



Sustainable Development Report 2016-2017

Bharat Petroleum Corporation Limited

Fuelling Sustainability Aspirations



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1 Scope of the Report

The theme of this year's annual Sustainable Development Report is '**Fuelling Sustainability Aspirations**' which focuses on Bharat Petroleum Corporation Limited (BPCL)'s responsible growth and sustainable practices. The report covers environmental, social and governance performance of the Company. The report is developed based on the Global Reporting Initiative (GRI) G4 Guidelines in accordance to the "Core" criteria for reporting. To attain the "Core" criteria, BPCL needs to report on at least one indicator for each identified material aspect, and the Management Approach for the identified material aspects. This is BPCL's eleventh year of reporting on social, environmental and governance parameters and tenth consecutive year of reporting based on GRI Guidelines. BPCL also reports on disclosures of 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).

BPCL has continued their association with M/s NextGen PMS Pvt. Ltd. for providing advisory services to build this report and assist with driving the sustainability agenda. 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 level. BPCL has reported actual numbers in most of the cases, except for certain indicators where BPCL has applied logical assumptions or estimations. The calculations for that are detailed in the annexures.

The information in the report is assured by a third party, KPMG India, appointed through the e-tendering process. The assurance is conducted as per ISAE 3000 and AA1000 (2008) Assurance Standard (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 and M/s NextGen PMS Pvt Ltd.

Information on the previously published Sustainable Development Reports are available on <https://www.bharatpetroleum.co.in/sustainability/sustainability-reports.aspx>.

Report Boundary

The report boundary covers environmental, social and economic parameters across BPCL's seven Strategic Business Units (SBU's) in India, over which BPCL has direct control. The SBU's include Aviation, Lubes, Refineries, LPG, Industrial & Commercial, Retail and Gas. Mumbai and Kochi Refineries have the most significant areas of operation.

The report boundary does not include BPCL's retail outlets, LPG Distributors, Joint Ventures, Subsidiaries and in-transit product movement. During the reporting period, there has been no significant change in terms of organisation size, structure, ownership structure or supply chain.

Report readers are welcome to provide their feedback or suggestions to the under mentioned address:

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Dear Stakeholders,

Complementing the Annual Report, this year's Sustainable Development Report exhibits BPCL's performance on three fronts – the economic performance, the approach towards dealing with the environment and the engagements with stakeholders at several levels. In this regard, I am happy to present BPCL's eleventh Sustainable Development Report with a focus on '**Fuelling Sustainability Aspirations**'.

The year, 2016-17 has been a significant one for the BPCL Group during which we have achieved record breaking profits, incurred the highest ever capital expenditure to augment our refining/marketing infrastructure, acquired trans country upstream producing assets and embarked on our journey of Project Sankalp. This achievement is a testimony to our hard-work and the commitment differentiating us from our peers. The financial year saw the Group achieve a Gross Revenue from Operations of INR 2,43,747.46 crore as compared to INR 2,19,226.79 crore recorded in 2015-16. The Profit after Tax stood at INR 8,720.94 crore in 2016-17 as against INR 7,584.51 crore in the previous year. Our market sales went up to 37.74 MMT as compared to 36.83 MMT during 2015-16.

In this journey towards sustainability, I would like to share my vision for BPCL:

Long term economic viability and growth: To ensure economic profitability, BPCL is committed to remaining financially strong, technologically relevant and responsibly operational. Our consistent growth is enhanced by advancements in technology. The strategy is to think beyond compliance, benchmark against global standards, expand to new markets, and capture opportunities and innovate for long term sustainability.

Environmental footprint: BPCL fully recognizes its responsibility towards the environment. Being cognizant of the challenges faced by the business, effect on climate change and the impact created on the local communities, BPCL has taken active measures to foster innovation in dealing with these challenges. BPCL has complied with the BS IV norms and has also invested in renewable energy. We have increased capacity of renewable energy from 19.57 MW to 22.17 MW registering an increase in capacity of 13.3% as compared to previous year.

Rainwater harvesting and installation of energy efficient lighting are other steps taken toward reduction in carbon footprint. 2016-17 witnessed an increase in total catchment area under rainwater harvesting to 7,22,800 m² from 5,30,475 m² which is a 36.3% increase from the previous year while energy efficient lighting capacity has also been increased from 3.6 MW to 6.2 MW, an increment by 90.2% from previous year. Through these initiatives, we have achieved an annual reduction of GHG emission by 34,000 MTCO₂e. We are aware of the other milestones still ahead of us on this journey toward alternating to renewable energy sources, and we acknowledge our responsibilities to continuously work towards minimizing our environmental footprint.

Responsibility toward people: With its motto “Safety First, Safety Must”, BPCL will continue in its strife to become a safer workplace. We assume responsibility not only for our employees and contract workmen, but also extend the same to our channel and business partners. We continually engage with our people and partners increasing awareness on safety in all areas of operations ranging from safety within BPCL plants to safety on the roads. However, I regret the fatalities caused to one of our company employees and three contract staff within our premises during the reporting year.

Talent management: People are the soul of the organisation. Our approach is thus to attract and retain talent, at all levels. Our total manpower strength as on March 2017 was 12,484. During the financial year 2016-17, 469 Management staff were recruited in the Corporation. Training on behavioural and functional aspects has been provided to keep talent abreast with the latest updates. An e-learning portal is also at the disposal of our employees. Going forward, we strive to enhance the learning atmosphere creating an inclusive work space.

Concern for local communities: Our operations impact the lives of thousands of people from the neighbouring communities, often in remote places which do not have access to basic amenities. Our dedicated corporate social responsibility projects have helped identify community needs and thereby ensure access to quality Education, Water Conservation, Skill Development, Health & Hygiene and Community Development. During 2016-17, as part of our ongoing corporate responsibility programme, the total spending on CSR initiatives is 1.13% of the profit after tax. In line with the ‘Skill India’ campaign, we have taken lead in setting up Mega Skill Development Institutes amongst industry peers. 2016-17 also marks the successful completion of the fourth batch of its in-house project Saksham for professional development of primary/upper primary teachers and Headmasters from 46 low income schools of Mumbai. The Ujjwala scheme supports nationwide initiatives with a focus on environment and health of women providing deposit free LPG connections to BPL families. To enable us to further improve upon our initiatives and nurture inclusive partnerships, we strive to ensure an increased impact in the areas of Education, Water Conservation, Skill Development, Health & Hygiene and Community Development.

These are the pillars aiding us toward sustainable growth. Going forward we must appreciate that the world is changing at an incredible pace. Disruptions have become the new norm and traditional business models are being severely challenged. Agility and adaptability are key to our growth and being focussed on our vision has become ever so important. Challenges notwithstanding, I am confident that BPCL will continue in its journey of value creation.

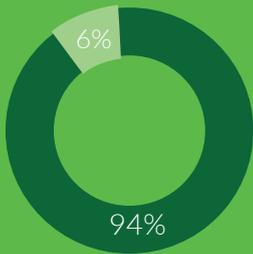


-D Rajkumar

Sustainability Highlights

Environment Performance

GHG Emissions (000' MTCO₂)



Total Direct Emissions (Scope 1)
 Total Indirect Emissions (Scope 2)



22.17 MW
Total Renewable Energy Installed



11.8 MW
Total installed capacity of Wind Energy

4,99,51.55 (000'KL)
Water Consumed



10.3 MW
Total installed capacity of Solar Energy

Social Performance

Non-Management Employees
6,556



Management Employees
5,928

Management Employees



561

Females



5,367

Males

Non-Management Employees



578

Females



5,978

Males

Return to work and retention rates after parental leave

30 Employees availed maternity leave

20 Employees returned to work after maternity leave and are with BPCL at the close of 31/03/2017



595 Lakh
New Customer Enrolments



3,55,562 Hours
Total Training



INR 90.98 Crore Spent

Economic Performance



INR 2,50,095.75 Crore
Direct Economic Value Generated



INR 8,039 Crore
Profit After Tax



25.39 MMT
Total Throughput (Refineries)

4 Organisation Profile

BPCL is one of India's leading Public Sector Undertaking in the oil and gas sector engaged in meeting the energy demand of the nation. BPCL has a diverse range of products ranging from petrochemicals to solvents and aircraft fuel. These products are directly available for customer use across Petrol Stations, Kerosene Agencies, LPG Distributors, Lube Shoppes and indirectly via industries and several international and domestic airlines. The values, vision, mission and culture form the bedrock of BPCL's functioning.

Values

- Trust is the bedrock of our existence
- Customer centricity is intrinsic to our achievements
- Development of people is the only way to success
- Ethics govern all our actions
- Innovation is our daily inspiration
- Collaboration is the essence of individual action
- Involvement is the way we pursue our organisation goals

Vision

- We are the most admired global energy company leveraging talent and technology
- We are the first choice of customers, always
- We exploit profitable growth opportunities outside energy
- We are the role model for Health, Safety, Security & Environment
- We are a great organisation to work for
- We are a learning organisation
- We are a model corporate entity with social responsibility

Mission

- 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
- 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
- Create awareness among people on the imperatives of energy conservation and efficient consumption of petroleum resources, by disseminating information through appropriate media
- Availing ourselves of new opportunities for expansion/diversification arising from the liberalization of the economy to achieve a global presence
- Promote ecology, environmental upgradation and national heritage
- Information on Training, other mechanisms, suggestion schemes

Culture

- We remain result focused with accountability for governance
- We collaborate to achieve organizational goals
- We enrol people through open conversations
- Our every action delivers value to the customer
- We proactively embrace change
- We care for people

The financial year ended 31st March 2017 has not seen any significant changes regarding the organisation's size and ownership structure. However, BPCL has added a few field locations as a part of their operations. BPCL has also initiated several steps to actively engage with its stakeholders and have reported the same through this report.

The Business

In India, BPCL has the following number of plants and offices:



* These 82 locations include 5 retail locations i.e. Bhilai, Durai, Udaipur, Kota Depot and Kathiyar which have been closed in the reporting year.

BPCL's business comprises of seven Business Units which are as follows:



Aviation

Aviation Business Units (BU) with an overall market share of 25.03 % has recorded highest ever sales of 1,548 TMT. Over the last year BPCL has registered a growth in market share by 21 % as against the combined growth of 10 % achieved by all the PSU Oil Companies. In the civil segment BPCL's market share increased from 24.36% to 26.61%. There was growth in all the segments – international by 15%, domestic by 33% and defence by 5%. The sustained growth is because of successfully retention of all the major domestic and international customers and acquisition of new customers.

Industrial and Commercial

In the second consecutive year the Industrial & Commercial(I&C) BU crossed the 4 million tonne mark. The BU recorded sales of 4265 TMT and registered a growth of 5.74% surpassing other PSU majors amidst heavy competition. As a value add during the year I&C business focused on differentiation in the HSD segment by offering superior technology through Automation to its key customers. The business unit consolidated its presence across the product portfolio in different sectors by renewing its relationship with major customers.

Gas

In FY 2016-17 BPCL handled 1371 TMT of Natural Gas (herein after would be called as Gas) as against 1088 TMT in the previous year, a growth of approx. 26%. Out of 1371 TMT, 265 TMT of Gas was supplied to Mumbai Refinery and 144 TMT was supplied to Kochi Refinery to meet their internal requirement. The remaining 962 TMT of Gas was supplied to various customers in Fertilizer, Power, City Gas Distribution (CGD), Steel and other industries across the country. Around 99% of BPCL's supply has been through pipelines to its various consumers. BPCL have been actively participating in the bids and continuing the efforts to expand the Gas Business.

Lubes

BPCL's MAK Lubricants brand has established a strong presence across the Automotive and Industrial sectors. Apart from the domestic markets MAK lubricants has fared well beyond the shores establishing itself as a very reliable brand competing with international brands in the exports markets. In the domestic market, the B2C marketing is through the Retail Outlet channel comprising of over 14,000 petrol pumps and also the Bazaar channel comprising of over 650 active distributors who further cater to the Mechanics and Retailers in the market.

LPG

LPG Strategic business unit grew in sales volume by 11.8% and increased market share by 0.30%. The registered sale was 5.5 MMT during FY 2016-17. New customer enrolment of 91.8 Lakh has surpassed its previous year enrolment of 50.9 Lakh, and thereby, taking the domestic customer base to 595 Lakh by the end of the FY 2016-17. BPCL added 205 new distributors taking the total Distributor Network to 4684 in the year.

Retail

The total market sales registered by the Business Unit stood at 25.2 MMT with an overall growth of -0.54 per cent in the year 2016-17 against PSU growth of -0.57 per cent. The sales volume of MS at 6.4 MMT in 2016-17 was 6.7 % higher than the level of 5.9 MMT achieved last year. HSD sales volume in 2016-17 stood at 17.6 MMT, as against 17.9 MMT last year, reflecting a growth of -1.8 % showing the effects of entry of private players. In the alternate fuels segment, BPCL recorded a growth of 7.3 % on the sale of Compressed Natural Gas (CNG) and the sales volumes for the year stood at 344 TMT. Auto LPG sales stood at 32 TMT which is 4 TMT less compared to previous year. Government policy linked SKO performance stood at 803 TMT, growing at -22.5%. The Business registered a Market Share of 27 % in MS and 27.1% in HSD.

Refineries

Mumbai Refinery

In FY 2016-17 Mumbai Refinery achieved throughput of 13.60 MMT of feed (crude oil and other feed stocks) as against 13.41 MMT achieved last year. This is the highest throughput ever achieved in Mumbai Refinery. This represents a capacity utilization of 113.3% as compared to 111.7% in the previous year. The refinery has also achieved 86.2% of distillate yield, 2347 TMT of Motor Spirit (an increase of 10.6% over the previous year), 94 TMT Propylene and 920 TMT Aviation Turbine Fuel (ATF) which again is the highest ever achieved.

Kochi Refinery

In FY 2016-17 Kochi Refinery also achieved the highest ever crude oil throughput of 11.787 MMT bettering its crude oil throughput of 10.708 MMT during the previous year. The capacity utilization of the refinery during the year was 107.6%. Kochi refinery also achieved its highest ever production 594.2 TMT of LPG (6.4% higher than previous year), 2170.5 TMT of Motor Spirit (5% higher than previous year), 5532.1 TMT of High Speed Diesel (3.7% higher than previous year) and 558.6 TMT of Aviation Turbine Fuel (16.3% higher than previous year).

Products Sold Directly

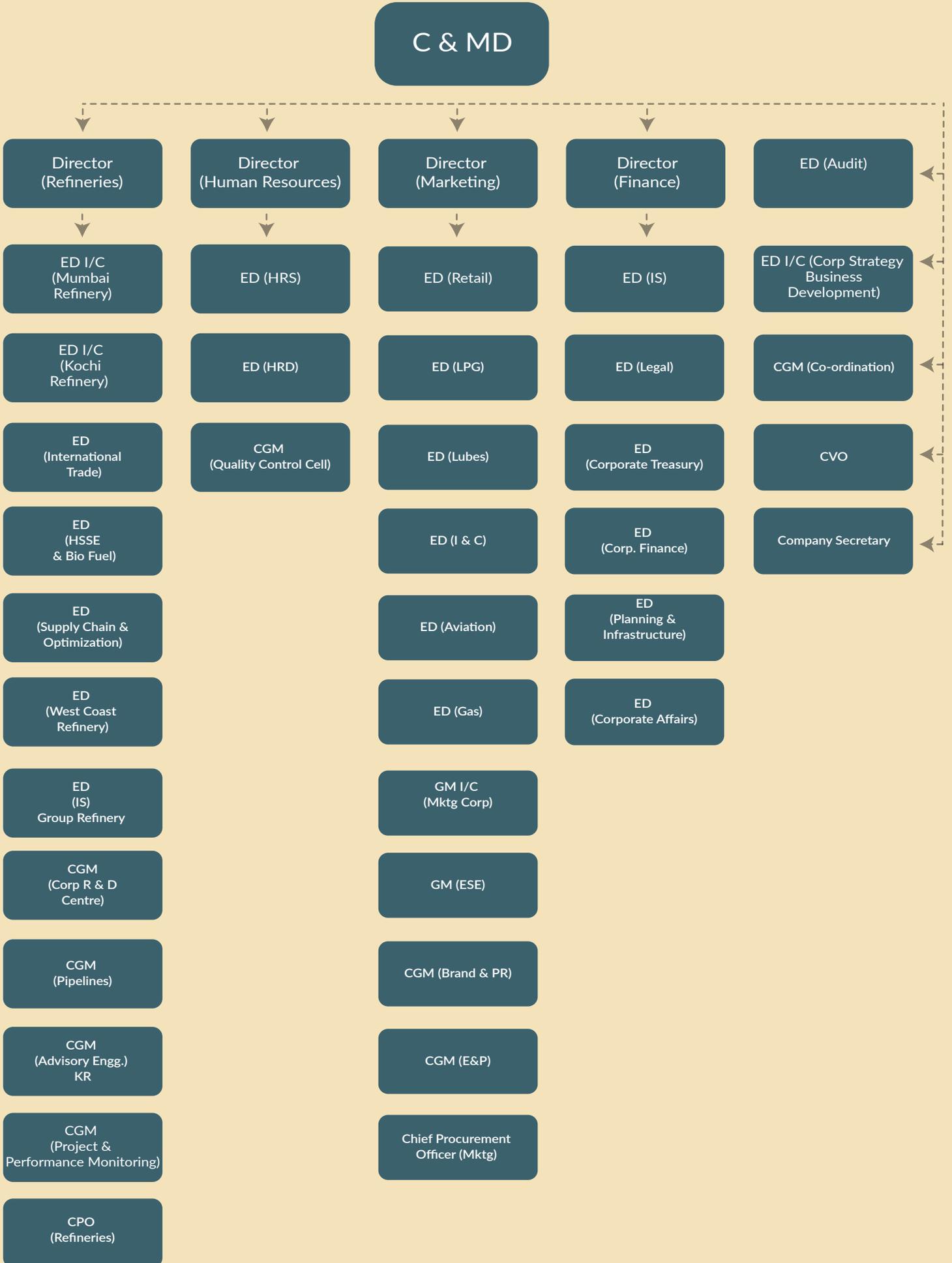
- Fuel Oils
- Toluene
- Benzene
- Naptha
- Solvents
- Aviation Turbine Fuel
- Bitumen

Sold through Retail Dealers & Distributors

- Motor Spirit (MS)
- High Speed Diesel (HSD)
- Superior Kerosene Oil (SKO)
- Mineral Turpentine Oil (MTO)
- Liquified Petroleum Gas (LPG)
- Lubricants



Organisational Structure



Shareholding Pattern

Shareholders	No. of Shares Held	% of holdings
1) Government of India	79,44,00,240	54.93
2) Government of Kerala	1,24,44,444	0.86
3) BPCL Trust for Investments in Shares	13,49,14,948	9.33
4) Mutual Funds/UTI	5,90,63,052	4.08
5) Financial Institutions/Banks	17,51,256	0.12
6) Insurance Companies	3,67,61,860	2.54
7) Foreign Institutional Investors	32,57,71,271	22.53
8) Bodies Corporate	3,40,70,817	2.36
9) Others	4,69,90,608	3.25
Total	1,44,61,68,496	100.00

BPCL has ten subsidiaries. Five are Indian and five are foreign subsidiaries. The list is as follows:

Indian:

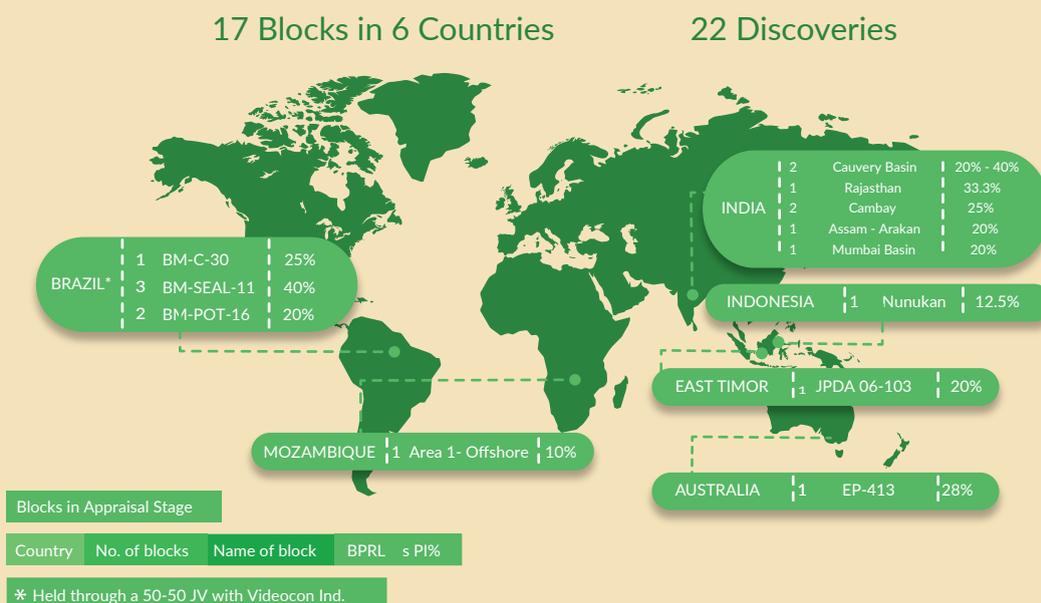
- Numaligarh Refinery Ltd
- Bharat PetroResources Ltd
- Bharat PetroResources JPDA Ltd. [Domestic Subsidiary of BPRL]
- Petronet CCK Ltd
- BPCL-KIAL Fuel Farm Pvt Ltd.

Foreign:

- BPRL International B.V. (The Netherlands) [Overseas Subsidiary of BPRL]
- BPRL Ventures B.V. (The Netherlands) [Overseas Subsidiary of BPRL]
- BPRL Ventures Mozambique B.V. (The Netherlands) [Overseas Subsidiary of BPRL]
- BPRL Ventures Indonesia B.V. (The Netherlands) [Overseas Subsidiary of BPRL]
- BPRL International Singapore Pte Ltd. (Singapore) [Overseas Subsidiary of BPRL]

BPCL's Network

Headquartered in Mumbai, Maharashtra, BPCL has its presence in 6 countries.



The above map is a representation of the number of countries and locations in which BPCL operates including the number of discoveries in the reporting year which has increased from 18 to 22. BPCL is yet to venture into direct operations at international locations (only subsidiary companies have overseas operations). The sustainability data in this report is limited to the company's India operations.

Corporate Governance and Ethics

Effective Corporate Governance at BPCL, goes beyond compliance. It is a culture and a mechanism for transparency, consistency, responsibility, accountability and fairness crafted for the stakeholders of the organization. This structure trickles down to the working staff of BPCL, its management and its Board of Directors, who strive to ensure highest ethical practices.

An effective and a well-informed board is a means of achieving good corporate governance protocols. The Board of Directors is the highest governance body exercising the powers subject to the provisions of the Companies Act, 2013. The Board of Directors are selected based on their competencies and qualifications as reviewed by the Nomination and Remuneration Committee. The nominations of the Directors are suggested to the Board and Shareholders for approval under the provisions of Companies Act. 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). DPE Guidelines lay down the criteria of eligibility for the selection of Directors.

BPCL has a robust structure in place for strategy, implementation and monitoring of its sustainability initiatives present in the Sustainability Policy approved by the Board in 2012, detailed in the annexure section of this report. The HSSE department collates and communicates all material aspects to the Sustainable Development Committee during Sustainability Development (Board Level) Committee Meeting which is held every six months. The Sustainable Development Committee overlooks and approves Sustainable Development Initiatives once finalized by the Corporate HSSE Department.

Board of Directors

The Board of Directors comprise of 11 members, of which 5 whole time executive directors, 2 part-time government directors and 4 part-time (Non-official) independent directors. Currently all BPCL's board members are male.

In the financial year 2016-17, the Board met twelve times. The gap between two meetings within the period prescribed under the Companies Act, 2013 and the Listing Regulations.

Meetings are generally attended by all directors barring exceptional circumstances when the Board grants a leave of absence. Such a decentralized organizational model aids in decision making and ensures transparency¹

Board Remuneration

The remuneration of the whole-time Directors is determined by Ministry of Petroleum and Natural Gas (MoP&NG). The Part-time(Ex-Officio) Directors do not receive any remuneration from the company. For computing the compensation, only regular heads of compensation (one-time payments & perquisites are excluded) are considered. The major components are – Basic Pay, Stagnation Increments, Dearness Allowance, HRA, Cafeteria Allowances.

The fixed remuneration component is accompanied by a variable component, based on the performance of the Management. The Performance Related Incentive Scheme for Management Staff (PRISM) is evaluated based on targets set in the MoU with MoPNG. At the beginning of each financial year, BPCL signs a Memorandum of Understanding (MOU) with the Ministry of Petroleum & Natural Gas. The MOU specifies targets for various parameters including physical, financial, social and environmental parameters².

¹Board Composition and the various committees of the Board and their responsibilities are available in the Annual Report 2016-17. [https://www.bharatpetroleum.co.in/pdf/OurFinancial/BPCL_AR_2017_for_Web%20\(1\).pdf](https://www.bharatpetroleum.co.in/pdf/OurFinancial/BPCL_AR_2017_for_Web%20(1).pdf)

²The details regarding selection procedure, qualification, remuneration determination process and training of the Directors is available in the Annual Report 2016-17. [https://www.bharatpetroleum.co.in/pdf/OurFinancial/BPCL_AR_2017_for_Web%20\(1\).pdf](https://www.bharatpetroleum.co.in/pdf/OurFinancial/BPCL_AR_2017_for_Web%20(1).pdf)

Ethics and Integrity

To protect and serve the interest of all stakeholders, BPCL has put specific procedures, processes and systems in place, under which the “Code of Conduct, Procedure and Disclosures for Prevention of Insider Trading in the Securities of BPCL” and “Code of Corporate Disclosure Practices” have been adopted. The Code of conduct is required so that BPCL employees and contractors are honest and responsive with the interactions they have with government agencies or regulators. BPCL work with governments, non-governmental organizations and international agencies on increasing transparency of revenue flows from sector to the host governments. BPCL has taken implementation of government policies in a proactive manner and has also provided all necessary information regarding ethical conduct to the employees on the intra link. The e-magazine “Soch” is aimed at enhancing the understanding related to various policies of the organization and to improve participation.

BPCL follows a vigorous mechanism to communicate concerns with the various stakeholders. The primary level of grievance redressal is tended to 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. The aggregate number of concerns raised during FY 2016-17 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, there are 5 cases which are at various forums in this regard pending for the year 2016-17. The details of which are mentioned below.

1. RIL /Essar/Shell had filed a complaint before the Petroleum & Natural Gas Regulatory Board (PNGRB) against PSU OMCs and upstream companies alleging collusion, cartelization and predatory pricing for MS and HSD- Sub Judice
2. A complaint was filed by RIL before the Competition Commission of India alleging cartelization and misuse of its dominant position- Sub Judice
3. India Glycols Ltd Vs India 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)
4. CCI vide its own cognizance started enquiry against OMCs by observing that OMCs are behaving like a cartel by fixing petrol price. Preliminary objection taken by Respondent OMCs that CCI does not have jurisdiction and PNGRB has jurisdiction to hear this issue.

Commission ordered DG investigation which should cover the entire value chain of price build up. We challenged the said order in Delhi High Court vide WP 7303/2013 and Delhi High Court vide order dated 22.11.2013 ordered stay in the said proceedings- Sub Judice

5. 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 and b) Reserving Dealer land just for selling oil and impose condition to give land to OMC when dealership is terminated- Sub Judice

Vigilance Mechanism

Vigilance in BPCL is an integral part of ensuring good governance in the organization. The department constantly endeavors to promote improvement in systems, processes and practices through an approach of proactive and participatory vigilance leading to “Vigilance for Corporate Excellence”. It believes that with best practices, adequate controls, accountability and transparency, decisions taken will be efficient, effective and consistent, ultimately leading to Corporate Excellence. This also helps sensitizing employees to this concept so that their thoughts and actions are aligned towards Integrity and Transparency.

Vigilance, helps the Business, identify susceptible areas in existing procedures & processes like Tendering Processes, Vendor Bill Payments and Channel Partner Selections etc. The Information Technology is being extensively utilized to effectively institute more transparent processes like e-tendering, e-payments, e-receipts etc., thereby instilling confidence of being a just & fair organization amongst the Vendor, Channel Partners and customers. Many recommendations are being made on field observations to improve existing system and process.

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 also carried out thorough investigations into the Complaints and Source Information. Complaints including those received online, were investigated both directly by Team Vigilance and through Businesses / Entities within the stipulated time frame.

There is a regular interaction with the employees of BPCL through BPCL’s internal Web site “Intralink” as well as with the customers/others concerned through the Vigilance portal available on the BPCL’s corporate website which has provision to lodge the complaints as well.

Vigilance portal has the objective of creating awareness on good governance, sharing knowledge on ethical practices and proactive vigilance and connecting with all the employees. This website has useful links of Central Vigilance Commission, Department of Personnel & Training Government of India etc.

As a part of capacity building Vigilance Officers had undergone training programme conducted by Central Bureau of Investigations and various other institutes of repute. The Vigilance Awareness Week 2016 (from 31st October to 5th November, 2016) was launched at BPCL Corporate office in Mumbai.

In line with the theme “Public Participation in promoting Integrity and Eradicating corruption”, set by Central Vigilance Commission during this period, various activities such as Awareness Sessions, Essay Contests, Question Answer Sessions, Vigilance Quiz, Debate Competition, Painting Contest and Skit program (topic: Fighting Corruption) were conducted for employees & school children.

As a part Public outreach programmes to propagate Integrity Pledge were conducted in Vijayawada and Guntur in the month of March 2016. These programmes were graced by Central Vigilance Commissioner, Shri K V Chowdhary, IRS as Chief Guest. During the programme more than 1200 participants administered online Integrity Pledge.

Vigilance Department has taken initiative for propagating ethical values in school children so that they become vehicle to carry these values to their families, friends and society and integrity Clubs are operational in various schools in Kochi, Mumbai, Chennai and Kolkata.

Value based teachings titled “Choti Choti Batein “an initiative to rekindle the good values amongst school children were conducted by vigilance officers. Through this initiative BPCL have covered 10 schools in Mumbai, Sholapur, Chennai, Kolkata and touched around 1100 students from various strata of the society.

The 7th edition of the Vigilance Plus was released and was received very well by the stakeholders. This magazine carries a snapshot of various activities carried out during the VAW 2016 and other events conducted by Vigilance Dept. The articles in the magazine were contributed by the staff members, school students narrating their experiences to combat corruption in day to day life.

BPCL vigilance has endeavored, as always towards a progressive path of Preventive, participative and punitive vigilance.

Risk Management

Enterprise-wide Risk Management process is administered by Chief Risk Office. The Risk Management Committee comprising of senior executives continually identifies the various risks threatening the Company's continued sustainability. These are grouped as:

- Strategic
- Operational
- Financial and
- Compliance related risks

There is a Quarterly Performance Review (QPR) where industry performance, peer review and competition analysis, overall risk assessment are undertaken. This is done in accordance to the HSE Policy of the organisation. The Sustainable Development Committee oversees, approves, provides budgetary allocation and monitors the Sustainable Development projects and policy. Presently, the committee is chaired by an Independent director. It comprises of 3 Independent Directors, Director Marketing and Director Refineries.

BPCL Memberships and Associations

BPCL is a member of several public advocacy and industrial trade associations. Some of the major ones are listed below:

- Confederation of Indian Industry (CII)
- Federation of Indian Chambers of Commerce and Industry (FICCI)
- Bombay Chamber of Commerce & Industry
- ASSOCHAM
- Indian Merchant Chambers
- United Nations Global Compact
- World Energy Council-Indian Member Committee
- World LP Gas Association
- Petroleum Federation of India
- Petrotech Society
- 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
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5 Key Impacts, Risks and Opportunities

India has surpassed Japan in the consumption of primary energy and now stands as the 3rd largest consumer of energy in the world registering a growth of 5.5% in energy consumption. With plans on the West Coast Refinery gaining momentum, India is emerging as a refining hub.

The declining trend in oil prices continued in 2016-17. This bodes well for the Indian economy given the increased dependence on oil and petroleum products as a source of energy. This year, the Indian crude basket has marginally increased to \$ 47.16 per barrel from \$ 46.17 per barrel in the previous year. The increase is due to the depreciation in the Indian rupee. The fall in prices has also kept the price of diesel under control, contributing significantly to ensuring healthy levels of inflation. Further, the subsidy burden for the central exchequer has reduced by 28% to Rs 19,728 crores as compared to the previous year, with the oil PSUs being fully compensated for throughout the year.

While the decline in crude prices has reduced the prices of fuel in India and thus the subsidy burden, permitting the emergence of market determined prices based on established pricing models, it has also encouraged the private players to perform more aggressively. During 2016-17, private players gained a market share of more than 10%.

Renewable sources of energy are growing exponentially. It is expected that half of the additional energy requirements will be met from renewable sources, together with nuclear and hydroelectric power over the next 20 years. This makes renewable sources of energy, both an opportunity as well as a threat, since it provides a platform to migrate towards cleaner and more efficient forms of energy, and a threat as it risks the obsolescence of huge investments in conventional forms of energy. But given the increasing competitiveness of renewable and concerns over carbon emissions, slowly but surely the fuel mix is undergoing a transition.

Robust infrastructure is a fundamental requirement for any industry and more so in the Oil & Gas sector due to the hazardous nature of the product. India has made several inroads in upstream, has an impressive refining capacity 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. However, there is an urgent need to enhance the import infrastructure, especially for the import of LPG. While a focused approach has been adopted to address this issue, it will be a while before India will have a comprehensive import infrastructure.

Demonetization in November 2016 has set the stage for digitalization in the country. This has been a significant decision that was implemented by the Government of India, and has catapulted the country onto a digital platform. With increasing number of digital transactions, India is getting slowly but surely accustomed to a cashless mode of payment. What remains a challenge is, given the combustible nature of petroleum products, how safely digital transactions can be completed in the petrol stations. Another challenge will be to ensure the end-to-end security of these transactions.

Another major step that is being taken by the Indian Government is that on GST which was effective from 1st July 2017. The multi-stage, destination-based tax that will be levied on every value addition will impact the Indian Oil & Gas Industry in a unique manner, as not all petroleum products are covered under GST. This implies that there will be an incidence of non-recovery of input tax credit thus resulting in an increased cash outflow. The exact financial impact can be ascertained and analyzed only when sufficient data is available and once more clarity emerges on how such non-recoveries of input tax credit will be addressed.

India is at the threshold of a major transition. Being one of the fastest growing economies in the world with a reasonable growth in energy consumption, India is poised to take on the challenges of intensified growth. In such an environment, BPCL is very well placed to contribute to the development of the Nation. Other than all the national and international challenges faced by BPCL, Climate Change is one of the main factors which is increasingly posing a number of risks. Any physical asset, under the influence of natural calamities as a result of climate change would be under impending danger at BPCL as plants and equipment's may not be able to withstand the unexpected climate change patterns that may follow. Further, BPCL has also classified risk associated with climate change in 4 different categories namely, Physical risk, Regulatory risk, health risk and reputation risk.

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6 Stakeholder Engagement and Materiality

Stakeholder engagement and materiality is integral in driving the sustainability vision throughout the company. The process is undertaken with transparency and accountability to ensure every stakeholder interest is considered without a bias. These stakeholder responses are then compiled to form a materiality matrix representing stakeholder views and their impact on business.

Stakeholder Engagement

BPCL takes a structured approach to engage with their stakeholders and address their key concerns. The success of the process is attributed to the constructive dialogue with the stakeholders. BPCL engages with a broad spectrum of stakeholders in a variety of ways, to build and strengthen trust-based relationships. The identification process of the relevant stakeholders involves taking feedback from the business units and corporate office. The various sections of this report have addressed the key stakeholder concerns. The details of identification, engagement technique and the key concerns of each of the stakeholder group is discussed below:

Internal Stakeholders

- Employees
- Shareholders

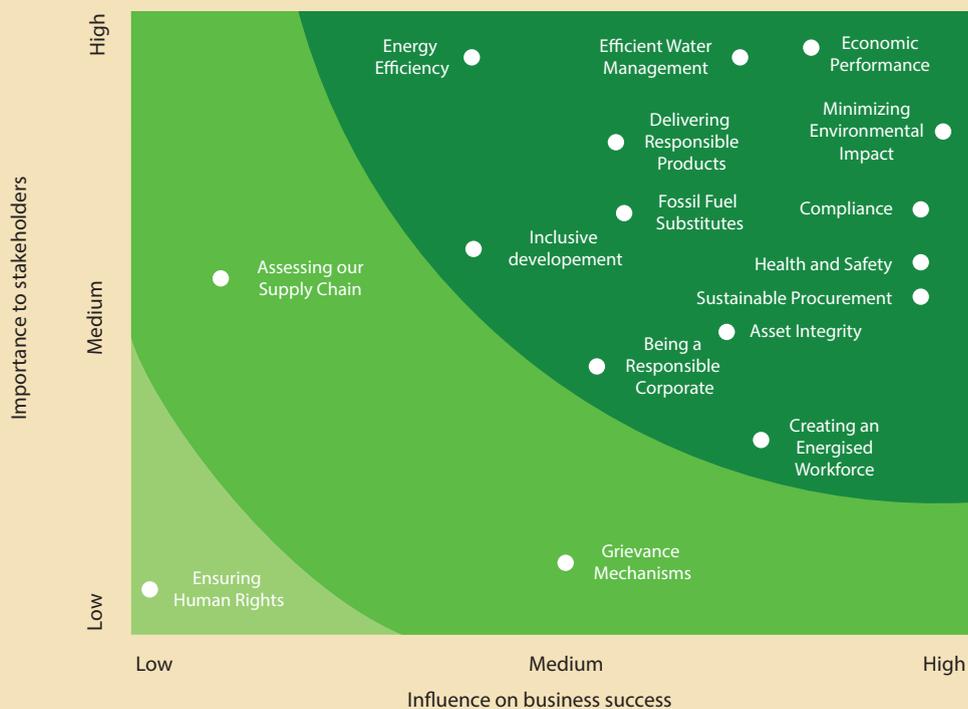
External Stakeholders

- Customers
- Government
- Dealers and Distributors
- Suppliers and Vendors
- Communities
- NGO's

Stakeholder	Frequency & mode of engagement					Key Concerns/ Priorities	BPCL Response
	Corporate	SBU/Regional offices and marketing	Annual	Periodic	Needs Based		
Customers	✓	✓	Customer meeting	Online communication, Customer feedback	Customer meeting	<ul style="list-style-type: none"> •Competitive pricing •Grievance redressal •Quality and quantity of product •Quality of service 	<ul style="list-style-type: none"> •Process innovations •Adoption of green technologies •Quality products and services
Communities and NGO's	✓	✓		Project reviews are undertaken periodically	Interaction with community focus groups	<ul style="list-style-type: none"> •Local employment •Training and inclusive growth •Long term engagement with NGO's 	<ul style="list-style-type: none"> •CSR programs implemented to foster community development •Skills training to improve livelihood opportunities
Dealers and Distributors	✓	✓		Meetings and training sessions	Individual Interactions	<ul style="list-style-type: none"> •Product quality and continuous supply •Facility maintenance •Safety during product handling •Technological improvements 	<ul style="list-style-type: none"> •Timely supply of products •Maintenance of facilities
Employees	✓	✓	Performance appraisal, satisfaction survey	Training, Wellness programs, online communication		<ul style="list-style-type: none"> •Career progression •Occupational safety •Wellness and benefits 	<ul style="list-style-type: none"> •Safe and healthy work environment •Encourage a culture of continuous learning •Prompt grievance redressal

	Corporate	SBU/Regional offices and marketing	Annual	Periodic	Needs Based		
Government and Regulators	✓	✓	Memorandum of understanding		Meetings for new policy developments and ministry directives	<ul style="list-style-type: none"> • Target vs. achievement as per the Memorandum of understanding 	<ul style="list-style-type: none"> • Create systems and processes to implement board approved policies
Shareholders and Investors	✓	✓	General meetings	Quarterly reports, quarterly investor meets, press releases		<ul style="list-style-type: none"> • Compliance • Governance • Ethical operations • Economic performance 	<ul style="list-style-type: none"> • Growth and profitability • Sustainable development practices
Suppliers and Contractors	✓	✓	Vendor meets	Inspection visit to facility, emails and phone calls		<ul style="list-style-type: none"> • Training and capacity building • Transparency in bidding process • Occupational health and safety • Timely payment of dues 	<ul style="list-style-type: none"> • E-tendering • Training Sessions • Implemented OHS policy • Supply Chain Advisory Note time to time

Materiality Assessment



Issues currently a focus
 Issues gaining importance
 Issues which are low on concern

Adhering to the GRI G4 guidelines, BPCL follows the above methodology to identify key material issues. The materiality matrix developed is the same as the matrix developed last year. The categorization under low, medium and high demonstrates the relative importance of aspects and does not necessarily depict that a particular aspect rated as 'low' has low impact or relevance.

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.

Categorization of material aspects as per GRI G4 Guidelines

Issues currently a focus of BPCL and its stakeholders			
Material Issues	GRI Category	GRI Sub-Category	GRI Aspects
Economic Performance	Economic		Economic Performance
Energy efficiency	Environment		Energy
Inclusive development	Economic	Society	Indirect Economic Impact
			Local Communities
			Indigenous Rights
			Involuntary Resettlement
Creating an energized Workforce	Social	Labour Practices & Decent Work	Employment
			Labour Management
			Training and Education
			Labour Practices Grievance Mechanisms
			Category: Social - Sub-Category: Human Rights
			Freedom of Association and Collective Bargaining
Health and Safety	Social	Labour Practices & Decent Work	Occupational Health and Safety
Being a responsible Corporate	Social	Society	Anti-Corruption
			Anti-Competitive Behaviour
			Public Policy

Compliance	Environment		Compliance
	Social	Society	Compliance
	Social	Product Responsibility	Compliance
Efficient Water Management	Environment		Water
Minimizing environmental impact	Environment		Emissions
			Effluents and Waste
			Overall
			Materials
Developing Responsible Products	Social	Product Responsibility	Product and Service Labelling
			Customer Health and Safety
			Marketing Communications
Asset Integrity and Process Safety	Social	Society	Asset Integrity and Process Safety
Sustainable Procurement	Economic		Procurement

Issues gaining importance

Material Issues	GRI Category	Sub category	Aspect
Assessing BPCL's supply chain	Environment		Supplier Environmental Assessment
			Transport
	Social	Labour Practices & Decent Work	Supplier Assessment for Labour Practices
	Social	Society	Supplier Assessment for Impacts on society
Grievance Mechanisms	Social	Human Rights	Supplier Human Rights Assessment
	Environment		Environmental Grievance Mechanisms
	Social	Human Rights	Human Rights Grievance Mechanisms
	Social	Society	Grievance Mechanisms for Impacts on Society

Issues which are low on concern

Material Issues	GRI Category	Sub category	Aspect
Ensuring Human Rights	Social	Human Rights	Non-Discrimination
			Diversity and Equal Opportunity
			Equal Remuneration for Men and Women
			Child Labour

Stakeholders Delight at the BPCL AGM



BPCL's 63rd Annual General meeting took place in September 2016

Mumbai I&C - Bonding Gets Stronger with Annual Customer Meet “Saanidhya”



In keeping with the tradition of Mumbai I&C Territory, the Annual Customer Meet “Saanidhya-A Relationship so Sublime” was organized for business partners at The Trombay Club lawns on in Feb’2017.

Major customers like Asian Paints, Bhushan Steel, SI Group, MSRTC, Pidilite, Reliance Industries, Jindal Group, ONGC, Vinati Organics, IRB, Deepak Fertilisers amongst others, who had significantly

contributed to the Territory volumes in various product segments during the year 2016, were felicitated with Trophies of Appreciation. The various upcoming customer centric initiatives being taken by BPCL including augmentation of infrastructure at KR / MR and new products as per market requirement were also discussed.

The highlight of the evening was a live Sand Art performance based on BPCL First theme. The Sand Art helped the customers appreciate how BPCL is touching and energizing the lives of people and fulfilling dreams by providing various solutions and meeting total energy needs.

All the customers were enthralled by the hospitality experienced during the meet and the enriching discussions with several role holders from BPCL. The evening was symbolic of the strong relationship between BPCL and its customers and the fact that BPCL was much more than a supplier of fuels.



T20 Cricket Match: Smart Fleet Customers Vs BPCL Dealers

BPCL and Smart fleet customers have long been sharing a good relation, and BPCL Team has taken one more step to improve this relationship further. The goodwill translated to T20 cricket match played between BPCL First Team, BPCL Dealers of Jabalpur and the Smart fleet customers.

Around 25 Dealers were acknowledged for their contribution in promoting the green fuel in front of media, customers & family members.



7

Achievements for 2016-17

7a. Awards and Recognitions



Mr. S Varadarajan (former C&MD) received SCOPE EXCELLENCE AWARD in 2016 from H.E President of India for Individual Leadership Category (Maharatna/Navratna PSEs) for the year 2013-14



BPCL's Brand Quiz programme enters 'INDIA BOOK OF RECORDS' in May 2017 at BPCL Trombay Club Mumbai



Former Chairman and Managing Director Shri. S Varadarajan, receives NHRDN 'People CEO Award' 2015-16



BPCL Bags Lions CSR Precious Award 2016



BPCL bags prestigious NIPM National Award for Best HR Practices- 2015



Former Director (Finance) Mr. P. Balasubramanian wins Business World BEST CFO Award in April 2016 at Leela Palace New Delhi



Green Initiatives of BPCL Kochi Refinery win KMA Excellence Awards 2017



PetroBonus & SmartFleet shine at the AIMIA Loyalty Awards 2016



BPC L Garner's Glory at ICE Awards 2016: Ms. Marianne Karmarkar receives the ICE Award for Petro Plus



Mumbai refinery received "Best Project Team Award" and "Best Innovator Award" - Petrotech Awards 2016



Bharat Petroleum Kochi Refinery Wins KSPCB Excellence Award for the year 2015



Dhanam selects ED BPCL Kochi Refinery) as Business Professional of the Year 2015



BPCL Annual Report Bags SCOPE Corporate Communication Excellence Awards 2016



Bharat Petroleum won the Silver Award for their In-house Magazine, Petro Plus, at the 56th Annual Awards of the Association of Business Communicators of India (ABCI) on 28th October 2016.



BPCL rank 9th Among 167 private companies and 50 PSU under” The best companies for CSR”



Featured in “Top 10 companies for CSR” list for second year in a row



Bharat Petroleum Shimmers with ABCI Silver Award on 28th October 2016 in Mumbai



Mumbai refinery received Quest for Excellence Award" in Global Performance Excellence Award (GPEA)- 2016 by International Research Institute for Manufacturing (IRIM)



Mumbai refinery received Highest Award in India Green Manufacturing Challenge (IGMC) – 2016 by Asia Pacific Quality Organization



Ideas award for 2016-17



Mumbai refinery received "Best Project Team Award" and "Best Innovator Award" - Petrotech Awards 2016



Chairmans award for ideas 2016-17

Message from the Director- Finance



Sustainable Development of society and the nation is of paramount importance for us at BPCL. Our commitment to sustainable development is to go beyond compliance and meet the customer and stakeholder expectations and participate in the overall development of the economy, society and environment.

The oil and gas sector contributes a major share to the country's Gross Domestic Product (GDP). The financial year 2016-17 has seen a growth of 5.2% in Consumption of petroleum products as compared to the 11.6% growth recorded in the previous year. The main reason for a decline in growth was due to the substantial decline in the demand for diesel which constitutes 40% of the total consumption basket. Diesel grew by only about 2% during 2016-17 as compared to the 7.5% growth recorded in the previous year largely due to reduction in the growth in commercial vehicles (CV). The sharp decline in oil prices over the past couple of years has been extremely beneficial to India, making energy more affordable, and easily accessible for the consumers and

complementing the Government's initiatives to improve the availability, accessibility and affordability of clean fuel together with reliability and self-sufficiency.. However, the challenge of imports remains, as India is still dependent on imports for 80% of its crude requirements, thus making it more vulnerable to the international oil scenario.

The Government of India has taken a decision to implement daily price changes in petrol and diesel across the country, a shift from a fortnightly re-structuring of price. After the success of the pilot project in Chandigarh, Udaipur, Jamshedpur, Puducherry and Vishakhapatnam on 1st May 2017, the initiative has been rolled out across the country with effect from 16th June 2017. The change was made on the grounds of introducing international standards in the Indian fuel retail market besides avoiding wide fluctuations in RSP while ensuring complete transparency in petrol and diesel pricing. While the basis of pricing shall continue to be on international oil rates, the only change is the reflection of daily international prices in the petrol and diesel prices in India. It is expected that companies and consumers, both shall benefit from this move. In order to ensure that the customers are well informed about the prices, several modes of communication such as mobile apps, automation at petrol pumps, LED screens at petrol pumps, SMS facility and updation of retail selling prices in the Oil PSU websites are being used.

Another major transformation in the tax regulations witnessed by the country recently is the implementation of Goods and Services Tax (GST) with effect from 01st July 2017. The multi-stage, destination-based tax that will be levied on every value addition will impact the Indian Oil & Gas Industry in a unique manner, as not all petroleum products are covered under GST. Consequently, there will be an increase in the tax burden due to non-availability of input tax credits.

Over the years, BPCL has created tremendous value for all stakeholders and continues in its endeavor to be a leading Energy Company in the country. We strongly believe in good corporate governance and uphold the highest standards of governance in all our dealings and transactions. In this regard, we understand that public participation in promoting integrity and eradicating corruption is very vital and all of us need to support it by being easily accessible, open, objective and transparent in all our public interactions.

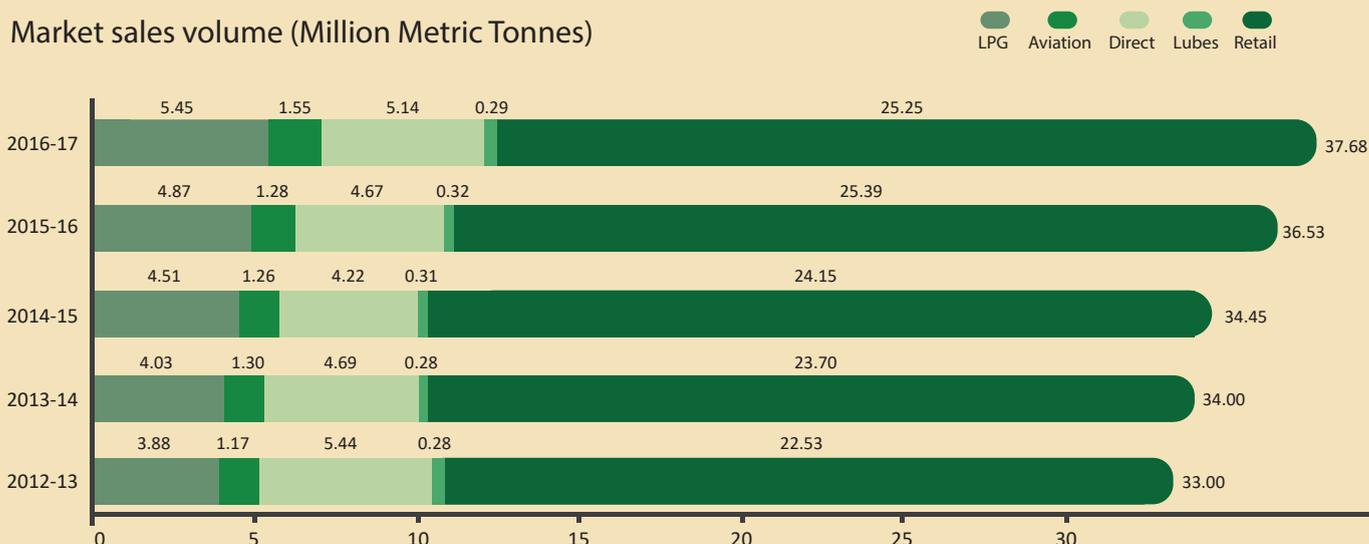
BPCL has heralded many community initiatives in the areas of Education, Water Conservation, Skill Development, Health & Hygiene and Community Development. Through an institutionalized and project-based approach, BPCL continues to take up new projects, increasing the on-ground impact in alignment with our vision of Responsible Development.

Being one of the fastest growing economies in the world with a reasonable growth in energy consumption, India is poised to take on the challenges of intensified growth. As we continue to conquer challenges that come in our way, we remain committed to derive opportunities for growth and create positive value for all the stakeholders as we traverse further.

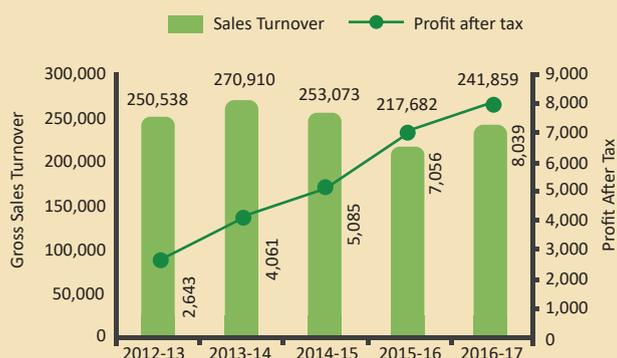
7b. Financial Performance

The financial performance of the company has an effect on all the stakeholders. To achieve targets, BPCL focuses on leveraging world-class assets with structural advantages in terms of costs, size and scalability to drive sustainable growth. BPCL has taken several strategic steps to ensure optimal use of resources and better productivity.

Market sales volume (Million Metric Tonnes)



Gross sales turnover/Profit after tax (Crores)



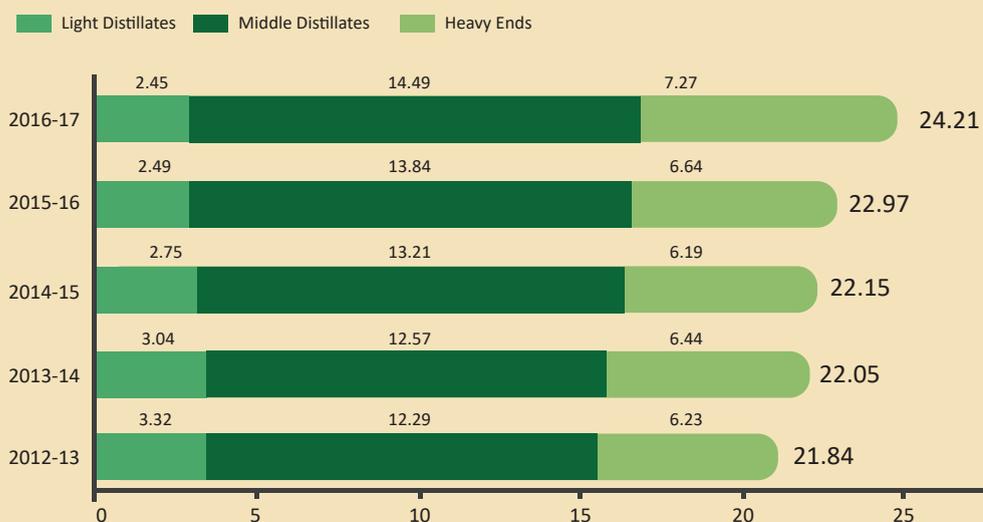
* Figures from FY 2015-16 onwards are per Ind AS

Refinery throughput (Million Metric Tonnes)



* Figures from FY 2015-16 onwards are per Ind AS

Production (Million Metric Tonnes)



Direct Economic Value Generated and Distributed

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

Financial assistance received from government

INR Crore

Subsidies	1,172.83
Royalty holidays	0.00
Financial assistance from Export Credit Agencies (ECAs)	0.00

Message from the Director-Refineries



At BPCL, we are cognizant that our refineries are major contributors towards BPCL's environmental footprint. We aim at striking a balance in improving our performance while ensuring our responsibility towards the environment.

During this financial year, Mumbai and Kochi Refineries achieved throughput of 25.39 MMT, which is the highest throughput achieved so far. All units under the Integrated Refinery Expansion Project (IREP) at Kochi Refinery have been commissioned.

BPCL refineries are producing environment friendly BS IV quality auto fuels and facilities are being upgraded for producing BS VI quality auto fuels prior to the deadline of April 2020 set by the Government of India. Focused efforts toward energy conservation are carried out at the refineries, resulting in reduction of steam consumption and higher heat recovery ultimately lowering CO2 emissions.

Refineries have implemented online stack monitoring systems and real time data from stack analyzers is connected to Central Pollution Control Board (CPCB) site.

Water conservation is given high priority and both the refineries are expanding volumes of the rain water harvesting. As a part of water conservation measures Kochi Refinery installed its first Reverse Osmosis (RO) based de-mineralized water (DM plant), which will recycle the entire effluent generated. Nearly 10,000 trees have been planted by Mumbai Refinery at staff colony and surrounding areas of Mumbai. Kochi Refinery maintains an eco-park covering an area of 5.5 acres of land in which more than 3,000 varieties of plants and trees are planted. Both the refineries have commissioned solar power plants on the roof top of office buildings.

Various other initiatives are undertaken by refineries for continuous improvement on environment front like converting organic waste to fertilizer, disposal of canteen waste through Biogas plant and recycling waste papers etc. Our Research & Development center has completed a pilot project of utilizing waste plastic for road construction.

Safety is of utmost importance at BPCL. This year, we are happy to showcase Mumbai Refinery's achievement of completing 26 Million-man hours without "Lost Time Accident" (LTA). Kochi Refinery too demonstrated its commitment to Safety with an achievement of 48.43 Million-man hours without LTA.

The company makes concerted efforts to bring out qualitative impacts on the lives of the surrounding communities. Focused interventions in the areas of education, skill development, health and hygiene are carried out with the help of NGO partners thereby reaching out to thousands of people.

Against the backdrop of a volatile global economy and India's energy dependency on fossil fuel, we strive to operate in economically, environmentally and socially responsible ways; and invest for the future. One of the major initiative in the near future is setting up of 3 nos. Bio-refineries that will produce ethanol from agricultural waste.

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

8a. Environmental Performance

As a responsible corporate citizen, BPCL acknowledges the impact it has on the environment. BPCL is constantly looking for opportunities to innovate and reduce its dependence on resources which would result in minimal emissions and waste. These technological innovations are in alignment with BPCL vision of being “Most admired global energy Company”.



Energy Management
(Renewable and Non-Renewable)



Water and Biodiversity



Managing Wastes and Effluents



Emissions Management

8.a.i Energy Management (Renewable and Non-Renewable)

BPCL has played a leading role in contributing to India’s economic growth by providing energy. Further, BPCL also understands the related challenges of being in this energy intensive industry and takes responsibility to address these. Therefore, BPCL engages regularly in exploring investments in renewable and non-renewable sources to fulfil the energy demand.

With limited natural resources, conservation is essential to save environmental degradation. The company is a significant consumer of energy, with the refineries responsible for a large share of the total energy used for operations. Therefore, energy conservation is a major pillar of sustainability. Continuous efforts are invested toward operations/maintenance as well as toward development of new projects at the refineries. Energy conservation through energy monitoring systems, energy audits, technology innovation, replacement by energy efficient equipment and other energy conservation measures have helped in good specific energy consumption. These energy conservation initiatives are then benchmarked with global standards. The Refineries have undergone structural changes to improve energy efficiency, resulting in fuel saving.

Mumbai Refinery:

1. Tree plantation (3200 trees) drive was undertaken at MIDC, Taloja, with assistance from Mumbai Waste Management Ltd.
2. AMS-1 /AMS-2 analysers were replaced as a part of Corporate Responsibility for Environment Protection (CREP) initiative under the aegis of MoEF.
3. Connectivity to CPCB & MPCB servers, to directly transfer real time emission data (6 parameters) from Ambient Monitoring stations 1,2 & 3 has been successfully established.

4. New in-situ analysers are provided in refinery furnaces stacks. Real time data connectivity of analysers (SO₂, NO_x, CO and SPM) of 23 stacks has been established with CPCB server.
5. Successfully commissioned ISOM/NHT unit for production and supply of BS 4 MS, thereby reducing sulphur emissions from transport fuel.
6. Installation of Tail gas treatment unit for improving efficiency of Sulphur Recovery Unit (SRU) is in progress.
7. Sewage Treatment Plant (STP) project, being developed jointly with M/s RCF, with a capacity to produce 15 MLD of treated water is currently in progress
8. Process of bio-remediation of 1200 m³ sludge is in progress.

Kochi Refinery

1. Commissioned heat recovery system from CDU-3 over head vapours as crude pre-heat resulting in annual fuel savings of 18625 tons.
2. Changing MAB drive turbine from MP to HP Steam condensate type, estimated fuel savings of 5370 tons per year-expected to be completed by November 2017 along with shut down.
3. Conversion of one WGC drive into motor driven with VFD to save steam and improve efficiency resulting in equivalent fuel savings of 2610 tons per year-expected to be completed by November 2017.
4. Works are in progress for fixing 56 nos. of day lighting system in Workshop and Central Warehouse area to make it a totally sun lit area. This will result in total yearly savings of 25 MWH. Already 36 numbers fixed.
5. Insulation improvement: New perlite insulation for two steam lines for 1.8 KM completed.
6. CDU3 and DHDT commissioned with state of the art technology so that HSD meets BS IV specifications.
7. Comprehensive energy audit of the entire refinery carried out and schemes identified for an annual saving of 163.98 KWH of electricity and 1262.8 T of FG/FO.
8. Online heater cleaning of fired heaters being carried out on a regular basis to reduce arch temperature of heaters.
9. ETP 5 being commissioned to meet environmental regulations.
10. Flare gas recovery system being implemented. The annual fuel saving envisaged is 2172.4 tons. It is expected to be commissioned by March, 2018.
11. Power saving of 165 KW by the stoppage of air blowers in SRU.
12. Air fin fan blade angles adjusted in CDU II and FCCU cooling towers resulting in lower yield temperature of products and lower VOC emissions from tanks.
13. Butterfly park launched.
14. RO DM Plant of 1000 m³/hr of DM water production capacity commissioned.

Meeting growing energy demand solely from fossil fuel would not sustain due to projected shortage of fossil crude and also due to the negative impact on the environment, emanating from the entire life cycle use of the fossil fuel. Thus, it becomes critical to promote usage of green energy. In this regard, the renewable energy capacity has increased from 19.57 MW to 22.17 MW by year end. The capacity of energy efficient lighting has also been increased from 3.26 MW to 6.20 MW. These initiatives have resulted in annual reduction of GHG emission by 34000 Metric Tons of CO₂ equivalent. BPCL plans to venture into development of large scale solar/wind power projects on JV basis as a long-term plan.

Breakup of renewable energy at the end of FY 2016-17

Total Solar Energy installation	10.3 MW
Total Wind Energy installation	11.8 MW
Total installation of Energy Efficient Lighting	6.2 MW

Sustainable Development Initiatives by MAK -LUBE Plant-Loni, Uttar Pradesh

1) Rain water harvesting

Parameter	
Total area of Plant(Sqm)	51,786
Total catchment Area Covered(Sqm)	46,858
Total rain water storage capacity	350 KL
Annual rain fall	637 mm



2) Energy efficient lighting

Converting existing lighting into Energy Efficient LED Lighting (Admin building & Street Light)	<ul style="list-style-type: none"> • 11 Nos of HPSV of 250 W replaced with 75 W LED • 88 Nos. of FTL of 28 W replaced with 15W LED • 32 Nos. of FTL of 20 W replaced with 10W LED
Total energy Saving(kWh) approx per annum.	5,000 units
In terms of Value/annum	Rs 60,000/-

3) Solar Installation

Description	15 KW, Solar system Installation & commissioning completed. 60 Solar Modules, inverter, Electronic meter also installed
Total power generated	17102 kWh
Annual saving in terms of Value (Rs)	1.80 Lakh (approx. Rs. 10.50 per unit) Approx. direct saving /month(Rs) : 15000/-.



Concept Note: Solar Powered Admin Building: Malda Depot

Malda is a small town of West Bengal. It is powered from DG sets. The peak power demand for Malda can reach upto 450 kVA. The power required for admin building (except ACs) at day time is max 6kVA and 2 kVA at night time. Malda is planning to power admin building lighting, all associated equipment of admin building except ACs and security room lighting with Solar Panel fitted on the admin building roof. The total wattage required would be around 6 kW at day time and 2 kW at night time. Hence, a solar panel corresponding to the power requirement, capacitor for charge storage for night storage, a charge controller for uniform charging of capacitor and an inverter for provision alternating current supply are required. The proposal for the solar panel was approved and Job for the installation and commissioning of solar panel was completed on 31.03.2017. The depot administrative building is receiving power from the solar panel and is working very smoothly till date.

Malda receives sunlight for an average of 10-12 hours per day (it is higher in summer). The details of the project plan are given below:

Total Power (Watt)	Day	5,340
	Night	1,352
Power consumed annually	285120 kWh (Units)	
Annual cost saving	Rs 2.85 lakhs	

Benefits:

- Environment friendly
- Renewable source
- Reduced diesel consumption
- One-time investment
- Relative low maintenance
- Thermal insulator and reduces AC power consumption

Electrical Heat Traced Bitumen transfer Pipeline at MR



As an energy conservation measure and commitment for environment, E&C- MR has installed and commissioned new Electrical Heat Traced long bitumen delivery line from Bitumen Plant to Bitumen loading gantry.

The objective of this project is to conserve energy by using electrical heat tracing instead of conventional steam tracing system. Electrical heat tracing system is energy efficient and maintains a constant

line temperature for improved operation.

Project Highlight:

1. Dismantled redundant 3" and 4" Steam traced bitumen lines of approx. 3.2 KM running length. New 8" NB pipe line of length approx. 650 M long was fabricated, and erected.
2. Power limiting electrical heat tracing system was installed along with control panel in Sub Station-6 with a operating temperature indication at BBU control room.
3. The total cost incurred for this project is 126 lakhs .

The use of Electrical heat tracing system of bitumen line will result in saving of 8 T/D of steam. The payback period for the project is approx. 12 months.

Commissioning of New Turbo Aeration Blower at Minas Plant, (Mumbai Refinery)

Energy efficient and state of art Aeration Blower was commissioned on 09.11.2016 as a major step towards conservation of energy. It consumes just half of the energy of existing blowers with minimum maintenance. The new turbo blower employs the high precision machined cast impellers, Hydrodynamic air foil bearings (air –lubricated), highly efficient permanent magnet motors and sensor less inverter drives, which eliminates conventional gear trains or pulley & belt to provide considerable energy savings without much maintenance.

This machine will save about Rs. 5.80 lakhs of energy cost per month and cost of machine will be recovered within 12 months' time. The Blower was procured and installed in record time with close coordination of E&C team and Operations team.

Solar PV system installed at Pithampur LPG Plant

Pithampur LPG Plant has a Solar PV System of capacity of 9 kW for the purpose of powering the Admin Building. The system is a Rooftop Grid type one without batteries so the power produced by the Solar PV System is directly taken into the LT Panel. The power of the Solar PV System is preferentially used first. If the power generated by the System is not enough then only power from the HT side is taken. If power generated by the Solar PV System is under - utilized, then the balance power passes onto the MLDB panel and the balance power is then used up by other equipment in the panel. As the plant operates in double shift and maximum power of the Admin Building is utilized in between 08:30 am and 5:30 pm, this method is effective. It also reduces the cost of battery maintenance.

The solar PV system was successfully commissioned by 31st January 2016.

Capital Expenditure on Sustainable Development projects:

Mumbai Refinery:

Sl. No	S D Project	Capital Expenditure, Rs. Crores	Benefit	Financial Benefit for FY 2016-17 Rs. Crores
1	Provision of PM blower in ETP	1.2	Power savings= 100 kWh	0.18
2	Advance process control in CCR	4	LSHS Saving = 6.5 MT/D	4.06
3	Advance process control in Boilers & Aspen Utility Planner	2.1	LSHS savings = 2.3 MT/D	0.79
4	Provision of LED bulbs	0.44	Power savings= 50 kWh	0.024



Kochi Refinery :

Sl. No	S D Project	Capital Expenditure, Rs. Crores	Benefit	Financial Benefit for FY 2016-17 Rs. Crores
1	Commissioned heat recovery system from CDU-3 over head vapours as crude pre-heat resulting in annual fuel savings of 2479.8 tons.	407	Fuel savings of 2,479.8 tons/year	1.72
2	Changing MAB drive turbine from MP to HP Steam condensate type, estimated fuel savings of 5370 tons per year-expected to be completed by November, 2017 along with shut down.	350	Fuel savings of 5,370 tons/year	9.19
3	Conversion of one WGC drive into motor driven with VFD to save steam and improve efficiency resulting in equivalent fuel savings of 2610 tons per year-expected to be completed by November, 2017.	2,080	Fuel savings of 2,610 tons/year	4.47
4	Works are in progress for fixing 56 nos. of day lighting system in Workshop and Central Warehouse area to make it a totally sun lit area. Already 36 Nos fixed	17.6	Saving of 16100 kWh per year.	0.01
5	Insulation improvement: New perlite insulation provided for two steam lines for 1.8 KM.	135.9371	Fuel savings of 3 tons/day	1.77
6	DHDT Unit commissioned with state of the art technology so that HSD meets BS IV specifications.	6,,100		11.77
7	Comprehensive energy audit of the entire refinery carried out and schemes identified for an annual saving of 104.78 lakh KWH of electricity and 1262.8 T of FG/FO.	1,955.4	Savings of 104.8 lakh KWH of electricity and 1,262 tons of fuel per year	
8	Online heater cleaning of fired heaters being carried out on a regular basis to reduce arch temperature of heaters.	1.6	To sustain unit charge rate.	
9	ETP 5 being commissioned to meet environmental regulations.	11,000		
10	Flare gas recovery system being implemented. The annual fuel saving envisaged is 2172.4 tons. it is expected to be commissioned by March, 2018.	1,951	Fuel saving of 2,172 tons/year	3.72
11	Power saving of 165 KW by the stoppage of air blowers in SRU.	Nil	13,21,400 kWh	1.21
12	Butterfly park launched.	8		

The savings are reported as actual for the completed projects and estimated for the ongoing projects. Serial No.7, the savings are estimated for the projects identified.

Achievements by Refineries toward Sustainable Development:

Mumbai Refinery:

Sl. No	Project name	Project Investment (Rs.)	Project Capacity
1	Rain Water Harvesting (RWH)	0.32 Crore	Area 4000 sq. mtr
2	Energy Efficient Lighting (EEL)	0.44 Crore	40 KW

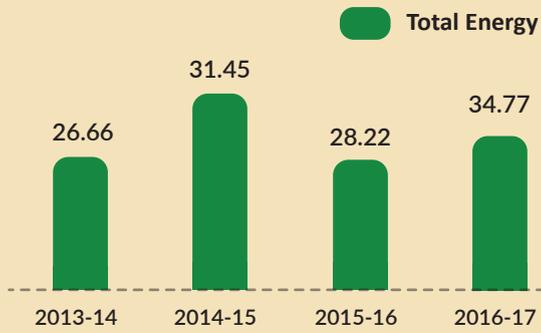
Kochi Refinery:

Sl. No	Project name	Project Investment (Rs.)	Project Capacity
1	Rain Water Harvesting (RWH)	-	1,02,955 sq mt
2	Energy Efficient Lighting (EEL)	58.552 Crore	129.1 KW
3	ETP/STP	118 Crore	5 new ETPs

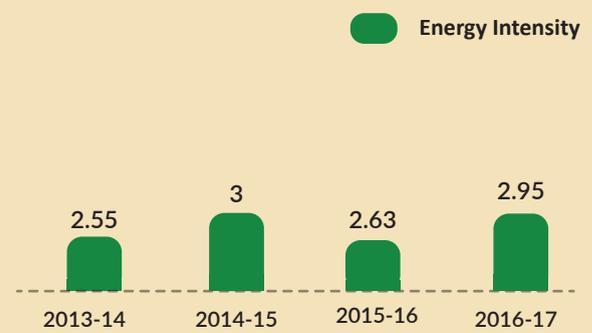
	Mumbai Refinery	Kochi Refinery	Other BU s	Total
Solar Energy (off grid) consumed	53.69 MWh	11.57 MWh	336.66 MWh	401.92 MWh

Solar Energy supplied to Grid	Wind Energy supplied to Grid	Total Renewable Energy supplied to Grid
6,060 MWh	24,843 MWh	30,903 MWh

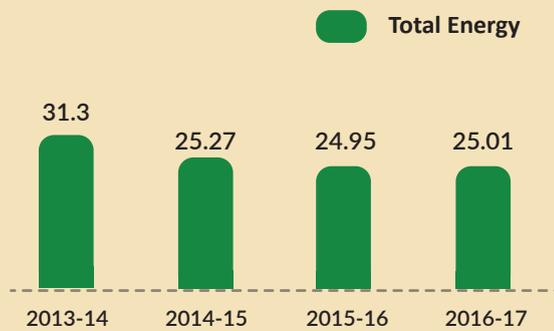
Total Energy (Million GJ)- Kochi Refinery



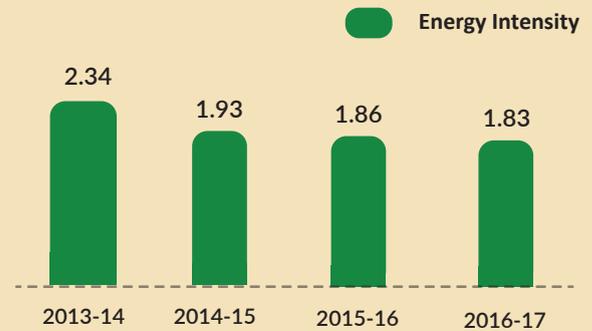
Energy Intensity (GJ/Tonne of Through)- Kochi Refinery



Total Energy (Million GJ)- Mumbai Refinery

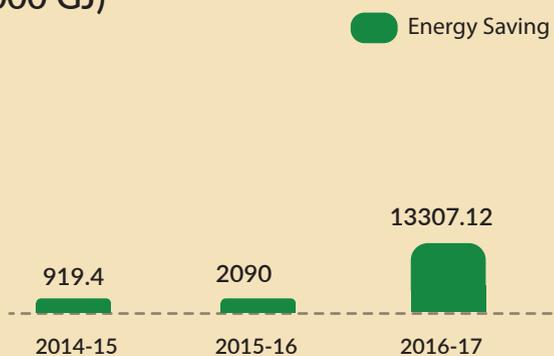


Energy Intensity (GJ/Tonne of Through)- Mumbai Refinery

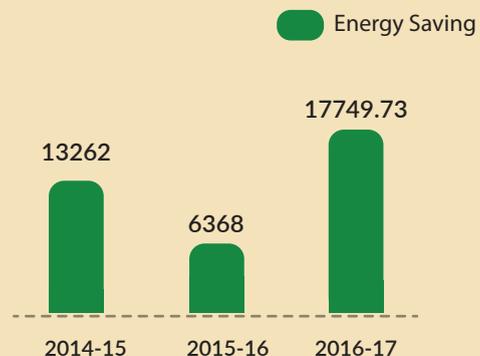


Total Energy ('000 GJ)	LPG	Retail	Lubes	Aviation
FY 2014-15	541.06	513.11	47.57	61.11
FY 2015-16	477.53	567.61	44.25	60.53
FY 2016-17	551.93	575.26	67.93	71.04

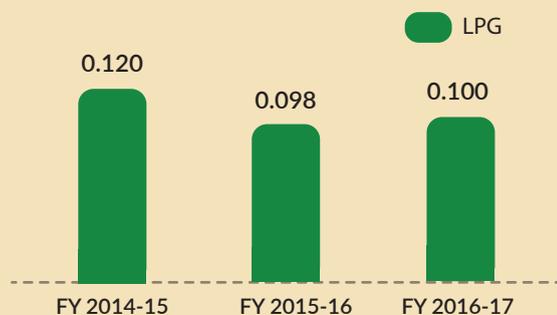
Energy Savings at Refineries ('000 GJ)



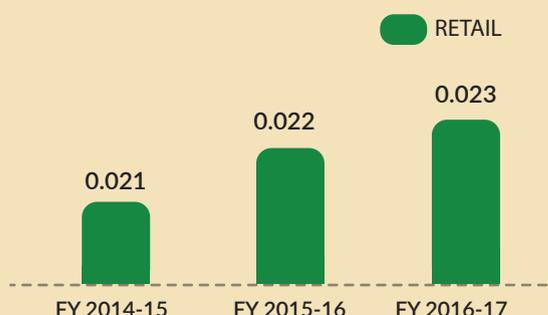
Energy Savings at Other BU'S (GJ)



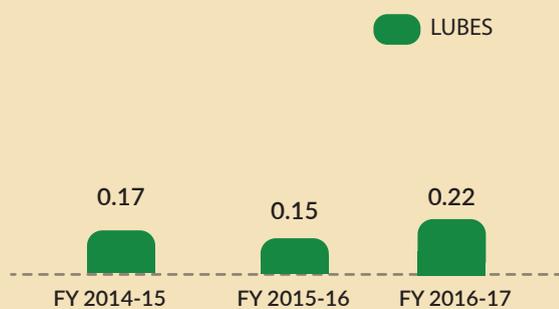
Energy Intensity-LPG (GJ/Tonne of Throughput)



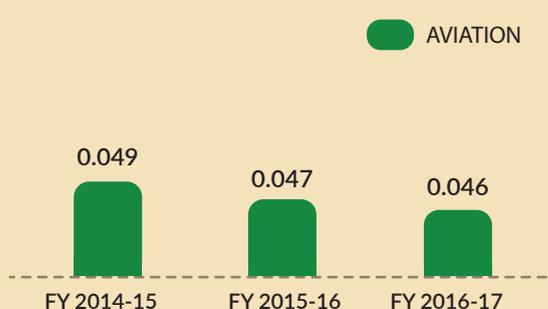
Energy Intensity-Retail (GJ/Tonne of Throughput)



Energy Intensity-Lube (GJ/Tonne of Throughput)



Energy Intensity-Aviation (GJ/Tonne of Throughput)



8.a.ii Water

BPCL recognises the value of natural capital and the impact of its operations on the environment. Therefore, BPCL has taken initiatives to optimize water consumption at various locations throughout India.

Water is the most essential resource for any oil and gas company. Therefore, BPCL contemplates for conservation and management of water by adapting Rain Water Harvesting system and reusing/recycling of water wherever possible. The total catchment area under Rain Water Harvesting was 5,30,475 sq. meter which has been increased to 7,22,800 sq. meter during the year. No water bodies have been significantly affected by withdrawal of water by units of BPCL areas of operations.

The total water consumed by BPCL is 49,951.55 thousand KL in the FY 2016-17. The major water sources along with the details of water consumption for refineries and other BU's for this year is given in the table below.

FY 2016-17		
Water Consumed Volume in 000' KL	Refineries	Other BUs
1. Ground water (bore/open wells):	0.00	1,007.55
2. Municipal water supply:	4,466.13	594.29
3. Surface water (River/lakes):	12,986.56	112.22
4. Tanker water:	0.00	3,546.68
5. Sea water intake:	27,060.80	0.00
6. Rain water:	142.15	35.16
7. AAI:	-	8.63
Total Water withdrawn	44,655.65	5,304.53

Total Waste Water (000'KL)	Refineries	Other BUs
Waste Water Generated	28783.95	166.40
Water Recycled / Reused	3548.97	858.46

Sustainable Development Projects - Borkhedi depot



Borkhedi depot has implemented SDR projects like Solar LED lighting and Rain water harvesting during 2015-16 (March 2016). Following are the details of both the projects:

A) Solar Lighting: The battery type solar plant is of 12.5KW capacity installed over rooftop of utility building powering all the de-licensed area street lighting and admin building lights. On an average 1,200 units are generated every month at full efficiency.

B) Rain water harvesting was implemented for all buildings. A network of pipelines and recharge pits spaced at 30m distances was provided in de-licensed area. All the storm water drains were also connected with this system so as to get maximum results. It really improved the ground water table in & around our depot. During the recent summer period, none of our bore wells went dry and all our water needs were fulfilled through ground water only.

ESE organizes Earth Day celebrations at CO



World Earth Day is celebrated on 22nd April every year all across the world to demonstrate support for environmental protection. This year Team ESE organised Earth Day fair with different programs on 21st & 22nd April at Swapnashilp, CO. The main objective was to create awareness in employees about environment needs like water conservation, planting trees, recycling of kitchen waste/E-waste. Awareness talk and slide show on Conservation of Natural Resources was conducted by Bombay Natural History Society. Employees were educated by BNHS on how to preserve natural resources. BNHS had

displayed posters on nature conservation, green habitat, medicinal plants and lifecycle of butterfly. They also had various nature friendly products like Sparrow nest, Bird feeder, Wildlife pictures and T shirts for sale.

A talk cum demonstration on “How to grow kitchen garden using organic waste” was conducted by NGO Green Souls. They also demonstrated some nutritious salad recipes to employees.

Main attraction was the E- waste collection Counter by Scrap Yard. E-waste collected during two days was 95 kgs consisting of old music speakers, CDs, Watches, Mobile phones etc. After recycling these items, the amount will be donated to CRY Foundation.

Another activity conducted for the cause of carbon foot printing was online calculation of Carbon footprint. Employees had to answer few questions w.r.t their daily habits & lifestyle which calculates carbon footprint of the individual. This activity helped in sensitizing people to use natural resources carefully and reduce carbon emissions to the atmosphere. Information on Himalayan Adventure trips were given by Yuvashakti to employees.

Inauguration of Rain Water Harvesting System at Mumbai Refinery Sports Club

The objective of this project is to collect surface runoff rain water from BPCL Refinery sports club ground and use the same as makeup water requirement of CCR raw water Cooling Tower inside the Refinery.

Rain water falling on ground being collected through a system of existing and newly constructed storm water channels running around the periphery of the ground. Underground precast modular filtration system "Furaat" has been provided to filter surface runoff water. The filtered Rain water is channelized by common header of 160 mm dia HDPE pipe to 250 cu.m. U/G RCC Tank.

In order to bring water from sports club to refinery, busy Ghatkopar Mahul Road was cut for laying the 3" dia pipeline with sleeve. Special permission from statutory authority like MCGM & RTO was obtained. The job was completed within the stipulated period 3 days and with least inconvenience to the general public. The Refinery Sports Club ground having catchment area of 25,170 Sq.Mt. and rain water harvesting potential of 53,289 Cu. Mt per year. Project cost is 1.7 Crore.



Roorkee LPG Bottling Plant

Solar Plant

A 10 KW Solar Power plant was installed on the roof of admin. building After the installation of this the KW/MT of the plant has reduced. In this type of solar plants, grid connected solar PV systems feeds solar energy directly into the building loads without battery storage. In case of short fall if any, solar energy is imported from the grid. The solar PV modules are of crystalline silicon type manufactured in India.

Thus, BPCL can save approx. 90% of power consumed by our admin. building by installation of 10 KW On Grid Connected Solar Power Plant without battery on the roof of admin. building of Roorkee LPG Bottling Plant.

Rain Water harvesting System

Water is our most precious natural resource and something that most of us take for granted. We are now increasingly becoming aware of the importance of water to our survival and its limited supply. The harvesting of rainwater simply involves the collection of water from surfaces on which rain falls, and subsequently storing this water for later use. At Roorkee we have installed Rain water harvesting facilities at three locations. One unit is installed near admin. building, one unit near LPG Pump & compressor shed and one in green belt area. All these rain water harvesting units are being used to increase the level of the ground water.



8.a.iii Biodiversity

BPCL is strategically reviewing its impact on biodiversity in its areas of operation. BPCL has initiated the process of creating awareness on the importance of biodiversity among various locations. BPCL has initiated the identification of protected areas and potential areas of high biodiversity value near all its industrial units in India. An environmental impact assessment is done for all new projects to identify the impact of operations on flora and fauna. BPCL has begun sensitizing employees on the issues of biodiversity with the help of informative note on biodiversity. The details of the roles in protecting the biodiversity will be reported in 2017-18.

BPCL is conducting tree plantation drives throughout various locations and also investing time and effort in preserving the green belt. The tree plantation drive is usually carried out on occasions such as earth/environment day. Saplings are planted and even distributed under the CSR initiative of BPCL. Further, on this section is discussed under Community contribution chapter.

8.a.iv Emissions Management

The energy and climate policies present major challenges to the oil and gas industry. The government holds primary responsibility to contribute to securing the energy supply with respect to the growing energy demand.

BPCL is taking steps towards enhancing energy efficient technologies in their operations. This would reduce GHG emissions and in turn mitigate climate change and global warming. BPCL's emissions from operations include Carbon dioxide, NOx, SOx, Methane and other gases.

To reduce environmental impact, BPCL has set periodic targets at all locations. Systems and system upgradations 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 _e)	Refinery	Other BUs
FY 2014-15	3619.33	51.75
FY 2015-16	3,847.89	52.90
FY 2016-17	3,907.24	55.29

Indirect GHG Emissions Scope 2 (^{'000} MTCO _e)	Refinery	Other BUs
FY 2014-15	102.29	66.74
FY 2015-16	111.36	63.86
FY 2016-17	177.36	80.52

	FY 2014-15	FY 2015-16	FY 2016-17
GHG Emission (Scope 1, Scope 2) Intensity (Refineries) (per throughput)	159.35	164.18	160.84

Total GHG Emissions- Scope 1+ Scope 2 (^{'000} MTCO _e)	Refinery	Other BUs
FY 2014-15	3721.62	118.49
FY 2015-16	3,959.25	116.76
FY 2016-17	4,084.60	135.81

Emissions of Ozone Depleting Substances (ODS) (MTCO ₂ e)		2016-17
Mumbai Refinery		2,208.2
Kochi Refinery		12,161.39

Other Air Emissions at Refineries (In Tonnes)	2014-2015	2015-2016	2016-17
Oxides of Nitrogen (NO _x)	2,371.84	2,426.61	2,495.28
Oxides of Sulphur (SO _x):	11,303.82	13,057.96	12713.67
SPM	978.19	981.91	904.30

Scope 3 Emissions	
(Business Travel) ('000 MTCO ₂ e)	5.879
Crude and LPG import ('000 MTCO ₂ e)	10.523

Manglia Receipt Terminal certified as ISO 50001 Compliant Location First in BPCL Retail



In a bid to make energy accessible to the country and future generations, Manglia Receipt Terminal (MRT) aspired to manage its energy consumption effectively in systematic manner by implementing ISO 50001: 2011(Energy Management System) standard. Implementation of this International Standard is intended to lead to reduction in costs, greenhouse gas emissions and risks. ISO 50001: 2011 Standard is based on the Plan - Do - Check - Act (PDCA) continual improvement framework and incorporates energy management into everyday organizational practices.

It is said that one unit of electricity saved is equivalent to two units produced therefore it is prudent to focus efforts on improving energy performance. It started in May 2015 with the kick off meeting with PCRA. Subsequently MRT developed its own energy policy, set energy objectives and targets in accordance with requirement of the standard. This was followed by internal audit and external audit by team of senior Auditors from the firm "Indian Register Quality System (IRQS)", a division of Indian Register of Shipping.

MRT was awarded the ISO 50001:2011 compliant location certificate on 28.03.2016 by IRQS.

8.a.v Managing Wastes and Effluents

The exploration and production of petroleum and natural gas generates effluents and waste. Being a responsible organization, BPCL aims to reduce the consumption of water in all operations. BPCL maintains 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. BPCL is trying to utilise this water for significant operations of the industry, provided it meets the water quality requirements. Else, the treated water is utilized for secondary purpose.

Total water discharged by quality (Concentration in mg/L)	Mumbai Refinery	Kochi Refinery
Total Suspended Solids	13.50	12.40
Biological Oxygen Demand	12.63	13.70
Chemical Oxygen Demand	69.39	41.10
pH	7.23	7.30
Total dissolved solids	0.00	0.00
Oil & Grease	1.50	1.20
Chlorides	0.00	0.00
Sulphates	0.00	0.00
Phenol	0.00	0.12
Sulphides	0.10	0.50

Environmental standards are maintained as per national laws and regulations. In FY 2016-17 there were no fines, non-monetary sanctions or cases brought through dispute resolution mechanisms. In FY 2016-17, there has not been any significant amount of oil spill.

Environmental Expenditure (INR Lakh)	Refineries		Other BUs	
	2015-16	2016-17	2015-16	2016-17
Treatment and disposal of waste	1,805.22	347.04	43.95	35.88
Depreciation and maintenance cost of equipment's used in pollution control	2,621.72	1,475.99	23.81	44.24
External services for environmental management	157.61	273.93	50.89	39.11
External certification of management systems	1.20	2.32	33.84	35.35
Extra expenditure for installing cleaner technologies	90,493.65*	1,025.81	21.16	50.41
Other environmental costs	204.65	1,071.23	43.20	35.74

*This includes a cost incurred on the expansion of Kochi refinery

Waste to Electricity Project at Brahmapuram in Ernakulam

The agreement to provide Viability Gap Fund by Bharat Petroleum Corporation Limited (BPCL) under CSR to Kochi Municipal Corporation (KMC) for the Waste to Energy Project of KMC has been signed at the Collectorate, Ernakulam.

BPCL is associating with the Municipal Waste to Electricity Project of Kochi Municipal Corporation as part of Swachh Bharat initiative based on the directives from Ministry of Petroleum & Natural Gas, Govt. of India. This is a project to convert solid municipal waste to electricity as part of urban waste management. BPCL is funding Kochi Municipal Corporation to the tune of Rs 25.00 crores as a onetime Viability Gap Fund (VGF). The VGF would be utilized for the additional fund requirements of Kochi Municipal Corporation (KMC) for paying to the Concessionaire the difference between the quoted rate and rate approved by the Kerala State Electricity Regulatory Commission (KSERC) for the electricity produced from this project.

The plant has a capacity to process 300 MT of waste per day which will be collected from Corporation and nearby Municipalities and Grama Panchayats. The accumulated waste will also be processed in the proposed plant.

Waste generated from Refineries

Hazardous waste : 4680.07 Tonnes

Non-Hazardous waste : 3042.29 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
Futher 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 generated within BPCL with the methods of disposal. A list of Hazardous and Non-Hazardous waste with their quantities are discussed in annexure of this report.

Celebrating World Environment Day at BPCL



Environment day training at Manglia Receipt Terminal



Go Green with Speed Campaign



BPCL Chembur colony collecting e-waste



NR Retail celebrating Environment Day



Sangrur TOP

8b. Social Performance

8b.i Promoting Safety through excellence in operations

'Safety First – Safety Must' is the philosophy that is inculcated in the culture of the organisation. BPCL gives utmost priority to safety and constantly look for improving and exploring systems and practices towards achieving this goal. 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).

Emergency Preparedness

To ensure all employees and workers are prepared for any emergency situation that may arise at any site location, regular mock emergency drills are conducted at refineries and all the marketing locations. These drills are based on ERDMP which is prepared as per the PNGRB guidelines. A set of guidelines have also been shared with the workers so that they are alert and well-equipped to handle emergency situations. To ensure that recurrence of the accidents is averted all accidents are documented and analysed. There is an involvement of local communities during the safety briefings. A key annual target of the HSSE Department is to review ERDMP of select locations, DCMPs of certain locations & Fire Drill reports, identify gaps in preparedness, and guide BUs for corrections as necessary. HSSE also monitors BUs for undertaking live fire fighting training.



BPCL understands that only a healthy individual 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. Occupational diseases have not been detected in the factory. Exposure to carcinogenic Benzene has not caused cancer in any of employees. However, other forms of common diseases are lifestyle diseases among employees.

Mitigation

In case of any severe incidents, BPCL has ERDMP which is put into action. BPCL trains employees for first aid and has best in class fire fighting equipment's and machinery. BPCL ensures the situation is contained 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.

Planning

The nature of work in the oil and gas industry calls for comprehensive preventive measures in the processes and transportation. Therefore, BPCL has invested efforts in putting together thorough safety and security measures by adopting advanced technologies and stringent standard operating procedures at all locations. The use of technology to automate process has resulted in reducing the exposure of workers to harmful or toxic chemicals. Technological advancements has also improved safety governance with online incident reporting, centralized control and monitoring. The monitoring systems helps to oversee the day to day operations, thus helping 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. In order 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. 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.

Restoration

Restoration refers to the process returning to a state of normalcy. 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.

BPCL Safety Performance	Company Employees		Contractors	
	2016-17	2015-16	2016-17	2015-16
Injuries	24	16	34	5
Cases of occupational diseases	21	10	20	27
Man-days lost	3872	584	25,971	1,191
Missed (absentee) days	20,429.5	23,588	1,847	7,664
Fatalities (Male)	1	0	3	0
Fatalities (Female)	0	0	0	0

Fire Service Week Celebrations at BPCL



Safety Oath taking ceremony at Surat LPG Plant

BPCL LPG Bottling Plant Surat Celebrated Fire Service Week from April 14 to 20. As part of the programme, various fire-fighting drills and activities were organized at the location. The programme started by taking safety pledge by all the company workmen, contract labor, PCVO crews, and security guards Jaipur LPG Territory celebrated Fire Service Week during the period 15.04.2016 to 20.04.2016. During this week, three themes were selected viz Training, Motivation and Safety systems performance. Jaipur LPG organised various Safety related activities/competitions in which Workmen Staff, Contract Labour, security staff and PCVO crew have been covered.



Bijwasan Installation imparts firefighting training to Indian Army

It was a proud & memorable event for BPCL & Bijwasan Installation when we got an unique opportunity to impart 3 days fire fighting training to the brave personnel of the legendary Indian Army on the request of Meerut based 22 Infantry Division which is entrusted with the training to the ammunition & firefighting cadres of the Army.



Workshop on 'Road safety'

Navagam T.O.P. organized a training workshop on "Tyre safety & its role in road transportation" in association with M/S. Eicher India Pvt. Ltd, Ahmedabad

8b.ii Community Contributions

BPCL is a vital player in the energy sector and is contributing significantly to India's progress. In alignment with the vision of the Company, the CSR initiatives strive to Energise Lives of the communities. Over the years BPCL has contributed towards the goal of achieving Sustainable Development and made significant progress in the thrust areas of Education, Water Conservation, Skill Development, Health & Hygiene and Community Development. Seeking to herald an inclusive business paradigm, CSR initiatives are undertaken based on social, environmental and economic considerations. CSR being ingrained into the business strategy; various initiatives have been pioneered to address some important developmental challenges. Today, through institutionalized and project-based approach, BPCL have scaled up existing projects, taken up new initiatives and exited from those that have been completed and handed over to the stakeholders involved.



Water Conservation



Health and Hygiene



Education



Community Development



Skill Development

BPCL acknowledges the impact caused by business operations on the communities surrounding their locations. Additionally, BPCL also understands their responsibility towards the marginalized and deprived, living in rural/tribal areas. Therefore, BPCL has 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. BPCL does not make any contributions towards any political parties either financially or through in-kind contributions.

With an aim to build powerful partnerships with society for sustainable development, some of the key initiatives undertaken, as part of CSR are mentioned below:

Education

Quality Education being one of the core thrust areas of BPCL CSR, is focused on improving the quality of education while striving to bring in technology and innovation into the teaching process. The Computer Assisted Learning (CAL) project which began in 2009-10 has been scaled up to over 250 centres in Mumbai, Uran, Panvel, Solapur (Maharashtra), Lucknow (UP) and Jaipur (Rajasthan). This project enables school going children an easy and regular access to advanced information technology (multi-media computers, broadband internet and quality educational software contents) and supplements their learning through locally designed curriculum, trains instructors and engages teaching-staff actively. Till date, project CAL has covered more than 90,000 children from class I to X and has been extended to the community residing around the Mumbai Refinery.

BPCL has successfully covered all government schools in the Uran block through project CAL and successfully handed over the project to the local government for continuation of the project thus taking steps towards sustainability.

Science Education Project for students of Government schools in Solur, Bangalore (Karnataka) focuses on experiential learning models based on science concepts. It reaches the students through a mobile science lab and science centre. This project has made hands-on science education available to poor rural children and teachers. This year, over 8546 students from 84 schools have enjoyed hands-on learning of science through BPCL's project, while also being groomed as young science leader-thinkers.

A number of new projects have also been initiated during the year such as remedial education for children in 20 slums of Bhubaneswar, dance and theatre training for underprivileged children in Mumbai which contributes to their holistic development, providing education support to cancer affected children, supporting Night schools in Mumbai for those unable to complete their secondary education in day schools for various reasons. Along similar lines, BPCL have taken up remedial education of students from Classes VI-IX in Coimbatore to improve their learning in Tamil, Mathematics and English.

BPCL has also successfully completed the fourth batch of its in-house project Saksham for professional development of primary/upper primary teachers and Headmasters from 46 low income schools of Mumbai. This project aims at encouraging teachers to use new techniques for teaching, classroom management as well as developing new teaching materials according to the needs of the class.

With an objective to inculcate the habit of reading in children from government schools and building professional capacities of teachers and principals, BPCL has continued to support setting up & management of libraries. Library books are classified as per the difficulty level so that students can choose the book as per their reading ability.

Health and Hygiene

BPCL is proactively working to address issues of health and sanitation by providing access to basic health care services, both preventive & curative, to the underprivileged and building the capacity of local health facilitators and community members. Projects related to strengthening healthcare infrastructure and services and building capacities of healthcare professionals, supporting health camps through mobile medical units, for general community etc. have been directed towards making basic healthcare services accessible to the underprivileged. Furthermore, various nutritional support projects in Kerala for anganwadi and school children have been undertaken. Through various health initiatives during the year, BPCL has reached out to 1,44,205 beneficiaries.

BPCL has participated in the Swachh Bharat Abhiyan in a big way through various initiatives. The company has undertaken maintenance of the toilets in 4 states – Andhra Pradesh, Chhattisgarh, Telangana and West Bengal, which were constructed as part of Swachh Vidyalaya Abhiyan'. Additionally, 20 toilets have been constructed schools and a college at Dharwad, Karnataka. BPCL has additionally taken up a project for cleanliness around Madurai Meenakshi Temple aiming at making it a 'Swachh Iconic Place' which is also a popular tourist destination.

Skill development

Deriving inspiration from Hon'ble Prime Minister of India's vision of 'Skilled India', BPCL has taken steps in this direction through Corporation driven initiatives as well as at the Industry level in this direction. The Oil & Gas Industry is together working in the direction of setting up Mega Skill Development Institutes-SDIs and subsequent SDIs in the catchment areas of other Oil PSUs. BPCL has taken the lead role to set up SDI Kochi, and has supported setting up the model SDI in Odisha and SDI-Visakhapatnam as well. Further, BPCL has contributed towards the Hydrocarbon Sector Skill Council for assessing skill needs & gaps, establish competency standards for each sector like upstream, downstream & mid-stream and imparting the requisite skills based on competency standards. Several placements linked skilling projects have been successfully completed across the country for youth, women and persons with disabilities.

Water Conservation

Water scarcity is a disturbing phenomenon in the country for decades and this affects a large population in India. Recognizing the suffering of people living in water scarcity areas of rural and urban India, BPCL has undertaken Project 'BOOND' which is a water conservation initiative through rain water harvesting. The project has covered 36 villages from Tamil Nadu, Karnataka, Maharashtra and Rajasthan during the FY2016-17.

It has now been extended to States of Andhra Pradesh and Uttar Pradesh as well. Effective community participation and inclusive approach of the project has enabled successful formulation of Village Water Committees that have taken over the governance and maintenance of the water structures constructed.

In addition to this, project BOOND also supports sustainable employment through new and improved agricultural practices like crop rotation, mulching, newer crops, innovative methods of irrigation and horticulture. Since 2010, BPCL has collectively reached out to 196 villages through project BOOND. These initiatives aim at increasing availability of water for agriculture, livestock and ground water recharge, decrease in migration, improving the quality of life of the villagers and a positive effect on the environment in addition to flood moderation.

Community Development

Participating in the developmental journey of the country BPCL considers community development through creating opportunities for learning, skilling, infrastructure development as the pillars to progress. In line with this objective and in addition to the initiatives on education, water conservation, health and hygiene, BPCL has also undertaken projects such as installation of solar lights, handpumps in remote villages. Environment and women-focused initiatives have been supported nationwide under the Ujwala scheme of providing deposit free LPG connections to BPL families. Realising the potential of employee volunteering and leveraging their talent, expertise and contribution for CSR initiatives, BPCL enables its employees to align and engage in CSR initiatives through the Bharat Connect programme. This project enables every new entrant in BPCL to align with the CSR objectives and activities of the company. Various activities conducted through volunteering such as Once upon a time - a story telling activity in schools, Shramdaan and Project Boond, volunteering in ongoing CSR projects, participation in Joy of Giving Week and many more are carried out regularly.

BPCL is committed to continue the work of sustainable development through focused and pro-active social projects under CSR initiatives aligning with national developmental goals.

Mega cycle rally by Pune LPG Territory during SAKSHAM 2016

Cycling is a truly invigorating and liberating experience, enjoyed by people of all ages and from all walks of life. Whether you're cycling to work, to school, to the shops or just for fun, the humble bicycle is an easy way to get more active and in turn saves the environment (No Smoke!) With a noble cause on their mind, around 1200 cycle enthusiasts from the city had participated in Mega cycle rally at Nigdi, PCMC, Pune on 22nd January 2017.



Bharatgas Pune organized the event in association with Rotary Club of Pimpri Chinchwad. Maximum participation was from students of various schools. Rally started with flag off by Mr. Dinesh Waghmare, Commissioner of Pimpri Chinchwad Municipal Corporation and Mr. Pawan Kumar, TM LPG Pune at 7.30 am on 22nd January at Bhakti Shakti Chowk, Nigdi. Saksham Pledge was administered to the participants before the start of the rally by PCRA representatives. Overwhelming response was received from the residents of Pune.

TM LPG appealed to the crowd to use environment friendly mode of transport for energizing the body and mind apart from saving the natural resources. He also administered the Suraksha Ke Panch Mantra to the participants for ensuring safety at home while using LPG.

Lucky draw was conducted for the participants and three bi-cycles were awarded to the winners.



Pradhan Mantri Ujjwala Yojana Launch at Motihari, East Champaran, Bihar

The Pradhan Mantri Ujjwala Yojana (PMUY) was launched at Motihari, East Champaran Bihar by Hon'ble Union Minister of Agriculture and Farmer's Welfare Shri. Radha Mohan Singh and Shri Dharmendra Pradhan, Hon'ble Minister of State (I/c), Petroleum and Natural Gas on 31 July 2016. This marks one more step in the direction of providing LPG connections during the three financial years commencing 2016-17 to 5 crore families who are Below Poverty Line (BPL).

As a symbolic launch of the PMUY, 10 women from BPL families were handed over connections.

Pradhan Mantri Ujjwala Yojana which was launched by Hon'ble Prime Minister of India on 1st May 2016 at Ballia (Uttar Pradesh) is a scheme to provide clean cooking fuel to the women belonging to the 'Below Poverty Line' (BPL) households across the country. Pradhan Mantri Ujjwala Yojana (PMUY) aims to provide subsidized connections to 5 Crore BPL households by 2019 and is a part of larger program of adding 10 Crore new LPG connections by 2019. Most of the connections would be in the eastern part of India where domestic LPG penetration is less than the national average. This is the first time in the history of the country that the Ministry of Petroleum and Natural gas is implementing a welfare scheme benefiting crores of women belonging to the poorest households. The identification of BPL families will be made on Social Economic Caste Census (SECC)- 2011 data. WHO study also suggests that 5 lakh women die every year in our country on account of fumes generated by using non-conventional sources of fuel.

Finance Minister has budgeted Rs. 2,000 Crore to subsidize 1.5 crore LPG connections for BPL households during the financial year 2016-17. During the next two financial years i.e. 2017-18 and 2018-19, the Government of India would make budgetary provision of Rs. 6000 Crore to subsidize 3.5 Crore new connections to BPL households under PMUY.

PMUY scheme provides subsidy of Rs. 1600/- to the woman beneficiary, comprising security deposit of 14.2 Kg cylinder, domestic pressure regulator, suraksha hosepipe, domestic gas consumer card and administration charges.

A new low cost LPG Stove has been developed (with BIS certification and one star rating) for the use of BPL households and the cost of the stove is Rs. 990 , and thereby reducing the burden on the poor households. Oil Marketing Companies shall also provide an option of interest free EMI option to cover the cost of LPG Stove and / or the first refill to the beneficiaries who are unable to bear this cost. The interest free EMI option aims at recovering the loan amount through the gas subsidy deposited in the bank account of the beneficiary from the subsequent refills.

Subsequent to the launch of the scheme on 1st May, 2016 at Ballia; several regional launches took place in the states of Gujarat, Rajasthan, Madhya Pradesh, Odisha and Bihar to expedite enrolment of more and more of beneficiaries in this scheme. Within a short span of less than three months, more than 20 Lakhs of beneficiaries have been released LPG connections under the scheme. Ministry of Petroleum and Natural Gas is set to extend benefit of the scheme to 1.5 crore beneficiaries during the current financial year 2016-17. In Bihar, the scheme was launched on 27.6.2016 and has already crossed 1 lakh within a short time.

Ministry of Petroleum and Natural Gas has released the toll free helpline number for the Pradhan Mantri Ujjwala Yojana beneficiaries. The candidates from BPL households can call toll free at 1800 266 6696 to discuss any of their queries about the PM Ujjwala Yojana.

The Hon'ble Minister of State(I/c), Petroleum and Natural Gas has said that New distributorships will be set up in Champaran district for making cylinders/cooking fuel accessible and easily available. So also, a New Oil terminal and bottling plant is planned in Champaran district at the cost of Rs 500 crore. Natural Gas pipeline from Gorakhpur is also planned for benefit of Motihari. BPCL has been requested to provide an ambulance out of its CSR commitment for Motihari Engineering college. Minister also gave commitment of Govt PSUs participation in recruitment process of various engineering colleges of the state.



Message from the Director- Human Resources



At BPCL, we believe that we can achieve sustainable growth only by integrating our business approach with the expectations of our stakeholders, conducting our business with integrity and providing our workforce with a safe environment and opportunity for growth. Our employees take pride in their association with an organization which is constantly innovating. We believe that continued investments in 'Development of People' which is also one of our core values is key to development of a responsible organization.

We invest in our employees not only in terms of resources but also time commitment by our senior leadership through Talent Review Panels (TRPs) for almost 51% of our management staff strength. The TRPs facilitate rich discussion around each and every management staff to discuss their Strengths, Areas of Development, their Aspirations and Engagement which culminates in the development of an Individual.

Development Plan (IDP). BPCL's philosophy of development involves 70% through experience, 20% through social learning and 10% through books, manuals & classroom training etc. The Integrated Career Development Framework (ICDF) which is an interwoven web of key HR processes aimed at developing the careers of Management Staff essentially ensures that employees are covered under learning interventions and offered rich exposure & experience to equip them shoulder greater responsibility. At BPCL we provide array of unique & blended learning opportunities and employees are also covered under mandatory functional & behavioral programs to take care of critical learning requirements.

In line with our vision of being 'Model Corporate Entity with Social Responsibility', we continue to contribute towards the goal of achieving Sustainable Development and have made significant progress in the thrust areas of Education, Water Conservation, Skill Development, Health & Hygiene and Community Development. We also involve our employees for CSR activities and offer them volunteering opportunities through various modes such as 'Once upon a time' - a story telling activity in schools, Shramdaan for Project BOOND, volunteering in ongoing CSR projects, participation in 'Joy of Giving Week' etc. Our initiative 'Bharat Connect' enables every new entrant in BPCL to align with the CSR objectives and activities of the company. Our Employee Satisfaction Enhancement (ESE) Team continues in its endeavor to keep employees engaged and maintains a constant connect with them through various interventions. ESE team has steered several initiatives aimed at enhancing 360-degree wellness of the employees and is an active facilitator towards a Healthy, Productive, Vibrant and Energized workforce'. ESE also promotes awareness amongst employees from time to time about environmental needs like water conservation, tree plantation, waste recycling and conservation of natural resources by way of celebrating days commemorating such activities, workshops, contests etc.

BPCL is a proud recipient of the CII HR Excellence Awards at National level for the year 2016, in two categories- 'Significant achievement in HR Excellence' and 'Commendation for Learning & Development'. BPCL was also ranked 9th in the "The Best Companies for CSR" list published by Economic Times. These recognitions reinforce our commitment for sustainable and inclusive development.

We are thus committed to the core purpose of energizing lives and will continue to facilitate and promote culture which enables the same.

9

Managing the Supply Chain

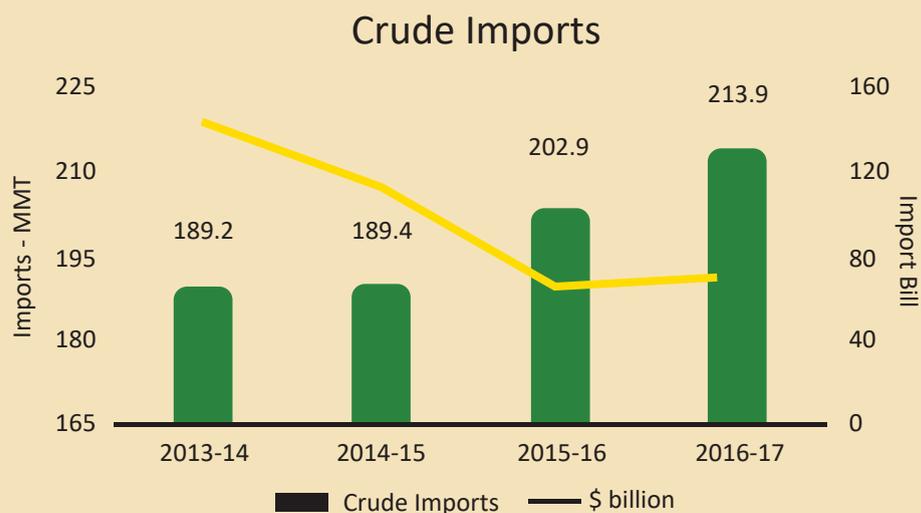
9a. Investor Interests

Investors are the most important stakeholders influencing decision making in the company. A sustainable return requires sharper focus on corporate governance and environmental and social factors. And owing to the nature of the sector, the business is chiefly driven by consumer spending, fluctuation in crude oil prices, strong government and a fiscally prudent budgetary plan influenced by efficient and quality products, derived by environmentally safe practices. BPCL has been strategically expanding its investment in refining and distribution capacity to bridge the gap between sales volumes and production and create opportunities with the manufacture of nice petrochemicals.

Indian Petroleum Sector

India is expected to overtake China as the largest consumer of petroleum products over the next 20 years. While oil dynamics are expected to continue to remain uncertain and volatile, the oil industry is well on the recovery path, getting accustomed to the new lows. The decline in prices has been extremely beneficial to India, making energy more affordable and easily accessible. What remains a challenge though is that India is still dependent on imports for 80% of its crude requirements, thus making it more vulnerable to the international oil scenario. India accounts for only 0.3% of the proven oil reserves, but has an energy consumption share exceeding 5%. In such a situation, being one of the fastest growing energy consumers, crude import decisions become extremely crucial.

Over the years, India's crude imports have been increasing consistently. During 2016-17, crude imports increased 5% over the previous year. However, declining prices have had a positive impact on the crude import bill. It was only last year that the energy bill has increased by about 10% partially due to moderate increase in crude prices and partially due to the depreciating Indian rupee.



Planned indigenous crude oil production for 2016-17 was 37.1 MMT against which the actual indigenous crude oil production that was recorded during 2016-17 is 36 MMT (36.9 MMT during 2015-16). The decline of 2% in indigenous crude oil production as compared to the previous year and the targets for 2016-17 is primarily due to reduced production from mature and ageing fields, underperformance and operational issues in some fields.

India is emerging as a refinery hub, being the 2nd largest refiner in Asia. India's refining capacity stands at 234.5 MMT as on 1st April 2017, up from 230.1 MMT in the previous year. The increase in refining capacity is attributable to the Integrated Refinery Expansion Project (IREP) at BPCL's Kochi refinery. While the capacity expansion due to IREP is expected to be 6 MMTPA from 2018-19 onwards, 80% of designed capacity has been included at present. PSU companies continue to hold a share of 65% in India's refining capacity.

Over the years, crude processing in India has been increasing. During 2016-17 it has increased by more than 5% to 245.4 MMT as compared to the previous year. The increase is primarily due to the commissioning of the Paradip refinery in February 2016 and is expected to grow further with the IREP stabilization of BPCL's Kochi refinery. Consumption of petroleum products grew by 5.2% to 194.2 MMT during 2016-17 as compared to the 11.6% growth recorded in the previous year. The main reason for a decline in growth was due to the substantial decline in the growth of diesel that constitutes 40% of the total consumption basket. Diesel grew by only about 2% during 2016-17 as compared to the 7.5% growth recorded in the previous year largely due to reduction in the growth in commercial vehicles (CV). During 2016-17 CVs registered a growth of about 4% as against the growth of 11.5% on the previous year. This, together with increased fuel efficiency have caused a sharp reduction in the growth of diesel during 2016-17.

Pipelines:

BPCL group owns a robust network of 2241 km of Product pipelines with design capacity of 17.84 MMT. Pipelines have achieved throughput of 14.06 MMT in the year 2016-17 which is highest so far. Pipelines have moved about 5072 MMTKM Petroleum products to BPCL's marketing locations spread across Northern, Central, Western & Southern part of the country, which is about 40 % of total primary transport.

9b. Managing the Talent

BPCL strongly believes that employees are invaluable assets of their organisation. Over the years, BPCL has constantly acknowledged the diverse and strong workforce as a contributing factor to their growth. BPCL encourages its workforce (management and non-management staff) to actively participate in the various engagement activities conducted across the organisation. Further, it also promotes active learning to maintain a healthy and motivated environment. In this regard, the Human Resource policies, employee satisfaction enhancement cell and talent improvement system are established.

Employee Management

BPCL acknowledges employee potential and further nurtures their skills, by providing induction and training programs. They facilitate continuous learning and encourage lateral and vertical enhancement of skills for the overall development of their employees.

BPCL encourages employment from local communities residing within the vicinity of their business locations and hires their workforce as per the reservation policies of the GOI in vogue., till date BPCL does not have a system in place to track the exact number of community members hired at various positions.

A performance review is conducted for all management and non-management employees on an annual basis. BPCL's employees are engaged in line with its business goal, ensuring right people are engaged in the right type of work where their skills are utilized in the best possible way. A 360-degree evaluation based on the leadership competencies and performance is carried out by the Review Panel, wherein the line-managers present the profile of their subordinates and design learning, develop frameworks and plan for their job profile, promotions and transfers. The HR department at BPCL have strong recruitment and retention strategies.

'Let's talk' sessions

- To facilitate discussions with employees on their individual goals, aspirations and their vision in BPCL

'Ideas platform'

Conducted Yearly

- Provides a platform to all the employees to send in their ideas to build an efficient work place

'Suggestion schemes'

Conducted Periodically

- To get suggestions and feedback from the entry level employees in the organization such as energy conservation, judicious use of natural resources, community development, environmental issues, safety etc.

Employees at BPCL are classified into management and non-management staff. The details of recruitment are available across locations.

Number of Newly recruited permanent Employees in 2016-17		Total			Total Number of Company Employees in 2016-17			
		Total	Male	Female	Total	Male	Female	
	Management Employees	469	418	51	Management	5,928	5,367	561
	Non-Management Employees	125	125	0	Non-management	6,556	5,978	578

Age Distribution of Permanent Employees	Total	Management	Non-Management	Permanent Employees resigned from the organisation		Total	Male	Female
<30 Years	2665	1,683	482			Management	332	303
30-50 Years	4909	2,575	2,334	Non-Management	13	13	0	
> 50 Years	5396	1,670	3,726					

Regional Distribution of Employees-Permanent	Non- Management		Management		Regional Distribution of New Employees-Permanent	Non- Management		Management	
	Male	Female	Male	Female		Male	Female	Male	Female
North Region	853	64	935	81	North Region	657	0	71	11
South Region	514	81	803	95	South Region	0	0	80	7
East Region	478	27	504	29	East Region	0	0	36	6
West Region	1265	273	1,407	255	West Region	2	0	130	22
Mumbai Refinery	1501	90	992	69	Mumbai Refinery	50	0	68	3
Kochi Refinery	1367	43	726	32	Kochi Refinery	70	0	33	2

Return to work and retention rates after parental leave		Total
Employees availed maternity leave		30
Employees that returned to work after maternity leave and are with BPCL at the close of 31/03/2017		20

Man hours spent on training on Non-Management (Hours)	Male		Female	
	Male	Female	Male	Female
Internal Training	74,290.00	4,120.00	1,89,216.00	13,642.00
External Training	16,778	32.00	53,240.00	4,244.00

Remuneration and Allowance

At BPCL, there is no discrimination of wages based on gender. The ratio of entry level wages to minimum wages is 1.49. 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 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.

Particulars	FY 2014-15	FY 2015-16	FY 2016-17
1. The annual total compensation for the organization's highest-paid individual	Rs.27,15,318	Rs.28,88,787	Rs.30,39,179
2. The median annual total compensation for all employees (excluding the highest-paid individual)	Rs.11,96,085	Rs.12,09,412	Rs.12,42,726

Additionally in Kochi Refinery, contract labour is paid wages and allowances as per a settlement which is higher than the applicable minimum wages rate and ranges from Rs. 505 to Rs. 606 per day. BPCL's payment policies prescribe paying 25% above the statutory requirements to our contract labour. The percentage increase in the total annual compensation of the organisation's highest paid individual is 5.21% and the median percentage in the total annual compensation for all the employees except for the highest paid individual is 2.75%.

Contractors are to strictly adhere to the Employee State Insurance Act, 1948 is another requirement of BPCL. BPCL also ensures compliance against all regulatory requirements including Industrial Dispute Act of 1947 which stipulates a minimum notice period of 21 days prior to the implementation of significant changes in operations. BPCL's various contractors are under the preview of contract labour (Regulation and Abolition) Act 1970 which stipulates coverage of contract labour under various social security schemes. All statutory rules applicable to contract labour that is payment of ESIPF & minimum wages, non-employment of child labour among others should be followed by the contractor. Capacity building for a variety of skills are conducted and multi-skills training are facilitated in order to ensure flexibility of workforce.

Employee Benefits

To ensure employee wellbeing and provision of healthy and ethical workplace, BPCL has put in place several policies and schemes. Formal and informal channels are provided for communication and grievance redressal.

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. Burmah 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.

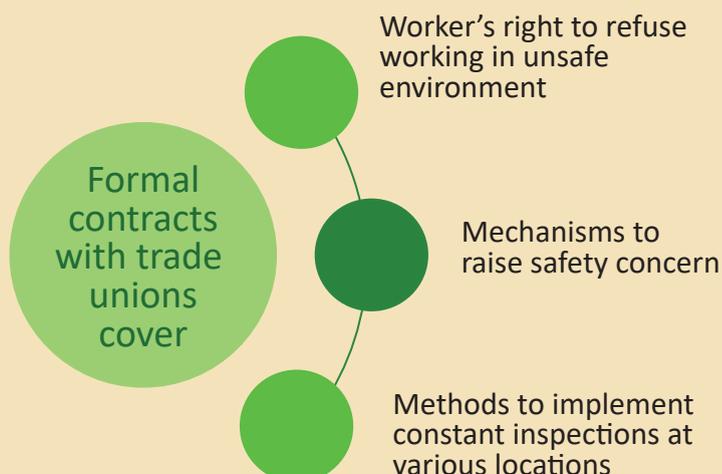
Labour Management

As a principle employer BPCL takes responsibility in protecting the rights of the permanent and contract employees alike. BPCL invests equally toward skilling permanent and contract employees. This builds a strong and mutually beneficial relationship that lasts longer. BPCL ensures that the contract staff enter into an 'Integrity Pact' and abide by all the legal commitments relating to ethics and governance. which includes aspects on child labour, forced labour and fair wages. BPCL, believes in the non-violation of human rights and is compliant with the international human rights standards. There were no labour grievances filed in FY 2016-17. Further, a minimum notice period of 2 months is provided to BPCL employees and their elected representatives, prior to the implementation of significant operational changes.

In order 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.

Trade Unions

- i. 21 Registered unions (including Refineries)
- ii. Representing 92% of BPCL employees (non-management)
- iii. BPCL enters into formal contracts with the trade unions
- iv. These contracts cover all the aspect of health and safety



It is a matter of pride for BPCL that no operations restrict employee's rights to form associations or collective bargaining.

Training and Education

Onboarding and training of new employees is vital for long term success. Setting the stage right, helps new hires to adjust to their jobs smoothly so that they are capable of performing efficiently. BPCL's approach towards sustainability, core values, company policies, human rights standards and code of conduct etc. 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.

BPCL helps employees acknowledge their potential and motivates them by providing a thorough induction training, on job training and other training until pre-retirement. Further, BPCL facilitates continuous learning and encourages lateral and vertical enhancement of skills for the overall development of their employees. Leadership workshops and training is conducted by the talent management team to inculcate the sense of leadership in the employees in order to prepare them face the challenges of the rapidly growing business world.

Additionally, BPCL conducts various workshops, management skills and development programs to bridge the competency gap. To enhance personal, managerial and functional expertise of our employees, they are exposed to various programs and seminars organized by premier institutes. In FY 2016-17, a total of 2,60,342-man days of training have been provided to all management of employees to upgrade their skills. Employees were also privy to seminars, organised by premier institutions in India and abroad.

Beyond established and recently enhanced engagement strategies, BPCL continues to explore the changing needs of current and future generations while maintaining open dialog.

BPCL is an equal opportunity employer, providing equal remuneration to men and women alike. It encourages women to take up positions at senior levels of the organization as well as represent the organisation at various national and international forums. BPCL's workforce has seen a proportionate increase in the women employees over the years. The provision of women friendly safety facilities may have aided with this.

Human Rights

BPCL is committed to conduct its business in an ethical and responsible manner that supports and respects the protection of human rights wherever BPCL operates. Human Rights policy at BPCL is anchored in its core values of 'Ethics'. It outlines the commitment towards both full time and part-time employees and is extended to all of BPCL's suppliers, customers, communities, vendors and contractors.

BPCL creates and nurtures a working environment where human rights are respected without prejudice regardless of nationality, gender, race, economic status or religion. BPCL does not engage in or support direct or indirect discrimination in recruitment, compensation, access to training, promotion, 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.

No incidents involving indigenous people and discrimination practices and no disputes involving local communities were reported in the FY 2016-17. BPCL is committed to adherence to Human Rights Policy in all its operations.

Employee Grievance Mechanism

BPCL reflects on employee feedback with keen interest. In order to connect better with employees and proactive handling of their grievances, Employee Satisfaction Enhancement Department organises varied interventions across pan India locations. All grievances were redressed well in time. In FY 2016-17, over 6 lakh customer interactions have been received and all are resolved over a closure time of 2 days.

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 emailing 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.

Sexual harassment cases are handled with great care and sensitivity. The sexual harassment panel deals with any cases raised to address these. The number of sexual harassment complaints filed during FY 2016-17 are 3 and pending is 0.

Roshni, a 360-degree physical wellness counselling service for Health Risk assessment, wellness coaching, health articles is conducted to ensure employee wellbeing. Stress management was introduced by conducting a special edutainment program 'Bollywood and stress management'.

INTERNATIONAL WOMENS DAY -Vadodara Installation



To empower women, Bharat Petroleum organised a three day Live Fire Fighting training for lady officers at Vadodara Installation, where sixteen lady officers from Bharat Petroleum and ten from HPCL participated. At the end of the third day, these officers were taken through live fire fighting experience wearing all the necessary Personal Protective Equipments, which improved their confidence in combating the fire in case of an emergency.

Bharat Gas Distributorship at Jammu goes all women managed on International Women's day



Jammu LPG Territory organised international women's day function at Village Suhanjana, Dist. Jammu. On this occasion, Geeta Bharatgas, Sohanjna has become first all women managed distributorship in the state of Jammu and Kashmir. Female staff has been specially trained to carry out the mandatory inspections/ Installation of New connections and to train the women folk in rural areas. With increase in LPG penetration in rural area, safety is of paramount importance for bharatgas and these women staff will educate and give hands on training on usage of LPG.

Bandhan – Chalak Dal Diwas at Balasore Depot, Odisha

Bandhan ceremony was celebrated at Balasore Depot with all management/ non-management staff and PCVO crew increase the bonding between the PCVO crew and BPCL. Approximately 90 numbers of PCVO crew participated in the event. To keep the program interactive and lively, recreational activities like Volleyball competition, Tug of war, Musical chair competition were organized for PCVO crew.



9c. Suppliers

Suppliers are a cardinal component of BPCL's supply chain. BPCL collaborates with its suppliers to ensure sustainable operations and foster responsible growth. 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. The IT Team of BPCL leads relationship management for the supply chain. Some of the engagement initiatives are given below:

Annual 'Premier Vendor' workshops for our material and equipment suppliers

Meetings to ensure smooth functioning of the process and to eliminate bottle necks

Periodic meetings with small vendor groups

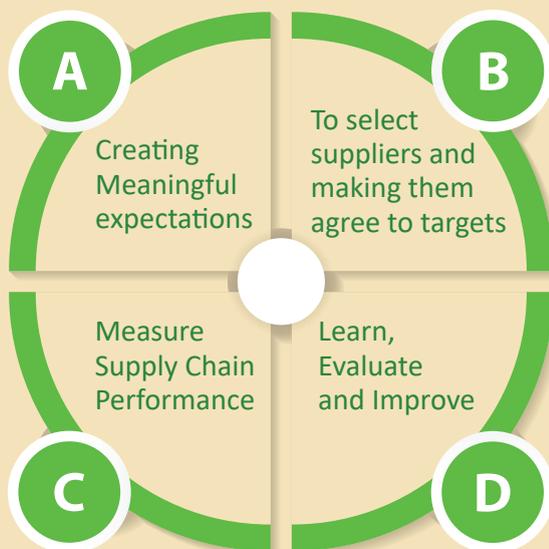
Make formal and informal channels to address grievances of our suppliers

Relationship building with National Oil Companies of different countries & Oil Traders

BPCL Sustainable Supply Chain Roadmap

ACTIONS

- Understanding BPCL's sustainability agenda
- Drafting process for bringing suppliers on-board with the sustainability agenda
- Mapping key areas relevant to BPCL's suppliers and supply chain
- Initial communication with the suppliers on broad areas of sustainability



ACTIONS

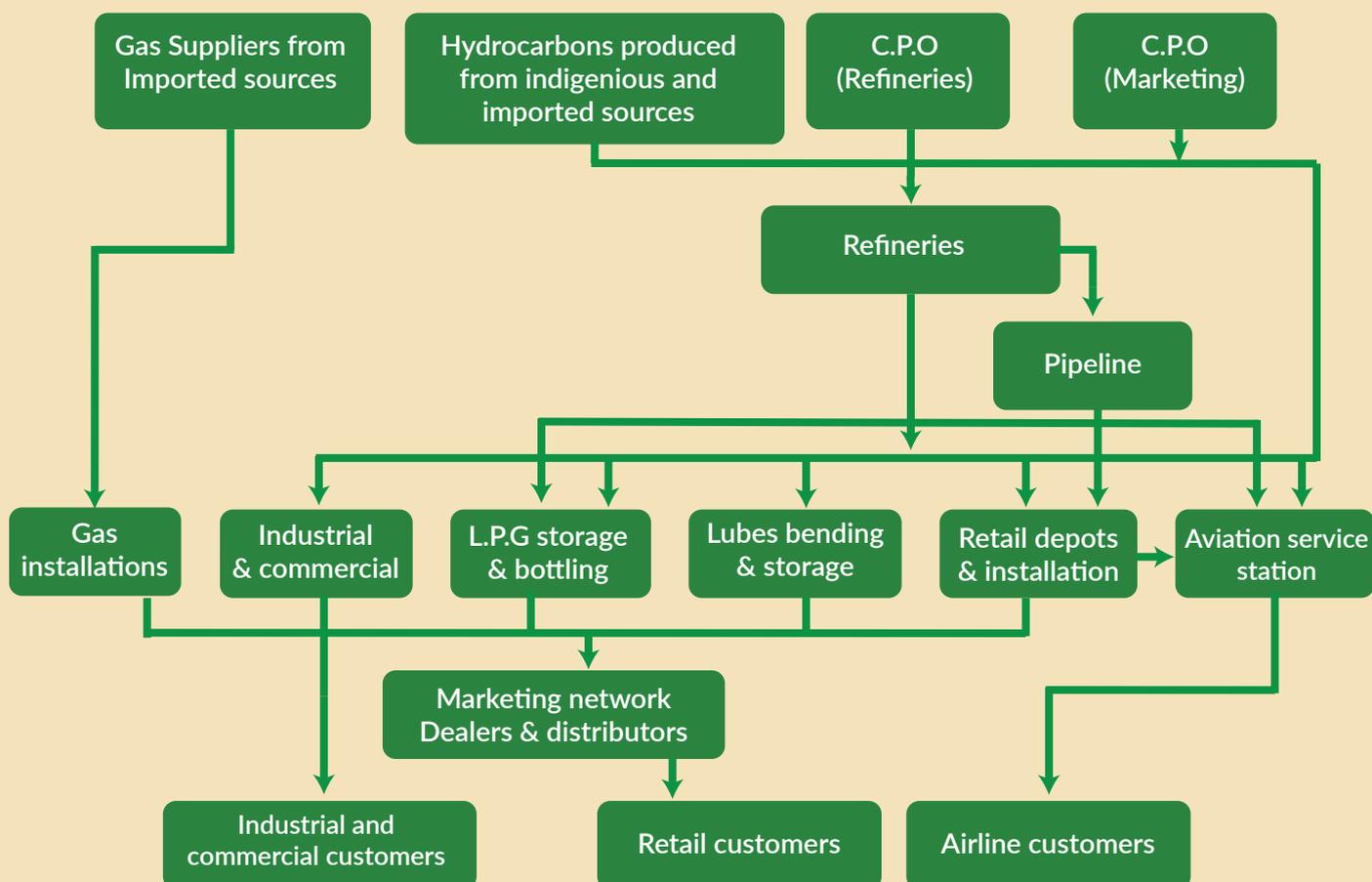
- Setting up comprehensive mechanism to track supplier performance on sustainability parameters
- Initial baseline of all suppliers to assess sustainability performance and highlight best practices
- Segmenting suppliers based on sustainability performance
- Defining roadmap for improving supplier performance on sustainability parameters

ACTIONS

- Categorizing suppliers as per their association with BPCL
- Drawing a representative sample from the suppliers for initial expectation mapping
- Seeking feedback from a sample set of suppliers on identified sustainability parameters
- Setting framework to assess supplier feedback and incorporate in policy / tender development
- Developing the supplier sustainability policy based on BPCL's prioritization and supplier feedback
- Drafting the amendments to tender to incorporate sustainability parameters in progressive manner

ACTIONS

- Establish continuous improvement framework for suppliers
- Evaluate supplier performance regularly to identify leaders
- Develop hand-holding and performance improvement assistance mechanism for suppliers
- Institute award and recognition for suppliers performing better on sustainability parameters



Supplier Identification and Tendering

To ensure suppliers are in line with BPCL's vision, it is important to monitor and track supplier progress. However, the sheer breadth and depth of BPCL's supply chain make it challenging to effectively manage all business requirements. Thus, BPCL has embraced technology as a means to improve and optimize their business. BPCL ensures transparent and effective management of tendering process with the help of technology. In accordance with the company policy, BPCL follows an e-tendering system before engaging with any external party. This robust e-tendering system allows BPCL to scrutinize all vendors and suppliers on various parameters before they begin work with BPCL. The Bid Qualification Criterion (BQC) in the tender creates a filter for suppliers and ensures only high-quality products are procured.

BPCL's central procurement office engages in strategic procurement for various business units and refineries. The procured materials need to be inspected and certified as per company's policy and by a third-party agency for larger procurements BPCL ensures no compromise is made pertaining to compliance with quality of procurement. To render support to the local suppliers, above 90% of our material and equipment is procured locally while balance is imported. Local refers to India Operations.

BPCL is fully complying with the Public Procurement policy for MSEs and 'Purchase Preference Clause' for MSEs has been incorporated in the 'General Purchase Conditions' of all the tenders. As against the target of 20% this year, BPCL has achieved 27.98% of procurement through MSEs. The total procurement value for BPCL where MSEs could have participated is 6094.63 crores and the actual value procured from MSEs is Rs. 1705.27 crores. Local in this report refers to India.

This year BPCL inaugurated Contractor Management System (CMS) which was made available in BPMAI. This dashboard represents a single screen view of full CMS process i.e. from pass registration to issue. This system has been implemented in the refineries.

It also provides below mentioned information on a single screen:

1. Facility to monitor and eliminate discrepancies in Licenses issued to vendor and total employees entering in refinery Premises against issued licenses,
2. Single point availability of Contract Employee details like Medical, Safety, ESIC, Verification, BPCL In charge details etc.
3. Gender wise Summary
4. Month wise contract employee's summary

The Central Procurement Offices (CPO) at BPCL constantly looks for new and innovative ways to reduce consumption as well as procure more efficient and environment friendly material. The CPO does this by trying to scale up the procurement of ethanol and other green products.

Supplier Assessment

BPCL engages with large number of suppliers as a normal course of work. These suppliers encompass contract staff supplying agencies and suppliers of products, materials and equipment. The robust e-tendering system on-boards all our vendors and suppliers. BPCL ensures compliance with the applicable National and International standards.



Constant
Quality check



Integrity pact signed as
part of on-boarding process



Suppliers -Self
declaration

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 well aware about the working conditions and ethics that are articulated to the company.

BPCL has both a formal and an informal mechanism to report cases of human rights, child labour, forced labour and working conditions of contractors/ contract labour. Over the years our contractors/ contractor labour have freely used these channels and have had their grievances resolved if any.

Safety Training

Safety in transportation is of utmost importance. Products at BPCL are transported via rail, road and coastal movements. Since road transportation is exposed to a higher proportion of risks, not only concerning damage to products but also risk to life, BPCL focusses on providing safety training for drivers and suppliers. BPCL ensures high safety standards right from unloading, transportation, reloading and processing of the oil in the refineries.

A number of training programmes and safety standards are in place in an attempt to support transporters. The training broadly comprises of, driving techniques, fuel conservation, defensive driving, knowledge of traffic rules and handling of hazardous materials. Some of the initiatives to increase safety are:

1. 100% Vehicle Tracking Systems are installed in the trucks to support the drivers while in transit.
2. Continuous expansion of pipeline network to minimize the transportation by road.
3. HSSE department analyses every single road accident to understand the root causes behind them.
4. Safety fittings in trucks as per Central Motor Act and the company's safety policy

Additionally, safety training is also provided for pipeline surveillance and pipeline health monitoring.

Road Safety Week



Trombay Despatch Unit (TDU)



Lucknow LPG plant



Driver training program organized by Ashok Leyland at Hariyala LPG Bottling Plant

In association with M/s. Ashok Leyland, Hariyala LPG Plant organized a one-day driver training program for truck drivers. Various topics related to Safe, Economical driving, were covered in detail.

Video demonstrations were made covering various live accidents to educate drivers about Road safety techniques, road signage & importance of following traffic rules. Video on complete vehicle maintenance describing all the components of truck was also displayed.

'Train the Needy' – A programme by Pipeline Department for petty contractors & vendors

Role of petty contractors & vendors, especially in remote locations, assumes greater significance because of lack of resources and facilities. Above all, many amongst such class of our business partners are comparatively 'less literate' and need 'hand-holding' at various stages of site activities. Documentation part of contractual activities is actually tougher for them than physical execution of the work. The documentation type covers e-tenders, entry and work permit system, completing statutory formalities etc.

Recently, Pipelines entity observed that numerous mistakes are committed by such contractors / vendors inadvertently and ignorantly while responding to our e-tenders, leading to poor response or rejection of their bids.

Location: Piyala

Date: 16th May

Attended by: 25 contractors who have been operating at Mathura, Bharatpur, Manmad, Mangliya, Piyala & Bijwasan etc.

Challenges

- Unavailability of 3G internet network and even continuous power supply
- Chance of leaking confidentiality of tender documents as the contractors used internet café of nearby cities

Learnings/change

- Pipelines HQ , coupled with M/s E-Procurement Technology Ltd , imparted stepwise and 'live' training of filling tender documents.
- DOs & DONT's were also explained with the help of images of old tenders in which contractors often made mistakes.

Outcomes of the training:

1. Improvement in the quality of documentation
2. Reduction in the number of violations due to wrong documentation
3. Timely submission of bills
4. Compliance with statutory requirements



9d. Dealers and Distributers

Dealers and distributers are key channel partners whose interface with customers directly affect BPCL's operations. They play a vital role in providing 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 & eligibility to training and product delivery is robust and has been developed in collaboration with other oil marketing companies. The selection of new LPG distributers is particularly stringent with specific criteria for eligibility. BPCL also continuously reviews the performance of LPG distributers through audits and inspections to ensure supply of LPG is made only to genuine customers. BPCL also keeps a check on defaulting distributers by conducting raids and levying penalties on them.

BPCL has a 'Marketing Discipline Guideline' which is applicable to all dealers and distributers which elaborates on procedures on operations of retail networks/LPG Distributorship. It provides standard operating procedures for the marketing network which builds trust and satisfaction to the customer. Additionally, BPCL also has laid out a 'Reconstitution Guideline' providing rules for retail outlet/ dealership. Apart from the usual dealership, BPCL has policies and guidelines for Company Owned and Company Operated (COCO) services.

All dealers and distributers undergo regular training programmes such as the 'Visionary Leadership Programme' providing insight on behavioural and functional changes in the method of engaging with customers and ensure quality, courteousness and timely services.

9e. Customers

Customers continue to be one of the most important stakeholders for BPCL. Customer satisfaction, loyalty and retention are the prime objectives at BPCL.

Digital transformation is emerging as a driver of sweeping change in the world around us. Connectivity has shown the potential to empower millions of people, while providing businesses with unparalleled opportunities for value creation and capture. Since the industrial revolution, the Oil & Gas industry has played a pivotal role in the economic transformation of the world, fuelling the need for heat, light and mobility of the world's population. Today the Oil and Gas industry has the opportunity to redefine its boundaries through digitalization. After a period of falling crude prices and, frequent budget and schedule overruns, together with greater demands of climate change accountability and difficulties in attracting talent, the Oil & Gas industry can provide practical solutions. Digitalization can act as an enabler to tackle these challenges and provide value to all its stakeholders.

In this regard, BPCL launched a "CUSTOMER AWARENESS CAMPAIGN" on Dec 26th, 2016, at its state-of-the-art fully automated Company Owned Company Operated (COCO) retail outlet, BP-Churchgate in Mumbai for the benefit of the fuelling consumers and to promote usage of "Cashless" mode of payments at Petrol pumps.

In keeping with Government of India's demonetisation policy, Public Sector Oil Marketing Companies under the aegis of MOP&NG has embarked upon an intensive program to promote "Cashless" transactions at its Petrol pumps at all their Retail Outlets and LPG Distributorships. Out of total 53522 Retail outlets of Oil Marketing Companies, 31879 outlets have been provided with POS machines to facilitate Credit and Debit Card transactions while drive is on to complete all Retail Outlets at the earliest. E wallet acceptance at all the Retails outlets is nearing completion to enhance Cashless Transactions. BPCL has enabled credit/debit card & mobile wallet payments at its petrol pumps apart from its pioneering Smart Card based loyalty program which can also be recharged using credit / debit cards / RTGS / NEFT & which is being used by a large number of fleet owners as payment management solution as well as by individual customers.

"Cashless transactions account for more than 25% of total OMC petrol pump transactions on all India basis. In Maharashtra also, including on National / State Highways and rural markets, it is rapidly increasing. In Mumbai, more than 55% of transactions in BPCL retail outlets are through Cashless mode. In Mumbai, Navi Mumbai, Thane and Raigad District. 100% of BPCL retail outlets, have one or more mode of Cashless payment facility available for the benefit of customers. BPCL has tied-up with SBI, HDFC Bank and other major Banks for placement of POS terminals to facilitate Credit/Debit card transactions and with PayTM, Freecharge, Oxigen, Reliance Jio, SBI Buddy, Fino for enabling mobile-wallet transactions at its retail outlets. In order to promote cashless transactions at petrol pumps, Govt. of India has also announced a special incentive of 0.75% to customers on all digital payments made at petrol pumps. Fuel surcharge waiver on Debit Card transactions until 31.12.2016 has also been announced by the Government. BPCL has taken several initiatives to create wide-spread awareness of digital mode of payments at petrol pumps through Customer Education Campaigns at retail outlets, customers / transporters' premises, Training Programs for Retail outlet dealers & their staff, Advertisements in Print and Electronic Media, Spreading awareness through Social Media – Twitter, Facebook etc. and Display of Messages through Standees, Banners and Posters at ROs. The First "Million in a Month" Financial Inclusion Transaction Value at Rural Marketplace.

Corporate Strategy and Business Development has four verticals – Rural Marketplace, Integrated Fleet Management, Urban Household Solutions and Personal Travel Offering. Each of these verticals is further divided into pillars. One of the seven pillars of the Rural Marketplace is Financial Inclusion.

26th May 2016 was a day of celebrations for the Rural Marketplace team of NBI. For it was on this day that, for the first time, they crossed the Rs. One million financial inclusion transactions in a month at Niphad in Nashik district.



Customer Grievance Redressal

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', used to gather queries, suggestions and grievances. In FY 2016-17 a total of 3,66,927 Customer Complaints have been received and 3,66,920 are closed satisfactorily. The pending complaints were resolved within a week after closing of the reporting year.

BPCL's centralized customer care system (CCS)



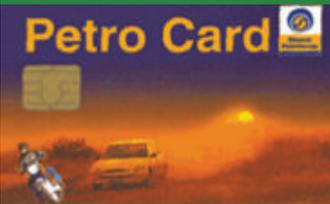
This platform is being used for

1. Suggestion capture
2. Lodging queries
3. Provides a grievance redressal mechanism
4. Emergency hotline no. 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 SmartFleet, PetroCard, In&Out stores, Ghar initiative etc. is trying to meet evolving customer needs more efficiently.

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 & 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>

BPCL has not undertaken any structured customer satisfaction survey. Although BPCL does take up customer feedback. In FY 2016-17, BPCL received 84,866 customer feedbacks of which 56,061 were satisfied customers. BPCL did not receive any confirmation for rest of the customer feedback as balance customers have not responded.

With an aim to provide a superior customer experience, BPCL has developed a retail automation platform to promote transparency through secured and automated fuelling and payment services. BPCL has a number of automated retail outlets in the area of network. In order to have hassle free transactions, a few retail outlets have been made NANO Compliant- No automation, no operation, meaning complete automation. Further, BPCL achieved compliance for Automation for Sure (AFS) at retail outlets. With the help of these initiatives BPCL have created a positive image amongst our numerous stakeholders, enabling BPCL to move closer to their vision of being the leading oil & gas retailer in India in all aspects.

BPCL wins 5 CGD Networks

Continuing the efforts to expand the Gas Business, BPCL has successfully won 5 bids for developing City Gas Distribution Networks in Goa, Saharanpur, Yamunanagar, Rohtak and Rupnagar in bid round 6 of PNGRB. Earlier in bid round 5 BPCL had won Haridwar.

While the Haridwar and Goa areas were bid jointly with GAIL Gas Ltd, the other 4 areas were bid by BPCL alone. These projects shall be implemented during the next five years entailing investments of over Rs.500 Crore to develop distribution network to supply Compressed Natural Gas and also cater to Piped Natural Gas customers in the Domestic, Commercial and Industrial Segments.

With the winning of above 6 areas, BPCL's CGD presence has increased to 10 areas in the country, including IGL, CUGL, MNGL and SGL where BPCL is co-promoters of the JVCs. Natural Gas is going to drive India's clean environment initiative and BPCL is proud to be associated with this green initiative.

Customer Safety

BPCL believes in the motto 'Pure for Sure' and strives to deliver quality product to consumers. In FY 2016-17, 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. All marketing communication relating to our products and services adhere to ASCI voluntary standards on marketing and communications.

BPCL ensures that their 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. Thus, 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 hereby, are mentioned below:

- Supply of low sulphur transportation fuels (MS / HSD) have resulted in lowering the negative impact on the environment.
- BPCL has undertaken maximization of blending of Ethanol in Motor Spirit. Ethanol is an oxygen-enhancing additive that helps Motor Gasoline burn cleaner, thus reducing air pollution due to lesser harmful emissions such as Carbon Monoxide (CO).
- In line with the Govt. of India Biodiesel blending program, BPCL has undertaken the blending of 5% Bio-diesel in HSD at selected locations. BIODIESEL is a fuel manufactured from non-edible/ edible oils. Biodiesel substantially reduces unburnt Hydro Carbon, CO and particulate matter.



Message from the Director- Marketing



The year gone by has been a very successful one for us in terms of sales volume achieved and increase in market share. Last year we achieved the highest ever sales volume of 37.74 MMT and cornered a market share of 22.77% amongst the Public Sector Oil Companies. At BPCL we have always ensured that our values are ingrained in every aspect of what we do. We recognize that the sustained growth of BPCL depends on the economic, environmental, and social pillars and hence we have been striving continuously to fulfil our triple bottom line responsibility.

We acknowledge the impact that we have on the environment and are constantly looking out for opportunities to curtail our negative impact. Moving forward with the vision of

being “Most admired global energy Company”, we have joined hands with TERI, New Delhi to act against consequences of climate change. In line with the government’s Auto Fuel Policy, our refineries at Mumbai and Kochi have successfully upgraded to BS-IV auto-fuels effective from March 2017, in an attempt to reduce carbon emissions. We have also carried out many renewable energy and energy conservation projects resulting in annual reduction of GHG emissions by 34,000 metric tons of CO₂ equivalent. We have made extensive budget outlay for developing infrastructure at Refining and Marketing locations in our effort to improve environment protection.

We are sensitive to the service levels offered to our customers across every touch-point and commitment to enhance customer experience. Focus is to make every interaction eco-friendly keeping in view that we interact with millions of customers on day to day basis, for e.g., our focus is on promoting eco-friendly 4T lube oil across network and also managing the reverse logistics of used lubricating oil. The value-added services offered by the Lubricants business plays a key role in facilitating the sales process through appropriate services offerings to end customers. Around 1584 Retail outlets of BPCL have a ‘Quick Oil Change’ facility within the premises, where 2-wheeler customers can have their engine oils changed within a time span of 7-10 minutes without any spillage, through a pneumatic machine that sucks out the old oil.

We have undertaken community development by creating opportunities for learning, skilling and infrastructure development. We are energizing communities through CSR activities which are mainly focused on education, water conservation, health and hygiene and installation of solar lights and handpumps in remote villages. From the water conservation standpoint, we have initiated project Boond, a rain water harvesting initiative with our specialized NGO. We have increased total catchment area for rainwater harvesting by 36.3%. On the solar energy generation front, we have already set up 4 MW grid connected Solar PV Plant at Bina Dispatch Terminal (BDT) at Bina, Madhya Pradesh and 1.05 MW Solar Plant at CRDC Noida. We have set up a total of 704 KW solar plants at various locations in the off grid and grid tied front. As on March 2017, 636 Retail Outlets (ROs) have been solarized with an average power of 5 KW per RO. This translated into 3.18 MW. At BPCL as of 31st March 2017 we are generating power of 8.934 MW through all solar installations. Going forward we have laid clear roadmap for increasing the generation of power from solar in the years coming.

The Pradhan Mantri Ujjwala Yojana (PMUY) has enabled further outreach to rural communities. PMUY launched in 2016 to empower missions of poor women in India who were forced to inhale unhealthy emissions from the coal, wood and other unclear fuels while cooking, has been well received. Apart from focusing on health of rural women and other family members, it is also an indirect and positive effect on deforestation and environment. Propagating safe use of LPG in the rural hinterland through several modes, like Nukkad Nataks, Safety Clinics and House to House safety education, Ujjwala Suraksha Mitra has remained a focus area for BPCL. 53.22 Lakh connections were released in the year 2016-17. Our endeavor has always been to ensure safety of our customers at every touch point

With these multitude of efforts invested in R&D and technology, we are poised to meet the upcoming challenges and set higher benchmarks to improve our sustainability performance, thereby aiding our growth in the business.

Developing quality products in line with the constantly changing business needs is the way BPCL does business. Innovation is the key element for sustainable growth in technology intensive energy industry, without which the future would be at risk. To keep pace with the changing market demand, the Research and Development Centre at BPCL focuses on development of innovative products and technologies to reduce emissions and improve productivity of products. In line with this prelude, the Corporate R&D Centre at Greater Noida, Uttar Pradesh and Product & Application Development Centre at Sewree, Mumbai are relentlessly pursuing BPCL's goal to create value through research. The Product and Application Development R&D has contributed significantly to the business volume and profitability through development of new grades and alternate formulations of Lube oil. This has helped in increasing the lube oil product portfolio and reducing the input cost.

Further, BPCL Corporate R&D Centre successfully developed and commercialized a device (dongle) named **BPMARRK™**, for rapid prediction of refining characteristics of crude oils. BPCL-Corporate R&D Centre has successfully developed dewaxing catalyst and currently 12 MT catalyst is being produced commercially for replacing existing catalyst in 2017-18. Commercial scale trials for production of white oils and de-aromatized solvents in Mumbai Refinery LOBS unit, diesel lubricity additive for hydro treated diesel stream, Column overhead corrosion inhibitor named "**BHARAT NEUTRACHEM™**" and biodegradable metal cutting oil were successfully carried out prior to full scale commercialization. Process know-how for production of Micro Crystalline Wax (MCW) through additive route was developed and its demonstration at 250 kg scale was successfully completed at NRL.

The Product and Application development R&D has contributed significantly to the business volume and profitability through development of new grades and alternate formulations of Lube oil. This has helped in increasing the lube oil product portfolio and reducing the input cost. BPCL R&D centers have acquired significant knowledge in the areas of synthetic fuels, synthetic lubricants and super adsorbent polymers. The centers have filed more than 85 patent applications in the last 10 years and aspire to commercialize new products every year on a sustainable basis. During 2016-17, BPCL-R&D centers have filed 3 Indian and 4 international patent applications and obtained 3 patents (1 India and 2 in other countries).

To develop new technologies through fundamental research and innovation, BPCL R&D continued to collaborate with academia and other knowledge partners for fulfilling the company's vision of being a truly innovative and technology driven company. In this context, BPCL-R&D centers continued research collaborations with a number of leading research institutes and made substantial progress in 2016-17. Some of these include IIP, ICT, EIL, BITS Goa, Delhi University, while international partnerships with PSE-UK, NTNU-Norway, CSIRO-Clayton, RMIT and University Melbourne-Australia have established platform for development of cutting edge technologies for future.

Every product at BPCL undergoes constant vigilance and quality check. The R&D centre continue to deliver products that reduce resource consumption wherever possible and also replace it with more environmental friendly material.

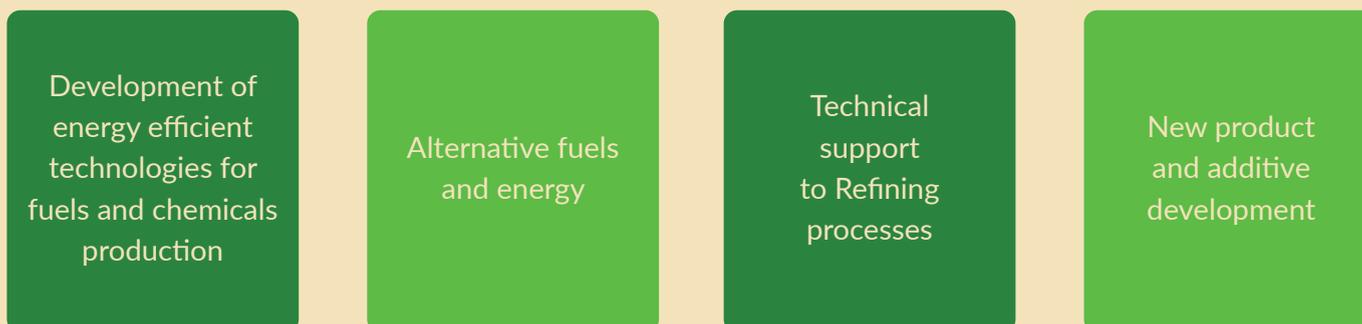
Expenditure on R&D during 2016-17

Expenditures(in crores)	2016-17
Capital Expenditure	16.70
Revenue / Recurring Expenditure	32.78
Total	49.48

Some of the research initiatives planned by the Mumbai Refinery for the year 2016-17 are discussed below:

1. Trial Crudes processing, carrying out test run and evaluation (CDU3 & CDU 4).
2. Attain minimum 95% on stream factor for laboratory equipment.
3. Participate in laboratory proficiency testing to establish testing accuracy - Target 90% samples with satisfactory rating.
4. Provide assistance to technology in trouble shooting and in developing new customers.
5. Technical Evaluation of Overhead Corrosion Control Programme in CDU3
6. To study and understand the suitability of Lube-500N for White oil application. Main focus would be for food and pharmaceutical grade. To plan white oil trail in the refinery based on CRDC pilot plant result output.
7. Conduct Hi-Y catalyst trials for processing high nitrogen bearing crudes
8. Study the metal content in VGO & establish procedure through CRDC/Shell/NCL Lab
9. Technical support for new centrifuge installation and performance check in FCCU
10. To explore the possibility of replacement of RFU splitter-1 and 2 with DWC column
11. Initiate study for making LGO/HGO coalescer functional.
12. To develop procedure/experimentation for measurement of Sodium metal (Na) below 1 ppm
13. Evaluation of Faudi feed filters performance by analyzing samples for particle size distribution with the help from R & D, Noida.

The core research areas of the R&D centres are broadly divided into four categories, namely:



Customer Centricity is one of the core corporate values of BPCL. All the products are designed keeping in mind the customer requirements. BPCL adhere to relevant standards wherever applicable. The product labels provide information required as per national and international specifications on the product. Further, BPCL also display relevant information for safe handling of the product. BPCL does not sell any product that is banned or disputed.

Landmark Initiatives

Retail Initiatives

1. Launched the first branded fuel in India i.e. Speed
2. Over 6300 Automated Outlets, Generating over 75% of total retail sales volume
3. In & Out Stores: 157 convenience stores
4. Tie up with Amazon for “Pick Up” store initiative
 - Chain of strategically located One Stop Truck Shops (OSTS)
 - Dedicated fleet sales team

Brand & Customer Loyalty Programme

1. Pure for Sure (PFS)
 - Pioneer program guaranteeing fuel Quality and Quantity
2. Loyalty programmes
 - Petrocard – one of the largest loyalty programmes having 0.58 mn customers
 - Smartfleet – 0.26 mn customers

Technology Initiatives

1. Smart Drive Mobile application for retails consumers
2. Business: e-biz.com/ e banking (B2B)
 - 90% plus customers collections
 - Online indenting/tracking
3. E business: e-bharatgas.com (B2B / B2C)
 - All India – All Customers (B2C)
 - Online refill booking/tracking (B2C)
 - Bulk customers direct order (B2B)

Other Key Initiatives

1. First to implement ERP (SAP) for increase in efficiency
2. First in the industry to start computerization in 1960's
3. Innovators in new business practices
 - Product-wise business structure adopted for greater focus
 - Off take agreement with subsidiaries and JV's

This campaign is aimed at showing the way forward for enhancing conservation capabilities of people and help understand need, issues & solutions for conservation and effective utilization of petroleum products and also to give message that collective participation is the key to conservation.

Bharat Petroleum pledges to do their bit for conserving precious petroleum products. Various activities are being taken across locations as part of SAKSHAM 2017 from 16 January 2017 to 15 February 2017.

Launch of Touch Screen LPG Information Kiosk

The launch of Touch Screen LPG Information Kiosk at Shastri Bhawan on 07.04.2016 marked a new milestone in the success story of LPG Consumer Year 2016 where consumers can experience the convenience of various services under a single window.



The LPG Information Kiosk, aesthetically designed by Piyala LPG Territory would offer ease of access to LPG consumers for hands on operation of the website "www.mylpg.in" which is a single touch point for all LPG related information to consumers. As all the consumer related information on LPG is now digitally available, the LPG Information Kiosk will not only empower the consumers with information but also enable them to book cylinder online, register for new connection, track cylinder booking and delivery dates, choose distributor for portability, check aadhar linking status, monitor subsidy transferred to bank account, give valuable feedback etc. The LPG Information Kiosk is not just a source of information but offers an experience of convenience on a click where consumers would feel the joy of knowing all about their LPG connection.

Dharwad LPG Bags the credit of First "5S" Certified Location in Oil Sector of India

Dharwad LPG bags the credit that it is the First location in Oil Sector in India to be "5S" Certified. It was one of the unique initiatives of HRS South in it's endeavour in "Building Energising Environments". It was a proud moment for Southern Region when Dharwad LPG was adjudged as Five S Certified Location with Excellent Grade on 30.03.2016 by Quality Circle Forum of India (HQ), Hyderabad.



Research reveals that there is a direct correlation between a clean work environment and improved employee safety, health & productivity. In line with the same, the 5S journey of Dharwad LPG plant started on 09th July 2015 with a Kick Start session on Five S. The Dharwad LPG team put their full effort in implementing the Five S concept successfully at every stage and qualified in the certification process conducted by QCFI professionals at every stage right from Seiri to Shitsuke.

Annexures

Annexure 1: Material Usage Breakup

Refineries		
Type of Material	Unit of Measurement	Quantity
Lube Oil	Tonnes	271.34
Hydrochloric Acid	Tonnes	4,086.90
FCCU Catalyst	Tonnes	773.55
Caustic Lye (Sodium Hydroxide)	Tonnes	2,327.15
Hydrogen Peroxide	Tonnes	714.1
Bitumen Drum	Tonnes	3,559.22
Indigenous Crude	Tonnes	4,940,184.87
Imported Crude	Tonnes	20,421,133.46
Methanol	Tonnes	11,055.31
ISD (Intermediate Stock Difference)	Tonnes	-48,483.53
R-LNG (Regassified Liquefied Natural Gas)	Tonnes	218,670.77
Reformate	Tonnes	0.00
Reprocessed/Confiscated	Tonnes	453.06
Rock Salt	Tonnes	1,616.01
Fresh Catalyst,CCU	Tonnes	1,207.75
Di Ethanol Amine	Tonnes	149.86
Amine,Neutralising	Tonnes	132.13
Anti Foulant	Tonnes	101.99
Lubricity Additive	Tonnes	741.21
Oil Recovered From Sludge	Tonnes	5,676.70
Reprocessed Slop	Tonnes	1,306.25

Retail		
Type of Material	Unit of Measurement	Quantity
1. Additives - Speed	Tonnes	99.48
2. Additives - Hi speed	Tonnes	2.37
3. Additives - Speed 97	Tonnes	91.82
4. Blue Dye	Tonnes	26.84
5. Grease	Tonnes	2.29
6. ORK KETAL Corrosion Inhibitor (Ethanol Additive)	Tonnes	986.02
7. Ethanol	Tonnes	185,011.89
8. Oil/Lubricant	Tonnes	6.24

Lubes		
Type of Material	Unit of Measurement	Quantity
1. Additives - Speed	Tonnes	0.00
2. Additives - Hi speed	Tonnes	0.00
3. Additives - Speed 97	Tonnes	0.00
4. Base Oil	Tonnes	111,998.42
5. Additives (Bulk)	Tonnes	9,162.53
6. Additives (Barrels)	Tonnes	5,843.30
7. Dye	Tonnes	2.77
8. SKO (For Cleaning)	Tonnes	5.11
9. Lubricants	Tonnes	0.00
10. Cotton	Tonnes	4.51
11. Additive For Printers	Tonnes	0.42
12. Metal Containers(BRLS/CASKS)	Tonnes	6,039.42

13.HDPE / VALREREX CONTAINERS /Plastic PAILS	Tonnes	2,472.34
14.CARTONS/CORRUGATED BOXES	Tonnes	2,421.35
15. Plastic Containers	Tonnes	5,791.78
16. Pouches	Tonnes	97.04
17. HFHSD	Tonnes	2,811.05
18. LDO	Tonnes	176.81

LPG

Type of Material	Unit of Measurement	Quantity
1. Additives - Speed	Tonnes	13.20
2. Additives - Hi speed	Tonnes	20.03
3. Additives - Speed 97	Tonnes	13.35
4. Lube Oil	Tonnes	11.90
5. Grease	Tonnes	7.53
6. Brown Soap	Tonnes	689.66
7. O Ring	Tonnes	26,493.92
8. Delrin Cap	Tonnes	31,257.95
9. LOT Valve	Number	68,536.00
10. PVC Seal	Number	347,386,000.00
11. SC Valve	Number	3,567,154.00
12. BMCG Additives	Litres	24,211.80
13. Teflon	Number	204,998.00
14. Safety Caps	Number	28,300,734.00
15. New Cylinders Inducted-BPC 190	Number	465,394.00
16. New Cylinders Inducted BPC 142	Number	9,908,272.00
17. Safety Caps Salvaged	Number	23,568,166.00
18. DPR	Number	8,107,660.00
19. New Cylinders Inducted-BPC 475	Number	35,394.00

Aviation		
Type of Material	Unit of Measurement	Quantity
1. Additives - Speed	Tonnes	0.00
2. Additives - Hi speed	Tonnes	0.00
3. Additives - Speed 97	Tonnes	0.00
4. Lube Oil	Tonnes	165.00

Annexure 2- 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.
- 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.
- 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.

Annexure 3: Hazardous and Non-hazardous Waste Breakup

Refineries	
Hazardous Waste	Total Weight (Tonnes)
Spent Catalyst (Recycled And Reused)(Hazardous) TSDF:	662.62
Spent Catalyst (Recycled And Reused)(Hazardous): sold to recycling authority	0.13
Oily Sludge(Hazardous):	3,939.57
Waste Bituminous Oil(Hazardous):	0
Waste Transformer Oil(Hazardous):	0
Spent Resin(Hazardous):	29.6

FCC Catalyst Fines(Hazardous):	0
Lubes Additives(Hazardous):	0
Spent Molecular Sieves(Hazardous):	0
ETP Chemical Sludge(Hazardous):	0.04
Alumina Balls(Hazardous):	0
Spent Clay(Hazardous):	0
Batteries/Electronic Waste(Hazardous):	48.11
Sulfur Guard N HGU(Hazardous):	0
Reformer Catalyst R 67 N HGU(Hazardous):	0
Spent Charcoal(Hazardous):	0
Spent Coke(Hazardous):	0
Total	4680.07

Retail

Hazardous Waste	Total Weight (Tonnes)
Batteries(Hazardous):	25.27
Oil Contaminated Rags/Cotton(Hazardous):	1.17
Sludge(Hazardous) :	1,177.34
Used Additive Barrels (Hazardous) :	5.79
Used Oil(Hazardous) :	5.41
Used Hand Glove (Hazardous) :	4.79
Srap Cable (Hazardous) :	1.06
Additive Containers (Hazardous) :	2.12
Total	1,222.95

Lubes

Hazardous Waste	Total Weight (Tonnes)
Batteries(Hazardous):	0
Used Cotton Waste (Hazardous):	6.61
Cotton Waste(Hazardous):	2.156
Ows Sludge(Hazardous):	27.55
Slop (Reused)(Hazardous):	102.52

Slop Generated (Hazardous):	26.25
Empty Barrels(Hazardous):	119.63
Empty Containers(Hazardous):	9.4
Saw Dust(Hazardous):	13.81
HDPE Scrap Containers(Hazardous):	19
HDPE Scrap Barrels(Hazardous):	48.03
Total	374.96

LPG

Hazardous Waste	Total Weight (Tonnes)
Batteries(Hazardous):	7.76
Paint Residue/Sludge (Hazardous):	6.20
Scrap Rubber O Ring(Hazardous):	467.10
White /Black / Scrap Plastic (Hazardous):	507.39
Scrap Empty Soap Drums(Hazardous):	21.33
Scrap Electric Cables(Hazardous):	9.41
Damaged Delrin Caps(Hazardous):	439.72
Scrap Paint Drums 20 Lit.(Hazardous):	29.21
Used Cotton Waste (Hazardous):	8.18
Oil & Grease Barrels(Hazardous):	86.32
Used / Scrapped Crushed LPG Cylinders(Hazardous):	1,424.49
Primer Sludge(Hazardous):	3.25
SC Valve Scrap(Hazardous):	473.88
Defective DPR(Hazardous):	347.09
Used Additive Barrel- BCG(Hazardous):	2.07
Total	3,833.40

Aviation

Hazardous Waste	Total Weight (Tonnes)
Batteries(Hazardous):	0.79
Oil Contaminated Rags/Cotton(Hazardous):	0.18
Total	0.97

Refineries

Non-Hazardous Waste	Total Weight (Tonnes)
Ferrous Scrap	2019.37
Tyres	0.00
Non Ferrous Scrap	121.32
Drums/Tins	177.92
Wood Scrap	567.57
Kitchen Waste	156.11
Total	3,042.29

Retail

Non-Hazardous Waste	Total Weight (Tonnes)
Ferrous Scrap (Non-Hazardous):	14,625.37
Tyres (Non-Hazardous):	0.86
Non Ferrous Scrap (Non-Hazardous):	16.60
Drums/Tins(Non-Hazardous):	3.25
Wood Scrap(Non-Hazardous):	3.08
Paper(Non-Hazardous) :	4.75
Cotton(Non-Hazardous) :	1,177.34
Paper Gasket(Non-Hazardous):	18.09
Saw Dust(Non-Hazardous) :	0.37
Kitchen Waste (Non-Hazardous):	127.79
Seal Wire(Non-Hazardous) :	1.79
Plastic Seals(Non-Hazardous) :	340.54
Total	16,319.83

Lubes

Non-Hazardous Waste	Total Weight (Tonnes)
Ferrous Scrap (Non-Hazardous):	0.00
Tyres (Non-Hazardous):	0.00
Non Ferrous Scrap (Non-Hazardous):	92,620.00

Drums/Tins(Non-Hazardous):	0.00
Wood Scrap(Non-Hazardous):	0
Kitchen Waste (Non-Hazardous):	1,902.00
Plastic Scrap(Non-Hazardous):	18,215.00
Wooden Scrap(Non-Hazardous):	33,270.00
MS Scrap(Non-Hazardous):	0.00
Total	146,007

LPG	
Non-Hazardous Waste	Total Weight (Tonnes)
Ferrous Scrap (Non-Hazardous):	1,294.05
Tyres (Non-Hazardous):	27.86
Non Ferrous Scrap (Non-Hazardous):	34.79
Drums/Tins(Non-Hazardous):	21.68
Wood Scrap(Non-Hazardous):	13.02
Used Oil (Non-Hazardous):	8.96
Wooden Scrap (Non-Hazardous):	11.06
Metal Scrap.(Non-Hazardous) :	411.18
Kitchen Waste (Non-Hazardous):	17.86
Total	1840.46

Aviation	
Non-Hazardous Waste	Total Weight (Tonnes)
Ferrous Scrap (Non-Hazardous):	3.22
Tyres (Non-Hazardous):	0.26
Non-Ferrous Scrap (Non-Hazardous):	0.25
Drums/Tins(Non-Hazardous):	0.08
Wood Scrap(Non-Hazardous):	0.11
Paper(Non-Hazardous):	1.08
Solid Waste(Disposed Through Municipal Lorry)(Non-Hazardous):	1.08
Kitchen Waste (Non-Hazardous):	0.43
Total	6.51

Annexure 4- Employee Representation

Aviation	Management	Non-Management
Safety committee:	78.00	92.00
Station Business Council committee:	69.00	50.00
Station Fire Order Team committee:	67.00	64.00
Safety Talk committee:	70.00	80.00
Hindi Implementation committee:	59.00	55.00
Works committee:	63.00	45.00

Lube	Management	Non-Management
Safety committee:	21.00	22.00
Station Fire Order Team committee:	53.00	212.00
Hindi Implementation committee:	37.00	28.00
Works committee:	5.00	5.00
Canteen Committee:	11.00	18.00
Welfare Committee:	5.00	5.00
Club Committee:	4.00	4.00
Safety Committee :	6.00	6.00
Quality Circle Committee:	2.00	2.00

LPG	Management	Non-Management
Canteen Committee:	120.00	183.00
Welfare Committee:	116.00	168.00
Club Committee:	141.00	200.00
Safety Committee :	237.00	251.00
Quality Circle Committee:	139.00	192.00

Retail	Management	Non-Management
Plant Safety Committee :	398.00	370.00
Works Committee :	209.00	202.00
Canteen Committee:	192.00	201.00

Welfare Committee:	188.00	157.00
Safety Committee :	386.00	361.00
Health Check-up Committee:	225.00	210.00

Refineries	Management	Non-Management
Management Health Safety Security Environmnet Committee (MHSSEC) Committee :	28.00	0.00
Joint Health Safety Security Environmnet Committee (JHSSEC) Committee:	17.00	18.00
Joint Safety Committee Including Contract Labour Committee:	6.00	6.00

Annexure 5- Stakeholder Engagement and Materiality

Below is a comprehensive list of all GRI G4 aspects including those mentioned in the oil and gas sector supplement have been considered in the materiality identification process. All indicators related to these aspects as per the GRI G4 guidelines have been taken into account during the process. The outcomes of this exercise have been further described in the 'Stakeholder Engagement and Materiality' chapter.

Social					
Economic	Environmental	Labour Practices	Human Rights	Society	Product Responsibility
Economic Performance	Materials	Employment	Investment and procure-ment Practices	Local communities	Customer health & safety
Indirect economic impact	Biodiversity	Labour management	Non-discrimi-nation	Corruption	Product and service labeling
Market Presence	Energy	Health and safety	Freedom of association	Public policy	Marketing
Reserves	Water	Training and education	Child labour	Anti-competi-tive Behavior	Customer privacy
	Emission, Effluents and Waste	Diversity and equal opportunity	Forced labour	Compliance	Compliance
	Products and services	Equal remuneration	Security practices	Emergency prepared ness	Fossil fuels Substitutes

	Compliance		Indigenous rights	Involuntary resettlement	
	Transport		Assessment	Asset integrity and process safety	
	Overall		Remediation		

List of Stakeholders considered

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

Commitment

Together, we have the highest 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 the Environment. We will comply with all Statutory Regulations and may even go beyond these for the benefit of our environment.

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

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, mis-use, 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.

GLOSSARY

AFS	Aviation Fuelling Station
API	American Petroleum Institute
ASSOCHAM	Associate Chambers of Commerce and Industry
ATF	Aviation Turbine Fuel
BMCG	Bharat Metal Cutting Gas
BPCL	Bharat Petroleum Corporation Limited
BPLC	Bharat Petroleum Learning Centre
BPRL	Bharat Petro Resources Ltd
BRR	Business Responsibility Report
CAL	Computer Assisted Learning
CDU	Crude Distillation Unit
CFC	Chlorofluorocarbon
CII	Confederation of Indian Industry
C&MD	Chairman and Managing Director
CSR	Corporate Social Responsibility
CREP	Corporate Responsibility for Environment Protection
COCO	Company Owned Company Operated
CPO	Central Procurement Office
CUBE	Customer Understanding for Business Excellence
DPE	Department of Public Enterprises
E&P	Engineering and Projects
ED	Executive Director
ERP	Enterprise Resource Planning
ESE	Employee Satisfaction Enhancement
ETP	Effluent Treatment Plant
EEL	Energy Efficient Lighting
FICCI	Federation of Indian Chambers of Commerce and Industry
FO	Fuel Oil
GHG	Green House Gas
GJ	GigaJoule
GRI	Global Reporting Initiative
HSD	High Speed Diesel

GLOSSARY

HSE	Health, Safety and Environment
HSSE	Health, Safety, Security and Environment
IOCL	Indian Oil Corporation Limited
IRQS	Indian Register Quality System
IPIECA	International Petroleum Industry Environmental Conservation Association
IREP	Integrated Refinery Expansion Project
ISAE	International Standard on Assurance Engagements
IDP	Individual Development Plan
IREP	Integrated Refinery Expansion project
I&C	Industrial & Commercial
JV	Joint Venture
KL	Kilo Litre
KR	Kochi Refinery
LED	Light Emitting Diode
LPG	Liquefied Petroleum Gas
MMBTU	Million British Thermal Unit
MMTPA	Million Metric Tonnes per Annum
MTCO _{2e}	Metric tons of carbon dioxide equivalent
MoP&NG	Ministry of Petroleum and Natural Gas
MOU	Memorandum of Understanding
MR	Mumbai Refinery
MS	Motor Spirit
MSE	Micro and Small Enterprises
MTO	Mineral Turpentine Oil
MRT	Manglia Receipt Terminal
NGO	Non-Governmental Organisation
NRL	Numaligarh Refinery Limited
NSC	National Safety Council
NVG	National Voluntary Guidelines
ODS	Ozone Depleting Substance
PPM	Parts Per Million
PRISM	Performance Related Incentive Scheme for Management Staff

GLOSSARY

PMPR	Preparedness, Mitigation, Planning and Restoration
PMUY	Pradhan Mantri Ujjwala Yojana
PSU	Public Sector Undertaking
QPR	Quarterly Performance Reviews
R&D	Research and Development
RBI	Risk based Investigations
RLNG	Regasified Liquefied Natural Gas
RWH	Rain Water Harvesting
SBU	Strategic Business Unit
SDR	Sustainable Development report
SEBI	Securities and Exchange Board of India
SME	Small and Medium Enterprises
SRU	Sulfur Recovery Unit
SECC	Social Economic Caste Census
TRPs	Talent Review Panels
UV	Ultra Violet
VTS	Vehicle Tracking System

Acknowledgement



It gives us immense pleasure to have presented to you BPCL's 11th Annual Sustainable Development Report. The report has been compiled by the Corporate HSSE team at BPCL. It has been framed in alignment with the triple bottom line approach; our commitment to create enduring value for our stakeholders. We are grateful to our internal and external stakeholders for their valuable time and support rendered throughout the preparation of this report.

We continuously strive to improve our disclosures and engage with stakeholders to create greater impact in social and environmental performance which is elucidated in the Sustainable Development Report. We would be happy to accept any feedback on our report.

- Corporate HSSE Team, BPCL

GRI G4 - CONTENT INDEX

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G4-6	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	10
G4-7	Nature of ownership and legal form.	10
G4-8	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	10
G4-9	Scale of the reporting organization.	6, 10, 29, 62
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G4-12	Description of Organization's supply chain.	60-75
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G4-15	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	11-15
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G4-40	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	11
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G4-49	The process for communicating critical concerns to the highest governance body.	11
G4-50	The nature and total number of critical concerns communicated to the highest governance body and the mechanism(s) used to address them.	11
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G4-52	Report the process for determining remuneration, if any remuneration consultants are employed.	11, AR Pg. 106
G4-53	Report how stakeholders' views are sought and taken into account regarding remuneration, including the results of votes on remuneration policies and proposals, if applicable	AR Pg. 106
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ASPECT: ENERGY		
G4-DMA	Generic Disclosures on Management Approach	29
G4-EN3	Energy consumption within the organization	39-40, Annexures
G4-EN4	Energy consumption outside of the organization	39-40
G4-EN5	Energy intensity	39-40
G4-EN6	Reduction of energy consumption	40
G4-EN7	Reductions in energy requirements of products and services	40
ASPECT: WATER		
G4-DMA	Generic Disclosures on Management Approach	41
G4-EN8	Total water withdrawal by source	41
G4-EN9	Water sources significantly affected by withdrawal of water	41
G4-EN10	Percentage and total volume of water recycled and reused	41
ASPECT: BIODIVERSITY		
G4-DMA	Generic Disclosures on Management Approach	44
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	44
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	44
G4-EN13	Habitats protected or restored	44
G4-EN14	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	44

ASPECT: EMISSIONS

G4-DMA	Generic Disclosures on Management Approach	45
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	45-46
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	45-46
G4-EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3)	45-46
G4-EN18	Greenhouse gas (GHG) emissions intensity	45-46
G4-EN19	Reduction of greenhouse gas (GHG) emissions	45-46
G4-EN20	Emissions of ozone-depleting substances (ODS)	45-46
G4-EN21	NOX, SOX, and other significant air emissions	45-46

ASPECT: EFFLUENTS AND WASTE

G4-DMA	Generic Disclosures on Management Approach	47-48
G4-EN22	Total water discharge by quality and destination	47-48
G4-EN23	Total weight of waste by type and disposal method	48-49, Annexures
G4-EN24	Total number and volume of significant spills	48-49
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	Not Applicable
G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	44

ASPECT: PRODUCTS AND SERVICES

G4-DMA	Generic Disclosures on Management Approach	77
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	77
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	Not Applicable

ASPECT: COMPLIANCE

G4-DMA	Generic Disclosures on Management Approach	47
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	47

ASPECT: TRANSPORT

G4-DMA	Generic Disclosures on Management Approach	47
G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	47

ASPECT: OVERALL

G4-DMA	Generic Disclosures on Management Approach	31
G4-EN31	Total environmental protection expenditures and investments by type	47

ASPECT: SUPPLIER ENVIRONMENTAL ASSESSMENT

G4-DMA	Generic Disclosures on Management Approach	67
G4-EN32	Percentage of new suppliers that were screened using environmental criteria	67
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	67

ASPECT: ENVIRONMENTAL GRIEVANCE MECHANISMS

G4-DMA	Generic Disclosures on Management Approach	70
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	70

ASPECT: EMPLOYMENT

G4-DMA	Generic Disclosures on Management Approach	61
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender and region	62
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	64
G4-LA3	Return to work and retention rates after parental leave, by gender	62-63

ASPECT: LABOR/MANAGEMENT RELATIONS

G4-DMA	Generic Disclosures on Management Approach	64
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	64

ASPECT: OCCUPATIONAL HEALTH AND SAFETY

G4-DMA	Generic Disclosures on Management Approach	51
G4-LA5	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs	52
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatalities, by region and by gender	52
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	52
G4-LA8	Health and safety topics covered in formal agreements with trade unions	52

ASPECT: TRAINING AND EDUCATION

G4-DMA	Generic Disclosures on Management Approach	62
G4-LA9	Average hours of training per year per employee by gender, and by employee category	62-63
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	62-63
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	62-63

ASPECT: DIVERSITY AND EQUAL OPPORTUNITY

G4-DMA	Generic Disclosures on Management Approach	62
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	62-63

ASPECT: EQUAL REMUNERATION FOR WOMEN AND MEN

G4-DMA	Generic Disclosures on Management Approach	62
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	63

ASPECT: SUPPLIER ASSESSMENT FOR LABOR PRACTICES

G4-DMA	Generic Disclosures on Management Approach	67
G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	67
G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken	67

ASPECT: LABOR PRACTICES GRIEVANCE MECHANISMS

G4-DMA	Generic Disclosures on Management Approach	65
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	65

ASPECT: INVESTMENT

G4-DMA	Generic Disclosures on Management Approach	64
G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	64
G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	65

ASPECT: NON-DISCRIMINATION

G4-DMA	Generic Disclosures on Management Approach	65
G4-HR3	Total number of incidents of discrimination and corrective actions taken	65

ASPECT: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING

G4-DMA	Generic Disclosures on Management Approach	67
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	67

ASPECT: CHILD LABOR

G4-DMA	Generic Disclosures on Management Approach	67
G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	67

ASPECT: FORCED OR COMPULSORY LABOR

G4-DMA	Generic Disclosures on Management Approach	67
G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	67

ASPECT: SECURITY PRACTICES

G4-DMA	Generic Disclosures on Management Approach	Not Applicable
G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations	Not Applicable

ASPECT: INDIGENOUS RIGHTS

G4-DMA	Generic Disclosures on Management Approach	54
G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken	54

ASPECT: ASSESSMENT		
G4-DMA	Generic Disclosures on Management Approach	65
G4-HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments	65
ASPECT: SUPPLIER HUMAN RIGHTS ASSESSMENT		
G4-DMA	Generic Disclosures on Management Approach	67
G4-HR10	Percentage of new suppliers that were screened using human rights criteria	67
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	67
ASPECT: HUMAN RIGHTS GRIEVANCE MECHANISMS		
G4-DMA	Generic Disclosures on Management Approach	65
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	65
ASPECT: LOCAL COMMUNITIES		
G4-DMA	Generic Disclosures on Management Approach	54
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	54
G4-SO2	Operations with significant actual and potential negative impacts on local communities	54
ASPECT: ANTI-CORRUPTION		
G4-DMA	Generic Disclosures on Management Approach	12
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	12
G4-SO4	Communication and training on anti-corruption policies and procedures	12
G4-SO5	Confirmed incidents of corruption and actions taken	12
ASPECT: PUBLIC POLICY		
G4-DMA	Generic Disclosures on Management Approach	29
G4-SO6	Total value of political contributions by country and recipient/beneficiary	29
ASPECT: ANTI-COMPETITIVE BEHAVIOR		
G4-DMA	Generic Disclosures on Management Approach	12
G4-SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	12
ASPECT: COMPLIANCE		
G4-DMA	Generic Disclosures on Management Approach	47
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	47

ASPECT: SUPPLIER ASSESSMENT FOR IMPACTS ON SOCIETY

G4-DMA	Generic Disclosures on Management Approach	67
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	67
G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken	67

ASPECT: GRIEVANCE MECHANISMS FOR IMPACTS ON SOCIETY

G4-DMA	Generic Disclosures on Management Approach	65
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	65

ASPECT: CUSTOMER HEALTH AND SAFETY

G4-DMA	Generic Disclosures on Management Approach	72
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	72
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	72

ASPECT: PRODUCT AND SERVICE LABELING

G4-DMA	Generic Disclosures on Management Approach	77
G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	77
G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	77
G4-PR5	Results of surveys measuring customer satisfaction	72

ASPECT: MARKETING COMMUNICATIONS

G4-DMA	Generic Disclosures on Management Approach	77
G4-PR6	Sale of banned or disputed products	77
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	77

ASPECT: CUSTOMER PRIVACY

G4-DMA	Generic Disclosures on Management Approach	72
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	72

ASPECT: COMPLIANCE

G4-DMA	Generic Disclosures on Management Approach	77
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	77

Oil and Gas Sector Supplement Indicators

OG1	Volume and Type of estimated proved reserves and production	BPCL does not own any reserves in the country
OG2	Total Amount invested in renewable energy	29
OG3	Total Amount of renewable energy generated by source	29
OG4	Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored	44
OG5	Volume and disposal of formation or produced water	Not Applicable
OG6	Volume of flared and vented hydrocarbon	Not Reported
OG7	Amount of drilling waste and strategies for treatment and disposal	Not Applicable
OG8	Benzene, Lead and Sulfur content in fuels	77
OG9	Operations where indigenous communities are present or affected activities and where specific engagement strategies are in place	54
OG10	Number and description of significant disputes with local communities and indigenous people	54
OG11	Number of sites that have been decommissioned and that sites that are in the process of being decommissioned	Not Applicable
OG12	Operations where involuntary resettlement took place, the number of households resettled in each and how their livelihoods were affected in the process	Not Applicable
OG13	Number of process safety events, by business activity	No significant safety event in the reporting period
OG14	Volume of biofuels produced and purchased meeting sustainability criteria	78



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Independent Assurance Statement to Bharat Petroleum Corporation Limited (BPCL) on their Sustainability Report for Financial Year (FY) 2016-17

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

Introduction

We ('KPMG in India, or 'KPMG') have been engaged by Bharat Petroleum Corporation Limited ('BPCL' or 'The Company') for the purpose of providing assurance on its sustainability report ('the Report') for the financial year (FY) 2016-17. The report was prepared by BPCL according to the Global Reporting Initiative's (GRI) G4 guidelines 'In-accordance' – core option including the Oil & Gas sector disclosures for sustainability reporting.

Assurance Standards and Guidelines Used

We conducted the assurance in accordance with

- Limited Assurance requirements of International Federation of Accountants' (IFAC) International Standard on Assurance Engagements (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 - 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 G4 Guidelines.

Scope and Boundary of the Assurance Engagement

The boundary of assurance covers the sustainability performance of BPCL's India operations for the period 01st April 2016 to 31st March 2017.

The assurance process was limited to the sustainability disclosures made in the Report. The General and Specific Standard Disclosures that were subjected to assurance are as follows:

Strategy and Analysis (G4-1, G4-2)

- Organizational Profile (G4-3 to G4-13, G4-15, G4-16)



- Identified Material Aspects and Boundaries (G4-17 to G4-23)
Stakeholder Engagement (G4-24 to G4-27) Report Profile (G4-28 to G4-33)
- Governance (G4-34 to G4-36, G4-38 to G4-42, G4-49 to G4-52, G4-54 G4-55)
Ethics and Integrity (G4-56)

The General and Specific Standard Disclosures that were subjected to assurance are as follows:

- Economic
 - Market Presence (G4-EC5, G4-EC6) , Indirect Economic Impacts (G4-EC7 to G4-EC8), Procurement Practice (G4-EC9)
- Environmental
 - Materials (G4-EN1, G4-EN2), Energy (G4-EN3, G4-EN5, G4-EN6), Water (G4-EN8, G4-EN9), Emissions (G4-EN15, G4-EN16, G4-EN18, G4-EN20), Effluents and Waste (G4-EN24), Overall (G4-EN31)
- Labor Practices and Decent Work
 - Employment (G4-LA1 to G4-LA3), Labor / Management Relations (G4-LA4), Occupational Health and Safety (G4-LA5, G4-LA8), Training & Education (G4-LA9, G4-LA11), Diversity and Equal Opportunity (G4-LA12), Equal Remuneration for Men and Women (G4-LA13), Labor Practices Grievance Mechanisms (G4-LA16)
- Human Rights
 - Non- discrimination (G4-HR3), Freedom of Association and Collective Bargaining (G4-HR4), Indigenous Rights (G4-HR8)
- Society
 - Local Communities (G4-SO1), Anti-corruption (G4-SO3, G4-SO5), Public Policy (G4-SO6) Anti- competitive Behavior (G4-SO7), Compliance (G4-SO8)
- Product Responsibility
 - Customer Health and Safety (G4-PR2), Product and Service Labeling (G4-PR3, G4- PR4), Marketing communications (G4-PR6, G4-PR7), Customer Privacy (G4- PR8), Compliance (G4-PR9).
- Oil and Gas Sector Disclosures
 - Involuntary Resettlement (G4-OG12), Asset Integrity and Process Safety (G4-OG13), Fossil Fuel Substitutes (G4-OG14)

Limitations in Conducting the Assurance

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 2016 to 31 March 2017. Data and information in the Report outside this reporting period was not subject to verification.



- Any statement/ remarks/ comments indicating intention, opinion, belief and/ or aspiration by BPCL were excluded from the scope of assurance.
- Determine 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 2016-17 Annual Report.
- Assurance visits were limited to the sites which are mentioned in the work undertaken.

Work Undertaken

Our procedures include assessment of the risks of material misstatements of selected performance indicators and disclosures and underlying internal controls relevant to the information published in the report. Our procedures were designed to gather sufficient and appropriate evidence to determine that the selected performance information is not materially misstated. We have adopted the following process -

- Evaluating the report's content to ascertain the 'In-accordance' option as per Global Reporting Initiative's G4 Guidelines
- Testing on a sample basis, the evidence supporting the data and information
- Evaluating the appropriateness of the quantification methods and models used to arrive at the data presented in the report
- Verification of systems and procedures used for quantification, collation, and analysis of sustainability performance indicators included in the report
- Understanding the appropriateness of various assumptions, estimations and materiality thresholds 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
- Discussion on sustainability with senior executives/ management at the different BPCL locations and at the corporate office to understand the risk and opportunities from sustainability context and the strategy BPCL is following
- Assessment of stakeholder engagement and materiality assessment process for determining material aspects
- Review of Company's approach to identify material issues and stakeholders engagement framework.
- Assessment of the systems used for data collection and reporting of the General Standard Disclosures and Specific Standard Disclosures of material aspects as listed in the assurance scope above.

As part of the verification process, we have conducted site visits to the following facilities of BPCL.

1. Refineries (Kochi, Mumbai)
2. LPG bottling plants (Uluberia, Piyala, Coimbatore)
3. Lubes (Loni)



4. Retail (Haldia, Sidhpur, Panipat)
5. Aviation (Ahmedabad, Kochi)
6. Corporate Office (Mumbai)

The procedures performed in a limited assurance engagement are less in extent than for a reasonable assurance engagement. Appropriate documentary evidence was obtained to support our conclusions on the information and data verified. Where such documentary evidence could not be collected due to sensitive nature 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 described above, nothing has come to our attention that causes us not to believe that

- The report is in accordance with the G4 guidelines and Oil & Gas Sector disclosures of the Global Reporting Initiative and covers BPCL's sustainability performance covering its operations as mentioned in the scope, boundary and limitations
- The standard disclosures and key performance indicators presented in the report by BPCL, are fairly represented in line with the identified material issues

As per AA1000AS 2008 Principles

Principle of Inclusivity: BPCL has stakeholder engagement strategy 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 now take initiative to disclose 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, prioritizing its sustainability focus areas, taking into account changing sustainability context and stakeholders' expectations. The Report contents have been linked to disclosures of the Oil and Gas sector disclosures, the International Petroleum Industry Environmental Conservation Association (API/PIECA/OGP) and the American Petroleum Institute's Oil and Gas Industry Guidance on Voluntary Sustainability Reporting (2010). The Company may now plan to extend the materiality determination process to include its supply chain/ immediate suppliers.

Principle of Responsiveness: BPCL has structured reporting systems in place and follows suitable guidelines for communicating its sustainability performance. The Company has in place processes and systems 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.

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 ISAE 3000 (revised) and AA1000 Assurance Standard 2008. Our work was performed in compliance with 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 ISQC 1 and the practitioner complies with the applicable independence and other ethical requirements of the IESBA code.

Responsibilities

BPCL is responsible for developing the report contents. BPCL is also responsible for identification of material sustainability issues, 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
Sustainability Services
13 September 2017



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