, environment and health and safety.</p> <p>For Details on Management Approach refer chapter Minimising Environmental impact</p>
	Fossil Fuel Substitutes	GRI Oil and Gas Sector Supplement GRI OG2, OG3 and OG14	<p>Climate change presents multiple challenges. Therefore, India has assumed greater responsibility and has set an ambitious target of 175 GW renewable energy target by 2022 to combat climate change. BPCL understands that their energy intensive operations are one of the leading contributors to climate change and therefore engages regularly in exploring investments in renewable to fulfil the energy demand. BPCL also has a policy of renewable energy which emphasizes increased use on solar / wind power</p> <p>For Details on Management Approach refer chapter Minimising Environmental impact</p>
	Environmental Compliance	Environmental compliance	<p>BPCL adheres of all the environmental compliances. The Company has put in place an adequate monitoring mechanism for sustained and effective compliance uniformly across the Corporation.</p> <p>For Details on Management Approach refer chapter Minimising Environmental impact</p>
	Environmental Grievance	Management approach	<p>BPCL handles all the grievances raised in an extremely sensitive manner across all categories</p>

			<p>and stakeholders. The primary level of grievance redressal is tended to at the BU level. The Company has in place processes and policies to handle grievances. The Companies Health, Safety and Environment Policy emphasizes on the use of appropriate technologies to minimise the impact of the activities on the environment.</p> <p>For Details on Management Approach refer chapter Minimising Environmental impact</p>
Social	Delivering Responsible Products	Customer health and safety	<p>BPCL believes in the motto 'Pure for Sure' and strives to deliver quality product to consumers. All products undergo safety testing as per the requirements to assess health and safety impacts. All marketing communication relating to the products and services adheres to ASCI voluntary standards on marketing and communications.</p> <p>For Details on Management Approach refer Operations at BPCL</p>
	Inclusive Development	Local communities	<p>Government of India has initiated several missions and initiatives to achieve goals that together ensure the growth and development of the nation and the wellbeing of its citizens. Being a responsible Company, BPCL contributes its efforts towards being in line with the missions and initiatives.</p> <p>For Details on Management Approach refer Connecting with Communities</p>
	Creating an Energized Workforce	Employment Labour/ Management Relations Training and Education	<p>BPCL's success is linked to its energised workforce. BPCL provides positive, innovative, collaborative and meritocracy elements in its work culture. The Company strongly believes an engaged workforce is crucial to achieve the business goals and build a strong and sustainable organization.</p> <p>For Details on Management Approach refer Harmonising with Workforce</p>
	Health and Safety	Occupational health and safety	<p>BPCL strives towards a safe and healthy work environment for its employees. The safety of the employees is a priority at BPCL. Throughout the year, many actions have been taken to improve the wellbeing and safety of employees. BPCL work hard to keep them safe and target zero occupational accidents. The safety culture is driven, on priority, by the top management and executed at every level through the Health and Safety Committee.</p> <p>For Details on Management Approach refer chapter Approach towards Safety</p>

	Asset Integrity and Process Safety	GRI OG13: Asset Integrity and Process Safety	<p>BPCL has established Process Safety Events identification and Measurement System in accordance to American Petroleum Institute (API) Recommended Practice (RP) 754 Standard. In addition, Process Safety Events are also increasingly reported by leading process companies in their sustainability reports. BPCL ensures that process safety events are monitored, recorded, analysed and the learning is shared across the locations. To maintain high safety standards every location has a HSSE (Health, Safety, Security, and Environment) role holder. His primary responsibility is to ensure adherence to the HSSE Policy.</p> <p>For Details on Management Approach refer chapter Operations at BPCL</p>
	Being a Responsible Corporate	Anti-corruption Anti-competitive behaviour Public Policy	<p>BPCL has built its reputation over the years by maintaining high standards of ethics and integrity. This has helped to build stakeholder trust and preeminent customer satisfaction. BPCL has formulated specific procedures, processes and has systems in place to promote good governance and ethical standards in all its business processes.</p> <p>For Details on Management Approach refer chapter Corporate Governance and Ethics</p>
	Social Compliance	Socioeconomic compliance	<p>BPCL follows compliance not just in letter but also in spirit. The Company has put in place an adequate monitoring mechanism for sustained and effective compliance uniformly across the Corporation.</p> <p>For Details on Management Approach refer chapter Harmonising with Workforce</p>
	Social Grievance	Management approach	<p>BPCL handles all the grievances raised in an extremely sensitive manner across all categories and stakeholders. The primary level of grievance redressal is tended to at the BU level. The Company has in place processes and policies to handle grievances.</p> <p>For Details on Management Approach refer chapter Ethics and Integrity</p>

For the boundary of each Material Topic refer chapter Stakeholder Engagement and Materiality



Growth Profile

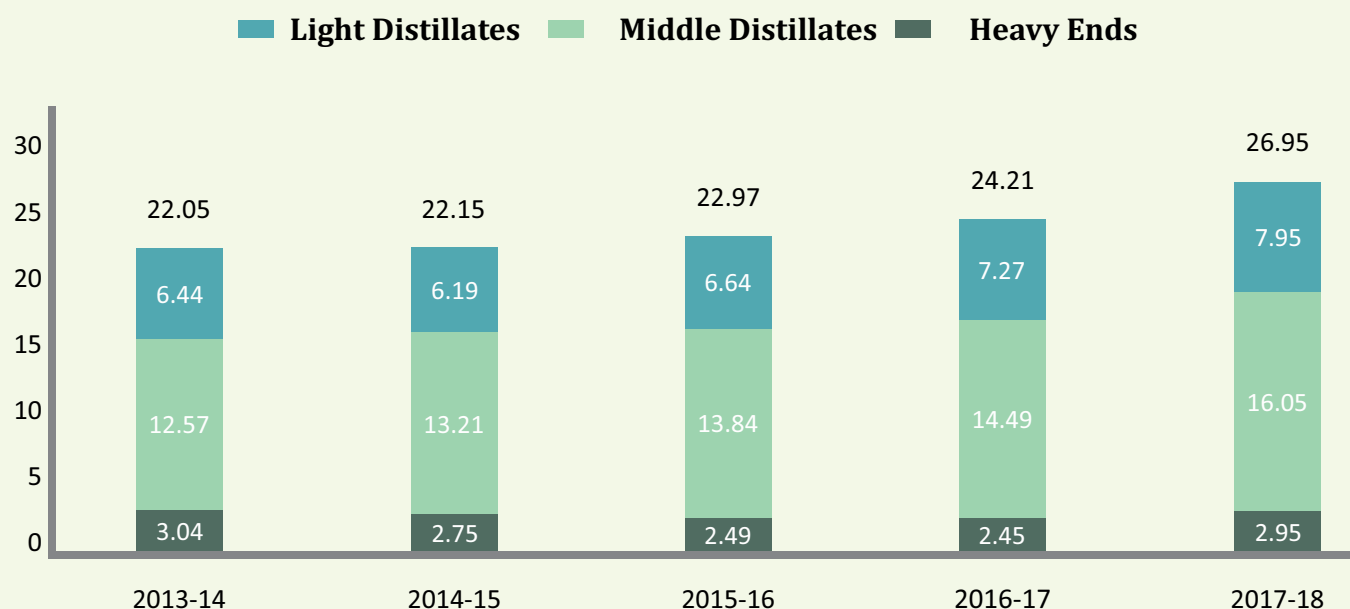


Growth Profile

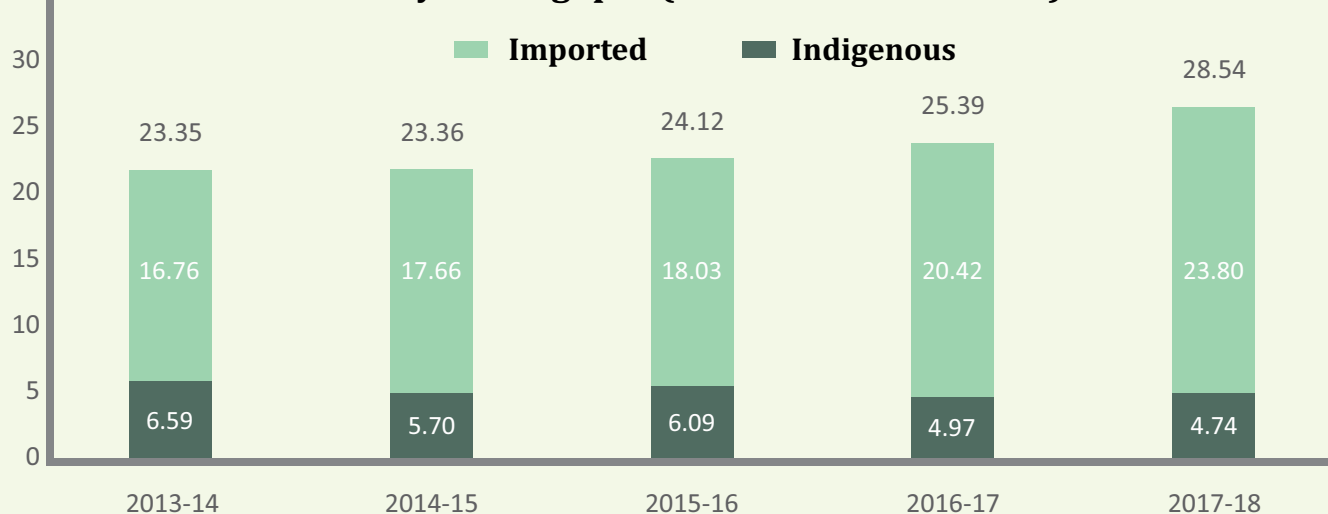
As per estimates from the World Economic Forum, India is the world's sixth largest economy with a GDP exceeding USD 2.5 trillion. As the economy grows, so does its appetite for energy. Over the past decade, India has added refining capacity of close to two thousand barrels per day, increasing its share in the world's refining capacity to 5%. As on 1st April 2018 India's installed capacity stands at 247.6 MMTPA, an increase of 6% over the previous year. The increase in refining capacity is primarily due to capacity enhancement and stabilization at BPCL's Kochi Refinery, HPCL-Mittal Energy Limited (HMEML)'s Bhatinda Refinery and Reliance Industries Limited (RIL)'s Jamnagar Refinery. The Indian refineries processed crude close to 252 MMTPA, 3% up from the previous year,

with almost 75% of the crude processed being high sulphur crude. On the same lines BPCL as a major Oil and Gas Maharatna Company is energising the Indian economy and acting as building blocks of the nation. Although BPCL weighs its performance by its Triple Bottom Line contribution but steady financial performance is must as it influences all stakeholders. BPCL ensures to have world-class assets with structural advantages in terms of costs, size and scalability to drive sustainable growth. The foundations have been laid upon which BPCL can continue to grow. Based on the financial and quality performances all its stakeholders can trust that BPCL will deliver as promised. BPCL has taken several strategic steps to ensure optimal use of resources and better productivity.

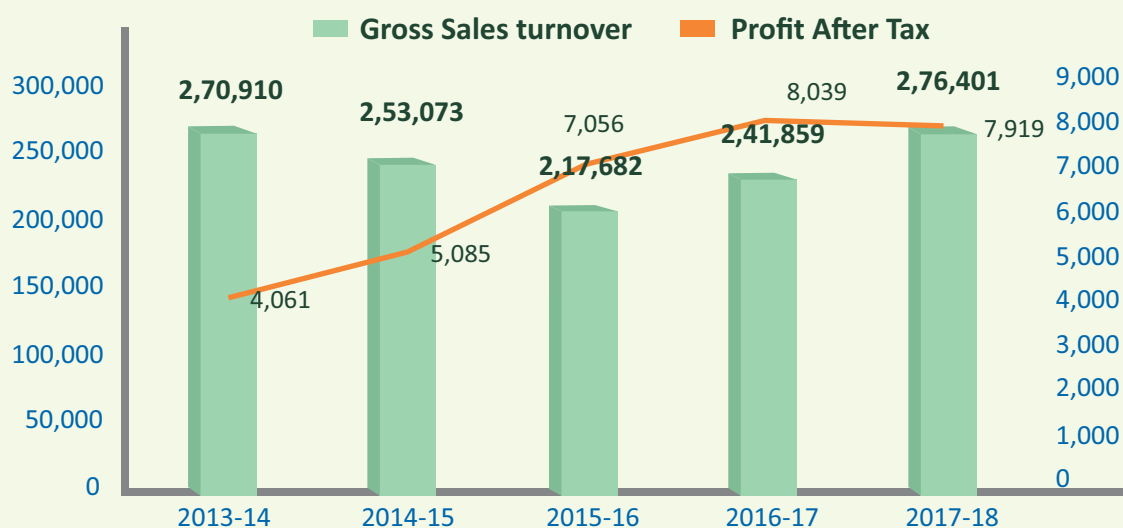
Production (Million Metric Tonnes)



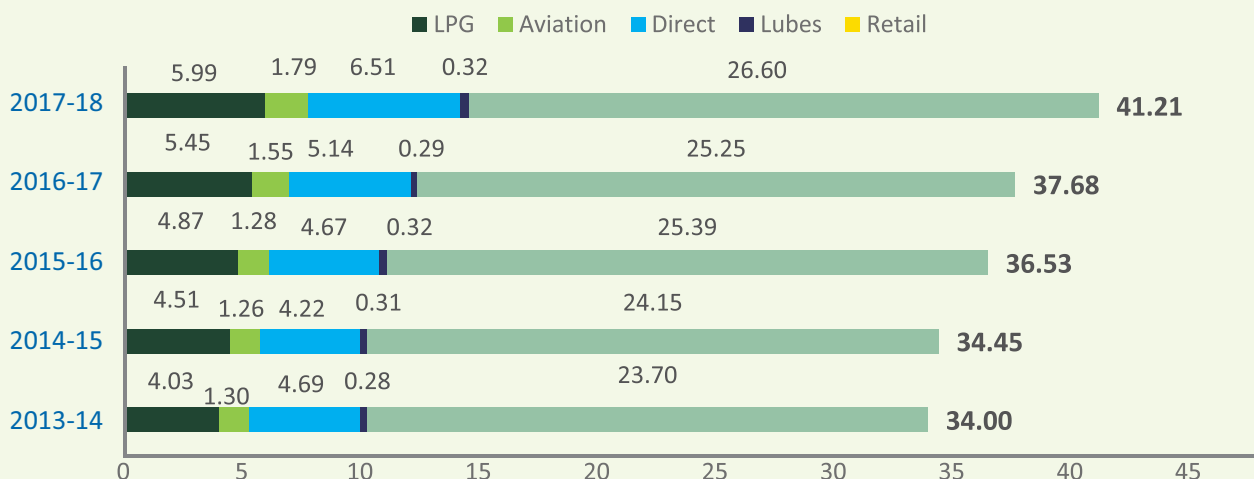
Refinery Throughput (Million Metric Tonnes)



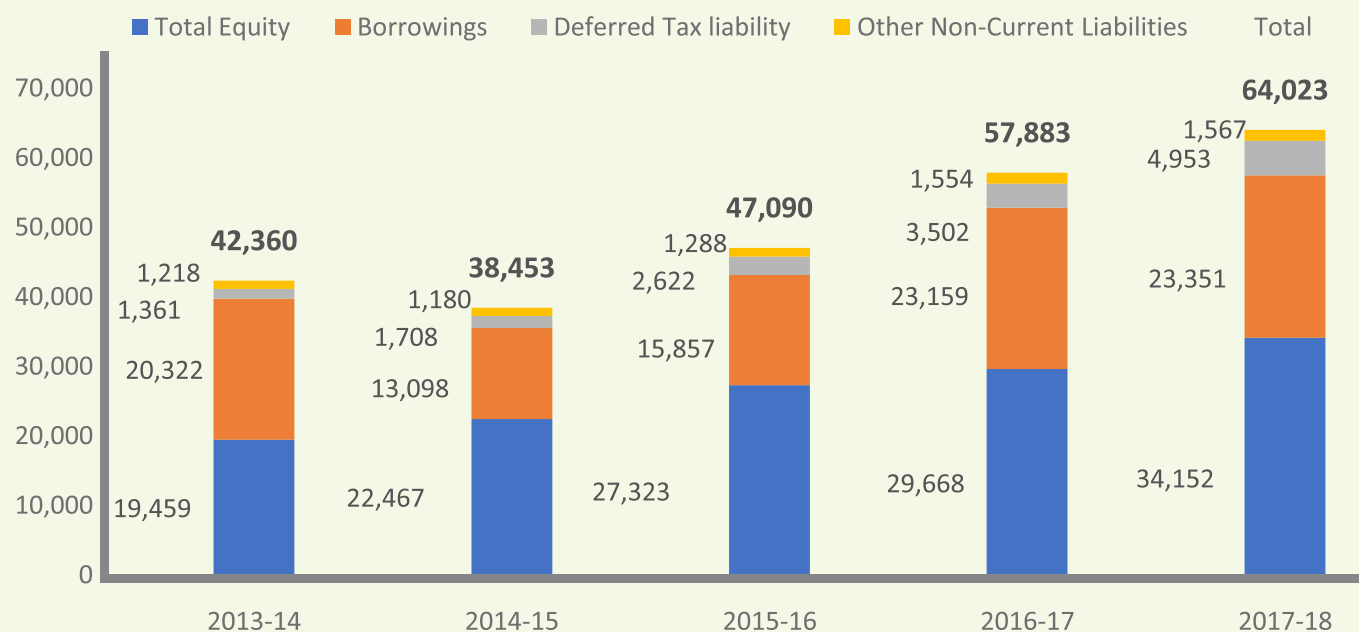
Gross Sales Turnover/Profit After Tax (Rs. Crores)



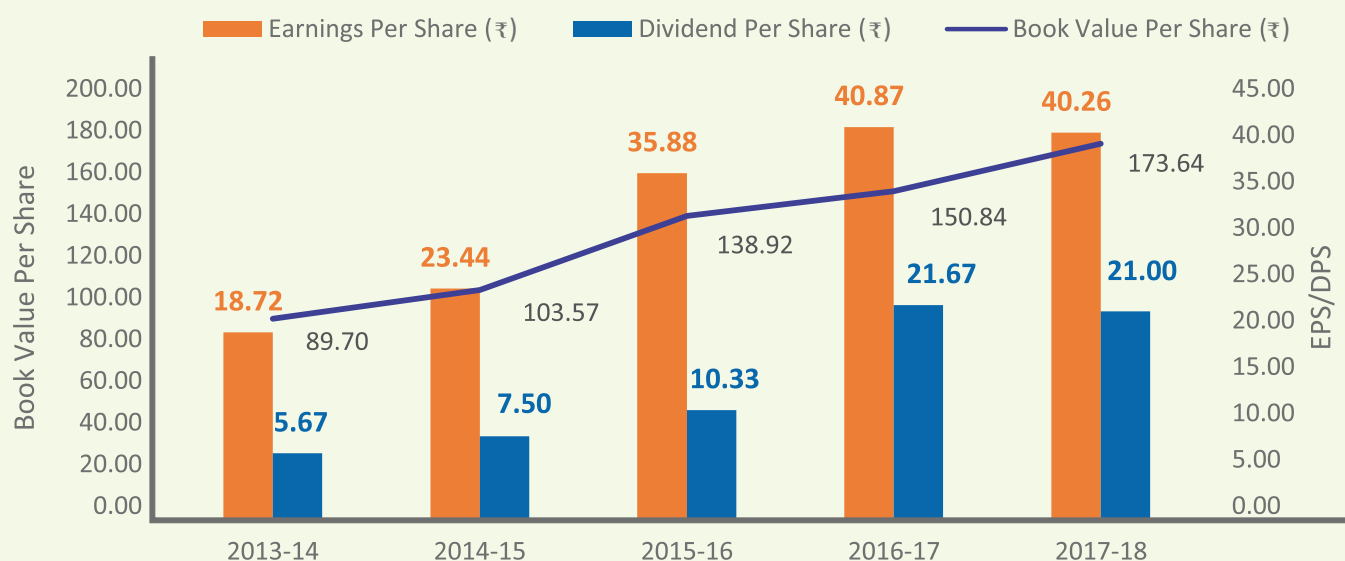
Market Sales volume (Million Metric Tonnes)



Total Funds employed (Rs. Crore)



Earnings Per Share (EPS)/Dividend Per Share (DPS)/Book Value Per Share (Rs.)



Direct Economic Value Generated and Distributed				
Rs in Crores	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
	(Standalone)	(Standalone)	(Standalone)	(Standalone)
Direct Economic Value Generated	2,49,857.45	2,18,363.60	2,50,095.75	2,80,173.11
Revenues	2,49,857.45	2,18,363.60	2,50,095.75	2,80,173.11
Economic Value Distributed	2,43,830.77	2,11,189.33	2,44,314.03	2,70,624.56
Operating costs	2,21,122.92	1,72,889.40	1,92,375.81	2,19,949.18
Employee wages and benefits	2,139.26	2,934.33	3,486.07	3,500.19
Payments to providers of capital	2,210.04	2,821.50	4,758	2,884
Payments to government	18,282.54	32,448.51	43,601.16	44,125.17
Community Investments (including CSR Expenditure)	76.01	95.59	90.98	166.02
Economic value retained	6,026.68	7,174.27	5,277.63	9,548.55

Financial assistance received from Government	INR Crore
Subsidies	734.23
Royalty holidays	0.00
Financial assistance from Export Credit Agencies (ECAs)	0.00

BPCL does not make any contribution towards any political parties either financially or through in-kind contributions.



Harmonising with Workforce

16 PEACE, JUSTICE AND STRONG INSTITUTIONS

1 NO POVERTY

5 GENDER EQUALITY

8 DECENT WORK AND ECONOMIC GROWTH

10 REDUCED INEQUALITIES

Harmonising with Workforce



Yoga Day celebration at BPCL

BPCL has been honoured with the prestigious 'MAHARATNA' status and it firmly believes that its people are the architects of the success. Securing this conferred status as the eighth Maharatna Company amongst 300 Public Sector Enterprises (PSEs) is a result of the sheer determination and commitment of its employees.

Employees are the most valued assets for BPCL and it promotes active development and participation of its employees. It wants to harness the natural enthusiasm and commitment of each and every employee by creating the optimal working environment and promoting their wellbeing. BPCL provides positive, innovative, collaborative and meritocracy elements in its work culture. Work environment of BPCL fosters active learning and provides opportunities for personal and professional development. BPCL ensures to have an energised workplace with unparalleled facilities for the employees. This would provide them with a hassle-free and highly satisfactory working environment experience. The wellbeing measurement enables the Company to identify improvements needed in working conditions, to boost employee engagement and to reduce stress.

The Employee Satisfaction Enhancement (ESE) Team continued its endeavours towards ESE vision 'To be an active facilitator towards a Healthy, Productive, Vibrant and Energized

workforce by working towards 360-degree wellness living up to the core purpose of energizing lives to make "BPCL – A Great Place to Work". All management staff of BPCL received a regular performance and career development review during the reporting period. Also, there is Workmen PMS institutionalised across all domains viz Marketing, Mumbai Refinery, Kochi Refinery through which performance appraisals are done in respect of all workmen and wherever applicable development needs are also mapped by the Line Managers. The performance ratings and feedback are also shared with the workmen. ESE followed a plan of enhancing employee satisfaction through employee wellness, employee connect and prompt grievance redressal. A total of 34 grievances were received and all were redressed in time.



World Environment Day celebration at Mumbai Refinery

There were no open cases from the past year. Towards proactive grievance identification and resolution, ESE conducted 70 awareness sessions and visited 40 locations to proactively interact with employees. All the data mentioned in the report is related to FY 2017-18.

International Yoga Day was celebrated by ESE at all regional offices in association with regional HRS, MR, KR and at many other locations. More than 1,100 employees participated in the yoga programs. A 'Dance Movement Therapy' program was organized on the occasion of Mothers' Day. Various talk sessions, events, contests and workshops were also organized. Psychological well-being correlates highly with emotional and physical wellness and this can be achieved by

meditation. On World Mental Health Day an 'ESE Fest' was celebrated to connect with employees, add joy and energize their lives. To drive home the theme of emotional fitness, a campaign on 'Stress Proof Yourself - Build Resilience' was conducted along with counselling sessions. A thought-provoking program, 'Rendezvous with Dr. Vikas Amte', the renowned social entrepreneur, was conducted to learn and share the joy of giving. World Earth Day and World Environment day were also celebrated. The main objective was to create awareness in employees about environment needs like water conservation, planting trees, recycling of kitchen waste/ e-waste and conservation of natural resources.

FREE MEDICAL CAMP AT BPCL REFINERY COLONY



In continuation of the pursuit to make a difference in the lives of extended family and stake holders, a Free Medical camp for all the domestic helps, Security staff and few contract workers of Refinery Colony was organized through a Medical team from K. J. Somaiya Hospital & Research Centre at the Colony "Anganwadi" on 18th August 2017.



A team of doctors conducted clinical examinations pertaining to problems of General illness, Ophthalmology, Gynecological & Orthopedic, ECG report for specific cases, Diabetes, Haemoglobin - Blood tests, Blood pressure reports and free medication to patients suffering from common illnesses was provided during the camp.



HR Initiatives:



1. Enabling a self learning culture



2. Identifying and developing the talent in the organisation
3. My Voice/ Merivaani



4. Every thought is important
5. Building a culture of high performance

1. Enabling a Self-Learning Culture

Over years employees has promoted numerous worthwhile contributions to organisational growth through state-of-the-art practices that are connected to employees' individual areas of work. This is a result of the matured structure BPCL has, which inculcates, promotes and rewards creative initiatives at the work place. 'Continuous innovation' is also a core value at BPCL.

The work environment at BPCL is experience highly based and employees are constantly challenged to test and improve on their strengths through various learning and development methods.

The continuous learning initiatives are developed in consensus with established premier institutions. These offer individuals distinctively customised training programs suited to achieve their organisational goals and growth. This initiative has led to creating a 'leadership pipeline'.

These leadership resources benefit the employees by teaching them skills that include:

1. Effective communication 
2. Feedback 
3. Developing subordinates 
4. People management 
5. Team development 
6. Performance management 
7. Handling difficult conversations, etc. 

Apart from this, there are different experience-based learning modules that have been developed at Bharat Petroleum:

Mercurix – Annual story telling event gives employees an opportunity to exhibit their skills and enhance their leadership abilities by using a compelling story / narrative as an inspirational tool.

Socratix – Case study events that evaluate thinking and strategic execution skills in employees.

E-Learning programs – In collaboration with global e-learning providers, there are cost and time optimised training programs developed. They cover behavioural, managerial and functional effectiveness of employees.

Educational assistance scheme – There are liberal financial assistance programs which support employees who choose to enhance their skillsets by upgrading their skills and knowledge.

E-library – All executives at BPCL have access to the e-library, it provides them access to the latest material.

Lecture series – In order to keep the employees motivated and widen their horizons, BPCL invites inspirational personalities to conduct sessions for them.

2. Identifying and Developing Talent

Talent management and leadership are of paramount importance at BPCL. Therefore, BPCL has launched various programmes that have helped individuals within the organisation to nurture their talent. Project 'CALIBER' is aimed at creating an organised means to assess, identify and develop existing talent within BPCL. Under this initiative employees underwent all-inclusive assessment process which was followed by a detailed review, integrated feedback and enrichment plans. Project 'ASCEND' was developed in continuation to the aforementioned project. It provides multi-rater assessment, multiple level personnel review, integrated feedback

and individual plans for employee engagement and skill development. This created a clear, cohesive and transparent system by which the employees could clearly see their progress and it allowed better definition of employee goals in line with organisational growth. This model uses three main parameters to assess individual performance - ability, aspiration and performance engagement.

The above-mentioned detailed process is available for middle and senior level professionals. For junior levels employees, there are additional distinctive assessment tools known as the Growth Factor Index (GFI).

3. My Voice/ Merivaani

BPCL nurtures its employees and appreciates their feedback. BPCL believes in the wellbeing of all its employees. Therefore, it has a 'Periodic Health Check-up Scheme' in place. This is aimed at creating an atmosphere of corporate wellness and paves the way towards ensuring:

- Employee well-being
- Availability/regular employee presence
- Rationalisation of costs incurred for medical care

4. Every thought is important

BPCL encourages its employees to put forward questions on matters of interest and concerns related to the BPCL and C&MD through its open interaction channels, such as 'Let's Talk' and 'Tea with C&MD'. Through these initiatives, BPCL has successfully formulated and implemented five and seven-year plans. This has promoted exceptional team performance across the organisation. BPCL ensures continuous development through its Internal Coaching, Speakers Forum, Continuous Improvement Initiatives (Quality circle, 5S, TPM, TQM, Kaizen, etc.), Quality circles and Six Sigma technique.

5. Building a culture of high performance

There is a structured approach followed at BPCL for determining organisational goals and objectives along with plans to achieve them. The HR initiatives begin with a five-year plan which is further broken down into annual plans. These goals and objectives are tabulated in the form of Balanced Score Card (BSC) which is monitored from periodically. The senior leaders are trained and certified in performance counselling techniques that are in line with the global trends to ensure an integrated work environment.

Training and Education

BPCL's approach towards sustainability, core values, company policies, human rights standards and code of conduct are imbibed by all employees during their thorough induction training programme. This helps them develop a feeling of responsibility, loyalty, leadership and ownership towards their job. In FY 2017-18, a total of 2,27,576 man-hours of training has been provided to all management employees to upgrade their skills. During the working tenure of an employees, they get trained on various topics like auditing, managerial skills, computer knowledge, knowledge on HSSE, operational knowledge, sales and distribution, which can be utilised by

them as per their requirement after parting from the organisation.

Employees classification: Employees at BPCL are classified into management and non-management staff. Senior Management is defined as per the organizational chart and all of them are hired from the local community. The employment type provided by BPCL is of full-time in nature for the permanent employees. BPCL being an oil and gas sector company, does not show any significant variation in the numbers reported for permanent employees due to seasonal variation. BPCL does not engage in or support direct or indirect discrimination for employees in their appointment, compensation, termination or retirement based on caste, religion, disability, gender, age, race, colour, ancestry, marital status or affiliation with a religious or union organisation or minority group. The details of recruitment are available across locations:



Nukkad natak at Bharat Bhavan, Mumbai

Number of Newly recruited permanent Employees in FY 2017-18	Total	Male	Female
Management Employees	373	318	55
Non-Management Employees	136	136	0

Regional Distribution of New Employees-Permanent by category	Non- Management		Management	
	Male	Female	Male	Female
North Region	27	0	63	8
South Region	32	0	51	9
East Region	2	0	33	2
West Region	7	0	95	27
Mumbai Refinery	30	0	49	6
Kochi Refinery	38	0	27	3

Total Number of Permanent Employees	12,061 * as on 31st March 2018		
Total Number of Contractual Employees	19,290		
Total Number of Company Employees in FY 2017-18	Total	Male	Female
Management	5,999	5,414	585
Non-management (Clerical + Labour)	6,062	5,538	524

The data collected for Non-management employees is not bifurcated age-wise but is available with the HR department.

Number of Newly recruited permanent Employees in FY 2017-18 (age-wise)	>30	30-50	>50
Management Employees	364	6	3

The contribution of workers who are not employees is not significant for BPCL operations.

Age Distribution of Permanent Employees	Total	Management	Non-Management
<30 Years	2,327	1,790	537
30-50 Years	4,657	2,550	2,107
> 50 Years	5,077	1,659	3,418

Permanent Employees Left the organisation (This includes the number of employees that retired, resigned, death in service and VRS)		Total	Male	Female
	Management	386	353	33
	Non-Management	108	108	0

Regional Distribution of Employees-Permanent by category	Non- Management		Management	
	Male	Female	Male	Female
North Region	762	59	925	83
South Region	482	69	803	101
East Region	409	22	520	30
West Region	1,122	244	1,491	268
Mumbai Refinery	1,400	86	957	69
Kochi Refinery	1,363	43	718	35

All the employees working at BPCL are entitled to avail parental leave either male or female.

Return to work and retention rates after parental leave	Management	Non-Management
Employees availed maternity leave	19	1
Employees that returned to work after maternity leave and are with BPCL at the close of 31/03/2018	16	Nil
Employees that availed paternity leave in Management position	131	85
Employees who returned to work after paternity leave ended in Management position	131	85
Employees who returned from paternity/maternity leave in the FY and are with the organization for 12 months	#	#

This is not reported as per Company Policy. However, details are available with HR Department.

Man-hours spent on training (Hours)	Male	Female
Non-Management	1,10,243	4,324
Management	2,09,112	18,464

E-learning course module was also launched from 2016-17 onwards on Role based and Managerial based courses. The total number of hours spent on training are 3,49,424

Remuneration and Allowance

BPCL does not discriminate in wages based on gender. This calculation is made considering minimum wages for construction of roads/buildings schedule for the unskilled labour in line with the applicable central or state rates (whichever is higher). Further, the marketing locations w.e.f. 01.01.2016, contract labour (excluding labour engaged by service provider with whom BPCL have

including the e-learning hours. On an average 15.09 manhours of training per employee was provided. This training is inclusive of safety related training undertaken at plants.

contract on principal to principal basis) are also being paid an additional amount per month over and above the Central Minimum Wage rate, depending upon the skill/ type of Area classification/ nature of contract. The ratio of the entry level wage for males and females to the minimum wage is 1.54.

Particulars	FY 2015-16	FY 2016-17	FY 2017-18
1. The annual total compensation for the organization's highest-paid individual	Rs.28,88,787	Rs.30,39,179	Rs.40,80,305
2. The median annual total compensation for all employees (excluding the highest-paid individual)	Rs.12,09,412	Rs.12,42,726	Rs.14,53,351.51

The percentage increase in the total annual compensation of the organisation's highest paid individual is 34.26*% and the median percentage in the total annual compensation for all the employees except for the highest paid individual is 16.95%.

The ratio of the annual total compensation percentage increase of the highest-paid individual to the median annual total compensation percentage increase for all employees is 2.02.

**Increase is high due to revision in salaries for Management Staff*

Employee Benefits

BPCL employees are entitled to certain benefits to ensure their wellbeing. Therefore, BPCL has put in place several policies and schemes. The below figure represents

the benefits provided to employees. The significant areas of operation however are limited to Mumbai and Kochi Refinery.

- | | |
|--|--|
| 1. Provident fund contribution | 11. Performance Incentive Scheme (PIS) |
| 2. Gratuity | 12. Medical Policy |
| 3. Insurance scheme | 13. Whistle Blower Policy |
| 4. EPS 1995 | 14. Legal Aid Policy |
| 5. Compensation on Death | 15. Post Retirement Policy |
| 6. Super Annuation Benefit Fund Scheme | 16. Housing Loan |
| 7. Maternity Leave | 17. Vehicle Loan |
| 8. Leave without pay for 3 years once in entire service | 18. New Pension Scheme |
| 9. 2 year's child care leave without pay. One time in entire service | 19. Education Assist Scheme |
| 10. Performance Linked Incentive (PLI) | 20. Burma Shell Pension Scheme |

BPCL contributes 12.5% of wages as pension contribution to the BPCL Employees Contributory Superannuation Fund. There is no contribution from the employees and these pension benefits are available to all

management, non-management staff who superannuate from service and the annuity is brought out from the amount standing to the credit of the individual member.

Employee Grievance Mechanism

BPCL reflects on employee feedback with keen interest. Employee Satisfaction Enhancement Department organises varied interventions across pan India locations to connect better with employees and proactive handling of their grievances. All grievances were redressed well in time.

Employee Engagement Cell is dedicated solely towards identifying and resolving the all the employee grievances. Employees also voice their grievances through various formal and informal channel such as emails to the Chairman, ED(HR) or any other senior manager directly to address their issues. Employee Satisfaction Enhancement (ESE) cell focuses on employee wellness, employee engagement and prompt grievance redressal.

ESE vision is 'to be an active facilitator towards a healthy, productive, vibrant and energized workforce'. It is working towards 360-degree wellness living up to core purpose of energizing lives to make 'BPCL – A Great Place to Work'. ESE conducts health camps, talks on lifestyle modification to inculcate healthy lifestyle amongst employees, at various locations.

All the operations of BPCL have been subject to Human rights reviews or Human rights impact assessments. Sexual harassment cases are handled with great care and sensitivity at BPCL. The sexual harassment panel deals with any cases raised on these lines. The number of sexual harassment complaints filed during FY 2017-18 are 01 and pending is 01.

Trade Unions

BPCL gives its employees freedom of association and collective bargaining. The health, safety and welfare provisions of Factories Act, 1948 are applicable to the factories of BPCL. Apart from that, the long-term settlement signed with Unions consists of explicit clauses pertaining to safety and security.

<ol style="list-style-type: none"> 1. 21 Registered Unions (including Refineries) 2. Representing 93% of BPCL employees (non- management) 3. BPCL enters into formal contracts with the trade unions 4. These contracts cover 100% of health and safety aspects 	<p style="text-align: center;">Formal contracts with trade unions cover</p> <ul style="list-style-type: none"> • Workers’ right to refuse working in unsafe environment • Mechanisms to raise safety concern • Methods to implement constant inspections at various locations
---	---

BPCL has a long-term settlement (LTS) agreement with its unionised staff through trade unions, which covers the details of notice period for consultation and negotiation of the operations of organisation. Minimum notice period of 21 days is typically provided to employees and their representatives prior to the implementation of significant operational changes that could substantially affect them. The measures taken by BPCL intended to support rights to exercise freedom of association and -bargaining are as follows:

- a) “Aarohan” – a two-day workshop exclusively designed for the Union leaders was organized for the union leaders across various regions and refineries. The intent of this workshop was to give the union leaders a varied exposure by putting together a mix of sessions and discussions which would help them in enhancing their leadership capabilities as a leader.
- b) Regular union meetings are also conducted in which employee representatives discuss and resolve various issues with the human resources/ employee relations team who ensure speedy and effective solution.


Labour Management

The permanent and contract employees are treated alike by the Company in terms of various aspects especially for protecting their rights and skilling. This helps BPCL to develop a strong and mutually beneficial association with its workforce. It is mandatory for the workforce of BPCL to abide by the 'Integrity Pact'. This comprises of the legal commitments towards governance and ethical conduct, which encompass aspects like Human Rights, Child Labour, Forced Labour, Fair Wages and Gender Equality. BPCL being a responsible organisation complies by all the national and international Human Rights standards. There were no labour grievances filed in FY 2017-18. In addition, there were no significant fines and non-monetary sanctions for non-compliance with laws and/or regulations in the social and economic area. A minimum notice period of 2 months is provided to BPCL employees and their elected representatives, prior to the implementation of significant operational changes.

To ensure transparency and accountability, IT systems are set for contract management. The system tracks the entry and exit timings and serves as a security mechanism to ensure discipline amongst contractors/ contract labour.



Physical training of BPCL employees at Gadota



Approach towards Safety

3 GOOD HEALTH
AND WELL-BEING



Approach towards Safety



Corporate Safety Management System manual launch during annual HSSE award function at Chennai

BPCL ensures to deliver energy to the nation in a safe and responsible manner. The Health, Safety and Environment (HSE) Policy validates the concern and commitment for protecting the health and safety of all BPCL employees, contractors, customers and the communities in which it operates, while having a target of zero occupational incidents. It complies with all statutory regulations and may even go beyond these for the benefit of the environment and well-being of its employees. At BPCL, safety is embedded in the mindset of the people with the moto of 'Safety First – Safety Must'. Strong and dedicated safety leadership is essential components to have safe and sustainable work environment. An effective safety culture requires proactive commitment, accountability, and its continuous reinforcement from all levels of the management. All health and safety related data mentioned in this report is related to FY 2017-18. BPCL's Corporate Safety Management System (CSMS) is a systematic and structured approach to manage the occupational health & safety risks associated with the operations to As Low as Reasonably Practicable (ALARP) level in accordance to BPCL's business goals, values and HSE policy. CSMS the highest-level document in BPCL's safety management system and describes the corporation's strategic approach to safety management. It applies to all BPCL operations, assets, and facilities, employees, contractors, and other relevant stakeholders.



Project SHUNYA

The nature of risk attached with oil and gas industry calls for comprehensive preventive measures in the business processes, protocols and work culture. BPCL's emergency response plan covers Preparedness, Mitigation, Planning and Restoration (PMPR).



I. Emergency Preparedness

Emergency preparedness includes developing plans for what to do, where to go, persons to be contacted for help before an event occurs. This planning of actions improves chances of successfully dealing with an emergency.

At refineries and all the marketing locations employees and workmen are prepared to face emergency situations through regular mock drills. Proper planning/preparations saves lives and helps minimising the impact of any emergency or calamity. To ensure that recurrence of the accidents is averted, all accidents are documented and analysed. There is also an involvement of local communities during the safety briefings. These drills are based on Emergency

Response and Disaster Management Plan (ERDMP) which is prepared as per the PNGRB guidelines. A set of guidelines have also been shared with the workmen so that they are alert and well-equipped to handle emergency situations.

A key annual target of the Health, Safety, Security and Environment (HSSE) Department review the Emergency Response and Disaster Management Plan (ERDMP) for certain selected locations (locations with major operations), DCMPs of certain locations & Fire Drill reports, identify gaps in emergency preparedness, and align BUs for taking necessary mitigation methods. HSSE also monitors BUs for undertaking live firefighting training.



FIRE SERVICES WEEK



Obervance of Fire Services Week : TOP-Kota



Safety First, Safety Must !

BPCL understands that only healthy individuals can work with their highest potential. Therefore, the employees are provided with regular medical camps, awareness sessions, access to premium health care and health advisors through the medical support services. There are employees performing operation in areas with a higher risk of health hazards or occupational diseases.

Few cases of occupational disease have been reported however, no incidence of occupational disease has been detected in these worker or other employees. Exposure to petroleum products, including benzene which is carcinogenic, in nature has not led to causing cancer to any of employees at workplace. However, the diseases detected in employees are related to lifestyle and not to occupational health.



Fire Truck at Kochi Refinery

II. Mitigation

Mitigation includes any act of preventing future emergencies, reducing the chance of an emergency happening, or reducing the damaging effects of unavoidable emergencies. BPCL has ERDMP which is put into action in case of any severe accident/ incident. BPCL trains employees for first aid and has best in class firefighting equipment's and machinery. It ensures that the situation is accommodated in best possible manner. All the incidents are recorded through an internal portal, both from refineries and marketing locations and disclosed in the Sustainability Report.

III. Planning

The nature of work in the Oil and Gas industry calls for comprehensive preventive measures in the processes and transportation. Therefore, BPCL has adopted advanced technologies and stringent standard operating procedures at all locations to put together safety and security measures. The use of technology to automate process has resulted in reduced exposure of workmen to harmful or toxic chemicals. Technological advancements have also improved safety governance with online incident reporting, centralized control and monitoring. The monitoring systems help to monitor day to day operations which help to assess the training requirements. Special training sessions on safety, health and environment aspects are held on all locations. BPCL ensures that process safety events are monitored, recorded, analysed and the learning is shared across the locations. To maintain high safety standards every

location has a HSSE (Health, Safety, Security, and Environment) role holder. It is the primary responsibility of the role holder to ensure adherence to the HSSE Policy. The safety performance of BPCL is monitored by corporate HSSE council, 4 regional councils and further at refinery and marketing locations through their respective safety committees, where the representation of workmen and management is in equal numbers as per statutory requirement. They represent 100% workforce at the location.

IV. Recovery

Once the immediate danger is over, recovering from an emergency safely will depend on the ability to rearranging life and nearby environment and take actions to return to a normal or an even safer situation.

Post any fire or safety incident, BPCL ensures all processes and equipment's are checked and safety conditioning systems are installed before commencement of any further operations. These are in accordance with the safety restoration guidelines as per MoP&NG.



Pipeline Safety Awareness Program for Police in Maharashtra

There was no case of male or female fatality with the Company and contract employees due to BPCL operations in FY 2017-18. The data collected for injury, cases of occupational diseases, man-days lost and missed (absentee) days is currently not bifurcated into male female.

BPCL Safety Performance	Company Employees				Contractors			
	North	South	East	West	North	South	East	West
Injuries	0	3	36	46	9	0	0	0
Cases of occupational diseases (Reported)	1	0	0	0	0	0	0	0
Man-days lost	0	0	365	12	1,878	166	1,471	21,362
Missed (absentee) days	4,555	3,915	2,634.04	6,388.7	2,457	782	0	805.6

Pipelines have achieved 31 Million Man Hour without having any fatalities and no Loss Time Accident (LTA) jointly with Mumbai refinery by end of FY 2017-18. Pipelines has developed and implemented New “Online Safety Work Permit System” in line with OISD-STD-105 and online LOTO System in coordination with refineries. Pipelines utilized existing pumps system along with DRA to achieve 1150 KL/Hr flow rate in the pipeline, thereby increasing their productivity. Power reliability at Piyala station was improved, no power cuts observed. Alternate interface detection instrument, OID (Optical Interface Detector) has been commissioned at Manmad.

Total 950 man-days internal training and total 533 man-days external training was imparted by the pipeline BU. Total 71 pipelines safety awareness programs were conducted for villagers and police personnel etc. Average 6.5 man-days training was imparted to pipeline's staff individual in FY 2017-18 through the Centre of Excellence & external programs. Pipeline hosted the 35th Activity Committee meeting of Centre for High Technology (CHT), MOP&NG in Mumbai where delegates from various industries & academia from IITB & IITM participated. Pipelines has sponsored “Pipelines Safety Conference” organized by PESO at Hyderabad. HSSE Training is provided covering following important aspects:



BASIC TRAINING PROGRAM-PLPELINES (BATCH-3)

- a) Fire Extinguishers Operation & Rescue Operations for ROU & Security Personnel.
- b) Use of Fire Proximity Suit and Breathing Apparatus Set Officers and Security Personnel.
- c) First Aid Training with Certification.
- d) Live Fire Fighting Training.
- e) “Mumbai Refinery Work Permit System”. training for Mumbai Ops and Maintenance Team.
- f) Behavior Based Safety (BBS) Training for Pipelines.



Fire fighting at Mumbai Refinery

In FY 2017-18, 12 Regional Council Meetings were held to review the safety performance and enhance safety management at work place. HSSE performance and ISA/ESA audit compliances was monitored quarterly and the status informed to BPCL Board. All incidents were shared among HSSE officers by collating and analysing data obtained from Online Incident Reporting System package. There were no major incidents reported during FY 2017-18. As a part of the safety assurance, Internal Safety Audits of each location are carried out every year. The resulting recommendations are monitored and reported to the Board every quarter. Also, external safety audits carried out by



Fire fighting in progress - Mock Drill, Bijwasan



Mock Drill, Bijwasan

OISD are monitored for enhancing safety at locations. Quantitative Risk Analysis (QRA) and Hazard & Operability study (HAZOP) is being carried out right from project stage for risk identification, risk reduction and mitigation. A proposal for conducting a detailed feasibility study along with Environmental Impact Assessment (EIA) and Risk Assessment Study has been put up for Management Approval by Kochi Refinery. Also, Security Threat perception study has been carried out by CISF for a few critical locations, office complexes and housing colonies. It has been made mandatory to have Police verification of all personnel entering BPCL premises and displaying identity cards for all the Company employees including contract staff.



Mock Drill, Bijwasan

The ERDMP plan for all locations has been prepared and certified in line with PNGRB guidelines. Exhaustive trainings were conducted during the year (17 Nos. trainings by Retail & 16 Nos. by LPG). Also, Corporate HSSE has published an induction training booklet for new officers inducted into retail BU.

On 22.08.2017, ED (I&C) arrived at MR to participate in the first ever Safety program designed exclusively for the customers which received participation from 50 customers and officials from MR & Sewree, besides the Mumbai territory team.



Fire Services Week celebration at Mathura TOP

The 7-70-700 Mission got bigger with 'Safety Connect' at Mumbai Refinery!



On 22.08.2017, ED (I&C) arrived at MR to participate in the first ever Safety program designed exclusively for the customers which

received participation from 50 customers and Officials from MR & Sewree, besides the Mumbai territory team.

Queries of the customers related to supplies and fire handling were taken up and safety presentation was made. The excitement levels rose higher with Safety Quiz conducted.

The highlight of the day was one of the customers occupying the chair of the Chief Guest which was in complete sync with the Philosophy of a customer-centric organization. The customers appreciated the program and mentioned that for the first time any oil company has shown such concern for safety at their premises thereby strengthening the bond with them. All the participants were presented with a certificate of participation and memento as a token of gratitude.

Director (Refineries) launches "BPCL KR Online" official YouTube channel of Kochi Refinery



Kochi Refinery is pleased to announce the launch of "BPCL KR Online" with the New Year Greeting from Mr. R Ramachandran, Director (Refineries), BPCL on the first day of the New Year.

The YouTube channel, BPCL KR Online will serve as the central repertoire of all HD news, events, campaigns and commercial

videos published, featured and followed by BPCL Kochi Refinery.

This can also be shared through social media channels on Facebook and Twitter. Links to the videos will be available on the KR page in the BPCL website and can be accessed using smart-phones or external drives.

A Road from Waste Plastic – A Novel Concept Developed by CRDC, Greater Noida



Waste plastic has become a massive concern, as its disposal is one of the critical challenges faced globally. In order to tackle this, a road has been constructed in Mumbai Refinery with novel concept developed by CRDC Scientist, Dr. Mahesh Kasture. Mixed waste plastic from paper industry has been used to construct this road.

Prior to this, the first demo road was constructed at CRDC, Greater Noida that is in use since last 9 months. A module developed from mixed waste plastic from paper industry can be directly put to use on site.

In order to valorize the concept with higher wheel load, a stretch of 130 square meter on road no 13 of Mumbai Refinery has been prepared using waste plastic modules wherein about 2 tons of waste plastic has been utilized. It is worth noting that, with this technology, around 40 tons of waste plastic can be utilized in 1 km (6 meters width and 1000 meters length). A product and process patent for this innovation has been filed by CRDC. This technology has a number of 'firsts' to its credit like:

- Plastic once utilized will not enter into atmosphere and hence environmentally friendly.
- Can accommodate most types of waste plastic with high volume of consumption.
- There is almost no need to segregate amongst different kind of plastic.
- Locally generated waste plastic can be used within the same vicinity that will arrest it from spreading in the surrounding area.
- It may result in a best business model for utilization of mixed waste plastic.

The waste plastic used is being characterized by NCL, Pune and technical and structural parameters of this road will be tested by IIT, Roorkee.



Road from plastic



Connecting with Communities- CSR Programmes

2
ZERO
HUNGER



8
DECENT WORK AND
ECONOMIC GROWTH



3
GOOD HEALTH
AND WELL-BEING



10
REDUCED
INEQUALITIES



4
QUALITY
EDUCATION



11
SUSTAINABLE CITIES
AND COMMUNITIES



6
CLEAN WATER
AND SANITATION



15
LIFE
ON LAND



Connecting with Communities- CSR Programmes



BPCL believes that some of their finest achievements aren't those found in their balance sheets but those found through their CSR activities in small towns and villages spread across India. This year with attainment of the Maharatna status, BPCL has not only attained huge brand value but also an increased responsibility and expectations from all its stakeholders. The involvement in sharing this wider responsibility dates way back to 1984. BPCL's vision and overall strategic objective is to embed sustainability in the corporate culture and processes to achieve sustainable growth while pursuing its philosophy "to give back to the society/ community to the best". BPCL moves forward aligning its CSR mission and vision with the vision of the Company. Over the years, BPCL has contributed towards the goal of achieving Sustainable Development and made considerable progress in the thrust areas.

CSR being ingrained into the business strategy; various initiatives have been pioneered to address some important developmental challenges. Other aspects that are an integral part of CSR – connected with operating and financial results, corporate governance and customer satisfaction – are handled in a cross-disciplinary way. BPCL aims to help the people enrich their lives, be it their employees, their families or people in surroundings and thus started their efforts for the society.

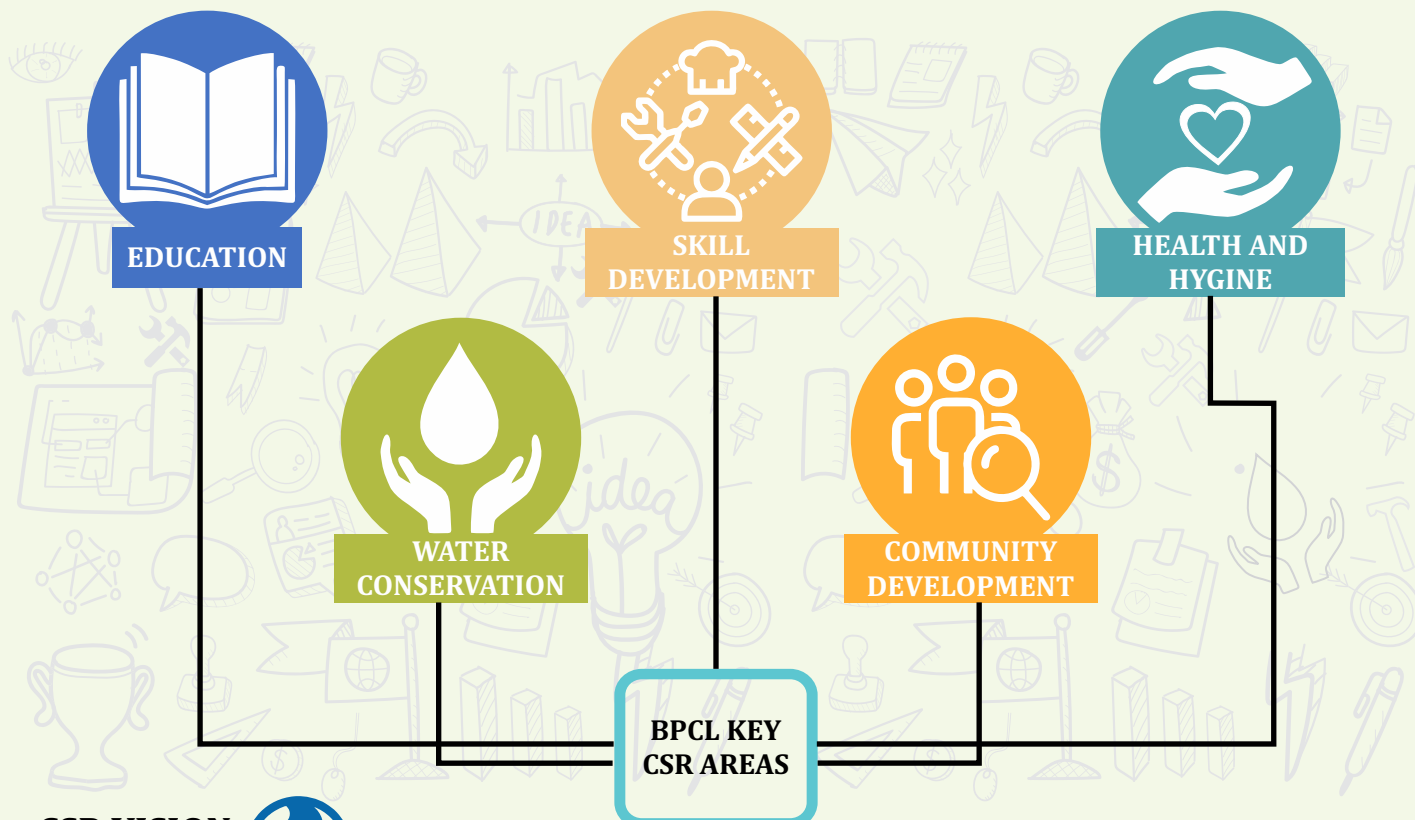
The information, material for this report is aligned with the GRI Standards for sustainability reporting, was gathered from internal departments and is mainly based on information available through internal reporting. The information is limited to the activities of BPCL, excluding its subsidiaries.

In partnership with several organisations BPCL has been supporting projects that benefit the underprivileged and marginalized sections of society. Thus, contributed towards the goal of achieving sustainable development.

Keeping in mind the huge income gap and disparity in the rural and urban population, BPCL initially started working in Mahul, a village located in the neighborhood of its Mumbai refinery in 1986. The sole reason of working was social upliftment of the fishing community as they needed direction and help in many areas such as education and health. After the initial success and satisfaction, BPCL immediately adopted another village – Karjat. This helped BPCL to introspect about the future social responsibility and its role in further contributing to this effort. BPCL selflessly contributes to development of the society, these investments for development of infrastructure and services are pro-bono and in-kind in nature. Currently, BPCL has adopted villages across India to make them fully self-reliant, providing them with fresh drinking water, sanitation facilities, medical facilities, enhancing income standards by imparting vocational training and agricultural innovations. BPCL believes that education is the only means to raise the villagers from their present state. Therefore, there is a focus on providing grants for opening schools and opening adult literacy camps as well. Today, through institutionalized and project-based approach, BPCL has scaled up existing projects, taken up new initiatives and exited from those that have been completed and handed over to the stakeholders involved.



Shramdaan at Mumbai Refinery Colony



CSR VISION

"Be a model corporate entity with social responsibility committed to energizing lives through sustainable development".

CSR MISSION

Create a 'positive impact' in all the communities where we operate.

- To transform 150 villages from 'water scarce to water positive'.
- To enable education of more than 10 lakh children.
- To create a resource of 'Expert Panels' on issues pertaining to our thrust areas.
- To encourage employee volunteering through our corporate culture and have a minimum of 10% of employees volunteering in the next five year.

CSR OBJECTIVES



Building Sustainable Communities - To have a positive impact on the communities in which we operate.



Health and Safety - To ensure the health and safety of our work force and communities as part of CSR strategy.

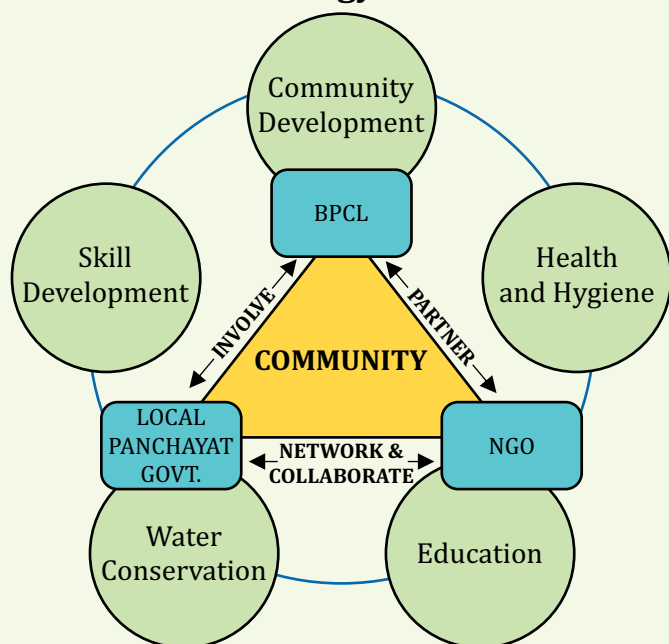


Environment - To minimize adverse impacts while taking steps to protect and enhance the natural environment.



Employees - Train tomorrow's leaders in teamwork skills and running socially responsible business.

BPCL CSR Methodology



- Initiatives to be integrated with business strategy and context.
- Leverage core competency - people and technology.
- Three-way execution model for community Projects.
- Develop deserving communities through 'Focused' and 'Need based' interventions - No 'Giveaways'.
- Create 'Sustainable Models' which are replicable and scalable.

Constitution of the CSR Committee of the Board and its core responsibility :



External Director (As the Chairman of the Committee)
Director (HR)
Director (Finance)

Execution of CSR Projects

BPCL has the following three tier system in place for executing CSR projects:

- CSR projects being undertaken for stakeholders in the value chain of the business.
- The CSR projects are largely executed in and around the Business Units mainly in the above-mentioned thrust areas.
- Furthermore, certain initiatives are carried out in rural or tribal areas for backward, underprivileged, SC / ST / OBC population as well. These are with the sole intention of nation building.

Monitoring of CSR Projects

- Monitoring of projects is an ongoing process by CSR executives as well as officers from various SBU's/ Entities.
- The Board level CSR Committee reviews the progress from time to time.
- The assessment of the impact of projects is crucial. The impact assessment is conducted as a part of the project for most of its projects. The impact is generally designed for a big project, which is then replicated or scaled up. Also, third party impact assessment is conducted as per the policy.

BPCL CSR Initiatives



Shramdaan at Mumbai Refinery Colony

Corporate Social Responsibility (CSR) is an integral part of BPCL's culture and their core values. The Company has worked beyond compliance by impactful investments for socio-economic development of the most underprivileged sections of the society in the vicinity of their footprints and in remote areas as well. BPCL's approach to social responsibility and subsequent CSR policy is what has made it an 'innovative, caring and reliable' Company.

In FY 2017-18, BPCL provided a budget of Rs. 183.33 Crores and has allocated the entire budget for various projects within the items enumerated in Schedule VII, which includes several initiatives of national importance.

BPCL acknowledges the positive and negative impact caused by its business operations on the local communities surrounding the locations. Therefore, BPCL has a committed CSR department solely dedicated towards assessment of impacts on the communities surrounding all their business locations.

The impact assessments aid in identifying the grievances of the community. It is ascertained that the Companies operations do not have any negative impact on local community. With an aim to build powerful partnerships with society for sustainable development, some of the key initiatives undertaken by BPCL are mentioned in the following pages:

Education



Computer Assisted Learning class at BMC school - Mumbai

BPCL believes that imparting quality education is the key to uplift socially backward or underprivileged sections of society. It is transforming lives through improving the quality of education while imbibing technology and innovation into the process. BPCL's commitment towards education can be recognised with its flagship projects Computer Assisted Learning (CAL). This project has been replicated and scaled up where possible. CAL is one such project that is promoting education through digital literacy for students, up to 10th Std. in low income schools of Mumbai and Jaipur. This FY 2017-18 project CAL has been replicated in 50 centres located in Municipal Corporation of Greater Mumbai (MCGM) school buildings and 20 schools in Washala, a tribal village in Thane district. The intervention focuses on improving children's learning levels in Mathematics and Language using computers. More than 1 lakh children have been benefitted under this initiative so far. Further, valuing the importance of learning while reading, BPCL has set up 24 libraries covering 3,779 children in Zilla Parishad schools of Uran Taluka, District Raigarh in Maharashtra. These libraries are managed by Children Management Committees in the respective schools.

In order to empower Mathematics teachers to facilitate conceptual learning in students, a Mathematics Enhancement Project, 'Ganit Shakti' was taken up in Government schools of Chhattisgarh.

Saksham is also one of the flagship projects of BPCL for teacher and headmaster training. This project encourages teachers to use new techniques for teaching, classroom management as well as developing new teaching materials according to the differential needs of the class. A set of primary/upper primary

teachers and headmasters from 64 low income/ Government schools of Mumbai were taken through a series of sessions on various topics, both pedagogical and management-related. This year it has completed its fifth batch successfully.



Quality Education at Sagar, M.P.

Health and Hygiene

BPCL acknowledges the inseparability of Health and Development with overall economic growth of a community. Thus, on this front BPCL has proactively worked to address the issues of health and hygiene by improving access to quality primary healthcare services, which also include projects that reach out to the cancer affected, provide free surgeries and strengthen the existing healthcare infrastructure across the country. To reduce the burden of avoidable disability in rural communities, BPCL supported the world's first hospital on a train, the 'Lifeline Express' in providing over 9000 patients with both surgical and non-surgical medical aid, in addition to training healthcare providers. Further, the targeted healthcare interventions, projects have been undertaken for providing clean drinking water to communities and nutrition to underprivileged children. BPCL has been relentlessly working towards making the Swachh Bharat programme a great success. The Company's contribution in creating an 'Open Defecation Free' country has been impressive through the



Primary Healthcare Services at Faridabad, Haryana

construction and renovation of more than 1,950 toilets in schools and communities till date. To make cities cleaner, BPCL has supported an end to end Solid Waste Management project involving collecting, segregating/processing and recycling of waste at 33 micro-composting centres. BPCL has also supported preservation of Indian heritage by adoption of the Sri Adi Sankaracharya Janmasthan- Kalady to make it a 'Swachh Iconic Place'. The project includes the management and disposal of sewage/waste water, development of a cultural walkaway at Kalady town, creating public sanitation facilities, and provision of clean drinking water.

BPCL was declared as the 12th Best Company in Responsible Business Rankings (First among PSUs and the oil industry) and also received a prize for the 'Best Swachh Iconic Place in India' from the Ministry of Drinking Water and Sanitation for supporting the 'Madurai Meenakshi Temple project.



Healthcare Services at Sawai Madhopur, Rajasthan



Ensuring a Bright Future

Skill development

In line with 'National Skill Development Mission' of India, officially launched by the Hon'ble Prime Minister on the occasion of World Youth Skills Day in 2015, BPCL has taken lead in setting up a state-of-the-art Skill Development Institute (SDI) in Kochi and also participated in and contributed towards other SDIs in Bhubaneshwar, Visakhapatnam, Raebareli and Guwahati. These SDIs have been set up to enhance their employability quotient for the Oil & Gas Industry as well as for other Industries requiring skills of a similar nature. Various skill development programmes focus on placement/employment-linked skilling of women, unemployed youth and the disabled.

One such high impact project was the skilling of 396 leprosy affected youth in various trades like Motor Vehicle Mechanic, Welder, Computer Operator, Programming Assistant, at centres at Nashik, Champa, Faizabad, Bankura, Vadathorasalur and Vizianagaram.

In a similar manner, projects have been undertaken for training visually impaired youth in Acupressure and Massage Therapy in Latur, rehabilitation and skilling of street youth in Mumbai and employment linked training to 30 adolescents with autism / intellectual disability in Mumbai. Moreover, in line with the 'Skill India Mission' of Government of India.



Skilling Training at Nashik, Maharashtra

Community Development

In order to make a difference, BPCL has made continuous efforts for community development by creating various opportunities through focused and proactive projects. The projects are based on extensive need assessment and focuses on providing sustainable solutions that engage the community that is benefitted.

BPCL has been supporting the construction of

Bio-Gas Plants for rural households, promoting better life for women folk by providing a sustainable and non-polluting fuel. Creating similar impact are projects like installation of Solar Street lights in rural areas, which not only serve to electrify rural villages, but also improve safety and convenience for the villagers.



Community Development by BPCL

Water Conservation

Water is integral part of human existence and its efficient management is indispensable. Today, thousands of people do not have access to basic drinking water and this lack of water availability of water and poor management

practices has led to one of the biggest environmental and social challenge India faces today (UN Report). India has about 17 per cent of the world's population as compared to only 4 per cent of its water resources.



Rejuvenating farm pond at Kolar, Karnataka



Clean drinking water stand for community people at Ottaya godwa dewas, Udaipur

Recognising the severity of this daily battle being fought by thousands of people living in rural and urban India, BPCL has undertaken its flagship project BOOND to minimise the impact of this problem. This project has received prestigious recognition over the years. Starting out with four villages in 2009, today BPCL has transformed more than 190 villages into water positive dwellings through Project Boond.

BPCL started with a focus on 'drinking-water', however gradually evolved to include projects which are aimed at increasing availability of water for agriculture, livestock and ground water recharge.

BPCL has successfully reached out, both directly and indirectly, to the communities in the villages through desilting of tanks, supply channels and link channels in the tank chain cascade, strengthening of bunds, check-dams, village ponds, repair /reconstruction of structures for water regulation, setting up roof rainwater harvesting, thereby increasing the availability of water. Thus, transforming villages from water scarce to water positive.

To ensure that all the BOOND projects are sustainable, BPCL has engaged local communities by supporting formation of village level associations, children's clubs, micro-finance groups or farmer federations, therefore working towards ensuring sustainability. This project is in operation in the states of Maharashtra, Tamil Nadu, Karnataka and Rajasthan and has covered 38 villages during FY 2017-18, helping to increase agricultural yield, floriculture and horticulture in the villages, thereby reducing migration. To further their involvement in the projects, BPCL also motivated them to contribute 25% of the expenses so that they become more responsible and assume its ownership. It also contributes to the community themselves where they adopt additional skills in the process of contributing to the projects. Community contribution increases the commitment from the community, motivates them, thus developing a long-term sustenance for the projects. Several committees such as Village Water Committees, Women's Self-Help Group, Farmers' group and Children Water Clubs were also formed to

educate and empower participants. This made it an organized effort, where all members of the community are focused and work towards a particular goal. Lastly, BPCL also held sessions for capacity building of these community groups. These sessions equipped them with skills required to maintain and monitor the projects independently.

The process of involving the community, encouraging them to make a financial contribution, organizing the community into work groups for focused effort and building their capacities to achieve the desired goal has led to formulate an effective foundation for BPCL to step out of the areas once the community self-reliant.



Empowerment and Water Management workshop by BPCL

START UP INITIATIVE – “ANKUR”

Aim: 'Project Ankur' is a BPCL initiative launched to promote, develop and nurture a 'start-up' ecosystem in India by backing innovative ideas and concepts that have the potential to grow into start-ups. This is an opportunity for all Indian innovators and entrepreneurs to turn their dreams and ideas into reality.

About the scheme: BPCL has initially allocated Rs. 25 Crores for this purpose and the fund is being distributed as grants to deserving applicants. A process has been put in place whereby a six-member committee, consisting of three internal and three external members, decide on the recipients of the grant. In May 2017, BPCL released a pan India advertisement asking for applications from Indian nationals. A website was created to receive these applications. BPCL has also signed a Memorandum of Understanding (MOU) for promotion and collaboration on start-ups. These MoUs have kept BPCL supplied with a steady stream of applicants. During the course of the year, BPCL has

selected 19 start-ups for grant funding of approximately Rs. 20 Crores over a period of 3 years. Some of the selected start-ups are helping BPCL solve operational problems in areas such as refinery shutdowns, inspections, corrosion monitoring, highway mapping, efficient lighting. In addition to the grant funding, BPCL is also providing mentoring and guidance to selected start-ups. Going forward, BPCL shall continue to support start-ups in a variety of ways including grant funding, exposure, mentoring and guidance.

Purpose of the Scheme:

- To provide support for disruptive technologies.
- To catalyze collaborative research.
- To develop a vibrant, innovative ecosystem.
- To nurture technological innovation and Intrapreneurship.
- To encourage promotion of startups in rural areas and technology with a rural orientation.



Minimising Environmental Impact

7 AFFORDABLE AND CLEAN ENERGY



12 RESPONSIBLE CONSUMPTION AND PRODUCTION



13 CLIMATE ACTION



15 LIFE ON LAND



17 PARTNERSHIPS FOR THE GOALS



Minimising Environmental Impact

BPCL undertakes sincere efforts to mitigate the impact of its operations on the environment and the communities. It conducts business in a responsible fashion and manages risks at every stage. BPCL has continuously worked to mitigate the risks and improve its environmental performance with a holistic approach. The Company is constantly on a lookout for opportunities towards minimising their environmental footprint which are in alignment with its vision of being “The most admired global energy company”. Today BPCL faces a dual challenge, firstly how to make a transition to a low carbon future and secondly to manage the risk of climate change while also extending the economic and social benefits of energy to everyone. BPCL has set up a Board level Sustainable Development Committee which discusses and reviews

projects on sustainable development semi-annually. BPCL also has a policy of renewable energy which emphasizes increased use on solar/ wind power.

It has in place a detailed Health, Safety and Environment Policy which emphasizes on the use of appropriate technologies to minimise the impact of our activities on the environment. BPCL refineries have ISO 9001, 14001, OSHAS 18001 certifications for quality, environment and health and safety. All environmental data reported in this report is regard FY 2017-18. The various sites (especially the significant sites of operation) of BPCL adopt initiatives, develops plans and implement them to reduce the consumption of energy, emissions, and waste. Also, there were no environmental grievance filed in FY 2017-18.



Energy Management (Renewable and Non-Renewable)

BPCL is committed to create a better tomorrow by providing energy to improve India's economic growth. BPCL understands that their energy intensive operations are one of the leading contributors to climate change

and therefore engages regularly in exploring investments in renewable to fulfil the energy demand. Energy management is a major pillar of sustainability.

In a research exercise on Climate Change

which was undertaken by 'The Energy and Resources Institute' (TERI), supported by the 'Federation of Indian Petroleum Industry' (FIPI) in which BPCL was an active participant. This study was aimed at understanding the challenges and their nature for the Indian oil and gas sector. The study also analysed the preparedness of the Indian oil and gas sector to meet the Paris Agreement reporting requisites. The study proposed sets of short- and long-term action points for helping the oil and gas sector of India to face the challenges of climate change.

The impact of transition towards low-carbon development is subject to the pace of technological advancements and coming up of renewable energy sector. In line with India's target of developing 175 GW power from renewable energy sources and to mitigate the climate change threats arising out of use of conventional, BPCL is promoting use of green energy.

The Company is now constructing rooftop and ground mounted captive solar plants in 5 installations / depots and 5 LPG plants. The total capacity of these plants will be about 4 MW.

BPCL is also developing hybrid plants in 18. Company owned large format retail outlets

across India. These plants are being developed as pilot projects, where rooftop solar plants with battery storage will be incorporated. The detailed feasibility and system design study has already been completed and construction of these plants will commence soon. In the FY 2017-18, rooftop solar units in 216 retail outlets were installed, taking the number of total solarized retail outlets to 1,217.

The renewable energy capacity has increased from 22.17 MW to 26.36 MW by year end. The capacity of energy efficient lighting has also been increased from 6.20 MW to 7.54 MW. These initiatives have resulted in an annual reduction of GHG emissions by 43,660 Metric Tons of CO₂ equivalent. Further, BPCL plans to venture into development of large scale solar/wind power projects on JV basis as a long-term plan.

BPCL takes continuous energy conservation initiatives through energy monitoring systems, energy audits, technology innovation, replacement by energy efficient equipment etc. These energy conservation initiatives are also benchmarked with global standards. The Refineries have undergone structural changes to improve energy efficiency, resulting in fuel saving.



World Environment celebration at Piyala (Pipeline)



World Environment celebration at Piyala (Pipeline)

Mumbai Refinery Initiatives:

Mumbai Refinery has accorded high importance to energy conservation and environment protection. The following energy conservation and loss control measures were adopted by Mumbai Refinery during FY 2017-18 which have resulted in significant fuel savings:

- “Chemical decontamination” technique has been adopted during refinery turnarounds. This resulted in reduction of turnaround duration and also improved heat exchanger cleaning.
- Excellent Hydrogen Management was achieved by processing of hydrogen rich off gas ex CCR (Continuous Catalytic Reforming Unit), in Hydro-cracker-PSA (Pressure Swing Absorption Unit) and Hydrogen Unit to recover valuable hydrogen from the off gases.
- On-line chemical cleaning of furnaces to clean off fouling and deposits on the radiation tubes leading to better heat absorption in radiation section.
- Implementation of “Steam Trap and Leak Management” project to achieve zero steam leaks in FCCU (Fluidized Catalytic Cracking Unit / CCR / DHDS (De-hydro De-sulphurisation) Complex.

- Continuous monitoring and control of all parameters of Furnaces and Boilers.
- Continuous recovery of flare gas with the help of FGRS and strict monitoring of process conditions to control flare loss.
- Survey of Pressure Safety Valves/ Pressure Control Valves to identify passing valves and rectification to reduce flare loss.
- Periodical Survey of Compressed air and Nitrogen leaks and rectification.
- Superior insulation was provided on steam headers to reduce surface heat loss.
- Availability of a robust “Energy Portal” for on-line monitoring of refinery process performance and energy consumption, including monitoring of “significant energy uses”.
- Implementation of various Advance Process Control (APC) strategies in CDU3/4, HCU, CCR, Boiler house, DHDS, ARU complex and CCG splitter.
- Effective usage of Advance Process Control (APC) in High Efficiency Boilers (HEB) and “Online Utility Planner and Optimizer”, a first of its kind in the country.
- Replacement of AFC fan blades with energy efficient FRP (Fiber-Reinforced Plastic) blades in CCR and ARU.



Alternate Source of Energy installation at Mumbai Refinery

Steps taken by BPCL's Mumbai Refinery for utilising alternate sources of energy:

- A Solar power plant has been installed at Refinery Admin building to harness solar energy. In FY 2017-18 solar power generated was 50.46 MWH. During the year 2017-18, Mumbai Refinery has added 614 KW of solar power generating capacity to the existing capacity of 40 KW, taking the total generating capacity of solar power to 654 KW. 13 separate units have been added during the year 2017-18 alone.
- During FY 2017-18, 5,315 fittings were installed with a cumulative power saving of 115.5 KW. Further, during the year 2018-19, all the 125 Watt and 250-Watt HPMV (FLP) fittings in the entire Refinery will be replaced with 45 Watt and 105-Watt LED fittings respectively. The overall savings achieved will be reported in the subsequent report.

Kochi Refinery Initiatives:

The following energy conservation and loss control measures were adopted during FY 2017-18, resulting in significant fuel savings:

- Installation of Plate Type Heat Exchangers in Crude/ Vacuum Residue service in CDU2 to improve Crude Pre Heat Temperature.
- Usage of Very High Pressure (VHP) steam in Integrated Refinery Expansion Project (IREP) instead of High Pressure (HP) steam, along with back pressure turbines.
- Installation of Power Recovery Turbine for Diesel Hydro-treater (DHDT) unit feed pump in IREP.
- Installation of Power Recovery Turbine for Vacuum Gas Oil Hydro-treater (VGO-HDT) unit feed pump in IREP.
- Installation of Power Recovery Turbine for VGO HDT unit Amine pump in IREP.
- Installed Power Recovery Expander for Petro Fluidised Catalytic Cracker unit (PFCCU) in IREP.

- Installation of vapour absorption machine in Air conditioning systems of sub-stations and Satellite Rack Rooms (SRR).

- Online connectivity: BPCL Kochi Refinery is one of the first industries to give online connectivity of all its stack monitoring data. (All 26 stacks in the then existing refinery given on-line connectivity starting with 23 stacks on 24-2-2016) Continuous online SO₂, CO and NO_x analyzers are provided for heaters and boilers for monitoring the sulphur dioxide, carbon monoxide and nitrogen oxide emissions from them and the data are provided online to CPCB server/KSPCB. All the data monitored online is made available to CPCB server through CPCB approved agency M/s Yokogawa India Limited.

- Rain water harvesting: Roof-drain rain water harvesting schemes are implemented for collecting rainwater from administration block and ARU/CDU2 block. About 1,75,000 KL water is collected during monsoon period by way of surface runoff generated at the ACTP/APTP area alone. Another rain water harvesting pond is constructed at Shore Tank Farm, Puthuvypeen in an area of 5 acres. The rain water so collected is used for cooling water make up, fire-fighting purposes and green belt development.

- Paper recycling: BPCL Kochi Refinery has engaged M/s Plan@Earth, a registered NGO working for the environment to take all sorts of waste paper and also clean plastic from the premises. The waste paper so collected from the premise is sent straight for pulping to ITC Ltd under the WOW (Wealth Out of Waste) Project. Value is realized in terms of fresh recycled paper. Green Certificate is also issued at the rate of 60 kilos of recycled paper equivalent to one tree. This way Kochi Refinery recycled 69.65 tons of paper this year thus saving around 1,161 trees as per the calculations.

- A "Waste to Energy" project for the city of Kochi is under implementation and BPCL

Kochi Refinery has offered a viability gap funding to the tune of Rs 25 Crores for the successful implementation of the same. Through this project it is proposed to produce electrical energy from municipal solid waste by utilizing the services of an external agency (M/s G J Nature Care and Energy Pvt. Ltd Consortium).

- Re-gasified Liquid Natural Gas (RLNG) for power generation: Installed facilities for using Re-gasified Liquid Natural Gas (RLNG) for power generation to reduce greenhouse gas emissions.
- ISO 50001 Implementation: One of the first companies in Kerala to adopt ISO 50001 to bring in better energy management practices. BPCL Kochi Refinery got certified as per ISO 50001 Energy Management System.
- Natural day light usage: 56 numbers of day lighting systems – Norikol were fixed in the main Workshop and the central warehouse to make them a totally day lit area.
- Rejuvenation of a nearby fresh water lake: BPCL Kochi Refinery supported the rejuvenation of a nearby fresh water lake (Thanneerchal Project) at Irimpanam with a funding of Rs 1.42 crores. The area has now developed into a park cum boating club.
- Solar powered security watch towers: Five security watch towers at remote locations get powered fully from the sun making it a net energy zero green building.
- 25,000 Trees for Mother Nature: Large scale afforestation is one of the important programmes against fugitive and particulate emissions and noise pollution. It is more than well established that vegetation interacts with gaseous and particulate pollutants and mitigate their adverse effects. With this objective Kochi Refinery rolled out a programme for planting 25,000 trees for mother nature on this year's World Environment Day.
- Biogas plant: A bio-gas plant with a capacity of processing one ton of food waste generated at the canteen is in operation. The bio gas generated from the plant is used for cooking in the canteen and the organic manure is utilized as manure for vegetation.

- Ecological park: An ecological park developed over an area of 5.5 acres is maintained within the refinery premises. This is with a view to maintain a healthy ecosystem, develop clean environment, control pollution and prevent soil erosion. About 3770 different varieties of plants are planted in this area.
- RO plant: A Reverse Osmosis (RO) plant is being set up to re-use treated effluent and thus to reduce water consumption.
- ESP: An electrostatic precipitator (ESP) has been installed downstream of CO Boiler for minimizing particulate matter emission from FCCU regenerator flue gases.
- AAQMS: Five continuous online Ambient Air Quality Monitoring Stations (AAQMS) have been installed for monitoring ambient air quality in the refinery premises. Three continuous ambient air quality monitoring stations (AAQMS) are installed at the Shore Tank Farm area also for proper monitoring of the ambient air quality in that area.
- Low NOx burners: To control emission of NOx, low NOx burners have been provided in all high capacity heaters and boilers.

Steps taken by Kochi Refinery for utilising alternate sources of energy:

- Installed 60 kW solar plant on top of the CDU2 substation. The annual electricity generation was 46.8 MWh.
- Installed 56 natural day-lighting systems in the main workshop and the main warehouse instead of fluorescent tubes resulting in annual electricity savings of 25 Mwh.

Pipeline Initiatives: The total number of energy efficient LED lights installed at stations of pipelines as energy conservation measures is 984. This resulted in a saving of 7,742 kWh units. A notable achievement after July 2017 is about using old pumps (2 no.s) at MDT which consume comparatively lesser power than the new pump (1 no.). By using DRA for old pumps, the same flow rate was achieved as that of the new pump (approx. 1,150 kl/hr). We have achieved Net saving achieved is Rs. 1.88 Crores from July 17 to March 18.

Steps taken by Pipeline Segment for using alternate source of energy:

- A 4.8 kWp solar power panel was commissioned at IPS-Washala to provide one light per house at Washala village as a “Corporate Social Responsibility Initiative”.
- Installation of solar power at Bina station, Kota SV 8, 12, 13, 30, 38, 45, IP-1 Guna, KJPL all SV stations, IPS-Washala, IPS-Sanghvi, SV-7/ 8/ 12/ 13/ 15/ 17/ 18/ 24/ 27/ 28 and MUPL SV 2.

The total installed capacity by the pipeline segment is of 2,232 kWp. The same has generated about 27,59,414 kWh units of energy resulting in Rs 18.87 lakhs savings.



Solar Panels installed at the Pipelines - Chennai

Breakup of renewable energy for FY 2017-18

Total Solar Energy installation	14.56 MW
Total Wind Energy installation	11.80 MW

Renewable energy capacity has increased from 22.17 MW to 26.36 MW. These initiatives have resulted in an annual reduction of emission by 43,660 metric tons of CO₂ equivalent.

The total amount invested on renewable energy is Rs. 6,25,43,230.



New LED 40 W Flame Proof



Normal LED 40 W



Old LED 120 W

Capital Expenditure on Sustainable Development projects: Mumbai Refinery:

S No.	Description of Scheme Implemented	Capital Investment in Rs. Crores	Energy Savings	
			Fuel (MT/year)	Power (MWH/year)
1.	Replacement of third stage ejector system by LRVP (Liquid ring vacuum pump) in VDU3:	Part of CDU3 revamp		0.145
	Around 60 MTPD of steam could be saved consuming around 145 kWh of electricity			
2.	Heat recovery from diesel stream in HCU:	Part of Hydrocracker revamp	2,976	
	It helped in generating MP steam of around 125 MTPD and reducing diesel rundown temp by around 10oC.			
3.	Reduction in MP steam consumption of HCU Feed steam heater, E201:	Part of Hydrocracker revamp	2,619	
	Steam consumption dropped by around 110 MTPD			
4.	Provision of Plate type heat exchanger in RMP ARU:	2.4	595	
	This resulted in 25 MTPD of MP steam saving in reboiler.			
5.	Increase in preheat to CCG splitter:	Nil	190	
	It resulted in reduction of MP steam to pre-heater from 120 to 112 MTPD.			
6.	Stoppage of Stripping steam to LG04 stripper (144-C-05):	Nil	238	
	It resulted in saving of 10 MTPD of MP steam.			
7.	Reduction of steam in product stripper (C 203) of HCU:	Nil	238	
	MP steam was reduced from 70 MTPD to 60 MTPD (10 MTPD reduction).			
8.	Steam trap and leak management scheme in RMP Complex:	3.5	4,333	
	The implementation has resulted in LP steam savings of 7.6 MT/hr.			
9.	CDU4 column pressure reduction from 1.8 kg/cm ² to 1.65 kg/cm ² :	Nil	1,471	
	This helped in stripping steam reduction of 10 MTPD and fuel savings of around 3.7 MTPD without any effect on the product quality.			
10.	CDU3 Deaerator steam reduction:	Nil	833	
	Around 35 MTPD of LP steam could be reduced.			
11.	FCCU Deaerator steam reduction:	Nil	714	
	Around 30 MTPD of LP steam could be reduced.			
12.	Replacement of AFC fan blades with EFRP blades in ARU:	0.30		0.04
	Power saving			

13.	Replacement of AFC fan blades with EFRP blades of CCR splitter O/H:	0.25		0.03
	Power saving is about 30 kWh.			
14.	Provision of Step less control in DHDS MUG compressor:	1.33		0.112
	By installing Hydro-COM step less capacity control system, power consumption reduced			
15.	Reduction in steam consumption of HCU RGC by correction in gas/oil ratio based on current molecular weight:	Nil	833	
	Steam reduction of 35 MTPD could be realized.			
16.	Revision in HCU Fractionator (C204: 132P213B) and Product stripper (C203: 132P211B) reflux turbine pumps rpm:	Nil	595	
	This resulted in reduction of 25 MTPD of steam consumption.			
17.	Energy saving benefits as achieved and sustained from APC:	Nil	7,500	
	From various strategies implemented in CDU3/4, HCU, CCR, Boiler house, DHDS, ARU complex and CCG splitter, 22.5 MTPD of fuel was saved.			

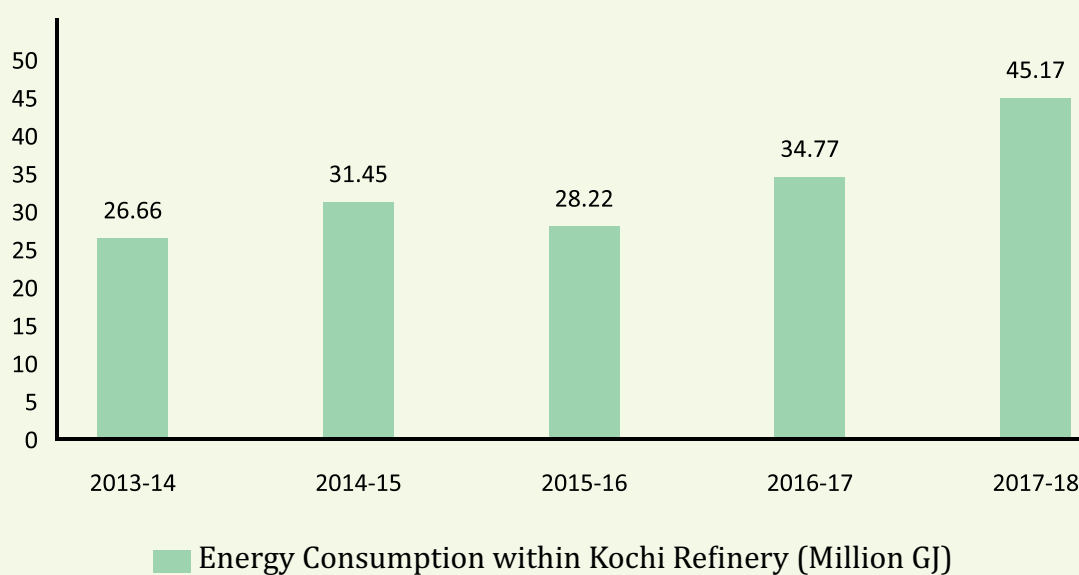
Kochi Refinery:

S No.	Details of energy conservation equipment and division	Capital Investment in ₹ Crores	Energy Savings	
			Fuel (MT/year)	Power (MWH/year)
1.	Installation of Plate Type Heat Exchanger in Crude/ VR service in CDU2 to improve Crude Pre Heat Temperature by 25oC.	2.16	8,238	
2.	Usage of VHP steam in Integrated Refinery Expansion Project (IREP) instead of HP steam, along with back pressure turbines reducing steam condensing by 98 Mt/Kh	Included in IREP cost	58,880	
3.	Installed Power Recovery Turbine (PRT) for VGO HDT feed pump saving power by 582 KW	Part of Hydrocracker revamp		4,819
4.	Installed Power Recovery Turbine for DHDT feed pump saving power by 359 KW	Included in IREP cost		2,972.5
5.	Installed Power Recovery Turbine for VGO HDT Amine pump saving power by 859 KW	Included in IREP cost		7,112.5
6.	Installed Power Recovery Expander in PFCCU	Included in IREP cost		9.8
7.	Replaced 4,880 conventional lighting by LED lighting in Plant, Control Rooms, substations, Lab Warehouse and office rooms resulting in power saving of 177 KW	Nil		1,129

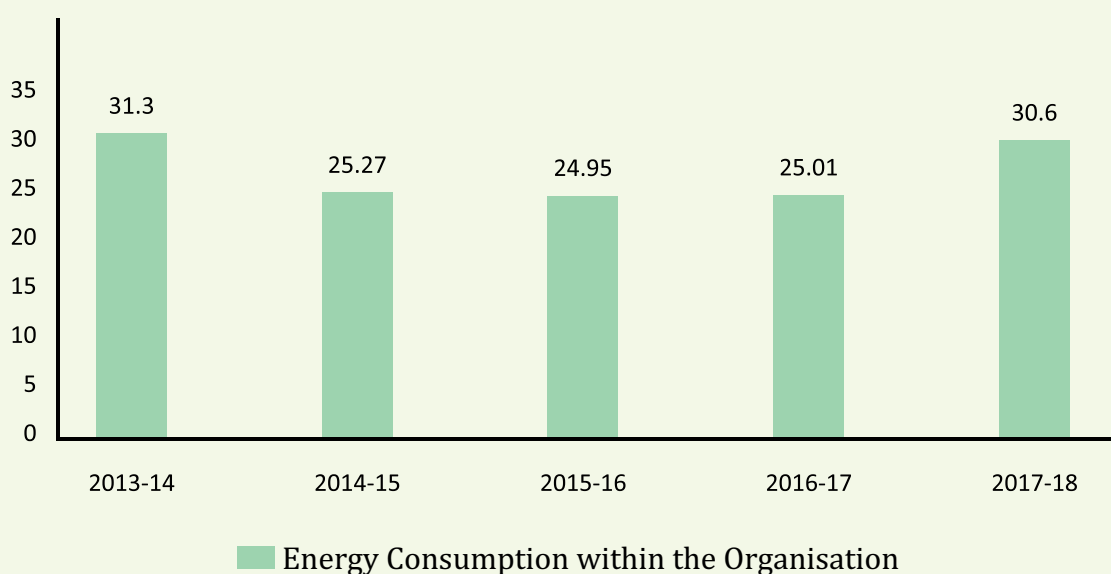
Renewable energy status of BPCL

	Mumbai Refinery	Kochi Refinery	Other BUs	Total
Solar Energy (off grid) consumed	50.46 MWh	50.97 MWh	1,260.60 MWh	1,362.03 MWh

Energy Consumption within Kochi Refinery (Million GJ)



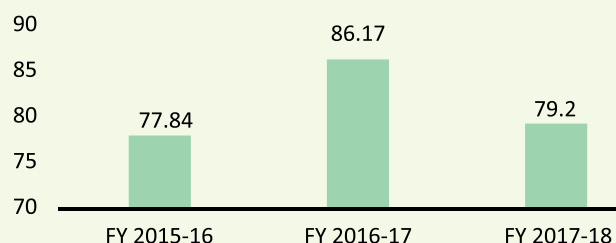
Energy Consumption within Mumbai Refinery (Million GJ)



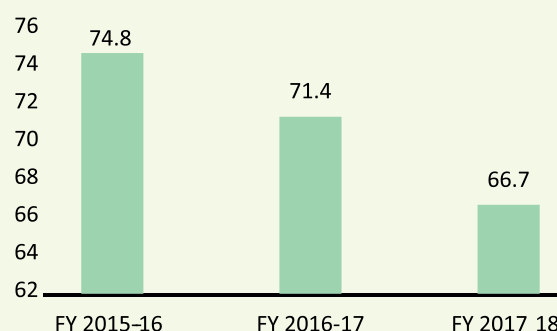
The amount of energy consumed outside the organisation is 27,183.86 thousand GJ. BPCL does not sell electricity, heating and cooling energy. The energy consumed outside the organisation has been calculated for business

travel by air and the import of crude and LNG. There is a restatement on the energy intensity as the calculation methodology has been updated.

Specific Energy Consumption (MBN*)-Kochi Refinery



Specific Energy Consumption (MBN*)-Mumbai Refinery



*The unit taken for the values is MBN, where: M = Thousand BTU (British Thermal Units), B = Barrel and N = NRGF (net refining gain factor)

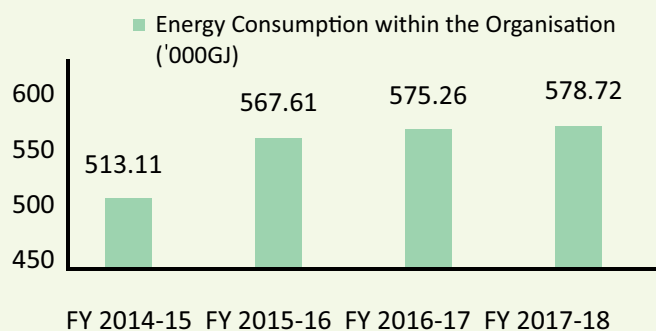
Significant Location	Direct energy (Million GJ)	Indirect energy (Million GJ)
Mumbai Refinery	30.06	0.54
Kochi Refinery	44.84	0.33

For energy consumption calculation local conversion factors released by TERI were used. Energy consumed at BPCL is broadly through burning of non-renewable fuels and purchase electricity from the grid, presented

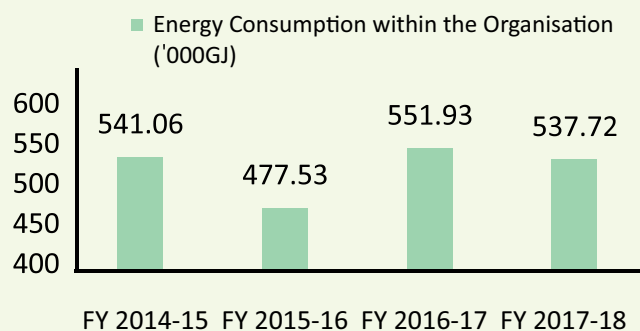
as direct and indirect energy consumption respectively in the above table. For total energy and energy intensity figures energy consumed within the organisation is considered.

Total Energy ('000 GJ)	LPG	RETAIL	LUBES	AVIATION
FY 2014-15	541.06	513.11	47.57	61.11
FY 2015-16	477.53	567.61	44.25	60.53
FY 2016-17	551.93	575.26	67.93	71.04
FY 2017-18	537.72	578.72	39.38	74.8

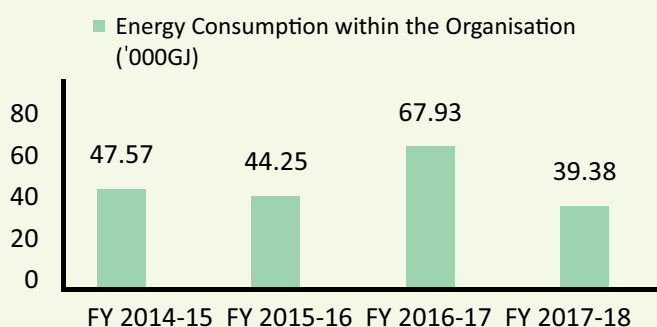
Retail



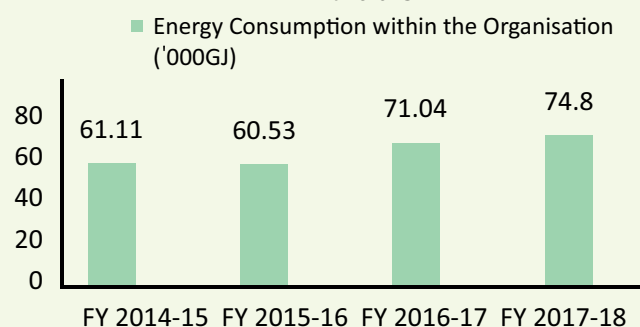
LPG



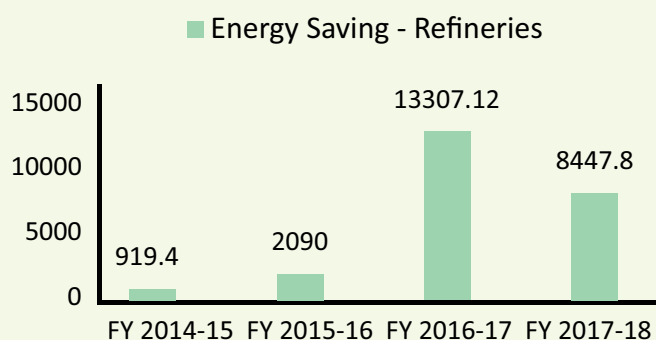
Lubricants



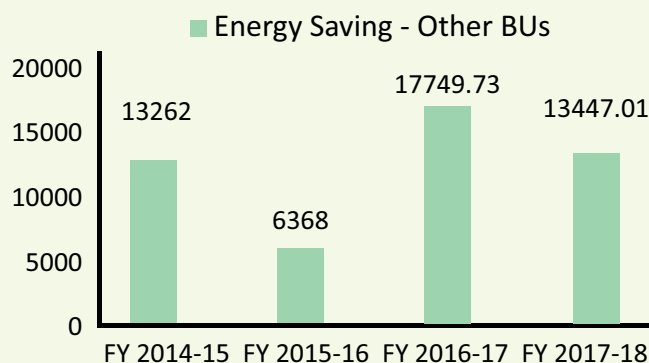
Aviation



Energy Saving ('000 GJ)



Energy Savings (GJ)



The types of energy involved in energy savings are diesel, steam and electricity. Reduction is based on the total numbers presented in the above-mentioned graphs.

Emissions Management

Indian government holds primary responsibility to contribute to securing the energy supply with respect to the growing energy demand. The imperatives of low-carbon development, embedded in India's Nationally Determined Contributions (NDC), has put tremendous pressure on the Oil and Gas sector to invest in lower emission intensive technologies. In line with India's NDC target of reducing GHG emissions intensity of GDP by 33 to 35% from 2005 levels by 2030, BPCLs seek opportunities to reduce its emissions associated with its operations and the products by energy efficient technologies in their operations.

This in turn will mitigate climate change and global warming.

BPCL's emissions from operations include carbon dioxide, NO_x, SO_x, methane and other gases. BPCL has set periodic targets at all locations. Systems and system up-gradations are made to measure the quantum of emissions. BPCL is progressing towards zero ozone depleting substance (ODS) emissions from both Mumbai and Kochi refineries. The details of the direct and indirect GHG emissions over the years along with the GHG emissions intensity for both Mumbai and Kochi refineries is represented below:

Direct GHG Emissions Scope 1 (^{'000} MTCO ₂ e)	Refinery	Other BUs
FY 2014-15	3,619.33	51.57
FY 2015-16	3,847.89	52.90
FY 2016-17	3,907.24	55.29
FY 2017-18	5,113.00	54.63

Indirect GHG Emissions Scope 2 (^{'000} MTCO ₂ e)	Refinery	Other BUs
FY 2014-15	102.29	66.74
FY 2015-16	111.36	63.6
FY 2016-17	177.36	80.52
FY 2017-18	198.54	74.01

Total GHG Emissions- Scope 1+ Scope 2 ('000 MTCO ₂ e)	Refinery	Other BUs
FY 2014-15	3,721.62	118.49
FY 2015-16	3,959.25	116.76
FY 2016-17	4,084.60	135.81
FY 2017-18	5,311.55	128.64

	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
GHG Emission (Scope 1, Scope 2) Intensity (Refineries) (per throughput) (tCO ₂ e/MT)	159.34	164.18	160.84	186.10

Emissions of Ozone Depleting Substances (ODS) (MTCO ₂ e)	FY 2016-17	FY 2017-18
Mumbai Refinery	2,208.2	1,987.38
Kochi Refinery	12,161.39	11,830.16

ODS emission covers the usage of R 22 at the Refineries.

Other Air Emissions at Refineries (In Tonnes)	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18
Oxides of Nitrogen (NO _x):	2,371.84	2,426.61	2,495.28	4,525.55
Oxides of Sulphur (SO _x):	11,303.82	13,057.96	12,713.67	10,690.7157

Scope 3 Emissions	FY 2016-17	FY 2017-18
(Business Travel) ('000 MTCO ₂ e)	5.879	6.34
Crude and LPG import ('000 MTCO ₂ e)	10.523	17.25

The amount of flared and vented hydrocarbon from MR and KR is 28,389 MT.

Water Management



Rain water harvesting at Kochi Refinery

Water management is an important aspect at BPCL as water is vital for all forms of life. BPCL recognises the value of this natural capital and works to manage their water use and to limit adverse impacts to water resources. BPCL has taken several initiatives to optimise water consumption at various locations throughout India. It has adopted rain water harvesting system and reusing/recycling of water wherever possible. The total catchment area under rain water harvesting is

7,22,800 sq. meter which has been increased to 7,73,427 sq. meter during the year. No water bodies have been significantly affected by withdrawal of water by units of BPCL around the areas of operations nationally.

In FY 2017-18 the total water withdrawn by BPCL is 57,459.98 thousand KL. The major water sources along with the details of water consumption for refineries and another BUs for FY 2017-18 is given in the table below.

Water Withdrawn	FY 2017-18	
	Refineries	Other BUs
Volume in ' 000 KL		
1. Ground water (bore/open wells):	0.00	899.58
2. Municipal water supply:	4,853.54	616.87
3. Surface water (River/lakes):	22,055.14	98.28
4. Tanker water:	2.89	191.50
5. Sea water intake:	28,566.2	.1
6. Rain water:	142.67	33.20
7. AAI:	0	8.03
Total Water withdrawn	55,620.44	1,839.54

There are various methodologies used at BPCL for calculating the water intake for e.g. through water meters, tank capacities/ calculations etc.

Total water consumed in pipelines was 2,29,398 m³ during FY 2017-18. Pipelines have installed rain water harvesting mechanisms at various locations including Gujri, Piyala, Mathura and Javkheda, which has captured approx. 4,087 KL rain water in 2017-18. Rain water is used for domestic purpose.

Rain water harvesting is achieved at IPS-Washala where the rain water is collected in pit and transferred to fire water storage tanks (1,160 KL) for firefighting to conserve water. Waste water discharged by BPCL is not used by any other organization.

Total Waste Water (000'KL)	Refineries	Other BUs
Waste Water Generated	33,467.59	139.86
Water Recycled / Reused	5,687.06	57.22
Waste Water Discharged	27,780.53	82.64
Percentage of Water Recycled / Reused	16.99%	40.91%

There are various methodologies used at BPCL for calculating the water intake for e.g. through water meters, tank capacities/ calculations etc.

Wastes and Effluents Management

Waste generation is inevitable but minimising environmental damage, possible onsite treatment and proper disposal in the best possible way is feasible. BPCL continuously strives to reduce waste generation and enhance waste management. BPCL aims to maintain a regular check on the discharge of effluents from all the operations involved in the industry. The installed Effluent Treatment Plants (ETPs) are functioning satisfactorily and the effluent quality is in conformance with the regulatory standards. To achieve the recycling goals, focus on proper waste selection is imparted by awareness campaigns and internal audits. Solutions to minimize waste production are sought to enhance the recycling in an economical, ecological and efficient way.

BPCL is trying to utilise this water for significant operations of the industry, provided it meets the water quality requirements. BPCL uses the treated water for secondary purpose. Most of the waste water is discharged to open land within the boundary of the location. The waste water discharged outside the boundary by BPCL has not negatively affected any water body. Waste water discharged by BPCL is not used by any other organization.

Total water discharged by quality (Concentration in mg/L)	Mumbai Refinery	Kochi Refinery
Total Suspended Solids	12.00	8.90
Biological Oxygen Demand	11.20	14.20
Chemical Oxygen Demand	79.40	46.70
pH	7.39	7.24
Total dissolved solids	0.00	0.00
Oil & Grease	2.60	2.10
Chlorides	0.00	0.00
Sulphates	0.00	0.00
Phenol	0.00	0.14
Sulphides	0.10	0.45

Environmental Expenditure (Rs. In Lakh)	Refineries		Other BUs	
	FY 2017-18	FY 2016-17	FY 2017-18	FY 2016-17
Treatment and disposal of waste	3,249.14	347.04	79.89	35.88
Depreciation and maintenance cost of equipment's used in pollution control	2,996	1,475.99	59.39	44.24
External services for environmental management	480.84	273.93	146.23	39.11
External certification of management systems	4.22	2.32	52.49	35.35

BPCL maintains environmental standards as per national laws and regulations. In FY 2017-18 there were no fines, non-monetary

sanctions or cases brought through dispute resolution mechanisms nor there has been any major accident, incident/ oil spill.

Waste Management:



Launch of Waste Management Manual during annual HSSE Award function at Chennai



Waste Oil



Oily Sludge

Waste generated from Refineries

Hazardous waste: 2,852.5 Tonnes

Non-Hazardous waste: 1,16,888.4 Tonnes

Batteries/
Electronic
Waste

Handed to Suppliers

- Through buy back agreements

Paper

Sold to authorised agencies

- For Recycling

Used filters
/ Used oil
rags/
cotton

Handed over to
PCB authorised Vendors

- Further treatment and disposal
in secured landfills

Ferrous
Scrap

Sold to authorised
agencies

- Recycling and refurbishing

Residual
Sludge

Disposal through authorised
agents by pollution control
board
Bioremediation

These are some of the most significant waste that is generated within BPCL with the methods of disposal. A list of hazardous and non-hazardous waste generated and disposed with their quantities is reported in annexure 3 of this report.



PPE-Hand Gloves



Used Gloves

BPCL has a contract with Central Pollution Control Board (CPCB) authorised hazardous waste disposal vendors, they collect the waste from the premise and accordingly transport the same as per the requirement of disposal method. BPCL complies with all the statutory norms and regulations stated by MoEF & CC, CPCB and State Pollution Control Board (SPCB). In FY 2017-18, hazardous waste of more than 2000 tonnes was treated through bio-remediation. No hazardous waste was transported, exported and imported by BPCL. Total hazardous waste (such as used oil, oily sludge, battery, e-waste, waste hand gloves, oil contaminated cotton, scrap cable and CI / DRA empty drums) generated by the pipeline segment was 3,443 kgs. Total non-hazardous waste (paper waste, kitchen waste) generated and disposed was 245 kgs. The packaging material for LPG, which is cylinders (domestic and commercial) are reclaimed as 100% as per LPG Cylinder Distribution Policy, however no packaging material is reclaimed for the other products.

Bio-remediation of Oil Soaked Soil at Chainage:

Pipeline was partially damaged by the farmer while leveling his field with dozer at Chainage 157.4 Km near Village: Agaskhind, Tehsil:Sinnar, District: Nasik resulting in contamination of soil with hydrocarbon. Immediately, sectional valves of either side of leak site were closed and BPCL's emergency team rushed to the site. On reaching, the site, area was cordoned off, electric supply of area was cut off, oil spill dispersant sprayed onto the oil-soaked soil, fire tender was positioned and ERV pressed into service to recover the leaked HSD from the site. Subsequently pipeline was repaired, and normalcy restored. Action was initiated for remediation of oil-soaked soil from site using oil zapper technology provided by BPCL R&D center. Quantity of oil-soaked soil was estimated to be approx. 2,500 m3 for bio- remediation.

Bioremediation is a process that uses living organisms such as microbes and bacteria to reduce contaminants, pollutants and toxins from soil and water. It can be used to clean up environmental problems like an oil spill or contaminated groundwater.

BPCL and the farmer jointly surveyed and identified vacant piece of land in his field adjoining to leak site for sun drying oil-soaked soil. Specific marking and fencing of vacant piece of land was carried out having proper access for personnel and vehicular movement for handling, unloading and spreading of the soil. BPCL mobilized waterproof canvas tarpaulin sheet for sun drying the soil inside notified and fenced area. BPCL facilitated farmer in obtaining NOC from Gram Panchayat for drying the soil inside notified and fenced area. The soil was bio-remediated using oil zapper technology and sun dried till oil contents in the soil came within prescribed limits and report was submitted to MPCB area office, Nasik for closure of the soil remediation activity.



Bio-remediation at Oil soaked soil at Chainage

Biodiversity Management

BPCL has initiated the identification of protected areas and potential areas of high biodiversity value near all its industrial units in India. It conducts Environmental Impact Assessment (EIA) for all new projects to identify the impact of operations on flora and fauna. It has also initiated the process of sensitising employees on the importance of biodiversity at various locations with the help

of informative note on biodiversity. On the World Environment Day, BPCL conducts tree plantation drives throughout various offices and locations. As on 31st March 2018, BPCL has planted more than 1,88,000 trees. BPCL has contributed towards a better environment, by sequestering approx. 2,879 tons of carbon dioxide and releasing approx. 7,674 tons of oxygen annually.

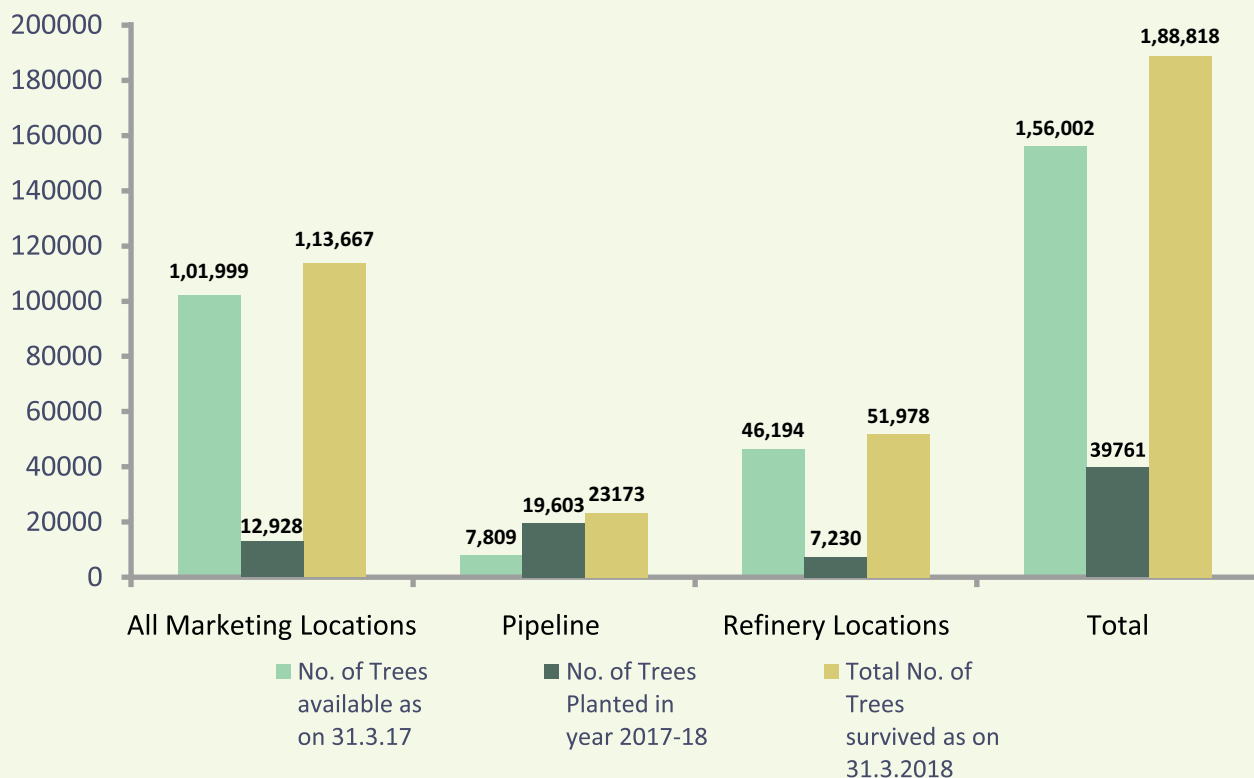
Tree Plantation Consolidated summary			
Business Units	No. of trees available in the location as on 31.3.17	No. fo Trees/ Planted from April 17 to March 18	Total No. of plants survived as on 31.3.2018
Retail	51,238	7,086	57,414
LPG	46,715	4,034	50,476
Lubes	894	71	952
Aviation	992	1,360	2,352
Pipelines	7,809	19,603	23,173
HRS	1,984	201	2,145
E&P	176	176	328
Mumbai Refinery	6,194	5,230	10,378
Kochi Refinery	40,000	200	41,600
TOTAL	1,56,002	39,761	1,88,818



Tree Plantation drive at Kochi Refinery

The details of the trees planted is mentioned below:

Trees at BPCL



Eco Park at Kochi Refinery

BPCL continues to make efforts to increase the average percentage of Green Cover area. BPCL under its CSR initiatives organises plantation drives.



Operations of BPCL

7 AFFORDABLE AND
CLEAN ENERGY



8 DECENT WORK AND
ECONOMIC GROWTH



9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Operations of BPCL

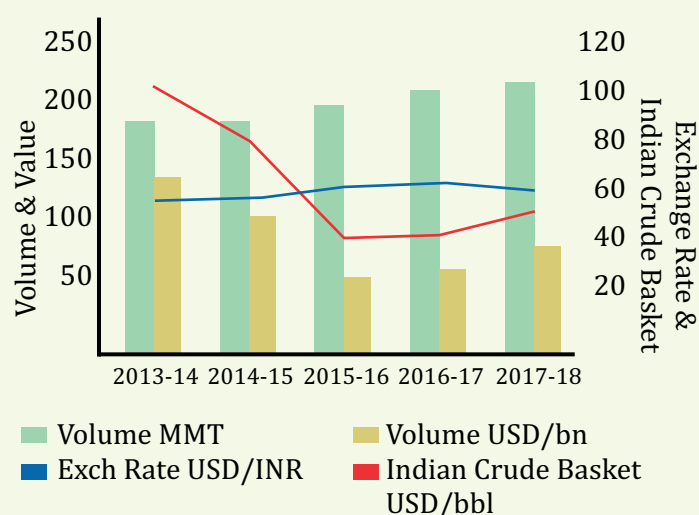
Over the past several years growth in developing economies has contributed immensely to boost the global demand for oil and other commodities. The price of oil has witnessed significant volatility; OPEC made conscious efforts to control supplies in the earlier parts of the year to curtail free fall of oil prices resulting in oil prices stabilisation. However, increasing geopolitical risks, especially in Venezuela, Iran, Libya and Nigeria has aggravated by the inventories declining to 5-year averages, oil prices started increasing rapidly over a very short period of time. While the recent intervention by OPEC and non-OPEC suppliers to enhance oil, output is expected to yield the desired impact of stabilising prices, much will depend on the outcome of US sanctions on Iran that will take effect by November 2018 and the impact of increasing demand for oil and oil products that continues to witness robust growth.

Indian Petroleum Sector

India being the third largest consumer of primary energy and one of the fastest growing economies in the world has become the perfect example of resilience, structural robustness, political stability and strong economic fundamentals. It has effectively absorbed the recent volatility in international oil prices. India has a per capita consumption of primary energy of only 0.57 ton of oil equivalent (toe) which is way behind the per capita consumption in the US of 6.92 toe and the world average of 1.82 toe. As trends suggest, India offers tremendous potential and has positioned itself as the world's fastest growing energy market for years to come. India produces less than 1% of the world's crude oil but consumes almost 5% of the world's crude oil. With more than 80% of the crude processed being imported, India's import bill has increased by 25% from USD 70 billion in the previous year to almost USD 88 billion in FY 2017-18. While the increase

in crude volumes has been only 3%, higher crude prices are the reason for an increased import bill. The Indian crude basket was at around USD 56 per barrel during FY 2017-18, 19% higher than the USD 47 (approximate) per barrel during the previous year. A 4% appreciation in the Indian rupee vis-à-vis the US dollar has aided in containing the import bill for 220 crude MMT imported during FY 2017-18. Indigenous crude oil production during FY 2017-18 stood at 35.7 MMT, marginally lower than the 36 MMT of last year. While the contribution from onshore fields has been declining over the past several years, contribution from off-shore fields has also started declining in the past two years, causing an overall decline in the share of indigenous crude in the crude requirements of the country.

Crude Imports



In FY 2017-18, 1,95,912 KL Ethanol was blended in 19,82,762 KL of EBMS This year there has been no production of biofuels. BPCL is also in the process of setting up 3 bio fuel refineries to produce second generation Ethanol to meet the current requirement.

BPCL is committed to managing health and safety risks and demonstrate continual improvement is its safety performance. BPCL has developed a Corporate Safety Management System (CSMS) which defines requirements for managing Occupation Health and Safety (OHS) risks across its operations to As Low as Reasonably Practicable (ALARP) level.

Monitoring and Safety Performance Measurement of Corporate Safety Management System requires BUs to establish Process Safety Events identification and Measurement System in accordance to American Petroleum Institute (API) Recommended Practice (RP) 754 Standard.

In addition, Process Safety Events are also increasingly reported by leading process companies in their sustainability reports. This Technical Standard is expected to assist BPCL in meeting stakeholder's sustainability reporting requirements. This Technical Standard is intended to provide guidance to all BUs and operating locations on collection, reporting and measurement of process safety events (commonly referred as PSEs) to detect early leads in detecting key process safety failures, which may otherwise lead to major process safety incidents due to unplanned releases. During the reporting period no significant process safety event has taken place.



Mumbai Refinery

Investor

An investor funds the Company's operation thus receiving part ownership therefore the influence in decision making is very high. BPCL works in the best interest of their Investors as the Investors are their key stakeholders. BPCL maintains constant with their Investors through various meets, conferences and other indirect touch points such as website. During FY 2017-18, 26 complaints received from investors through SEBI and NSE which were attended to and resolved on a priority basis.

Suppliers

Suppliers are the key component to ensure constant availability of product and services. To ensure sustainable operations and responsible growth, BPCL collaborates with its suppliers. Maintaining a strong and healthy relationship with suppliers encourages greater efficiency and lower turnaround time. BPCL fosters long term mutually beneficial relationships with suppliers through a series of different engagements throughout the year. Some of the engagement initiatives are mentioned.

- Annual 'Premier Vendor' workshops for material and equipment suppliers
- Periodic meetings with small vendor groups
- Meetings to ensure smooth functioning of the process and to eliminate bottle necks
- Make formal and informal channels to address grievances of the suppliers
- Relationship building with National Oil Companies of different countries & Oil Traders



Vendor Awareness Workshop on GST at Mumbai Refinery



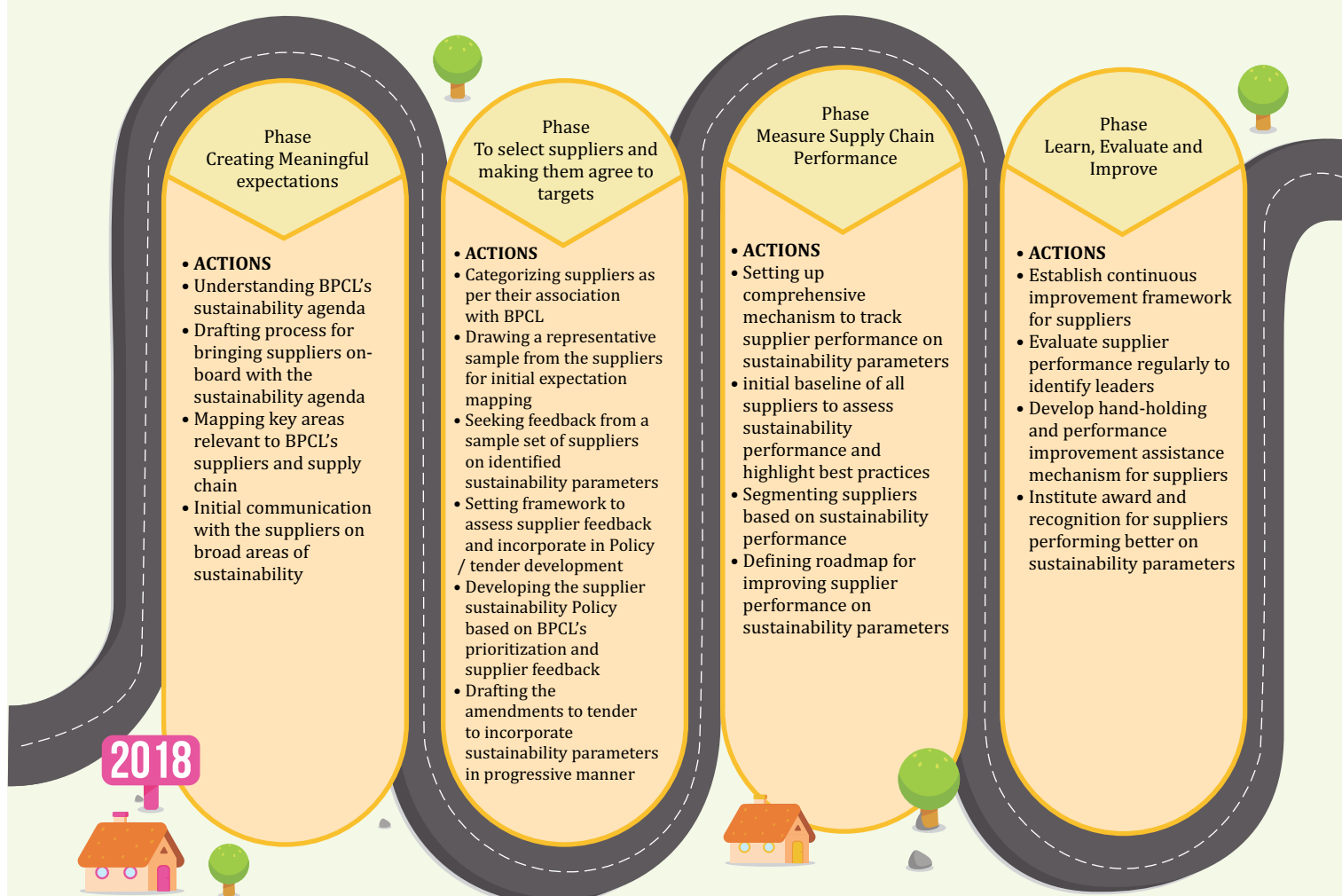
Vendor Meet at BPCL

BPCL follows the mandates from the Public Procurement Policy Order, 2012 to have 20% of the total annual purchases of products produced and services rendered by MSEs. Out of 20% target of annual procurement from MSEs, a sub-target of 20% (i.e. 4% of total procurement) shall be earmarked for

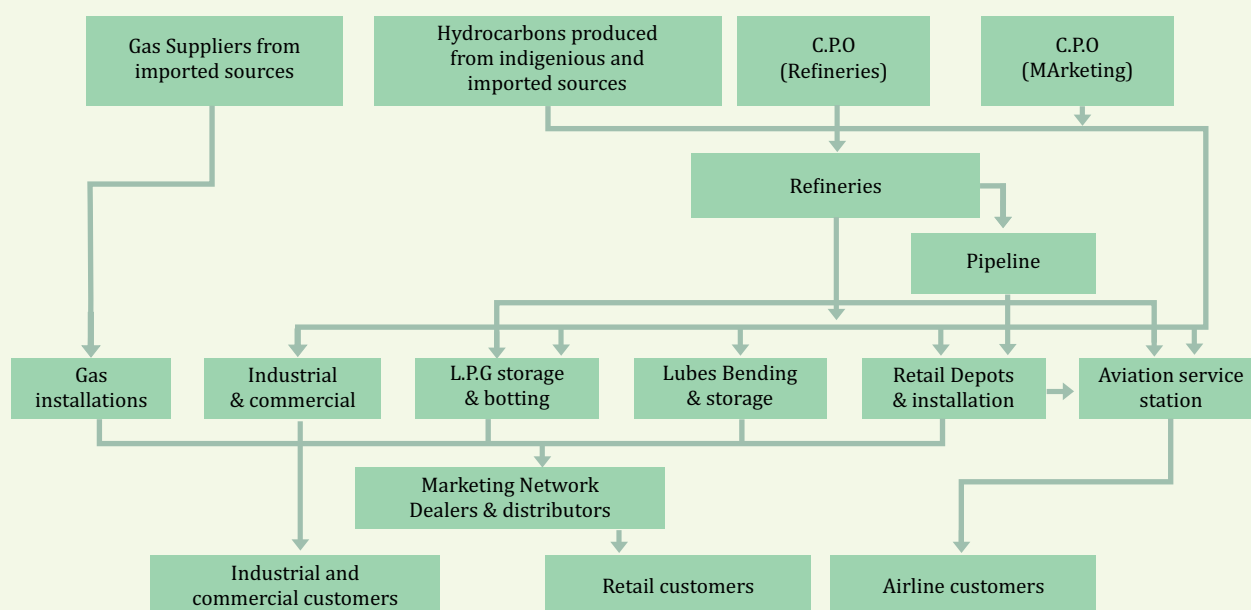
procurement from MSEs owned by SC/ST entrepreneurs. Apart from crude, significant procurement for BPCL is done locally from India. The proportion of indigenous and imported crude is presented in the Annual Report page 9 and 115.

Sr. No	Particulars	FY 2015-16 Figures in Crores	FY 2016-17 Figures in Crores	FY 2017-18 Figures in Crores
1.	Total Annual Procurement Value (only Non-Hydrocarbon)	5,434.09	4,919.61	7,071.94
2.	Total value of Procurement from MSEs (including MSE owned by SC/ST entrepreneurs)	1,253.30	1,613.88	1,916.87
3.	% of Procurement from MSEs (including MSE owned by entrepreneurs)	23.06%	32.80%	27.11%
4.	% of Procurement from SC/ST entrepreneurs	0.0045%	1.85%	1.24%

BPCL Sustainable Supply Chain Roadmap



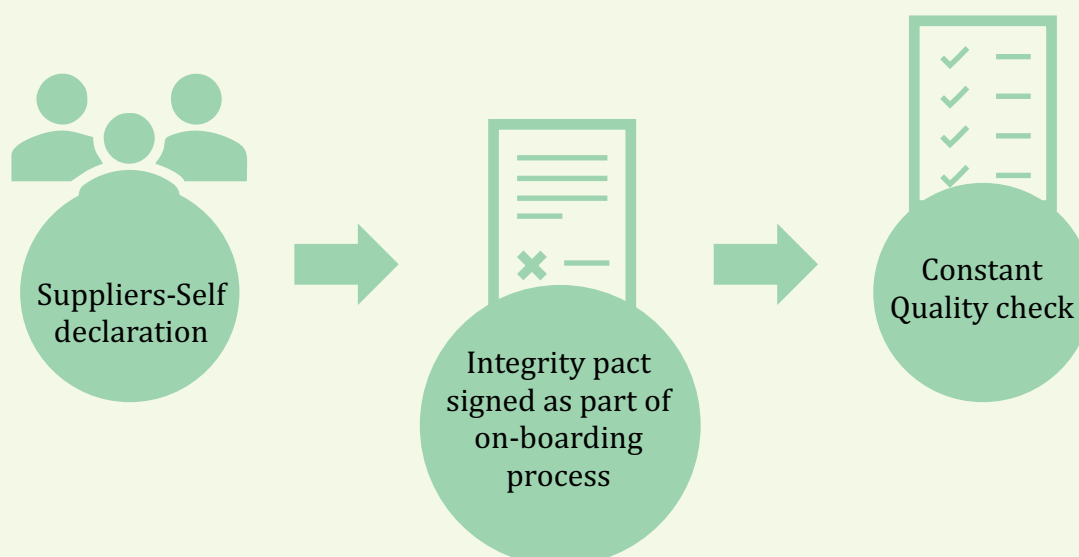
Operational Overview



Supplier Assessment

BPCL maintains consistent efforts to ensure that all suppliers adhere to the applicable national and international standards. BPCL is in constant touch with large number of suppliers.

These suppliers encompass contract staff supplying agencies and suppliers of products, materials and equipment. The robust e-tendering system on-boards all the vendors and suppliers.



BPCL has a high regard for ethical conduct. Thus, every supplier is to sign an integrity pact before empanelment. The integrity pact contains the terms and conditions and monitoring mechanisms of working with

BPCL and includes conditions on environment protection, child labour, timely payment of dues and good working Conditions. All Business Units and location heads are aware about the working conditions and ethics that are articulated to the Company.

Dealers and Distributers

Dealers and distributers play a vital role as they are the interface with customers directly. They provide customers with a wide range of products and services before and after the sale. BPCL ensures quality customer treatment through its dealers.

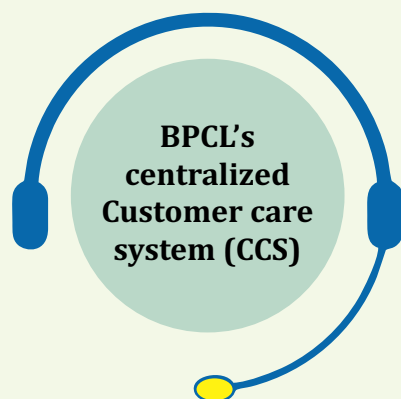
The process right from dealer selection and eligibility to training and product delivery is robust and has been developed in collaboration with other oil marketing companies.

Customers

BPCL aims to provide value to their customers by giving them superior quality of product with uninterrupted supply. Customer satisfaction, loyalty and retention are the prime objectives at BPCL. BPCL is very sensitive towards grievances raised across all categories and stakeholders. All customer complaints and grievances are addressed by a separate department within each BU. The Nodal officers for grievance redressal have been designated right from the corporate office to the State and Territory offices and their details are available in the Citizen's Charter. BPCL also has in place an interactive toll-free number on our centralized Customer Care System (CCS) called 'Smart-Line'.

It is a technology driven initiative for providing a single window to address the concerns of its customers across all BUs and geographies. It is used to gather queries, suggestions and grievances. It is an integrated platform for customer interactions across all channels such as email, website, social media, vigilance, National Consumer Helpline as well as walkins.

CCS has registered its highest ever 0.9 million (with 38% CAGR) interactions during FY 2017-18. It has now evolved into a robust platform and certainly the most preferred choice of customers, resulting in substantial improvement in the Customer Satisfaction Index.







- This platform is being used for
1. Suggestion capture
 2. Lodging queries
 3. Provides a grievance redressal mechanism
 4. Emergency hotline number -1800 22 4344

**'Smart line' : All India toll free
Number-24*7**

Customer Provisions

BPCL's initiatives are driven by commitment and desire to enhance customer experience. As stakeholder expectations are constantly changing, BPCL continuously strives to meet its expectations. Currently, BPCL with initiatives such as Smart Fleet, Petro Card, In & Out stores and Ghar initiative are trying to meet evolving customer needs more efficiently.

BPCL has not undertaken any structured survey during the year 2017-18, but it does take customer feedback to identify customer satisfaction trends. In FY 2017-18, BPCL received 91,675 customer feedbacks, of which 64,296 were satisfied customers. Subsequently, the other customers were approached, and the pending issues were resolved to their satisfaction.

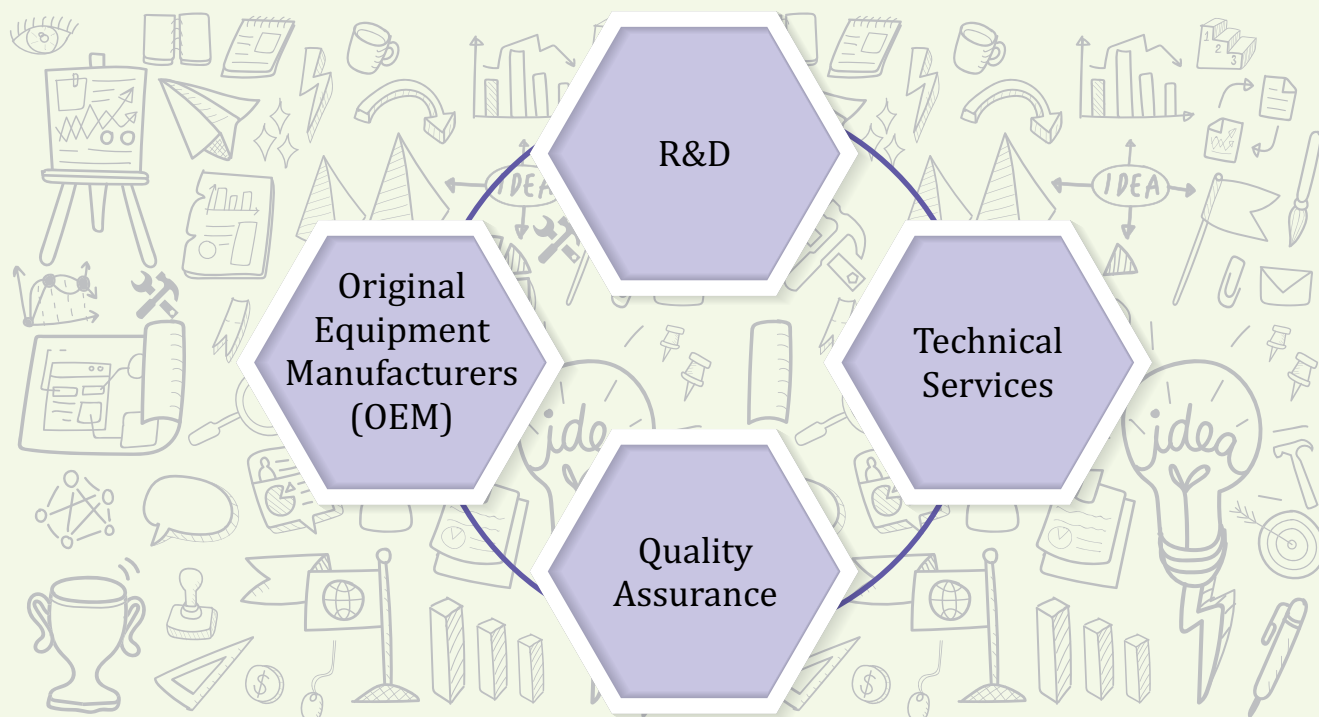
SmartFleet	PetroCard	In & Out stores	One stop truck shop (OSTS)
 <p>SmartFleet is a fleet management services solution that brings unique cost and time efficiency solutions to fleet owners, enabling their businesses. The program is a comprehensive solution for fleet owners, offering a combination of security and convenience, making fleet management effortless and efficient.</p>	 <p>Bharat Petroleum offers PetroBonus, an unmatched customer loyalty programme to reward customers with Petromiles each time they refuel or shop at our fuel stations. These Petromiles can be redeemed against attractive gifts.</p>	 <p>Our In & Out stores offer a convenient and comfortable environment to shop, while BPCL's partnerships with leading food-chains allow you to grab its customers a quick tasty bite on the go.</p>	 <p>BPCL has initiated a OSTs facility, which includes a gas station, dormitory and eatery. The OSTs will take care of the personal, travelling and business requirements of truckers and long-distance travellers. Basic telephony services at the site are also available.</p>

Customer Safety

BPCL believes in the motto 'Pure for Sure' and strives to deliver quality product to consumers. In FY 2017-18, BPCL did not have any incidents of non-compliance with regulations and voluntary codes concerning product and service information and labelling or concerning the health and safety impacts of products and services during their life cycle. Also, there were no monetary fines imposed due to non-compliance. All marketing communication relating to the products and

services adhere to ASCI voluntary standards on marketing and communications. BPCL ensures that its product do not pose unintended harm to the environment and to persons involved during its production, transportation, consumption or disposal. The products are in compliance with the necessary national and international standards and BPCL provides customers with the necessary information about the products and their safe usage as mandated by regulatory bodies.

Product and Application Development



The major thrust areas of R&D center are process improvement and the development of products that are resource effective. Some of the products with enhanced environmental performance resulting in improvement of the safety aspect thereby, are mentioned.

Product Research and Development

The advancement of the unprecedented developments and disruptive innovations in the energy sector demonstrate that the current scenario of the sector is dynamic. The most imperative way of endurance is by keeping operations, processes, products and services refreshed. Innovation is a technique to keep up with the pace of the changing world.

There is an emergence of technologies like electrical vehicles in the transport sector, biofuels, solar and wind power, which can potentially change the course of business. Nevertheless, there are burgeoning opportunities for value added petroleum products and petrochemicals. The Research and Development Centres of BPCL proactively engage in development of innovative products, process technologies, cleaner fuels and fuel additives.

These developments help BPCL to reduce environmental footprints while improving the Company's profitability while move with a steady pace with the changing scenario. R&D has contributed significantly to the business volume and profitability through development of new grades and alternate formulations. This has helped in increasing the product portfolio and reducing the input cost. All products undergo safety testing as per the requirements to assess health and safety impacts. In line with this prelude, the Corporate R&D Centre at Greater Noida, Uttar Pradesh and Product & Application Development Centre at Sewree, Mumbai are continuously striving for value creation through research activities.

The research work is broadly divided into four categories, as per focus research areas:

- Technical support to Strategic Business Units (SBUs).
- Development of energy efficient technologies for fuel and chemical production.
- New product and additive development.
- Alternative fuels and energy.

These units are the backbone for the Lubes Business Unit and provide competitive advantage to Business operations through continuous innovation in the areas of lubricants, new product development, value added services to customers and major OEM tie-ups.

Under the above-mentioned core categories, the specific areas in which R&D is been carried out by BPCL is on developing the following grades/products:

- High Performance Engine Oil compatible with Ethanol blended petrol (up to E85) for 4 Stroke 2 Wheelers.
- Synthetic Engine Oil for high performance passenger cars.
- High performance Hydraulic Oil.
- Cutting Oil for new generation materials.
- Fully synthetic transmission fluid for passenger cars.
- Water resistant grease for industrial applications.
- Alternate formulations for existing products.

The benefits derived out of the Research and Development:

- High Performance Engine Oil for 4 Stroke 2 wheelers would be suitable for ethanol blended petrol (up to E85) as it enhances the engine and engine oil life, provides support to the Government initiative of ethanol blending in petrol and helps us to generate new business.
- Synthetic Engine Oil for high performance passenger cars would offer better flow at low temperatures and excellent engine protection at high temperatures, hence a trouble free and smooth driving experience for end customers and helps us to generate new business.
- High performance energy efficient Hydraulic Oil would enable manufacturing facilities using hydraulic systems to operate at maximum efficiency, increase production output and reduce fuel consumption. This would help us in generating new business.

- Environmental-friendly, multi-purpose soluble metal working fluid designed for a multitude of machining operations on metals which are being widely used in Automobile and Aerospace applications respectively. This would help us in generating new business.
- Synthetic transmission fluid enables smooth shifting of gears and provides better overall protection. The synthetic transmission fluid sustains its viscosity over a wide range of operating temperatures ensure in a better lubrication of manual transmission.
- Water resistant grease for industrial application provides effective protection for bearings and other moving parts in industries where moisture ingress affects lubrication longevity and corrosion resistance, thereby reducing overall grease consumption.
- Alternate formulation for existing grades would provide operational flexibility, besides reducing the input cost of respective grades.

The plan of action is on developing high performance engine oil for high powered racing bikes, heavy duty diesel engine oil for ultra-low emission BS VI engines, bio degradable cutting oil, fire resistant hydraulic fluid for coal sector, universal tractor transmission fluid for farm tractors, long life wheel bearing grease for heavy commercial vehicles and alternate formulations for existing products.



Startup Leap

Particulars	(Rs. In Crores)
Expenditure	2017-18
Capital Expenditure	35.81.
Revenue/Recurring Expenditure	47.38
Total	83.19

Landmark Initiatives:

- The tremendous efforts of the Technical Services Department got BPCL's grades proven in core sector industries and also a customized oil was developed for steel mills.
- 12 programs for the staff and channel partners were conducted by MAK Center of Excellence and MAK Tech Know League covering all lubes staff was carried out for the first time.
- An informative laboratory HSSE manual was compiled by the Quality Assurance (QA) Department in consultation with HSSE department. Extensive support for BS IV to BS VI fuel (MS & HSD) conversion in the National Capital Region (NCR) area was provided to roll out BS VI fuel within the stipulated time frame of 31st March 2018.
- The OEM Team has obtained approval from a leading automotive company for automotive gear oil and engine oils.

Patents, Awards and Recognitions:

- IPR protected by filing patents in six countries- India, Thailand, Brazil, US, Europe, and Canada).
- European, Canadian and US patents have been granted for the product.
- FTO (Freedom - TO -Operate) obtained for the product in India
- BPCL R&D team bagged "Petrofed - Innovator of the Year: Team Special Commendation Award - 2011-12".
- First award in IDEAS'16 Creative Stroke (Marketing - Technical).



Petro Fed - Oil and Gas Industry Awards

A Make in India Initiative by BPCL R&D Centre

A step towards developing a product to promote ethanol blending in Motor Spirit. Ethanol can absorb significant amounts of water without phase separation. The dissolved water in ethanol causes corrosion in pipelines, storage tanks and fuel tanks. BPCL R&D developed a technically superior and cost-effective corrosion inhibitor BHARAT ECOCHEM for ethanol blended fuels which causes corrosion problems in automobile fuels, storage tanks and transportation lines due to the hygroscopic nature of ethanol.



PROJECT

Aim:

Project Nishchay (a non-fuel initiative) is a BPCL initiative launched in FY 2015-16 with a vision to create multiple non-fuel businesses and achieve disruptive growth through pathbreaking business ideas.

Coverage:

Four non-fuel offerings were identified for different customer segments viz:

1. “Umang” –

A rural marketplace for rural customers.

BPCL aspires to bring to the rural population a wide range of services 24*7 through technology, thereby making their lives easier as well as meeting the corporate vision of financial inclusion. In FY 2017-18, Umang has been expanded across Maharashtra, Uttar Pradesh, Madhya Pradesh, Rajasthan, Tamil Nadu and Odisha. The result has shown a good traction for various offerings, leading to increased footfalls at all Umang Retail Outlets. BPCL is now expanding this offering to other states and enrolled another 500 dealers and distributors during 2018-19.

2. “Fleetgenie” –

It is an Integrated Fleet Management Solution for the unorganized fleet segment.

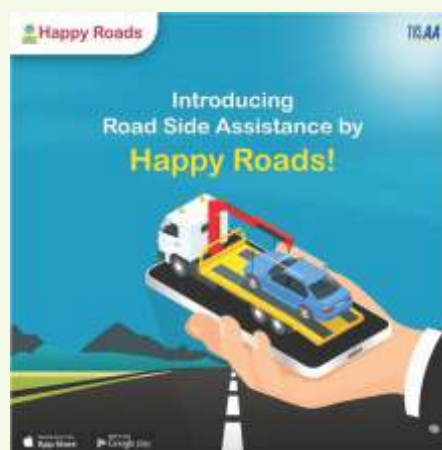
A technology driven Integrated Fleet Management (IFM) platform under the brand name “Fleetgenie”– was rolled out as a solution to address various pain points of fleet-owners with its bouquet of integrated services and aims to be a unique one stop shop for all stakeholders. It is a freight management marketplace for fleet owners, shippers and drivers with services like return load, roadside assistance, vehicle maintenance, cash management, advanced telematics, insurance and telemedicine.

3. “Happy Roads” -

It is designed as an end-to-end travel guide for the weekend road traveller. Post positive response of the market research on the core propositions of Destination Discovery and Trip Assurance, the Happy Roads app went live on Google Play Store in May 2017. With more than 80,000 downloads, it has reached an audience of over 8 lakhs and has more than 40,000 followers on social media till March '18. The platform has helped to remain connected with urban customers and provided a tool to Retail and Lubricants to disseminate information about marketing campaigns more effectively, making the campaigns more successful than ever in the past. Around 56 weekend destinations in 7 states namely Karnataka, Kerala, Himachal Pradesh, Uttarakhand, Jammu & Kashmir and Rajasthan are presently being featured with many more being curated to be added where avid road travellers would like to go. Based on the learnings from the pilot projects of above three initiatives, corrections have been applied and BPCL is now on the cusp of scaling up the activities to cover an extensive pan-India footprint.

4. “Shopongo”-

Omni channel solution for regular grocery needs of urban households has been plotted in Pune on trial bases in FY 2017-18.





Annexures



Annexure 1: Material Usage Breakup

REFINERIES		
Type of Material	UoM	Quantity
Oil/Lubricant	KL	667.5
Hydrochloric Acid	Tonnes	486.3
FCCU Catalyst	Tonnes	545.6
Caustic Lye (Sodium Hydroxide)	Tonnes	1,217.3
Hydrogen Peroxide	Tonnes	1,704.6
Bitumen Drum	Tonnes	4,246
Indigenous Crude	Tonnes	43,53,868
Imported Crude	Tonnes	2,37,94,785
Methanol	Tonnes	11,234
ISD (Intermediate Stock Difference)	Tonnes	-71,910.5
R-LNG (Regassified Liquefied Natural Gas)	Tonnes	9,258.7
Reformate	Tonnes	84,510
Reprocessed/Confiscated	Tonnes	249.9
Rock Salt	Tonnes	864.6
Fresh Catalyst,CCU	Tonnes	809
Di Ethanol Amine	Tonnes	1,592.8
Amine, Neutralising	Tonnes	35.6
Anti-Foulant	Tonnes	55.5
Lubricity Additive	Tonnes	1,272.7
Oil Recovered from Sludge	Tonnes	9,888.5
Reprocessed Slop	Tonnes	3,227
Foam procured for firefighting	Vol in KL	30.00

RETAIL		
Type of Material	UoM	Quantity
Additives - Speed	KL	132.1
Additives - Hi Speed	Tonnes	2
Additives - Speed 97	Tonnes	60.5
Blue Dye	Tonnes	22.8
Grease	Tonnes	2
Corrosion Inhibitor (Ethanol Additive):	KL	180.6
Ethanol	KL	1,52,324.2
Oil/Lubricant	KL	15.1
Any other (Liquid):	KL	112.2
Any other (Solid):	Tonnes	0.008
Foam procured for firefighting	KL	53,097.7
DCP Powder procured for firefighting	Tonnes	26.2

LUBRICANTS		
Type of Material	UoM	Quantity
Oil/Lubricant	KL	24,023
Base Oil	Tonnes	46,543.9
Additives (Barrels)	Tonnes	2,758.5
Dye	Tonnes	2.6
SKO (For Cleaning)	Tonnes	4.6
Additive for Printers	Tonnes	0.5
Metal Containers (BRLS/CASKS)	Tonnes	5,948.4
HDPE / VALREREX CONTAINERS/Plastic PAILS	Tonnes	1,852.2
CARTONS/CORRUGATED BOXES	Tonnes	2,450.3
Plastic Containers	Tonnes	6,976.4
Pouches	Tonnes	555.6
HFHSD	Tonnes	1,643
LDO	Tonnes	113
Foam procured for firefighting	KL	40
DCP Powder procured for firefighting	Tonnes	0.5

AVIATION		
Type of Material	UoM	Quantity
Oil/Lubricant	KL	0.4465
Any other (Liquid)	KL	0.79801
Any other (Solid)	Tonnes	0.064
Foam procured for firefighting	KL	50.00
DCP Powder procured for firefighting	Tonnes	3.818

BPCL does not use any recycled input materials to manufacture the organization's primary products and services. All materials

except Ethanol (Bio-ethanol) are non-renewable. Due to the nature of business, products sold by BPCL can't be reclaimed.

Annexure 2A-GHG Calculation Quantification Methodology

The methodology of calculation of GHG emissions from BPCL operating locations are aligned with the following standard definitions:

1. Stationary Combustion: Emission factors provided in the IPCC Guideline for National Greenhouse Gas Inventories of 2006 were used to calculate GHG emissions from stationary combustion sources. Activity data (quantity of fuel consumed) is multiplied with the respective default energy factor or actual measured Net Calorific Value (NCVs) and emission factor to quantify the direct emission from stationary combustion sources.

The emission factor used is 4.184

2. Purchased Electricity: The quantification of energy indirect GHG emission (Scope 2) is based on activity data (Purchased Electricity in kWh) multiplied by emission factors specified in the 'CO2 Baseline Database for the Indian Power Sector User Guide', issued by Central Electricity Authority, Government of India for Unified Grid.

The emission factor used is 0.82

3. Transportation: Only transportation considered for calculation of emissions is in-plant vehicular movement of the vehicles.

Emission factors provided in the IPCC Guideline for National Greenhouse Gas Inventories of 2006 were used to calculate GHG emissions from combustion sources. Activity data (quantity of fuel consumed) is multiplied with the respective default energy factor or actual measured Net Calorific Value (NCVs) and emission factor to quantify the emissions. For the purpose of this report FY 2017-18 is the Base year.

4. SOx and NOx Emissions: To arrive at SOx and NOx emissions, the average emission rate, running hours of diesel generators and boilers per month, and the oxide of Sulphur and Nitrogen are first computed.

a. The exhaust stacks are monitored for the net emission calculation for the following:

b. Concentration of SOx and NOx emission

c. Flow rate of exhaust gases

d. Running hours of Diesel Generators (DG) and boilers

5. GHG Emissions (Scope 3): The Air travel emissions are calculated basis the total distance travelled by the employees for Business related activities (domestic and international). The calculation of emissions due to the Crude and LNG import is done by considering the quantity of each of them transported by either VLCC/ULCC/VLGC carriers and smaller capacity carriers. For the purpose of this report FY 2017-18 is the Base year.

- The emission factor used for Air Travel is 0.1599
- The emission factor used for Crude and LNG import by VLCC/ULCC/VLGC and Other smaller capacity Carriers is 0.00000359 and 0.0000288 respectively

6. Ozone-Depleting Substances (ODS): The emission factors used for calculating the ODS are taken from GHG protocol.

7. 1BTU=1.055x10⁻⁶GJ

Annexure 2B- Water Calculation Quantification Methodology

There are various methodologies used at BPCL for calculating the water intake for e.g. through water meters, tank capacities/ calculations etc.

Annexure 3: Hazardous and Non-hazardous Waste Breakup

The modes of disposal for the below-mentioned hazardous wastes are mentioned on page no. 90.

Refineries		
Hazardous Waste	UoM	Quantity
Spent Catalyst (Recycled and Reused) (Hazardous) TSDF	Tonnes	428.3
Spent Catalyst (Recycled and Reused) (Hazardous): sold to recycling authority	Tonnes	1,520.1
Oily Sludge (Hazardous)	Tonnes	27.6
Waste Transformer Oil (Hazardous)	Tonnes	20.2
Spent Resin (Hazardous)	Tonnes	22.2
FCC Catalyst Fines (Hazardous)	Tonnes	89.9
Spent Molecular Sieves (Hazardous)	Tonnes	2.9
ETP Chemical Sludge (Hazardous)	Tonnes	53.4
Alumina Balls (Hazardous)	Tonnes	63.6
Spent Clay (Hazardous)	Tonnes	237.7
Batteries/Electronic Waste (Hazardous)	Tonnes	132
Sulfur Guard N HGU(Hazardous)	Tonnes	128
Reformer Catalyst R 67 N HGU(Hazardous)	Tonnes	81.3
Spent Charcoal (Hazardous)	Tonnes	29
Spent Coke (Hazardous)	Tonnes	16.3
Hazardous waste treated by bio-remediation	Tonnes	2,163.6
Hazardous waste transported out of your premises during the reporting period	Tonnes	13,577.1

Refineries		
Non-Hazardous Waste	UoM	Quantity
Ferrous Scrap (Non-Hazardous)	Tonnes	10,889.4
Tyres (Non-Hazardous)	Tonnes	5.81
Non-Ferrous Scrap (Non-Hazardous)	Number	212.9
Drums/Tins (Non-Hazardous)	Tonnes	34.2
Wooden Scrap (Non-Hazardous)	Tonnes	551.9

Retail		
Hazardous Waste	UoM	Quantity
Batteries (Hazardous)	Number	309
Sludge (Hazardous)	Tonnes	1,206.2
Paper Gasket (Hazardous)	Tonnes	16.2
Used Additive Barrels (Hazardous)	Tonnes	6.1
Used Oil (Hazardous)	KL	47.8
Damaged/Used Hose (Hazardous)	Number	939
Sample Containers with Wooden Casing (Hazardous)	Number	790
Used Hand Glove (Hazardous)	Tonnes	0.6
Scrap Cable (Hazardous)	Tonnes	2.5
Additive Containers (Hazardous)	Tonnes	3.2
Drums/Tins (Hazardous)	Tonnes	1.2

Retail		
Non-Hazardous Waste	UoM	Quantity
Ferrous Scrap (Non-Hazardous)	Tonnes	34.5
Tyres (Non-Hazardous)	Number	12
Non-Ferrous Scrap (Non-Hazardous)	Tonnes	1.4
Drums/Tins(Non-Hazardous)	Tonnes	1.3
Filters (Non-Hazardous)	Number	597
Wooden Scrap (Non-Hazardous)	Tonnes	1.5
Saw Dust (Non-Hazardous)	Tonnes	0.2
Kitchen Waste (Non-Hazardous)	Tonnes	46

Seal Wire (Non-Hazardous)	Tonnes	2.5
Plastic Seals (Non-Hazardous)	Tonnes	3.2

Lubricants		
Hazardous Waste	UoM	Quantity
Used Cotton Waste (Hazardous)	Number	6.9
Used Additive Barrels (Hazardous)	Tonnes	342.9
Ows Sludge (Hazardous)	Tonnes	34
Slop Generated (Hazardous)	Tonnes	1,685.4
Market Returned Product (Hazardous)	Tonnes	0.685
Empty Containers (Hazardous)	Tonnes	416.2
MS Scrap Barrels (Heavy /Light Weight) (Hazardous)	Number	45,663
HDPE Scrap Containers (Hazardous)	Tonnes	11.2
HDPE Scrap Barrels (Hazardous)	Tonnes	1.2

Lubricants		
Non-Hazardous Waste	UoM	Quantity
Tyres (Non-Hazardous)	Number	32
Saw Dust (Non-Hazardous)	Tonnes	8
Kitchen Waste (Non-Hazardous)	Tonnes	5.2
Plastic Scrap (Non-Hazardous)	Tonnes	57.4

LPG		
Hazardous Waste	UoM	Quantity
Batteries (Hazardous)	Number	241
Paint Residue/Sludge (Hazardous)	Tonnes	21.9
Scrap Rubber O Ring (Hazardous)	Tonnes	373.8
White /Black / Scrap Plastic (Hazardous)	Tonnes	8
Scrap Empty Soap Drums (Hazardous)	Number	9,066
Damaged Delrin Caps (Hazardous)	Tonnes	391.4
Scrap Paint Drums 20 Lit. (Hazardous)	Number	31,590.5
Used Cotton Waste (Hazardous)	Tonnes	4.8

Used Hand Gloves (Hazardous)	Number	59,318.5
Used Filters (Hazardous)	Number	30,797
Oil & Grease Barrels (Hazardous)	Number	462.9
Damaged or Defective Loading and Unloading Hoses (Hazardous)	Number	4,069
Used / Scrapped Crushed LPG Cylinders (Hazardous)	Tonnes	407.6
Primer Sludge (Hazardous)	Tonnes	30.8
SC Valve Scrap (Hazardous)	Number	3,260,560
Defective DPR (Hazardous)	Number	8,35,714.02
Used Additive Barrel- BCG (Hazardous)	Number	488.6
Paper Gasket (Hazardous)	Kgs	37.5
Drums/Tins (Hazardous)	Tonnes	6.3
Hazardous waste treated by bio-remediation	Kgs	75
Hazardous waste transported out of your premises during the reporting period	Tonnes	5.6

LPG		
Non-Hazardous Waste	UoM	Quantity
Ferrous Scrap (Non-Hazardous):	Tonnes	1,160.6
Tyres (Non-Hazardous):	Number	18,434
Non-Ferrous Scrap (Non-Hazardous):	Tonnes	75.2
Drums/Tins(Non-Hazardous):	Tonnes	39.3
Wood Scrap (Non-Hazardous):	Tonnes	320
Used Oil (Non-Hazardous):	Tonnes	9.6
Wooden Scrap (Non-Hazardous):	Tonnes	319.3

AVIATION		
Hazardous Waste	UoM	Quantity
Drums/Tins(Hazardous)	Kgs	4

AVIATION		
Non-Hazardous Waste	UoM	Quantity
Ferrous Scrap (Non-Hazardous)	Kgs	371.6
Tyres (Non-Hazardous)	Number	107
Non-Ferrous Scrap (Non-Hazardous)	Kgs	40

Drums/Tins (Non-Hazardous)	Kgs	7
Filters (Non-Hazardous)	Number	948
Solid Waste (Disposed Through Municipal Lorry) (Non-Hazardous)	Kgs	606
Wooden Scrap (Non-Hazardous)	Kgs	17

Annexure 4- Employee Representation

The Joint Management Worker Health and Safety Committee represents 100% of workers whose work or work place is controlled by the Organisation.

Refineries	Management	Non-Management
Management Health Safety Security Environment Committee (MHSSEC) Committee:	36	0
Joint Health Safety Security Environment Committee (JHSSEC) Committee:	19	19
Joint Safety Committee Including Contract Labour Committee:	12	12

Retail	Management	Non-Management
Plant Safety Committee:	400	383

LPG	Management	Non-Management
Safety Committee:	262	254
Quality Circle Committee:	177	233

Lubricants	Management	Non-Management
Safety Committee:	29	25
Station Fire Order Team Committee:	45	186

Aviation	Management	Non-Management
Safety Committee:	102	96
Station Fire Order Team Committee:	109	126

Annexure 5- Stakeholder Engagement and Materiality

List of Stakeholders taken into consideration:		
Employees	Shareholders	Academia
Customers	Government and Regulators	Competitors
Dealers and Distributors	Suppliers	Research Centers
NGO's	Local Communities	Ex-Employees
Civil Society	Media	

Annexure 6- BPCL's Policies

I. Health, Safety and Environment Policy of BPCL

Commitment -BPCL's Sustainability Policy validates our concern and commitment for protecting the health and safety of all employees, contractors, customers and the communities in which we operate and for conservation of environment.

a) We comply with all Statutory Regulations and may even go beyond these for the benefit of our environment.

b) We consider Health, Safety and Environmental aspects are an integral part of our business planning and operation processes.

Policy -Based on these guiding principles, we shall:

Demonstrate our commitment by

- Providing and maintaining safe facilities and working conditions.
- Recognising that all employees have responsibility for their own safety and actions which could affect the safety of others.
- Adoption of appropriate technologies to minimise the impact of our activities on the Environment.

Establish clear objectives and targets to

- Improve continuously for prevention of accidents & occupational illnesses and minimising any impact of our activities on the environment.

- Promote learning through training and sharing of experiences and best practices; including with contractors, customers and the public, wherever required.

- Inculcate values and attitudes conducive to achieve excellence in Health, Safety and Environmental performance.

Provide means to achieve our mission by

- Assigning clear roles and responsibilities at all levels and periodically reviewing and recognising contribution to HSE objectives.
- Allocating adequate resources.

- Fostering a spirit of participation by all employees in Health, Safety and Environmental conservation efforts.

- Creating appropriate forums for deliberations on Health, Safety and Environmental issues.

Monitor performance by

- Periodically auditing work processes, systems & practices and promptly correcting deficiencies.

- Incorporating HSE performance as a parameter for assessing the overall performance of Employees, Business Units, Contractors and Business Associates.

II. Security Policy of BPCL

Commitment -

We have the highest concern for the Security of human lives and Corporation's properties, goods and services. We also commit ourselves to be alert and responsible to prevent theft, misuse, loss, damage, pilferage and sabotage of any nature which will hamper our business interests / continuity.

Policy - Commensurate with this commitment, we shall:

- Adhere to security rules, regulations and laws of the land.
- Provide effective and proactive measures for Physical and Internal Security as explained in

the Security Manual – at all Refineries and Marketing establishments.

- Keep ourselves in readiness to meet all emergency situations by appropriate action plans.
- Actively participate in implementation of security measures to combat external threats.
- Reinforce the security set up by providing regular trainings and up gradation of facilities.
- Monitor effectiveness of security measures by surprise checks, mock drills and take corrective actions.

III. Sustainable Development Policy of BPCL

“Together, we care for environment and comply with all statutory regulations to conserve and sustain the natural, social and biodiversity as integral part of our operational processes and Business”.

Energy Intensity for BUs

ENERGY INTENSITY - BUs (GJ/Tonne of Throughput)			
BUs	FY 2017-18	FY 2016-17	FY 2015-16
Retail	0.023	0.023	0.022
LPG	0.022	0.1	0.098
Lube	0.002	0.22	0.15
Aviation	0.003	0.046	0.047

Glossary

AFS	Aviation Fuelling Station	IREP	Integrated Refinery Expansion Project
API	American Petroleum Institute	ISAE	International Standard on Assurance Engagements
ASSOCHAM	Associate Chambers of Commerce and Industry	IDP	Individual Development Plan
ATF	Aviation Turbine Fuel	IREP	Integrated Refinery Expansion project
BMCG	Bharat Metal Cutting Gas	I&C	Industrial & Commercial
BPCL	Bharat Petroleum Corporation Limited	JV	Joint Venture
BPLC	Bharat Petroleum Learning Centre	KL	Kilo Litre
BPRL	Bharat Petro Resources Ltd	KR	Kochi Refinery
BPRL	Bharat Renewable Energy Limited	LED	Light Emitting Diode
BRR	Business Responsibility Report	LPG	Liquefied Petroleum Gas
CAL	Computer Assisted Learning	MMBTU	Million British Thermal Unit
CDU	Crude Distillation Unit	MMPA	Million Metric Tonnes per Annum
CFC	Chlorofluorocarbon	MoP&NG	Ministry of Petroleum and Natural Gas
CII	Confederation of Indian Industry	MOU	Memorandum of Understanding
C&MD	Chairman and Managing Director	MR	Mumbai Refinery
CSR	Corporate Social Responsibility	MS	Motor Spirit
CREP	Corporate Responsibility for Environment Protection	MSE	Micro and Small Enterprises
COCO	Company Owned Company Operated	MTO	Mineral Turpentine Oil
CPO	Central Procurement Offices	MRT	Manglia Receipt Terminal
CUBE	Customer Understanding for Business Excellence	NGO	Non-Governmental Organisation
DPE	Department of Public Enterprises	NRL	Numaligarh Refinery Limited
DEP	Directorate of Public Enterprises	NSC	National Safety Council
E&P	Exploration & Planning	NVG	National Voluntary Guidelines
ED	Executive Director	ODS	Ozone Depleting Substance
ERP	Enterprise Resource Planning	PPM	Parts Per Million
ESE	Employee Satisfaction Enhancement	PRISM	Performance Related Incentive Scheme for Management Staff
ETP	Effluent Treatment Plant	PMPR	Preparedness, Mitigation, Planning and Restoration
EEL	Energy Efficient Lighting	PMUY	Pradhan Mantri Ujjwala Yojana
FICCI	Federation of Indian Chambers of Commerce and Industry	PSU	Public Sector Undertaking
FO	Fuel Oil	QPR	Quarterly Performance Reviews
GHG	Green House Gas	R&D	Research and Development
GJ	GigaJoule	RLNG	Regasified Liquefied Natural Gas
GRI	Global Reporting Initiative	RWH	Rain Water Harvesting
HSD	High Speed Diesel	SBU	Strategic Business Unit
HSE	Health, Safety and Environment	STP	Sewage Treatment Plant
HSSE	Health, Safety, Security and Environment	SEBI	Securities and Exchange Board of India
IOCL	Indian Oil Corporation Limited	SME	Small and Medium Enterprises
IRQS	Indian Register Quality System	SRU	Sulfur Recovery Unit
IPIECA	International Petroleum Industry Environmental Conservation Association	STP	Sewage Treatment Plant
		SECC	Social Economic Caste Census
		TRPs	Talent Review Panels
		UV	Ultra Violet
		VTS	Vehicle Tracking System

Acknowledgement



We hope that the readers found the Sustainable Development Report informative!

It gives us immense pleasure to present to you our 12th Annual Sustainable Development Report. The Corporate HSSE team at BPCL has put in their efforts in the development of the report. The report has been developed in accordance with the triple bottom line approach of BPCL. We extend our gratitude towards our internal and external stakeholders for their valuable time and constant support extended throughout the preparation of the report.

We are one of the largest Oil and Natural Gas companies of the nation and are thoroughly aware of the criticality of operating in an extensively resource consuming sector. It is most crucial for us to incorporate sustainability as a foundation for all our operations. We focus on enhancing energy and operational efficiency, improving processes and technologies, reducing resource consumption to minimise our impact on the environment and creating a healthy, safe and secure workplace. We work towards creating value for our stakeholders, improve on our disclosures and engage with the stakeholders.

We would be glad to receive feedbacks on our report.

Corporate HSSE Team
Bharat Petroleum Corporation Limited

GRI Standards	Disclosure	Page No.	Omissions
GRI101: Foundation 2016 (GRI 101 doesn't include any disclosures)			
General Disclosures			
Organisational Profile			
GRI 102: General Disclosures 2016	102-1 Name of the Organization	11	this disclosure cannot be omitted
	102-2 Activities, brands, products, and services	15, 18	this disclosure cannot be omitted
	102-3 Location of headquarters	13	this disclosure cannot be omitted
	102-4 Location of operations	14, 18	this disclosure cannot be omitted
	102-5 Ownership and legal form	14	this disclosure cannot be omitted
	102-6 Markets served	18	this disclosure cannot be omitted
	102-7 Scale of the organization	14, 53, 62	this disclosure cannot be omitted
	102-8 Information on employees and other workers	11, 61-63	BPCL does not collect detailed data for contract employees
	102-9 Supply chain	15	this disclosure cannot be omitted
	102-10 Significant changes to the organization and its supply chain	11	this disclosure cannot be omitted
	102-11 Precautionary Principle or approach	29-33, 118	this disclosure cannot be omitted
	102-12 External initiatives	11, 15, 89	this disclosure cannot be omitted
	102-13 Membership of associations	25	this disclosure cannot be omitted
Strategy			
GRI 102: General Disclosures 2016	102-14 Statement from senior decision maker	4-9	this disclosure cannot be omitted
	102-15 Key impacts, risks, and opportunities	29-33	this disclosure cannot be omitted
Ethics and Integrity			
GRI 102: General Disclosures 2016	102-16 Values, principles, standards, and norms of behaviour	20	this disclosure cannot be omitted
	102-17 Mechanisms for advice and concerns about ethics	25-26	this disclosure cannot be omitted
Governance			

GRI Standards	Disclosure	Page No.	Omissions
GRI 102: General Disclosures 2016	102-18 Governance structure	22-24	this disclosure cannot be omitted
	102-19 Delegating authority	24	this disclosure cannot be omitted
	102-20 Executive-level responsibility for economic, environmental, and social topics	24	this disclosure cannot be omitted
	102-21 Consulting stakeholders on economic, environmental, and social topics	42-50	this disclosure cannot be omitted
	102-22 Composition of the highest governance body and its committees	22-24	this disclosure cannot be omitted
	102-23 Chair of the highest governance body	23	this disclosure cannot be omitted
	102-24 Nominating and selecting the highest governance body	22	this disclosure cannot be omitted
	102-25 Conflicts of interest	22	this disclosure cannot be omitted
	102-26 Role of highest governance body in setting purpose, values, and strategy	22, 24	this disclosure cannot be omitted
	102-27 Collective knowledge of highest governance body	22	this disclosure cannot be omitted
	102-28 Evaluating the highest governance body's performance	22	this disclosure cannot be omitted
	102-29 Identifying and managing economic, environmental, and social impacts	24, 42, 45	this disclosure cannot be omitted
	102-30 Effectiveness of risk management processes	29-33	this disclosure cannot be omitted
	102-31 Review of economic, environmental, and social topics	24	this disclosure cannot be omitted
	102-32 Highest governance body's role in sustainability reporting	24	this disclosure cannot be omitted
	102-33 Communicating critical concerns	26, 43	this disclosure cannot be omitted
	102-34 Nature and total number of critical concerns	26	this disclosure cannot be omitted
	102-35 Remuneration policies	25	this disclosure cannot be omitted
102-36 Process for determining remuneration	25	this disclosure cannot be omitted	
102-37 Stakeholders' involvement in remuneration	25	this disclosure cannot be omitted	

GRI Standards	Disclosure	Page No.	Omissions
GRI 102: General Disclosures 2016	102-38 Annual total compensation ratio	65	this disclosure cannot be omitted
	102-39 Percentage increase in annual total compensation ratio	65	this disclosure cannot be omitted
Stakeholder Engagement			
GRI 102: General Disclosures 2016	102-40 List of stakeholder groups	42	this disclosure cannot be omitted
	102-41 Collective bargaining agreements	66	this disclosure cannot be omitted
	102-42 Identifying and selecting stakeholders	42	this disclosure cannot be omitted
	102-43 Approach to stakeholder engagement	42-45	this disclosure cannot be omitted
	102-44 Key topics and concerns raised	43	this disclosure cannot be omitted
Reporting Practice			
GRI 102: General Disclosures 2016	102-45 Entities included in the consolidated financial statements	11	this disclosure cannot be omitted
	102-46 Defining report content and topic Boundaries	11	this disclosure cannot be omitted
	102-47 List of material topics	46-50	this disclosure cannot be omitted
	102-48 Restatements of information	98	this disclosure cannot be omitted
	102-49 Changes in reporting	11	this disclosure cannot be omitted
	102-50 Reporting period	11	this disclosure cannot be omitted
	102-51 Date of most recent report	11	this disclosure cannot be omitted
	102-52 Reporting cycle	11	this disclosure cannot be omitted
	102-53 Contact point for questions regarding the report	11	this disclosure cannot be omitted
	102-54 Claims of reporting in accordance with the GRI Standards	11	this disclosure cannot be omitted
	102-55 GRI content index	135-142	this disclosure cannot be omitted
	102-56 External assurance	11	this disclosure cannot be omitted

GRI Standards	Disclosure	Page No.	Omissions
Material Topics			
GRI 201- Economic Performance			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	55	
	201-2 Financial implications and other risks and opportunities due to climate change	33	
	201-3 Defined benefit plan obligations and other retirement plans	65	
	201-4 Financial assistance received from government	55	
GRI 202- Market Presence			
GRI 202- Market Presence 2016	202-1 Ratios of standard entry level wage by gender compared to local minimum wage	11, 64	
	202-2 Proportion of senior management hired from the local community	11, 61	
GRI 203- Indirect Economic Impacts			
GRI 203- Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	78-87	
GRI 204- Procurement Practices			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 204- Procurement Practices 2016	204-1 Proportion of spending on local suppliers	113	
GRI 205- Anti-corruption			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 205- Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	26	
	205-2 Communication and training about anti-corruption policies and procedures	27	
	205-3 Confirmed incidents of corruption and actions taken	26	
GRI 206- Anti-competitive Behavior			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	









GRI Standards	Disclosure	Page No.	Omissions
GRI 205- Anti-corruption 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	26	
GRI 301- Materials			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 301- Materials 2016	301-1 Materials used by weight or volume	123-125	
	301-2 Recycled input materials used	125	
	301-3 Reclaimed products and their packaging materials	107	
GRI 302- Energy			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 302- Energy 2016	302-1 Energy consumption within the organization	97, 98, 125	
	302-2 Energy consumption outside of the organization	98, 125	
	302-3 Energy intensity	98	
	302-4 Reduction of energy consumption	91-96, 99	
GRI 303- Water			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 303- Water 2016	303-1 Water withdrawal by source	102-103, 126	
	303-2 Water sources significantly affected by withdrawal of water	102, 126	
	303-3 Water recycled and reused	103, 126	
GRI 305- Emissions			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 305- Emissions 2016	305-1 Direct (Scope 1) GHG emissions	100, 125	
	305-2 Energy indirect (Scope 2) GHG emissions	100, 125	
	305-3 Other indirect (Scope 3) GHG emissions	101, 125	
	305-4 GHG emissions intensity	101, 126	
	305-5 Reduction of GHG emissions	94, 125	









GRI Standards	Disclosure	Page No.	Omissions
	305-6 Emissions of ozone-depleting substances (ODS)	101,126	
	305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	101,125	
GRI 306- Effluents and Waste			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 306- Effluents and Waste 2016	306-1 Water discharge by quality and destination	103-104	
	306-2 Waste by type and disposal method	106-107, 126-130	
	306-3 Significant spills	105	
	306-4 Transport of hazardous waste	107,126	
	306-5 Water bodies affected by water discharges and/or runoff	103	
GRI 307- Environmental Compliance			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 307- Environmental Compliance 2016	307-1 Non-compliance with environmental laws and regulations	105	
GRI 401- Employment			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 401- Employment 2016	401-1 New employee hires and employee turnover	62-64	The rates for new employee hires and employee turnover by age and region is not reported
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	65	
	401-3 Parental leave	64	
GRI 402- Labor/Management			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
	402-1 Minimum notice periods regarding operational changes	67	

GRI Standards	Disclosure	Page No.	Omissions
GRI 403- Occupational health and Safety			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 403- Occupational health and Safety 2016	403-1 Workers representation in formal joint management-Worker Health and Safety Committees	130	
	403-2 Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	72	Gender-wise data is not collected
	403-3 Workers with high incidence or high risk of diseases related to their occupation	70	
	403-4 Health and safety topics covered in formal agreements with trade unions	66	
GRI 404- Training and Education			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 404- Training and Education 2016	404-1 Average hours of training per year per employee	61, 64	
	404-2 Programs for upgrading employee skills and transition assistance programs	61	
	404-3 Percentage of employees receiving regular performance and career development reviews	57	
GRI 405- Diversity and Equal Opportunity			
GRI 405- Diversity and Equal Opportunity 2016	405-1 Diversity of governance bodies and employees	23, 61	
	405-2 Ratio of basic salary and remuneration of women to men	61, 64	
GRI 406- Non-discrimination			
GRI 406- Non-discrimination 2016	406-1 Non-discrimination	22, 61	
GRI 413- Local Communities			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 413- Local Communities 2016	413-1 Operations with local community engagement, impact assessments, and development programs	78-87	

GRI Standards	Disclosure	Page No.	Omissions
GRI 413- Local Communities 2016	413-2 Operations with significant actual and potential negative impacts on local communities	81	
GRI 415- Public Policy			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 415- Public Policy 2016	415-1 Political contributions	55	
GRI 416- Customer Health and Safety			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 416- Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	118	
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	117	
GRI 419- Socioeconomic Compliance			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
GRI 419- Socioeconomic Compliance 2016	419-1 Non-compliance with laws and regulations in the social and economic area on-compliance with laws and regulations in the social and economic area	67, 105, 117	
Sector Specific Indicators			
GRI 103: Management Approach 2016	103-1,2,3 Management Approach	47-50	
Sector Specific Indicators	OG2 Total amount invested in Renewable Energy	94	
	OG3 Total amount of Renewable Energy generated by source	94	
	OG13 Number of Process Safety Events, by Business Activity	71, 112	
	OG14 Volume of biofuels produced and purchased meeting sustainability criteria	119	

Linkage with Sustainable Development Goals

Goals	Sustainable Development Goals	Chapter Names
 <p>1 NO POVERTY</p>	End poverty in all its forms everywhere	<ul style="list-style-type: none"> • Harmonising with Workforce
 <p>2 ZERO HUNGER</p>	End hunger achieve food security an improved nutrition and promote sustainable agriculture	<ul style="list-style-type: none"> • Connecting with Communities – CSR Programmes
 <p>3 GOOD HEALTH AND WELL-BEING</p>	Ensure healthy lives and promote well-being for all at all ages	<ul style="list-style-type: none"> • Approach towards Safety • Connecting with Communities – CSR Programmes
 <p>4 QUALITY EDUCATION</p>	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	<ul style="list-style-type: none"> • Connecting with Communities – CSR Programmes
 <p>5 GENDER EQUALITY</p>	Achieve gender equality and empower all women and girls	<ul style="list-style-type: none"> • Harmonising with Workforce
 <p>6 CLEAN WATER AND SANITATION</p>	Ensure availability and sustainable management of water and sanitation for all	<ul style="list-style-type: none"> • Connecting with Communities – CSR Programmes
 <p>7 AFFORDABLE AND CLEAN ENERGY</p>	Ensure access to affordable, reliable, sustainable and modern energy for all	<ul style="list-style-type: none"> • Minimising Environmental Impact • Operations of BPCL
 <p>8 DECENT WORK AND ECONOMIC GROWTH</p>	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	<ul style="list-style-type: none"> • Harmonising with Workforce • Connecting with Communities – CSR Programmes • Operations of BPCL

Goals	Sustainable Development Goals	Chapter Names
 <p>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</p>	Build resilient infrastructure, promote inclusive and sustainable industrialisation and foster innovation	<ul style="list-style-type: none"> • Operations of BPCL
 <p>10 REDUCED INEQUALITIES</p>	Reduce inequality within and among countries	<ul style="list-style-type: none"> • Harmonising with Workforce • Connecting with Communities – CSR Programmes
 <p>11 SUSTAINABLE CITIES AND COMMUNITIES</p>	Make cities and human settlements inclusive, safe, resilient and sustainable	<ul style="list-style-type: none"> • Connecting with Communities – CSR Programmes
 <p>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</p>	Ensure sustainable consumption and production patterns	<ul style="list-style-type: none"> • Stakeholder Engagement and Materiality • Minimising Environmental Impact • Operations of BPCL
 <p>13 CLIMATE ACTION</p>	Take urgent action to combat climate change and its impacts	<ul style="list-style-type: none"> • Opportunities, Risk and Challenges • Minimising Environmental Impact
 <p>15 LIFE ON LAND</p>	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss	<ul style="list-style-type: none"> • Connecting with Communities – CSR Programmes • Minimising Environmental Impact
 <p>16 PEACE, JUSTICE AND STRONG INSTITUTIONS</p>	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels	<ul style="list-style-type: none"> • About this Report • Corporate Governance and Ethics • Harmonising with Workforce
 <p>17 PARTNERSHIPS FOR THE GOALS</p>	Strengthen the means of implementation and revitalise the global partnership for sustainable development	<ul style="list-style-type: none"> • Opportunities, Risk and Challenges • Minimising Environmental Impact



KPMG (Registered)
1st Floor, Lodha Excelus
Apollo Mills Compound
N. M. Joshi Marg, Mahalaxmi
Mumbai - 400 011, India

Telephone: +91 (22) 3989 6000
Fax: +91 (22) 3090 2511
Internet: www.kpmg.com/in

Independent Limited Assurance Statement to Bharat Petroleum Corporation Limited on its Sustainability Report for Financial Year 2017-18

To the Management of Bharat Petroleum Corporation Limited, Bharat Bhawan, Currimbhoy Road, Ballard Estate, Mumbai 400001.

Introduction

Bharat Petroleum Corporation Limited ('BPCL' or 'The Company') has requested KPMG (Registered) in India ('KPMG', or We) to provide an independent assurance on its Sustainability Report for the FY 2017-18 ('the Report'). The Company's management is responsible for identifying its material topics, engaging with its stakeholders and developing the content of the Report. KPMG's responsibility is to provide limited assurance on the Report as described in the scope of assurance.

Reporting Criteria

BPCL applies sustainability reporting criteria derived from the following:

- Global Reporting Initiative (GRI) Standards 'in accordance Comprehensive' option including the Oil & Gas sector disclosures.
- International Petroleum Industry Environmental Conservation Association and the American Petroleum Institute's Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (2010) (API/PIECA/OGP).
- National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Businesses in India, issued by the Ministry of Corporate Affairs, Government of India.

Assurance Standards Used

We conducted our assurance in accordance with

- Limited Assurance requirements of International Federation of Accountants' (IFAC) International Standard on Assurance Engagement (ISAE) 3000 (revised), Assurance Engagements Other than Audits or Reviews of Historical Financial Information,
 - Under this standard, we have reviewed the information presented in the report against the characteristics of relevance, completeness, reliability, neutrality and understandability
- Type 2, Moderate level assurance requirements of AA1000 Assurance Standard 2008 by AccountAbility,
 - Under this standard, we have reviewed the nature and extent of adherence to the AA1000 AccountAbility Principles and the quality of publicly disclosed information as part of the report limited to performance indicators/information required by GRI Standards.

Scope, Boundary and Limitations

The scope of assurance covers the sustainability disclosures of BPCL for the period 01 April 2017 to 31 March 2018 limited to the disclosures as mentioned in the table below.

The boundary of the report covers the economic, environmental and social performance of BPCL's operations in India as stated in the 'About this Report' section of the Report.

We have carried out assurance visits to the following sites:

- Refineries: Kochi, Mumbai
- LPG bottling plants: Hyderabad, Loni



- Lubes: Budge Budge, Wadi
- Retail: Bijwasan, Mangliya, Mangalore
- Aviation: Delhi, Kochi
- Corporate Office: Mumbai

Our assurance process was subject to the following limitations:

- Verification of claims was limited to data and information presented in the Report for the period 01 April 2017 to 31 March 2018.
- Any statement/ remarks/ comments indicating intention, opinion, belief and/ or aspiration by BPCL were excluded from the scope of assurance.
- KPMG did not perform any role in determining which if any, recommendations should be implemented.
- The Assurance Statement does not include verification of financial performance indicators/information that was sourced from BPCL's FY 2017-18 Annual Report.

The General, Management Approach and Topic Specific Disclosures subject to assurance were as follows:

<p>General Disclosures</p> <ul style="list-style-type: none"> • Organizational profile: 102-1 to 102-4, 102-6 to 102-8, 102-12 to 102-13 • Strategy: 102-14 to 102-15 • Ethics and integrity: 102-16 • Governance: 102-18 to 102-20, 102-23, 102-26, 102-32 • Stakeholder engagement: 102-40 to 102-44 • Reporting practice: 102-45 to 102-56
<p>Management Approach</p> <ul style="list-style-type: none"> • 103-1 to 103-3
<p>Specific Disclosures</p> <ul style="list-style-type: none"> • Economic <ul style="list-style-type: none"> ○ Economic Performance: 201-2 ○ Anti-corruption: 205-1, 205-2 ○ Anti-competitive Behavior: 206-1 • Environmental <ul style="list-style-type: none"> ○ Materials: 301-1, 301-2 ○ Energy: 302-1, 302-4 ○ Water: 303-1 to 303-3 ○ Emissions: 305-1, 305-2, 305-4, 305-6, 305-7 ○ Effluents and Waste: 306-1 to 306-5 ○ Environmental Compliance: 307-1 • Social <ul style="list-style-type: none"> ○ Employment: 401-1 to 401-3 ○ Labor/Management Relations: 402-1 ○ Occupational Health and Safety: 403-1, 403-2 ○ Training and Education: 404-2, 404-3 ○ Local Communities: 413-1 to 413-2 ○ Socioeconomic Compliance: 419-1
<p>Oil and Gas Sector Disclosures</p> <ul style="list-style-type: none"> • Renewable energy <ul style="list-style-type: none"> ○ Total amount invested in Renewable Energy: OG2 ○ Total amount of Renewable Energy generated by source: OG3



Assurance procedures

Our assurance processes involve performing procedures to obtain evidence about the reliability of specified disclosures. The nature, timing and extent of procedures selected depend on our judgment, including the assessment of risks of material misstatement of disclosures whether due to fraud or error. In making those risk assessments, we have considered internal controls relevant to the preparation of the Report in order to design assurance procedures that are appropriate in the circumstances. The procedures performed in a limited assurance engagement are less in extent than for a reasonable assurance engagement.

Our assurance procedures also included:

- Assessment of BPCL's reporting procedures for sustainability reporting regarding their consistency with the application of GRI Standards.
- Evaluating the appropriateness of the quantification methods used to arrive at the data presented in the Report.
- Verification of systems and procedures used for quantification, collation, and analysis of sustainability disclosures included in the Report.
- Understanding the appropriateness of various assumptions, estimations and used by BPCL for data analysis.
- Discussions with the personnel responsible for the evaluation of competence required to ensure reliability of data and information presented in the Report.
- Assessment of the stakeholder engagement process through personal interviews and review of relevant documentation.
- Assessment of data reliability and accuracy.
- Verification of key performance data through site visits on an annual basis for
 - Testing reliability and accuracy of data on a sample basis
 - Review of the processes deployed for collection, compilation, and reporting of sustainability disclosures at corporate and site level

Appropriate documentary evidence was obtained to support our conclusions on the disclosures verified. Where such documentary evidence could not be collected due to confidentiality of the information, our team verified the same at BPCL's premise.

Conclusions

We have reviewed the Sustainability Report of BPCL. Based on our review and procedures performed as per the scope of work, nothing has come to our attention that causes us not to believe that the sustainability data and information presented in the Report is appropriately stated, in material topics, and in line with the reporting principles of GRI Standards.

We have provided our observation to the company in a separate management letter. These, do not, however, affect our conclusions regarding the Report

As per AA1000AS 2008 Principles:

- **Principle of Inclusivity:** BPCL has a stakeholder engagement process in place. The report fairly communicates the frequency and the mode of engagement with stakeholders - both internal and external, highlighting the outcomes of interactions and the Company's responses towards the same. The company may include disclosures on the actions taken within the organization along with the progress made for addressing the concerns and expectations of its stakeholders.



- **Principle of Materiality:** BPCL periodically reviews its materiality process, prioritizing its sustainability focus areas, taking into account changing sustainability context and stakeholders' expectations. The Company may now plan to extend the materiality determination process to include its supply chain/ immediate suppliers.
- **Principle of Responsiveness:** BPCL has processes and systems in place to achieve the responses it commits to its stakeholders. The Report may now disclose sustainability roadmap for BPCL highlighting progress on the sustainability goals and targets the Company has taken up internally to its stakeholders.

Nothing has come to our notice for us to believe that the data presented in the Report and verified by us as per the scope of this engagement is not reliable. Data transcription and calculation errors were detected but the same was resolved during the assurance process.

Independence

The assurance was conducted by a multidisciplinary team including professionals with suitable skills and experience in auditing environmental, social and economic information in line with the requirements of the ISAE 3000 (revised) standard. Our work was performed in conformance to the requirements of the IFAC Code of Ethics for Professional Accountants, which requires, among other requirements, that the members of the assurance team (practitioners) as well as the assurance firm (assurance provider) be independent of the assurance client, in relation to the scope of this assurance engagement, including not being involved in writing the Report. The Code also includes detailed requirements for practitioners regarding integrity, objectivity, professional competence and due care, confidentiality and professional behavior. KPMG has systems and processes in place to monitor compliance with the Code and to prevent conflicts regarding independence. The firm applies International Standard on Quality Control (ISQC) 1 and the practitioner complies with the applicable independence and other ethical requirements of the International Ethics Standards Board for Accountants (IESBA) code

Responsibilities & Restriction on use of our report

BPCL is responsible for developing the Report contents. BPCL is also responsible for identification of material sustainability topics, establishing and maintaining appropriate performance management and internal control systems and derivation of performance data reported.

This statement is made solely to the Management of BPCL in accordance with the terms of our engagement and as per scope of assurance. Our work has been undertaken so that we might state to BPCL those matters for which we have been engaged to state in this statement and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than BPCL for our work, for this Report or for the conclusions expressed in this independent assurance statement. The assurance engagement is based on the assumption that the data and information provided to us is complete and true.

We expressly disclaim any liability or co-responsibility for any decision a person or entity would make based on this assurance statement. By reading this assurance statement, stakeholders acknowledge and agree to the limitations and disclaimers mentioned above.

Prathmesh Raichura
Director
KPMG in India
21 December 2019



AA1000
Licensed Assurance Provider
000-25

CHAIRMAN'S OFFICE
Bharat bhavan,
4 and 6 Currimbhoy Road,
Ballard Estate,
Mumbai 400001, India

Tel No.: +91-22-22713000,
+91-22-22714000
<http://www.bharatpetroleum.in>