



# ongc Group

Sustainability Report FY'18



**Live the  
Molecule**



It is a molecule unlike any other, for it makes the world go round. The elusive entity, pursued by everyone alike, is none other than the hydrocarbon molecule - the one that forms the basis of all fossil fuel. The golden reserve concocted by Mother Nature is shared and consumed by all, albeit irresponsibly sometimes. We have been living for the molecule for over six decades now, looking for it, processing it, bringing it to people and trying to find judicious ways of using it - all at the same time. For us at ONGC, the molecule is what we live by.





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# A Moment of Pride

**Shri Narendra Modi, Hon'ble Prime Minister, dedicated the ONGC Corporate Office 'Deendayal Urja Bhawan' - a LEED Platinum certified Green Building to the nation on September 25, 2017.**







Hon'ble PM, Shri Narendra Modi launching the ONGC paperless office project at the ONGC Corporate Office, Deendayal Urja Bhawan, New Delhi





Message from the  
**Chairman and Managing Director, ONGC**  
& Chairman - ONGC Group of Companies







## Dear Stakeholders,

The ONGC Group of today is known for much more than its accomplishments in its core business area of Exploration & Production (E&P). We are a global leader in integrated energy business with significant interests that spans the hydrocarbon value - chain and beyond – be it upstream operations, refining, petrochemicals, power or renewable energy. At the heart of this evolution lies our firm commitment to sustainable growth, knowledge excellence and exemplary governance practices.

Volatility has been a constant feature of the energy industry, particularly in oil and gas sector. This has intensified further in recent years with heightening of stress on multiple fronts: crude oil price movements, geopolitical landscape, climate change concerns and impending global transition to a low - carbon economy. Despite this surrounding volatility, ONGC has continued to excel in its core businesses. Domestically, it remains the country's foremost E&P player, with healthy capital commitment levels notwithstanding industry-wide cutbacks on spends in reaction to the price crash. During FY'18, ONGC made 12 new oil and gas discoveries out of which two discoveries, one each in Cambay and Cauvery Onshore Asset, have already been put on production. Reserve accretion for the year stood at 67.83 MMtoe. With a Reserve Replacement Ratio (RRR) of 1.48, the trend of expanding hydrocarbon resource base has continued for the twelfth consecutive year with steady crude production volumes.

The standalone crude oil production increased to 22.31 MMT in FY'18, from 22.25 MMT in FY'17. Natural gas production registered an impressive growth of over 6% as production in FY'18 rose to 23.48 BCM compared to 22.09 BCM in FY'17. The cumulative domestic production (inclusive of JV operated properties) also recorded an increase - 50.05 MMtoe as compared to 48.81 MMtoe in FY'17. Going forward, we expect a steady step-up in our domestic hydrocarbon output, primarily led by ramp-up in gas output from key projects such as KG-DWN-98/2, Daman and Vashishta fields. Drilling is one of the most capital-intensive activities in the E&P process chain and our performance in FY'18 reinforces drilling as one of our key fortes. For the second consecutive year, as many as 503 wells were drilled - the highest ever. ONGC drilled 119

exploratory wells - the highest number in the last 6 years and also achieved the highest cycle and commercial speed.

Financially as well, FY'18 proved to be a strong year, with higher profits and a healthy dividend payout. ONGC recorded standalone Revenue from Operations of INR 850,041 Million in FY'18, as compared to INR 779,078 Million in FY'17. The Profit After Tax (PAT) also increased by over 11% to INR 199,453 Million in FY'18 against INR 179,000 Million in FY'17. Total payout to shareholders was INR 84,699 Million with impressive payout ratio (including dividend distribution tax) of 51.1%.

Our international E&P business also continued on its road of growth. ONGC Videsh Limited (OVL), a wholly owned subsidiary of your company has participation in 41 oil and gas projects in 20 countries across Europe, Asia, South America, Africa and the Oceania region. With the acquisition of significant stake in Russia's Vankorneft in 2016 and 10% stake by Indian Consortium led by ONGC Videsh in the UAE's offshore oil and gas field (Lower Zakum) in February 2018, ONGC Videsh registered highest-ever production of 14.16 MMtoe of oil and oil equivalent gas in FY'18 (an increase of over 10% as compared to 12.80 MMtoe in FY'17). The company recorded consolidated revenue from operations of INR 104,176 Million as compared to INR 100,800 Million during FY'17 and Profit after Tax (PAT) of INR 9,815 Million as compared to the consolidated Profit after Tax of INR 7,573 Million during FY'17.

A pillar of ONGC Videsh's business performance is the implementation of a robust risk management framework aligned with ISO 31000:2009, which has been instrumental in improving the quality of decision making. ONGC Videsh has a strong commitment towards minimizing environmental impact and ensuring safety in its operations. The company is certified for Integrated QHSE Management System in line with ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environment Management System) and OHSAS 18001:2007 (Occupational Health & Safety Management System).

Beyond E&P, acquisition of majority stake (51.11%) in HPCL added further strength to our already respectable downstream portfolio. Upon the acquisition, HPCL has





become a subsidiary of your Company. While ONGC as a Company remains committed to excellence in the core upstream business, HPCL fits well in the Group's overall integrated Energy approach. Addition of HPCL will provide the Group a pure-play refining and marketing company with an extensive retail presence in the country. Together with MRPL, the refining capacity of ONGC Group today stands at over 40 MMT, making us the third largest in the country in terms of Installed capacity. MRPL also had a solid year in its operations. It registered highest ever throughput at 16.31 MMT in FY'18. The refining unit recorded an impressive GRM of USD 7.54/bbl.

While sustained operational excellence and steady business growth have defined ONGC's journey over the years, we firmly believe sustainability is going to be a key theme for all industries in the coming period. In line with the long-term vision harboured by ONGC, we recognize the future risks and opportunities that the industry presents and are gearing up for the upcoming period of transformation. An approach premised on sound application of technology and sustainability is what ONGC is embracing for discovering new pathways of growth.

ONGC acknowledges climate change as a significant global risk. Keeping this in consideration, we have sanctioned a scientific study in association with other oil and gas sector PSUs on 'Climate Change Risks: Preparedness for Oil and Gas sector', conducted by The Energy and Resource Institute (TERI) and Federation of Indian Petroleum Industry (FIPI). We also are among the first few domestic companies to bring carbon mitigation to the forefront. To move decidedly along this direction, we are transitioning towards a paperless office, installing solar lights at our installations, eliminating the consumption of single-use plastic across the organization and plan to convert all installed lights to LED by the year 2020, among others.

Our green energy portfolio has two operational wind farms with a combined capacity of 153 MW. In spite of declining gains in carbon markets, we continue to implement Clean Development Mechanism (CDM) projects under the Kyoto Protocol. During this financial year, ONGC has taken an

initiative to extend the credit period permissible under CDM regulation, for another 7 years for a 51 MW Wind Power Project in Surajbari, Gujarat. During the year, we also installed Solar power plants at Hazira Plant, Vadodara, IPSHEM Goa and Ankleshwar Asset. The total Capex on Solar based power plants commissioned during the year FY'18 is INR 532.44 Million. Installation of 115,000 LED lights at various work centres is expected to reduce our electric consumption on lighting by 50% which translates into a saving of INR 180 Million annually.

Various other measures such as reducing gas flaring and monetization of low pressure gas have also been initiated at our work centres with the ultimate objective of reducing the carbon footprint of our business. As a result of these aggressive efforts, we reduced our total emissions by 4.34% and achieved 4.05% reduction in our total energy consumption, year on year.

While inaugurating the new corporate office, a LEED Platinum certified Green Building of ONGC, on September 25, 2017, Hon'ble Prime Minister exhorted the company to take up a challenge of developing an energy efficient electric cooking stove, which would enable cooking through the use of solar energy. In response to this challenge, ONGC launched a nationwide 'Solar Chulha Challenge' inviting entrepreneurs, scientists, and researchers to participate in the Indigenous Development effort on Design, Development and Demonstration of Solar Chulha suitable for indoor cooking. The selected three entries were awarded INR 1 Million, INR 0.5 Million and INR 0.3 Million respectively. ONGC will be procuring 1,000 units for demonstration in different regions.

Safety of employees is considered to be of utmost importance at ONGC, and the company makes continuous efforts to provide a safe working environment to all employees. During the financial year, one of ONGC's Assets, Rajahmundry Asset was adjudged the Best Onshore Asset for accident-free operations and losing no man hours, amongst all the oil and gas companies including the private players for FY'17. Notably, the Asset was also awarded the National Safety Awards for the "Lowest Injury Frequency Rate" in drilling mines category for the year 2013 from Hon'ble President of India in the year 2017.



Beyond business, our CSR initiatives have also created a positive impact to the society. At the same time, it also sensitizes us to our role as an important stakeholder of the society and environment. In FY'18, ONGC ensured more than 100% utilization of CSR budget, amounting to INR 5,034 Million for its CSR programs with target areas spanning from healthcare, sanitation, education, and environment and sustainability. INR 1,844.6 Million of this CSR budget was utilised for projects supporting the Swachh Bharat Initiative. In line with the Government policy, ONGC has also set up a Start-Up India fund of INR 1,000 Million to foster, nurture and incubate new ideas related to energy, and MOUs with 5 start-ups were signed in FY'18.

As a result of the consistent efforts to continue as an environmentally conscious and a socially responsible company, ONGC has been awarded with 'Good Corporate Citizen' award from PHD Chamber of Commerce during Annual Awards for Excellence-2017, Environmental Sustainability-Company of the Year Award from FIPI, Environmental Sustainability Research & Development Award at 5<sup>th</sup> Governance Now PSU Award. The Institute of Petroleum

Safety, Health and Environment (IPSHEM), Goa received 'Grow Care India Environment Gold Award' and Hazira Plant of ONGC received twin awards - 'Occupational Health and Safety Management Award 2017' and 'Environment Management Award 2017' from Grow Care India Foundation (GCI), during the financial year.

To communicate our strong focus on ensuring sustainability in our organization, I am happy to present to you the ninth sustainability report of ONGC and fifth sustainability report of ONGC group of companies comprising of ONGC Videsh, MRPL, OMPL, OPaL and OTPC. The report adheres to 'core' option of GRI standards for reporting.

Sincerely,

**Shashi Shanker**

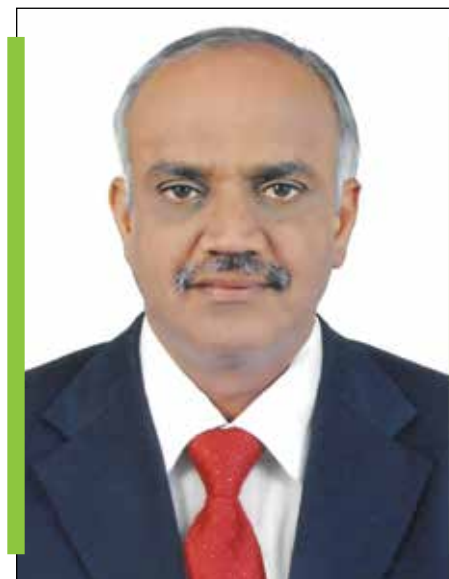
Chairman and Managing Director - ONGC  
& Chairman - ONGC Group of Companies





## Message from the Managing Director

MRPL



### Dear Stakeholders,

With a vision to become a world class refining and petrochemicals company, MRPL is striving towards creation of long-term value through a path of sustained leadership. I present to you the fifth consecutive sustainability report of MRPL as part of the ONGC group report. Through this report, we aim to engage with our valued stakeholders and communicate our performance on the three pillars of sustainability - economy, society and environment.

During the year, MRPL has showcased exemplary financial and operational performance with strong growth in revenues and record net profit. The company achieved a turnover of INR 630,670 Million against a turnover of INR 594,150 Million during FY'17, and a profit after tax (PAT) of INR 22,240 Million against a PAT of INR 36,440 Million incurred during FY'17. Through MRPL's selection of optimal crude mix, better equipment reliability, timely shutdown adherence and commendable operational discipline, MRPL achieved the highest ever gross crude processed of 16.31 MMT for FY'18, as against the previous highest of 16.27 MMT during FY'17 registering an increase of 0.04% in throughput.

At MRPL, we define progress not just in terms of our economic performance but also in terms of the satisfaction of our workforce. The company places utmost importance

on employee welfare and employee relations to ensure long-term and cordial relationship with all of our employees. The company takes pride in reporting that not a single man-hour was lost on account of any industrial disturbance in the FY'18. During the year, MRPL ensured that its employees devoted 3,552.68 man-days for training, development and learning. Safety of employees is an integral part of MRPL's culture and a non-negotiable pillar of the company's core strategy. Several awareness programs are undertaken in the refinery to ensure safety of people, processes and Assets. The product portfolio comprises quality products, eco-friendly grades and the processing itself is carried out in an eco-friendly and safe environment using efficient technologies.

MRPL considers sustainability as a major driver for building future-readiness in a dynamic market environment. We believe that taking cognizance of social and environmental challenges and aligning our product offering with changing consumer needs will help MRPL thrive in the long-term. With this view, MRPL has retained its focus on maximizing the use of clean energy and higher energy efficiency in refinery operations. During the year, MRPL commissioned a 6.063 MWp project spread across 34 roof tops within the refinery premises, which is the largest solar power project





in a refinery site in India. This is expected to lead to a significant improvement in energy efficiency of the refinery. The company continues to design initiatives to reinforce its commitment towards environment by reducing fresh water intake, maximizing recycle of treated effluent and decreasing sulphur oxides emissions. The company utilized on an average processed 2.13 Million imperial gallons per day (MGD) and recycled 2.18 Million imperial gallons per day and thus had reduced intake of fresh water demonstration responsible consumption and Production. The company has put in place resilient quality and environmental management systems, and became one of the pioneers in Indian Oil & Gas industry to comply with revised ISO 2015 standards and receiving the certification during the year.

We are devoted to fulfilling our responsibility toward the society and stakeholders, which continues to grow with our growing scale of operations. During the FY'18, MRPL has contributed INR 103 Million towards various community development initiatives, as against INR 14.50 Million spent in FY'17. Our social welfare and community development initiatives are focused on the key areas of rural transformation, education, health and sanitation. The social welfare and community development initiatives were focused on the key areas of rural transformation, education, health and sanitation. The objective of our community initiatives is to

bring about positive change in the society by enhancing the quality of life & economic well-being of the local populace around our areas of operation. MRPL will continue to add social value for community and surrounding villages with a CSR budget of INR 670.60 Million available in FY'19

In recognition of our consistent efforts in crating positive impact, MRPL bagged Srishti - Good Green Governance (G-Cube) Winners trophy under 'Manufacturing Sector' on the auspicious occasion of Earth Day (April 22, 2018), and was also recognized with Platinum Trophy at the 18<sup>th</sup> Annual Greentech Environment Award 2018, amongst other awards and recognitions.

We are determined to continue our consistent contribution towards achievement of sustainability goals of ONGC group in an inclusive manner.

Sincerely,

**Venkatesh. M**

Managing Director, MRPL



## Message from the Chief Executive Officer

OMPL



### Dear Stakeholders,

ONGC Mangalore Petrochemicals Limited (OMPL) - a green field petrochemicals project, is promoted by Oil and Natural Gas Corporation Ltd (ONGC), India's Most Valuable Public Sector Enterprise, and Mangalore Refinery and Petrochemicals Limited (MRPL) which is a subsidiary of ONGC. With the vision to become a world-class leader in petrochemicals industry, OMPL is tirelessly working towards providing quality products and services by means of continuous innovation, learning and operational excellence.

At OMPL, we thrive to achieve sustainability in our business operations, as it supports us in our long-term strategy of inclusive growth. We want to create sustainable value for our customers, employees, shareholders and society through our business activities. Sustainability is one of our corporate values that motivates and inspires our employees.

During the year, OMPL has achieved a turnover of INR 55,612.94 Million with a loss of INR 4,468.35 Million, mainly on account of lower margins & availability of feedstock, interest cost, depreciation and lower recognition for deferred tax. In spite of this, we have made consistent efforts to increase our capacity utilisation. The capacity utilization for the year was about 88%. We are continuously undertaking measures to

augment the capacity utilisation by sourcing Heavy Naphtha from other oil companies to bridge the deficit in supplies, and to ensure continuous feedstock for plant operation.

The operational performance of the company has been remarkable during the year, with a production of 0.701 MMT Para-xylene, 0.195 MMT Benzene and 0.203 MMT Paraffinic raffinate. The company also achieved a marked improvement in export capacity by exporting Para-xylene and Benzene worth INR 36,140.01 Million and INR 10,175.22 Million, respectively. Consistent product quality, timely delivery and undeterred customer focus have ensured a presence for both products in all the major consuming regions. We sourced special grade Naphtha from domestic and international sources to enhance capacity utilization of the complex. OMPL has also achieved a reduction in demurrage through consistent efforts in coordination with New Mangalore Port Trust.

At OMPL, we consider environmental management as a fundamental responsibility, while carrying out day-to-day operations. In line with India's Nationally Determined Contribution (NDC) as a result of the Paris Agreement on Climate Change, we are committed to reduce our GHG



emissions. One of the measures in this direction is the in-house development and execution of dynamic alarm limit for dual fired heaters, in tandem with CPCB's guidelines. Process heaters and gas turbines in the complex are already designed to handle environment friendly LNG fuel, as and when available. This manifests our commitment to bring down our GHG emissions. To optimise our fresh water consumption, the complex has been designed to utilize treated municipal sewage water in the cooling water system.

OMPL takes full cognizance of its environmental impact and actively identifies suitable initiatives. OMPL was actively involved in the Plastic Ban Awareness Programme, and has taken an initiative to substitute plastic water bottles with glass containers for drinking water in meeting halls and conference rooms. The 'Green Belt Development' project with modern sophisticated scientific techniques such as drip irrigation, gravity flow has also been adopted by the company under the guidance of Karnataka Forest Department, Karnataka.

Ensuring safety of our employees will always be a priority area for OMPL. To enhance safety, we took various measures including medical check-ups and regular internal mock drill exercises considering the various emergency scenarios in plant and non-plant areas. We are committed towards imparting continuous trainings to our employees in fire and safety practices. An offsite mock drill was also conducted in presence of District Crisis Group (DCG) to demonstrate the emergency preparedness of OMPL. As a result of our tireless efforts to improve the safety practices of the company, we have been able to achieve a Zero Loss Time Incident (LTI) for the FY'18. Another exemplary indicator of our safety performance is the achievement of 886 Safe working days without LTI which was recorded on 31<sup>st</sup> March 2018. In order to enhance employee's awareness and make them more vigilant towards safety, the company also observed Chemical Disaster Prevention week in December 2017, and National

Safety Day/week 2017 in March 2018.

OMPL continues to maintain cordial and harmonious relationships with the collectives and no industrial disturbance was observed during FY'18. With regard to human resource development, many employee engagement activities were undertaken in the financial year. The percentage share of women employees in the workforce has increased to 17%. As a special initiative during this year, Women in Public Sector (WIPS) initiative has been constituted as part of which exclusive training programs were organized for women employees, with some of the women employees nominated for external training programs as well.

In recognition of our efforts, OMPL has been conferred with the First Prize in Best Safe Industry category in "State level Safety awards-Oil Industries" conducted by Department Factories and Boilers, Karnataka. Working in synergy with our group of companies and strategic partners, OMPL is determined to identify opportunities to leverage on the expertise, knowledge and insights of our employees and stakeholders, to pioneer new ways to address current and future challenges.

Being a responsible organization, we conduct business in a manner that improves our profitability, while creating positive impact on the environment and society. By working further in this direction, we will ensure the company's long-term resilience and sustain our competitive edge, enabling us to deliver greater value to our stakeholders and shareholders.

Sincerely,

**Sujir Suresh Nayak**  
Chief Executive Officer, OMPL



## Message from the Managing Director

OPaL



### Dear Stakeholders,

OPaL Plant at Dahej was inaugurated by Hon'ble Prime Minister Shri Narendra Modi in March 2017.

During FY'18, OPaL plant has run at an average capacity of around 50%. The capacity utilization is being ramped up, which is expected to reach up to 80% in FY'19. Upon complete ramp up, OPaL would be producing about 1.4 Million tons of Polymers and 0.5 Million tons of liquid chemicals, generating about INR 150,000 Million annually in revenues. During FY'18, OPaL clocked a turnover of INR 60,000 Million through product sales of over 0.8 MMT, both in domestic as well as export markets. OPaL commenced polymer exports in April 2017 and established its presence in 26 countries with "OPaLene" brand.

Sustainable development for OPaL signifies considering both short and long term aspirations, and integrating economic, social, and environmental considerations into the organizational decision making. In addition to creating value for shareholders, we strive to ensure that our activities are carried out within the purview of applicable environmental legislations, while simultaneously working for the betterment of communities we operate in. Our commitment to inclusive development is reflected in our risk management framework.

A robust risk identification and evaluation process has been instituted at OPaL, which enables us to identify not only the functional, operational, market related and enterprise level risks, but also various impediments faced by stakeholders. We use state-of-the-art technologies to conserve energy, prevent pollution, and reduce wastes and emissions. We have deployed environmental safeguards, recycling of resources and reutilization of wastes for all projects. We continuously monitor fugitive emissions of hydrocarbons, chemicals and other materials to minimize the impact on flora and fauna.

Plastics are essential for our country and our people. The superiority of plastic for public use like transportation, sanitation, food storage, shelters etc. is well established. Hence our country needs to adopt a philosophy for responsible use of plastic and move towards complete reuse and recyclability of all plastics. OPaL would play a leading role in taking forward this agenda by engaging with all stakeholders.

Being one of the largest polymer producers in India, we consider plastic as a product with several advantages in human lives, as it presents unparalleled advantages over natural resources (such as wood, glass, paper, and aluminium,





among others), and comes with superior functionalities in the form of light weight, functional ease, transportation ease, packaging and aesthetics. Unfortunately, a large fraction of the plastic being used in India ends up in the landfills and is harmful to the environment due to poor source segregation practices, lack of waste management infrastructure, and inadequate public awareness in general.

At OPaL, we acknowledge our responsibility to promote practices for responsible use of plastic. As part of our Extended Producers Responsibility (EPR), OPaL takes the lead in creation of “seed – awareness” by conducting interactive awareness sessions with school students across Vadodara. These sessions are centred on responsible use, reuse and recycling of plastic, and aim to develop proactive waste management habits among children and their families.

OPaL considers CSR to be a significant driver in promoting inclusive growth. Since its inception, OPaL has been

implementing numerous social welfare activities for the benefit of the local population, identifying three key focus areas for CSR activities — education including skill development, healthcare and infrastructure development for improving the quality of life in and around the plant. During FY'18, OPaL contributed INR 4.1 Million towards CSR projects.

I sincerely thank all stakeholders who have made our operational journey a success, and seek their continued support in our journey forward.

Sincerely,

**Avinash Verma**  
Managing Director, OPaL



## Message from the Managing Director

OTPC



### Dear Stakeholders,

Sustainability issues are affecting humankind more than it ever did. Abreast with the present situation and keeping in perspective the future of the planet, ONGC Tripura Power Company (OTPC) is actively pursuing activities to espouse Sustainability Development Goals set by United Nations. In pursuance towards a sustainable world, it gives me immense pleasure to present our Sustainability Report for the period FY'18.

The operations of OTPC is geared towards embracing all the three pillars of sustainability, viz. People, Planet and Profit. OTPC is in the business of power generation and continues to be the largest power plant in the North Eastern region. The electricity generation from the plant alone meets about one-fourth of the demand of the entire region at one of the most competitive prices. During FY'18, OTPC sold about 3,894 Million units of electricity in the region resulting in revenue generation of about INR 12,853 Million that is marginally less than the revenue generated in the last financial year. The decline is mainly due to increase in Operation and Maintenance Cost and lower fuel availability.

Natural gas, a clean fuel, is used to generate electricity. The plant is configured with ultra-modern heavy duty gas turbines

and dry low NOx (DLN) 2.0+ combustor that is environment friendly and helps in achieving efficiency greater than 56%. NOx emission is much lower than the prescribed statutory limit. In addition to higher efficiency and lower emissions, combined cycle gas based power plants like OTPC plant can play a critical role in integration of renewable energy in the Indian grid culminating in a clean and green India.

The plant is registered as Clean Development Mechanism (CDM) projects with United Nations Framework Convention on Climate Change (UNFCCC). The plant is one of the largest CDM projects in the country. During the financial year, OTPC was recognized for demonstrating highest level of commitment to the environment. Several awards such as CII-ITC Sustainability Award 2017 for Excellence in Environment Management, Environment Excellence Award 2017 for Clean Generator of the Year – Gas by Mission Energy Foundation and National EHS Award 2017 for Outstanding Contribution for Carbon Emission Reduction by World Quality Congress were accorded to OTPC.

Social activities are carried out under Corporate Social Responsibility (CSR) program that has been carefully tailored with inputs from local panchayats, government authorities



and villagers. The activities under CSR program are focused to foster development in the areas of education, sports, health, sanitation, skill development and rural development in and around the area of plant operations in Palatana, Tripura. During FY'18, OTPC made an expenditure of INR 11.70 Million on CSR activities. The aim of the CSR program is to enhance the quality of life and economic well-being of the general public and weaker sections of the society. The local community has appreciated the CSR initiatives taken by OTPC.

At OTPC, employees are considered as its greatest asset and best standards have been adopted for well-being and quality of life of the workforce. OTPC has taken numerous employee friendly initiatives for providing a congenial work environment. Rewards & recognition programs and other employee welfare measures like construction of recreational facilities have been undertaken. OTPC gives a special focus to knowledge sharing, capacity building and nurturing the intellectual capital. A training centre has been constructed for employees and efforts are being made to tie up with reputed institutions for efficient learning and training of the employees. In order to strengthen communication systems and to keep the employees of the company informed about the achievements of the company, OTPC has started an in-house magazine "Spandan" that is published on quarterly basis.

OTPC attaches highest priority to safety, occupational health and protection of environment in and around its area of

operation. Safety performance is discussed in the committee meetings and status of safety performance is placed in the Board meetings on a regular basis. During the year, OTPC also bagged an award for World-class Safety Practices for Business Sustainability by Society of Power & Energy Professionals (SOPEP). OTPC has certifications in areas of Quality Management System (ISO 9001:2008), Environmental Management System (ISO 14001:2004) and Occupation Health and Safety Management System (OHSAS 18001:2007) in place.

At OTPC, we believe in continuous adoption of newer and innovative technologies to remain competitive and sustainable in the dynamic market environment. Being a socially responsible company, it is our responsibility to enhance the enabling environment in power sector by using eco-friendly technologies for generating power in an environmentally sustainable manner. I foresee a brighter future where we carry forward the legacy of Sustainable Growth; safeguarding the economic, social and environmental interests of our future generations.

Sincerely,

**Satyajit Ganguly**  
Managing Director, OTPC



## Message from the **Director (Exploration) & Director I/c CM&SG**

ONGC



### **Dear Stakeholders,**

The damaging impact of climate disruptions are visible all over the globe and the Indian subcontinent is no exception. With one third population living below the poverty line and more than 60% of them depending primarily on agriculture for their minimum sustenance, combined with a 7,516 km long coast line, India is very vulnerable to climate change effect. With primary dependence on monsoon for the agriculture, India as a country also is very sensitive to any climate change. The recent Kerala floods alone resulted in more than 500 deaths and economic losses to the order of INR 200 Billion.

To sustain the recent rapid growth of Indian economy, continuous supply of energy is essential. ONGC in pursuit of securing energy supply to the nation, has been striving hard to strike an optimum balance between exploration and exploitation of energy sources and preserving the environment. Supplying energy for the economic growth and development of the country in an environmentally sustainable manner is our 'mantra'.

The company is continuously focused on reducing its emissions. This year we could achieve a reduction of 4.59%

in direct emissions and 4.34% in the overall emissions. This could be achieved through various programmes like reduction in low pressure gas flaring, energy efficient lighting, use of renewable energy etc. Water footprint studies at different workplaces for optimal use of fresh water, rainwater harvesting projects, sewage treatment plants, seawater desalination plants, etc. were taken up for conservation of water resources.

Your company has pioneered the Global Methane Initiative (GMI) programme in India, in association with the United States-Environmental Protection Agency (US-EPA), way back in the year 2007. Through this program, fugitive methane emissions which are not visible to the naked eyes are detected through an Infrared camera. A dedicated GMI team conducts the leakage detection survey in the process installations and remedial measures are taken to arrest those leakages. It pleases me to share that over the years, this programme alone has prevented emissions of 16.7 MMSCM methane gas in to the atmosphere with an environmental benefit of 250,000 tCO<sub>2</sub>e.





While presenting to you the 9<sup>th</sup> independently assured, GRI based sustainability report of ONGC and ONGC group of companies, I thank you for your confidence and investment in ONGC. Two of the subsidiaries, ONGC-Videsh and MRPL were included in the reporting scope from FY' 14 and subsidiary OMPL, joint ventures OPaL and OTPC were also included from FY'17.

I assure you that while maintaining our position as a global leader in integrated energy business through sustainable growth, knowledge excellence and exemplary governance,

we are firmly moving forward to make your company more and more climate resilient through modern technological interventions.

Jai Hind!

**Ajay Kumar Dwivedi**

Director (Exploration) & Director I/c CM&SG  
ONGC



## About the Report

ONGC Group began its journey of sustainability reporting nine years ago, and we continue to communicate our performance on environmental, economic and social aspects to its stakeholders through our ninth sustainability report. In our growth journey, we have always placed the strongest emphasis on value creation for our valued stakeholders. This report covers sustainability performance of ONGC; its three subsidiaries — ONGC Videsh, Mangalore Refinery and Petrochemicals Limited (MRPL) and ONGC Mangalore Petrochemicals Limited (OMPL); and two JVs — ONGC Petro additions Limited (OPaL) and ONGC Tripura Power Company Limited (OTPC).

For ONGC Videsh, the boundary covers key material aspects across its global operations (through subsidiaries) across the following entities: Imperial Energy (Russia), Mansarovar Energy Colombia Ltd. (Colombia), Greater Nile Petroleum Operating Company (Sudan), San Cristobal Project (Venezuela) and Carabobo (Venezuela). Throughout the report, ONGC Group refers to ONGC, three subsidiaries and the two JVs.

This sustainability report has been prepared in accordance with the GRI Standards and Oil and Gas Sector Supplement (OGSS), which is applicable to ONGC, ONGC Videsh, MRPL, OMPL, OTPC and OPaL. The reporting criteria of this report is 'In Accordance – Core' and the reporting period is FY'18 (1<sup>st</sup> April 2017 to 31<sup>st</sup> March 2018).

We engaged an independent external organization, TUV India Private Limited, to provide assurance in line with AA1000 Assurance Standard, and the assurance statement is provided at the end of the report. The GRI content index provided in the report (page 103-106) provides a quick reference to all GRI Standards indicators and standard disclosures.

Through this report, we aim to provide our valued stakeholders with a holistic snapshot of ONGC Group's approach to sustainability, the progress we have made over the years and our future plans.

All the sustainability reports published by ONGC Group can be accessed on ONGC's website: <http://www.ongcindia.com/wps/wcm/connect/ongcindia/Home/Initiatives/Corporate+Sustainability/>

We welcome any feedback from the readers either on the contents of this report or the approach we are taking. For any further details on Sustainability Report FY'18 please contact: Chief-Carbon Management and Sustainability Group (CM&SG), Oil and Natural Gas Corporation Limited, Tower A, 3<sup>rd</sup> Floor, Deendayal Urja Bhawan, 5, Nelson Mandela Marg, Vasant Kunj, New Delhi – 110070, Phone Number: 011-26753007; Fax: 011-26129091; E-mail: [chief\\_cmsg@ongc.co.in](mailto:chief_cmsg@ongc.co.in)



## Key Highlights: **FY'18**



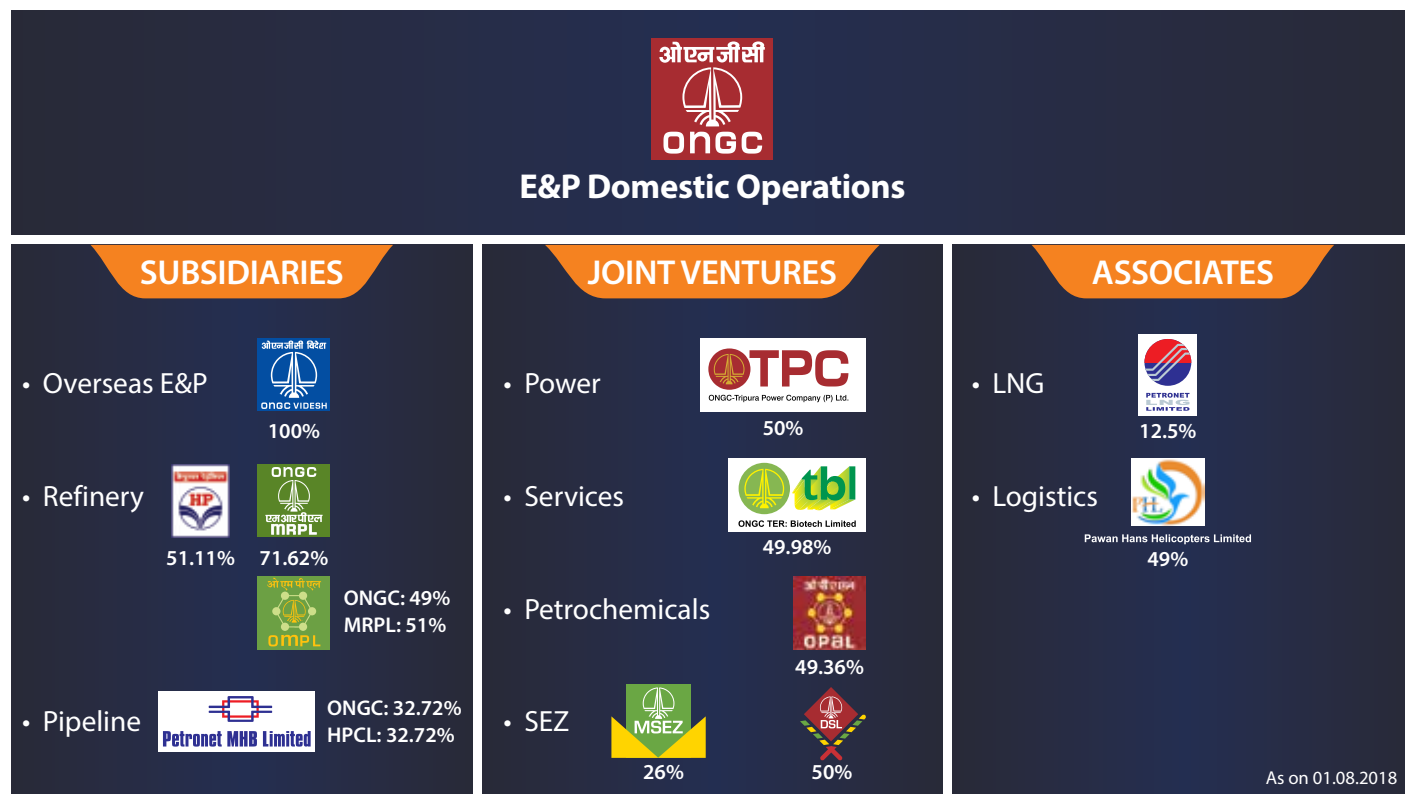


## ONGC – A Pioneer in **Energy Sector**

ONGC is the largest crude oil and natural gas company in India, contributing to around 70 percent of India's total domestic production of crude oil and natural gas. It is the only public sector Indian company to feature in Fortune's 'Most Admired Energy Companies' list. It is one of the most valued and largest E&P Company in the world, and one of the highest profit-making and dividend-paying enterprise. ONGC has been ranked number one E&P Company in the world by Platts Top 250 Global Energy Company Rankings - 2017 and 11th among global energy majors based on assets, revenues, profits and return on invested

capital. The leading international business journal Forbes has ranked the Company 3rd largest in India and 246th worldwide based on sales, profit, assets and market value.

The vision of ONGC Group is to be a global leader in integrated energy business through sustainable growth, knowledge excellence and exemplary governance practices. ONGC Group has taken structured initiatives towards value-multiplier integration projects such as Refinery, LNG, Petrochemicals, Power, and SEZ, to have presence in the entire hydrocarbon value-chain. Moving ahead, ONGC Group strives to become an integrated energy provider by expanding its operations and building forward linkages and downstream value additions.



- HP: Hindustan Petroleum Corporation Ltd.
- OPaL: ONGC Petro-additions Ltd.
- OTPC: ONGC Tripura Power Company Ltd.
- MSEZ: Mangalore SEZ Ltd.
- PLL: Petronet LNG Ltd.

- MRPL: Mangalore Refinery & Petrochemicals Ltd.
- OMPL: ONGC Mangalore Petrochemicals Ltd.
- OTBL: ONGC TERI Biotech Ltd.
- DSL: Dahej SEZ Ltd.
- PHL: Pawan Hans Ltd.

Organizational profile of ONGC Group



# The Arms of **India's** **Energy Security**



ONGC's PLQP Platform in Krishna Godavari Basin on the Eastern Coast of India



## ONGC Videsh

ONGC Videsh, our overseas arm, is a wholly owned subsidiary of ONGC and has participation in 41 projects across 20 countries -Azerbaijan, Bangladesh, Brazil, Colombia, Iraq, Israel, Iran, Kazakhstan, Libya, Mozambique, Myanmar, Namibia, Russia, South Sudan, Sudan, Syria, United Arab Emirates, Venezuela, Vietnam and New Zealand. With a total oil and gas reserves (2P) of about 711 MMtoe, ONGC Videsh maintains a balanced portfolio of 15 producing, 4 discovered/ under development, 18 exploratory and 4 pipeline projects. Over the years, ONGC Videsh has expanded its global presence significantly and has emerged as the first Indian company to produce equity oil and natural gas abroad.

## Products and Services

ONGC & ONGC Videsh	MRPL	OMPL
Crude Oil	LPG	Paraxylene
Natural Gas	Naphtha	Benzene
LPG	Gasoline	LPG
Naphtha	HSD	Fuel Gas
C2-C3	Fuel Oil	Hydrogen
	Poly Propylene	Paraffinic- Raffinate
	Mixed Xylene	



An ONGC Videsh offshore platform in Vietnam





## Mangalore Refinery and Petrochemicals Limited (MRPL)

The other subsidiary, MRPL, a Miniratna, has about 7% of India's total refining capacity, with a state-of-the-art 15 Million metric tonne refinery, with two units of Hydrocracking & Catalytic Conversions, Petro Fluidised Catalytic Cracking (PFCC) and Delayed Coker Unit (DCU) to produce premium

diesel and unleaded petrol of high octane, respectively. Located on the hilly terrains of Mangalore, the refinery has a versatile design with complex secondary processing units and a high flexibility to process crudes of various API, delivering a variety of quality products.

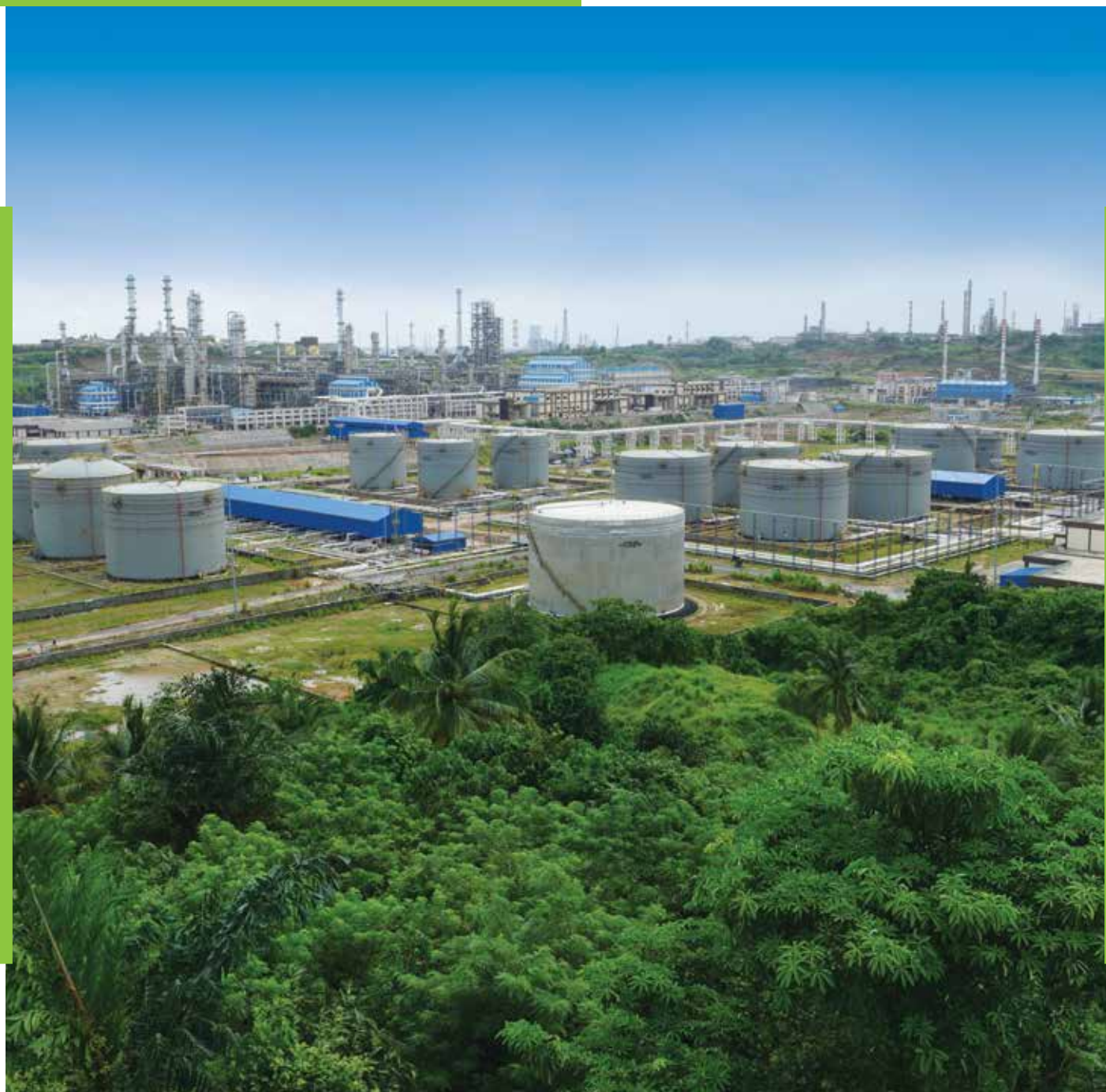


*Panoramic view of MRPL Refinery, Mangalore*





## ONGC Mangalore Petrochemicals Limited (OMPL)



**OMPL** is a green field petrochemicals subsidiary company of ONGC. ONGC holds 49% of equity share capital of OMPL while MRPL holds 51%. The company was incorporated in December 2006, with a registered office in Mangalore, India. OMPL's Aromatic Complex is spread over 442 acres of land in Mangalore Special Economic Zone (MSEZ) and has a production capacity of 914 KTPA (Kilo-Tonnes Per Annum) Paraxylene and 283 KTPA (Kilo-Tonnes Per Annum) benzene at 100% operational load.





Apart from the three subsidiaries, this report covers the following two JVs of ONGC:

Products and Services	
OPaL	OTPC
High Density Polyethylene	Power Generation
Linear Low Density Polyethylene	
Polypropylene	
Benzene	
Butadiene	
Pyrolysis Gasoline Pygas	
Carbon Black Feedstock	

### ONGC Petro additions Limited (OPaL)



**OPaL** is a JV company incorporated in 2006, by ONGC and Gujarat State Petroleum Corporation (GSPC) with 26% and 5% stakes, respectively, and co-promoted by GAIL. With a grass root mega petrochemical project at Dahej, Gujarat in the PCPIR/SEZ region, OPaL is poised to become a key player in the polymer industry. With adequate indigenous feedstock supplies, skilled manpower, and ready domestic and international markets, the company has the potential to become one of the best performing operators in the global petrochemical industry.



## ONGC Tripura Power Company Limited (OTPC)



**OTPC** is a JV company of ONGC, IL&FS Group, India Infrastructure Fund-II and the Government of Tripura. OTPC has been pivotal in transforming the power supply scenario of the entire north-eastern region of India, and has been a key catalyst in its rapid economic development. The first block (363.3 MW) of the power plant has been commercially operational since January 2014, and the second block (363.3 MW) has been operational since March 2015. The power generation project combined with linked transmission project and upstream gas supply project has brought in investments of about INR 100 Billion in the region.



The aspects of organizational profile of ONGC Group, such as products and services, location of office and markets, and ownership structure are provided below:

	ONGC	ONGC Videsh	MRPL	OMPL	OPaL	OTPC
Location of Registered office	Oil & Natural Gas Corporation Limited 5, Nelson Mandela Marg, Vasant Kunj, New Delhi - 110070, India	ONGC Videsh Limited 5, Nelson Mandela Marg, Vasant Kunj, New Delhi - 110070, India	Mangalore Refinery & Petrochemicals Limited Kuthethoor P.O., Via Katipalla, Mangaluru, Karnatka-575030 India	ONGC Mangalore Petrochemicals Limited Mangalore SEZ, Permude Village, Mangaluru, Karnataka - 574509, India	ONGC Petro additions Limited 4 <sup>th</sup> Floor, 35, Nutan Bharat Co-operative Housing Society Limited, R.C. Dutt Road, Alkapuri, Vadodara, Gujarat- 390007, India	ONGC Tripura Power Company Limited Udaipur-Kakraban Road, Palatana P.O., District Gomati, Tripura - 799105, India
Ownership and legal form	A Maharatna Public Sector Undertaking (PSU) of the Government of India	A Miniratna Schedule "A" CPSE of the Government of India Wholly owned subsidiary and overseas arm of ONGC	A Schedule 'A' Miniratna CPSE under the Ministry of Petroleum and Natural Gas	A petrochemicals subsidiary company promoted by ONGC and MRPL Under the Ministry of Petroleum and Natural Gas	A JV company incorporated by ONGC and Gujarat State Petroleum Corporation (GSPC) with 26% and 5% stakes, respectively, and co-promoted by GAIL Under the Ministry of Petroleum and Natural Gas	A JV company of ONGC, IL&FS Group, India Infrastructure Fund-II and Govt. of Tripura

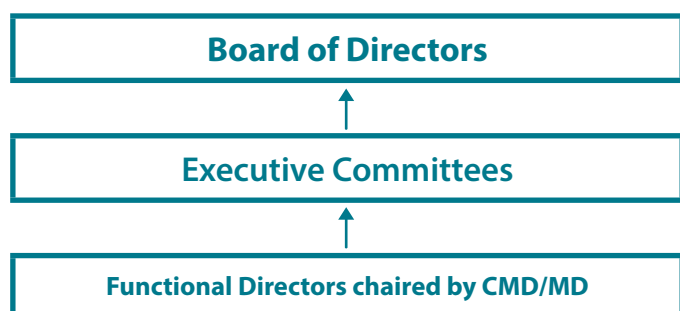
Table 1: Summary of organizational profile of ONGC Group

## Corporate Governance

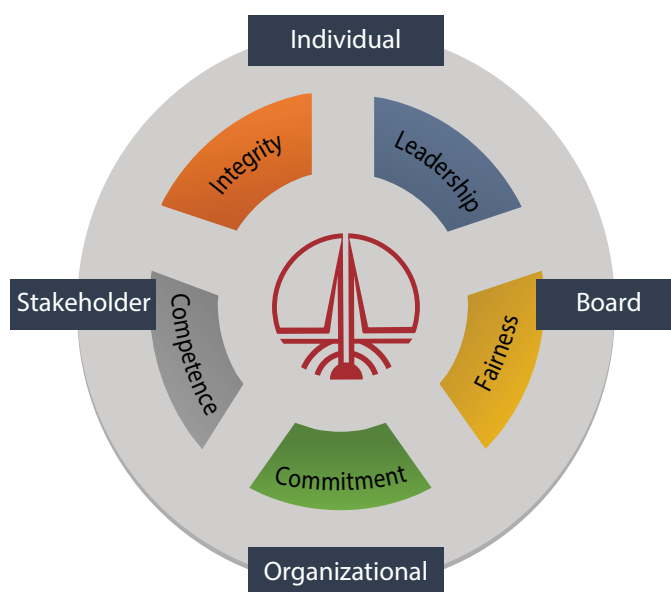
ONGC Group believes that transparent and effective governance systems are crucial for increasing accountability and maintaining long-lasting relationships with stakeholders. Our corporate governance framework ensures that we make timely disclosures and share accurate information regarding our economic, environmental and social performance, as well as disclosures related to the leadership of ONGC Group. ONGC has been continuously rated 'Outstanding' grade Categorization of Public Sector Enterprise (CPSE) as per Department of Public Enterprises (DPE) guideline on corporate governance. We believe that an active, well-informed and independent board is necessary to ensure the highest standards of corporate governance.

At ONGC Group, the Board of Directors ('the Board') is at the core of our corporate governance practices. The Board oversees the Management's functions, Executive Committees and protects the long-term interests of our stakeholders. The group strongly believes in complying with all applicable rules and regulations. In the interest of our stakeholders, the Group

has established suitable policies at the Board level to ensure an ethical and transparent environment in the organization. The Board has defined a Code of Conduct to help fulfil our corporate responsibility towards our stakeholders. This Code of Conduct ensures that the Board will have the necessary authority and processes to review and evaluate our operations as and when required, and ensuring independence of the decisions made by the Board. The code of conduct encourages and promotes exemplary governance practices, and is essential for promoting stakeholder confidence in the organization.



Board of Directors and Committees- ONGC Group



Corporate governance structure at ONGC Group

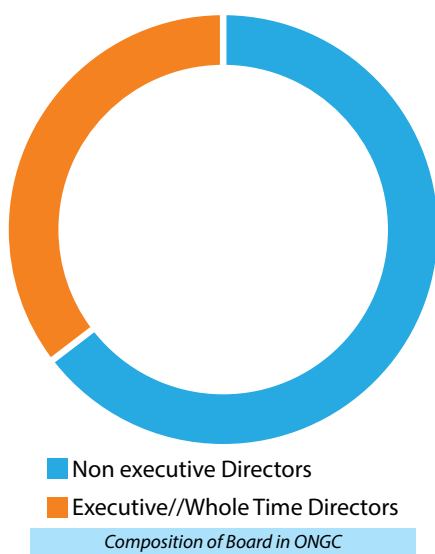




## Size and composition of the Board

At ONGC, we strive to ensure an appropriate mix of executive and independent directors in the Board to maintain its independence, and separate its functions of governance and management. As on March 31, 2018, ONGC Board comprised of 17 Directors on the Board, comprising of 6 Functional Directors (including the Chairman and Managing Director) and 11 Non-Executive Directors (out of which 2 Government Nominee Directors and 9 Independent Directors) appointed by the Government of India, as per the requirements of the Companies Act, 2013 and the Listing Regulations. One woman member has also been appointed as a Board member during this reporting year.

### Composition of Board



ONGC Group is governed under the leadership of its respective Board members. Under the leadership of the Board, respective strategies, policies and performance review are undertaken. To streamline the effectiveness of governance across ONGC Group, an 'Executive Committee' is in place that directly reports to the Board of Directors. The key roles and responsibilities of the executive committees include reviewing and implementing risk management procedures and promoting company strategy. The Independent Directors are provided with the relevant information to ensure the stakeholders' interests are protected.

To ensure a strong focus on specific issues and expedient resolution of various matters, a number of committees have

been formed under the Board across ONGC Group and JVs such as Audit Committee, Nomination and Remuneration Committee, Human Resource Committee and Corporate Social Responsibility Committee<sup>1</sup>. The Committees are required to have meetings at pre-defined intervals to discuss and resolve any persistent issues specific to their domain. The specific roles, requirements, and modus operandi for Board Members and Committee members of these committees can be found in ONGC's Code of Conduct for Board Members and Senior Management Personnel<sup>2</sup>.

Integrity and transparency are regarded as core values in every business activity of ONGC Group. There is a strong commitment to act in compliance with the applicable laws and regulations without compromising honesty and integrity in every aspect of the business. ONGC has formulated and uploaded policies/codes on its website in line with the Companies Act, 2013 and the Listing Regulations e.g. Code



of Conduct for Board Members and Senior Management Personnel, Material Subsidiary Policy, Policy of Training of Directors, CSR and Sustainability Policy, Risk Management Policy to list a few. A complete list of policies can be referred through the ONGC Annual Report FY'18.

For ensuring transparency across the organization, ONGC Group has a strong and effective Whistle Blower mechanism, which was implemented in December 2009. A total of 41 Protected Disclosures have been processed through this mechanism till March 2018. The system ensures that a genuine Whistle Blower is granted due protection from any

<sup>1</sup> Further details on the functions of the Committees are available in ONGC Annual Report FY'18.

<sup>2</sup> Available at [https://www.ongcindia.com/wps/wcm/connect/e9f997fc-f96b-4ca3-a626-45388c55ba1c/Amcobm.pdf?MOD=AJPERES&CONVERT\\_TO=url&CACHEID=ROOTWORKSPACE-e9f997fc-f96b-4ca3-a626-45388c55ba1c-lZnleUL](https://www.ongcindia.com/wps/wcm/connect/e9f997fc-f96b-4ca3-a626-45388c55ba1c/Amcobm.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE-e9f997fc-f96b-4ca3-a626-45388c55ba1c-lZnleUL)



ONGC	ONGC Videsh	MRPL	OMPL	OPaL	OTPC
1. Audit Committee	1. Audit Committee	1. Audit Committee	1. Committee of Directors	1. Audit Committee	1. Audit Committee
2. Nomination and Remuneration Committee	2. Financial Management Committee	2. Stakeholders Relationship Committee	2. Nomination and Remuneration Committee	2. Human Resource Committee	2. Nomination and Remuneration Committee (NRC)
3. Stakeholders' Relationship Committee	3. Project Appraisal and HSE Committee	3. Corporate Social Responsibility & Sustainable Development (CSR & SD) Committee	3. Audit and Ethics Committee	3. Project Review Committee	3. CSR Committee
4. Project Appraisal and Review Committee	4. Human Resource Management and Remuneration Committee	4. Nomination, Remuneration and Human Resource Management Committee	4. Corporate Social Responsibility Committee	4. Marketing Committee	4. Operation Review Committee
5. Health, Safety and Environment Committee	5. Corporate Social Responsibility and Sustainability Committee	5. Project Appraisal and Execution (PAE) Committee		5. Financial Management Committee	5. Share Transfer and Allotment Committee
6. Committee on Dispute Resolution		6. Operation Review / HSE Committee		6. Nominaton & Remuneration Committee	
7. Corporate Social Responsibility Committee				7. Share Allotment Committee	
8. Committee for Issue of Share Certificates				8. Empowered Committee	
9. Risk Management Committee				9. Corporate Social Responsibility Committee	
10. Research and Development Committee				10. Risk Management Committee	
11. Asha Kiran				11. Operation Review Committee	

Committees of the Board at ONGC Group

victimization. It is applicable to all employees of the company and has been uploaded on the company website. In addition, ONGC has a full-fledged Vigilance Department headed by Chief Vigilance Officer (CVO), who holds the rank of a Functional Director of the company. With a view to maintain his independence, the CVO reports to the Chief Vigilance Commissioner of the Government of India. [Refer ONGC Annual Report for more details]

## Identifying risks and opportunities

### ONGC's Risk Management Policy

"ONGC shall identify the possible risks associated with its business and commits itself to put in place a Risk Management Framework to address the risk involved on an ongoing basis to ensure achievement of the business objective without any interruptions.

ONGC shall optimize the risks involved by managing their exposure and bringing them in line with the acceptable risk appetite of the Company."

ONGC Group recognises the importance of timely identification of risks and opportunities for our consistent organizational growth. The Board of Directors have constituted a Board Level Risk Management Committee,





which has conducted four meetings till date for reorganising ONGC's risk management strategy. Currently, ONGC Group has an Enterprise-wide Risk Management (ERM) framework in line with the requirements of SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015. ONGC Group has also rolled out a comprehensive Enterprise-wide Risk Management (ERM) Policy throughout the organization. The Audit & Ethics Committee periodically reviews the identified risks and the management options for these risks. In ONGC, a dedicated risk management cell is also functional with specific roles and responsibilities. The risk management covers three broad types of risks:

- Financial risk management through CSA module in SAP
- Strategic risk management (This is dealt with separately under the domain of strategic and corporate planning.)
- Process risk management for the business units across the enterprise

The following are some of the major risks faced by ONGC Group:



Category	Risk	Description
<b>Economic</b>	Commodity Price	Volatility in oil or natural gas prices affecting operating margins results and future prospects
<b>Environmental</b>	Natural Disaster	Natural catastrophe leading to interrupted or reduced production or industrial accident
<b>Operational</b>	Industrial Accidents	Major accident or oil spill resulting in loss of life, environmental damage, regulatory fines, civil liability, loss of licence to operate and reputational damage
<b>Political</b>	Geopolitical risks	Disruption of supply due to war, civil disturbance, terrorism or other political instability
<b>Resource availability</b>	Inadequate resource availability	Material change in estimates regarding oil and gas reserves or development potential

Table 2: Key business risks of ONGC Group

ONGC Videsh has established and implemented ERM System as per ISO 31000:2009, wherein risk process to identify, assess, record, monitor and review risks has been defined. Risk registers mapping the identified risks, with their drivers and mitigating factors have been mapped as part of the ERM. For acquisition of overseas projects, a detailed 'Zero Based Risk Review (ZBRR)' is prepared consisting of all types of risks, which helps the Management to take an informed decision considering the risk profile of each project. ONGC Videsh has developed and implemented SAP GRC-Risk module for optimal decision making and automated compliance. This module is extensively used where Risk Monthly Report based on risk events and quarterly compliance of risk mitigation

factors are mapped in SAP system through workflow by risk coordinators and approved by risk owners.

For decision making by top management, risk dashboards have been developed and rolled out, which shows projects on a global map with their risk scores, significant risks of projects on global map, risk heat maps and status of quarterly compliance. There is a system of internal and external audits covering ERM, HSE, financial, operational, commercial etc. aspects, which are carried out at different levels and sometime through joint teams with international partners and through expert third parties and Government audits. Risk Management Committee meets once in six months or earlier to review the ERM System and framework, significant risks and emerging risks.



## Reporting what is **essential**

### Stakeholder engagement

ONGC Group continues to work towards maintaining long-term relationships with our valued stakeholders - both internal and external. We work in close collaboration with our stakeholders which enables us to continually address all challenges faced. These formal and informal engagement outcomes are discussed at regular intervals and form the basis of decision making by our management.

A structured process of stakeholder engagement is adopted by ONGC Group to identify the needs and expectations of our stakeholders. These identified concerns are incorporated as

a key input in our decision-making and policies. ONGC has actively set up many collaborative platforms such as customer grievance mechanisms, customer satisfaction survey, annual and quarterly meetings and employee feedback surveys are utilised for engaging with our stakeholders. Our stakeholder engagement strategy enables us to identify internal and external stakeholders who are affected by our business operations and further affect our business; this enables us to develop platforms for stakeholder-inclusive decision-making.

During the reporting year, a stakeholder engagement process was adopted by ONGC Group to identify stakeholders' needs and expectations. The engagement process consisted of



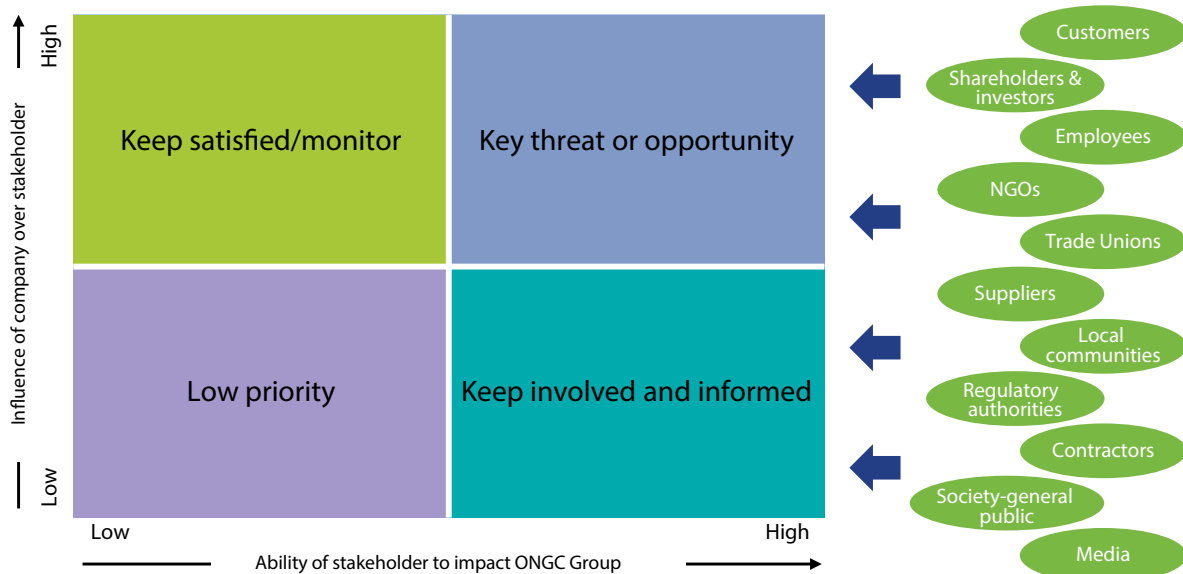
four key phases — Plan, Identify, Engage and Report. In the planning stage, tentative means of engagement were set to interact with key stakeholders identified in the second phase. In the third phase, ONGC Group engaged with the

stakeholders to understand their needs and concerns. The results of the third phase were used to identify material aspects that need to be communicated by ONGC Group to its stakeholders, in addition to reporting its performance.



While all stakeholders are important, we consider it essential to prioritize the most relevant stakeholders in order to ensure an effective engagement strategy. Thus, after identification of stakeholders, we understand the dynamics of influence-impact between identified stakeholders and ONGC. This understanding helps us adopt a customized approach and engagement strategy for different sets of stakeholders.

Stakeholder engagement workshops were conducted in FY'17, where various stakeholders from different functions such as environment, safety, human resources, CSR, administration, commercials, fire department, legal and mechanical were invited. The following types of stakeholders were engaged during the workshop:

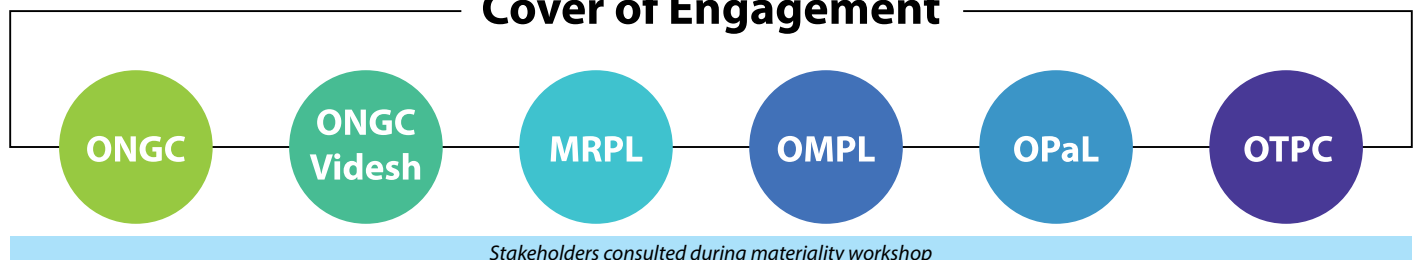


## Stakeholder Engagement Methods

### Stakeholder Consultation: FY'17

Key stakeholders identified	Key functions consulted
Regulatory authorities	Health, Safety & Environment
Customers	Operations
Media	Human resources
Local Communities	CSR
Vendors/Suppliers	Administration
Trade associations	Commercials
Shareholders/investors	Fire
Employees	Legal

## Cover of Engagement





In addition to this stakeholder engagement exercise carried out in FY'17, the following stakeholder engagement methods are adopted by ONGC continue our engagement with stakeholders throughout the year.

Key Stakeholder Group	Basis of identification of stakeholders	Channels of Communications	Expectations of stakeholders	Key topics and concerns discussed with stakeholders
<b>Shareholder, Investor</b>	<ul style="list-style-type: none"> <li>The economic value of ONGC creates and distributes wealth for its shareholders.</li> <li>Expectations of investors can influence the financial strategy.</li> </ul>	<ul style="list-style-type: none"> <li>Annual and quarterly meetings</li> <li>ONGC website: investor relations</li> </ul>	<ul style="list-style-type: none"> <li>Business growth and stability</li> <li>Better quarterly reports</li> <li>Corporate reputation</li> <li>Transparency in corporate governance</li> </ul>	<ul style="list-style-type: none"> <li>Financial performance</li> <li>Risk management</li> <li>Entry into new markets</li> <li>Optimising operational costs</li> <li>Corporate governance and corruption</li> </ul>
<b>Customer</b>	<ul style="list-style-type: none"> <li>Customers are the source of wealth creation.</li> <li>Client satisfaction is essential for ONGC for its long-term success.</li> </ul>	<ul style="list-style-type: none"> <li>Annual customer satisfaction survey</li> <li>Marketing</li> </ul>	<ul style="list-style-type: none"> <li>Ethical and fair marketing</li> <li>Product quality</li> </ul>	<ul style="list-style-type: none"> <li>Resolution of customer complaints</li> <li>Quality of products</li> <li>Pricing of products</li> </ul>
<b>Supplier</b>	<ul style="list-style-type: none"> <li>Suppliers are important business partners for ensuring sustainable growth.</li> </ul>	<ul style="list-style-type: none"> <li>Pre-bid conference</li> <li>Vendors' meet</li> <li>Contract agreement</li> <li>Training and awareness programmes</li> </ul>	<ul style="list-style-type: none"> <li>Fair and accountable transactions</li> <li>Transparency in tendering process</li> </ul>	<ul style="list-style-type: none"> <li>Pricing, quality and safety of services</li> <li>Issues related to human rights</li> </ul>
<b>Employee</b>	<ul style="list-style-type: none"> <li>The capabilities and well-being of our employees influence our operational performance.</li> <li>Employees leave a significant footprint in the organizational work culture.</li> </ul>	<ul style="list-style-type: none"> <li>Complaint and suggestion box</li> <li>Grievance redressal mechanism</li> <li>Seminars</li> <li>Employee feedback surveys</li> </ul>	<ul style="list-style-type: none"> <li>Career development</li> <li>Performance feedback</li> <li>Fair evaluation and compensation</li> <li>Regard for human rights policies</li> <li>A comfortable organizational culture</li> </ul>	<ul style="list-style-type: none"> <li>Career growth prospects</li> <li>Learning and development programmes</li> <li>Trainings</li> <li>Rewards and recognition</li> <li>Occupational health and safety</li> <li>Work environment and policies</li> <li>Grievance redressal mechanism</li> <li>Ethics, transparency and accountability</li> </ul>
<b>Local Community</b>	<ul style="list-style-type: none"> <li>Strong and healthy relationships with the local communities is essential in identifying needs.</li> <li>A good environmental and social performance strengthens the relationship with the communities.</li> </ul>	<ul style="list-style-type: none"> <li>Participating in collaborative activities with NGOs</li> <li>Roundtable conferences with local residents</li> <li>Inviting local communities to ONGC's events</li> </ul>	<ul style="list-style-type: none"> <li>Minimum environmental impact on the communities</li> <li>Recruitment of the people from the community</li> <li>Supporting the local economy</li> </ul>	<ul style="list-style-type: none"> <li>Social concerns in the region</li> <li>Minimising negative cultural impact</li> </ul>
<b>Regulatory Authority</b>	<ul style="list-style-type: none"> <li>Stakeholders have the capability to influence the regulatory authority with regard to the deployment of new legislations or updating existing legislations.</li> </ul>	<ul style="list-style-type: none"> <li>Review meetings</li> </ul>	<ul style="list-style-type: none"> <li>Compliance with relevant regulations</li> <li>Compliance with national and regional policies</li> </ul>	<ul style="list-style-type: none"> <li>Regulatory compliance</li> <li>Operational efficiency</li> <li>Development of communities</li> <li>Management of environmental impact</li> </ul>

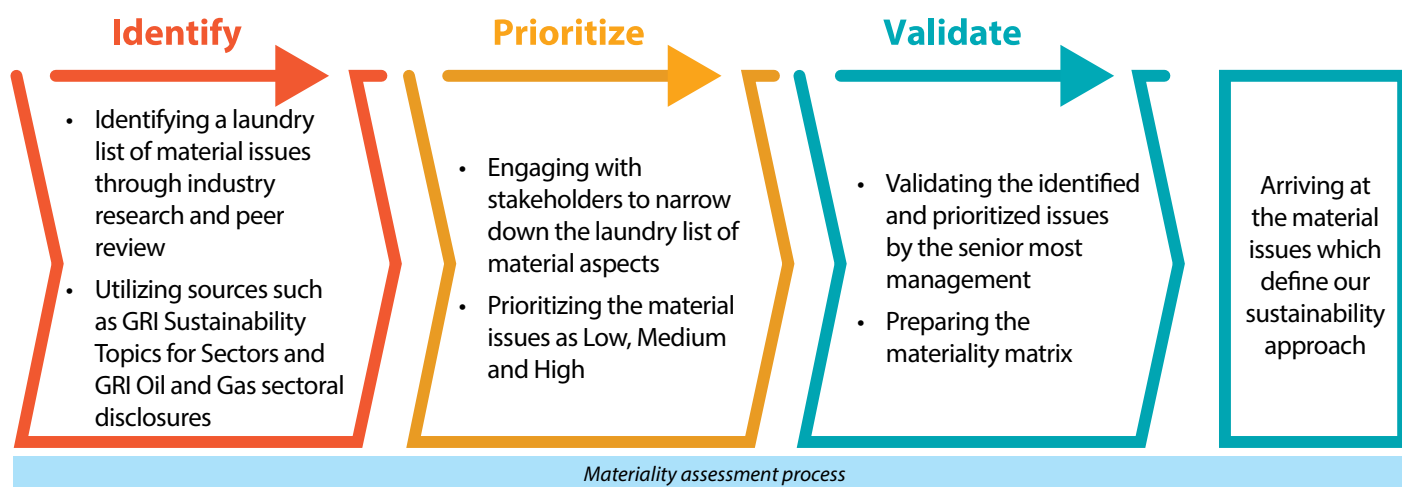
Table 3: Stakeholder engagement methods at ONGC Group



## Materiality Assessment

As part of the materiality assessment, ONGC Group engaged with identified stakeholders to understand the key sustainability issues material to the organization and stakeholders. The principle of materiality was applied to define and report the economic, social and environmental issues that matter the most to our organization and stakeholders. Material issues are defined as those of the highest concern to our organization and our

stakeholders. The stakeholder engagement exercise played a critical role in identifying and prioritizing material issues pertaining to the environmental, social and governance aspects. ONGC Group is faced with an extensive range of sustainability issues, which have been narrowed down to prioritize the sustainability issues that are significantly material to ONGC Group and our stakeholders. Our approach to materiality assessment is depicted below:



We consider materiality assessment as the foundation of forming our sustainability strategy, and therefore, a well-structured approach was adopted for the internal assessment of material issues. The materiality determination process

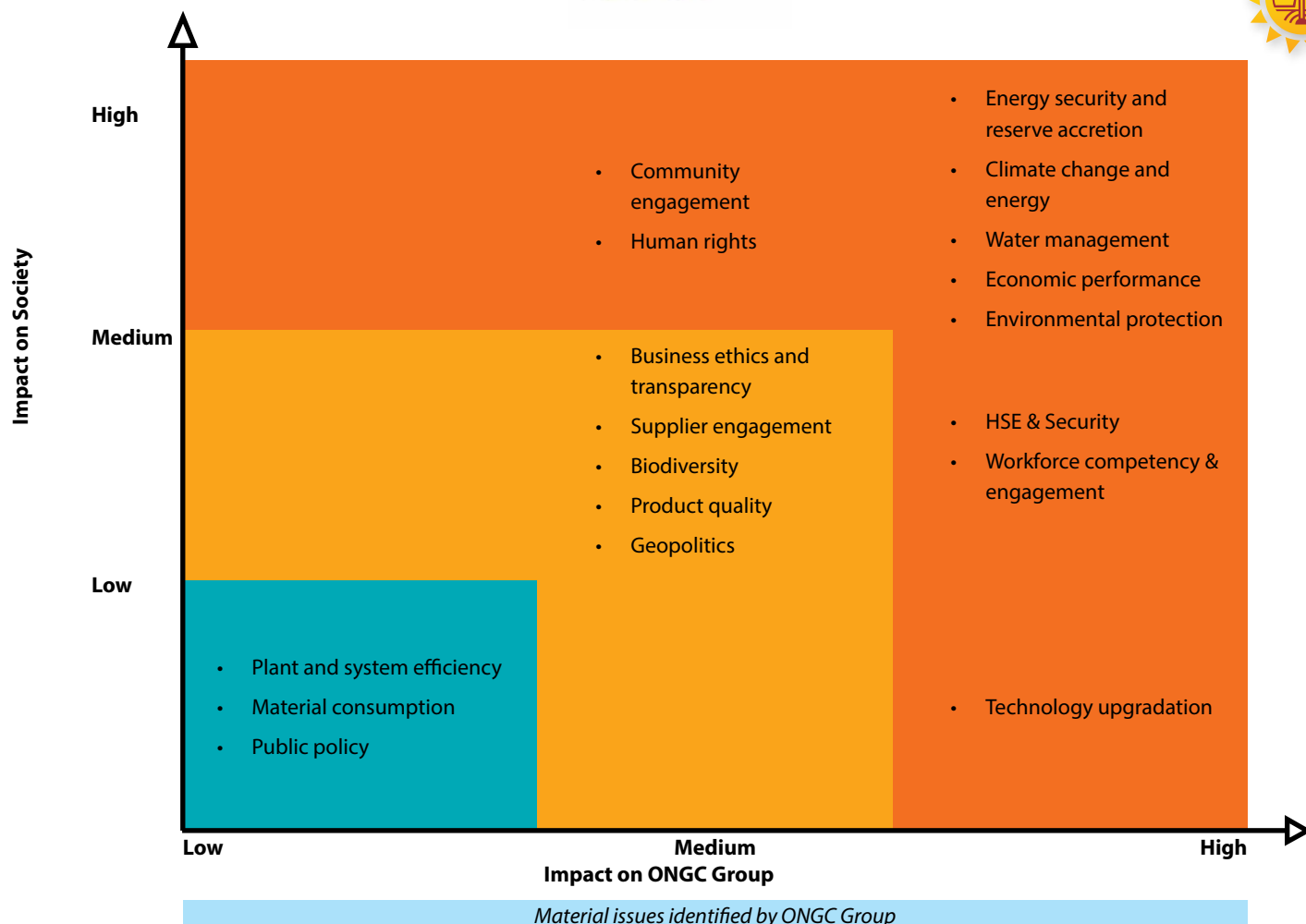
consisted of seven phases — defining the scope, identifying potential issues, categorising the issues, prioritising the material issues, stakeholder feedback, management buy-in and preparation of materiality chart.

Materiality Determination Process						
Phase-1	Phase-2	Phase-3	Phase 4	Phase 5	Phase 6	Phase 7
Key Steps Involved						
Defining the scope	Identifying potential issues	Categorising the issues	Prioritising the material issues	Stakeholder feedback	Management buy-in	Materiality chart
Defining the scope of the report in terms of the locations <ul style="list-style-type: none"><li>ONGC</li><li>ONGC Videsh</li><li>MRPL</li><li>OMPL</li><li>OPaL</li><li>OTPC</li></ul>	Creating a broad list of material aspects relevant to the nature of the business operations of ONGC and its group companies through a peer review	Categorising the identified topics into environmental, social and economic aspects	Prioritising the material issues based on the strategic importance to ONGC Group and its stakeholders	Seeking feedback from internal and external stakeholders on the identified material aspects	Validating the identified material aspects internally from ONGC Group's top management	<ul style="list-style-type: none"><li>Finalising the material aspects of ONGC Group by – 'High', 'Medium' and 'Low'</li><li>Preparing the materiality chart</li></ul>

Table 4: Materiality Assessment - Phases

The results of the materiality assessment were analysed and subsequently placed on the grid (see below) that depicts a dual perspective - importance to the organisation and impact on society. The analysis of these results revealed an interesting comparison of the aspects.





The materiality determination process was concluded with the identification of 18 material issues, where 10 were identified as high material issues, five were identified as medium material issues, and three were identified as low material issues. The content of this sustainability report has been developed to reflect our commitment to the sustainability

issues identified as highly material, where the relevant key performance indicator for each of the high material issue has been measured and reported. In comparison to the previous reporting period, three additional material issues that were identified include – product quality, public policy, and plant and system efficiency.

Low	Medium	High
<ul style="list-style-type: none"> <li>• Plant and system efficiency</li> <li>• Material consumption</li> <li>• Public policy</li> </ul>	<ul style="list-style-type: none"> <li>• Business ethics and transparency</li> <li>• Supplier management</li> <li>• Biodiversity</li> <li>• Product quality</li> <li>• Geopolitics</li> </ul>	<ul style="list-style-type: none"> <li>• Energy security and reserve accretion</li> <li>• Climate change and energy</li> <li>• Water management</li> <li>• Economic performance</li> <li>• Environmental protection</li> <li>• HSE and security</li> <li>• Workforce competency and engagement</li> <li>• Technology upgradation</li> <li>• Community Engagement</li> <li>• Human rights</li> </ul>
<b>Environmental</b>	<b>Social</b>	<b>Economic</b>

*List of material issues identified for ONGC Group*



# Creating **economic value**

## **Economic performance**

ONGC Group's economic performance has been consistent due to its ability to adapt quickly and endure a challenging business environment. The year FY'18 witnessed a lot of uncertainties, with macroeconomic changes having a positive as well as negative effect on our business. Global crude prices recorded a strong recovery and more than doubled from early-2016 levels. This is a positive indicator for the health and growth outlook of the Oil & Gas sector. Withdrawal of USA from the nuclear deal with Iran and subsequent re-imposition of sanctions on the later demonstrated the significant influence of geopolitics on oil and gas markets. Climate change concerns, the remarkable growth of renewables and anticipated energy transitions have added to the complexity of the industry landscape.

During the year, ONGC recorded revenue of INR 850,041 Million from operations, as compared to INR 779,078 Million in FY'17. The company's Profit after Tax increased by over 11% to INR 199,453 Million in FY'18, as against INR 179,000 Million in FY'17. Dividends to shareholder for FY'18 remained healthy with a total pay-out of INR 84,699 Million with impressive pay-out ratio (including dividend distribution tax) of 51.13%. ONGC has consistently maintained a dividend pay-out ratio of over 50% over the last 4 years.

The acquisition of majority stake in state refining entity, Hindustan Petroleum Corporation Ltd (HPCL), was a defining move, one that significantly transforms ONGC's downstream portfolio. While ONGC in itself remains committed to excellence in upstream business, HPCL fits well into the group's integrated energy strategy. HPCL will provide the Company, a pure-play refining and marketing edge with an extensive retail presence (over 15,000 outlets) in the country, entailing significant diversification benefits. Together with MRPL, the refining capacity of ONGC group today stands at over 40 MMT, making us the third largest in the country in terms of installed capacity.

FY'18 proved to be good for ONGC Videsh Limited in terms of economic performance. Following the acquisition of significant stake in Russia's Vankorneft in 2016, ONGC Videsh led Indian consortium also acquired an important 10% stake in the UAE's offshore oil and gas field (Lower Zakum) in February 2018. Buoyed by incremental volumes from both these assets, overseas hydrocarbon output rose by over 10% to 14.16 MMtoe in FY'18 versus 12.80 MMtoe in FY'17. The consolidated revenue from operations and consolidated PAT during FY'18 stood at INR 104,176 Million and INR 9,815 Million, as against INR 100,800 Million and INR 7,573 Million in FY'17, respectively. Going forward, ONGC Videsh's international ventures are going to play a critical role in the realization of ONGC's long-term growth blueprint as well as furthering sovereign energy diplomacy reach globally.

In the downstream business, MRPL achieved turnover of INR 630,670 Million in FY'18 against INR 594,150 Million in FY'17. MRPL earned a profit after tax (PAT) of INR 22,240 Million during the FY'18 against profit of INR 36,440 Million earned in FY'17. The refining unit also posted an 18% year-on-year growth in its exports.

ONGC Mangalore Petrochemicals Limited (OMPL), another Petrochemical unit of ONGC having production capacity of 1.2 MMTPA of Aromatics, initiated operations in FY'15. Close to 80% of its products, namely Paraxylene and Benzene, are exported. During the year, OMPL achieved a turnover of INR 55,612.94 Million, and posted a loss of INR 4,468.35 Million, mainly on account of lower margins & availability of feedstock, interest cost, depreciation and lower recognition for deferred tax.

ONGC Petro additions Ltd (OPaL), a 1.1 MMTPA Ethylene Cracker unit, is one of the largest dual-feed crackers in the world today. In a short span of time, the company has established itself in the domestic as well as international markets, both with respect to quality as well as price. The capacity utilization of the plant was over 70% during the fiscal FY'19, further reaching 100% utilization toward the end of December 2019.



ONGC Tripura Power Company (OTPC), our Power JV in the country's North-eastern State of Tripura which operates a 726 MW Combined Cycle Gas Turbine Power Plant. During FY'18, OTPC registered total revenue of INR 12,852.90 Million as compared to INR 12,978.90 Million during FY'17. The net profit for FY'18 has been INR 1,251.30 Million, as compared to profit of INR 1,303.70 Million during FY'17. The decline in profit

is mainly due to increase in operations and maintenance cost and low fuel availability. However, OTPC is another noteworthy sustainability venture of ONGC group, and a greenest UNFCCC-certified power plant of the country. This plant meets about 25% of power requirement of North Eastern States.

The key highlights of ONGC Group's economic performance are provided below:

Economic Performance FY'18	ONGC	ONGC Videsh	MRPL	OMPL	OPaL	OTPC
<b>Direct economic value generated (A)</b>	<b>FY'18 (INR Million)</b>					
Revenues — net sales, revenue from investments and sale of assets	928,876.48	131,507.29	632,882.09	56,418.92	56,072.88	12,852.87
<b>Economic value distributed (B)</b>	<b>FY'18 (INR Million)</b>					
Operating costs	206,602.00	33,261.91	448,768.00	56,039.30	49,861.19	110,536.43
Employee wages and benefits	113,810.53	2,328.71	4,173.45	416.19	1,021.93	207.54
Payments to providers of capital (Dividend)	77,641.21	2,0643.60	Note <sup>3</sup>	4,721.92	Nil	1,685.01
Payments to government (Contribution to Exchequer)	376,088.00	8,666.37	146,330.58	Nil	13,423.19	328.61
Community investments	5,034.35	41.11	103.02	Nil	7.14	11.73
<b>Economic Value Retained = (A - B)</b>	<b>149,700.39</b>	<b>66,565.59</b>	<b>33,507.04</b>	<b>(4,758.49)</b>	<b>64,313.45</b>	<b>435.31</b>

Table 5: Economic performance of ONGC Group

## Awards and recognition

In recognition of our economic performance during the year, ONGC Group has received some of the most prestigious awards:

- ONGC won the Dainik Bhaskar India's Pride Award for 'Excellence in the Maharatna Category'. The Hon'ble Chief Minister of Madhya Pradesh Mr. Shivraj Singh Chouhan presented the award at New Delhi on March 28, 2018.
- ONGC was declared the Winners in four categories - Corporate Social Responsibility & Sustainability, Human Resource Management, Corporate Governance and to top it all - The Company of the Year, Jury award, at the

Indian Chamber of Commerce - PSE Excellence Awards in September 2017.

- ONGC bagged the Dun & Bradstreet Corporate Award in the Oil and Gas Exploration Sector during the 11<sup>th</sup> edition of Dun & Bradstreet Corporate Awards-2017 ceremony held on June 1, 2017. Also ONGC bagged two top awards in 'Mining: Crude Oil' and 'Best Maharatna' categories, in Dun & Bradstreet PSU Awards 2017, held on July 25, 2017.
- ONGC ECPF Trust bagged the "Star Performer" award in 'The Retirement Funds Conclave-2017' on November 17, 2017 in New Delhi on the basis of performance evaluation done by Employees Provident Fund Organization.

<sup>3</sup> Finance cost of Rs. 4,404.57 million is included in operating costs. Dividend related to FY'17 amounting to INR 10,515.59 million and Dividend distribution tax of INR 2,140.73 million was paid during the year FY'18.



## Promoting India's **energy security**

One of the prime objectives forming the foundation of our operations is to promote energy security. ONGC has, over the years, proven its capability to contribute effectively to larger national goals and priorities. A lot of what we have achieved as the country's flagship energy explorer, has been done to support our national goal of achieving long-term energy security.

ONGC Group has a mandate of securing the nation's energy security by pursuing E&P activities in India and overseas, enabled by the best-in-class technologies and collaboration with strategic partners. Our primary goals in FY'18 were to keep up the healthy pace of project execution, improve

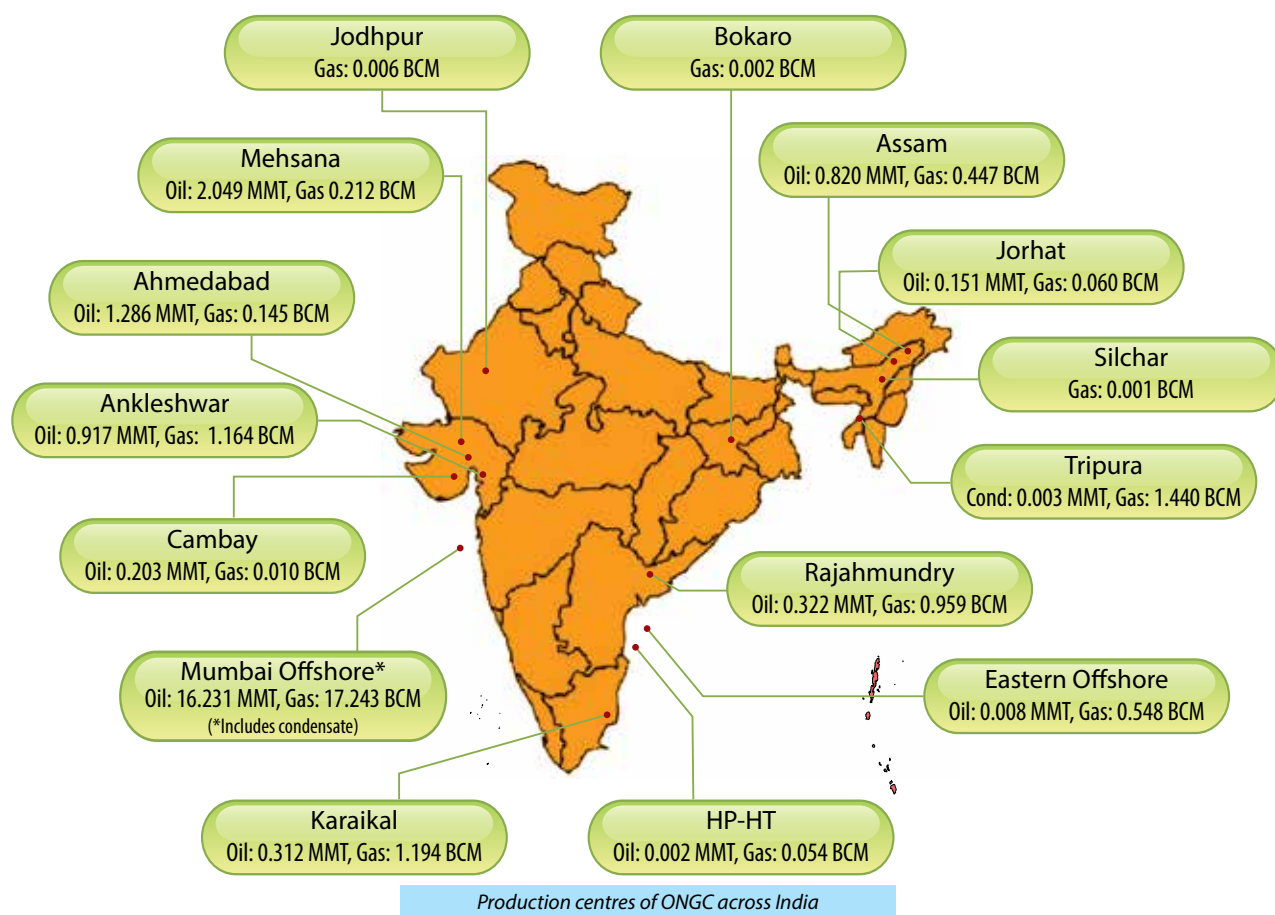
productivity and optimise operating costs, thereby improving India's energy performance.

During FY'18, ONGC Group contributed significantly to improving the country's energy security by expanding production and exploration volumes. Some of the major achievements of ONGC Group companies are described below:

### ONGC

During the year, ONGC made as many as 12 hydrocarbon discoveries in various basins of the country. Two out of these 12 discoveries i.e., Mattur West-1 (Cauvery onland) and Matar-1 (Cambay onland) have already been monetized and these prospects are producing since May 31, 2017 and

### Domestic Producing Areas





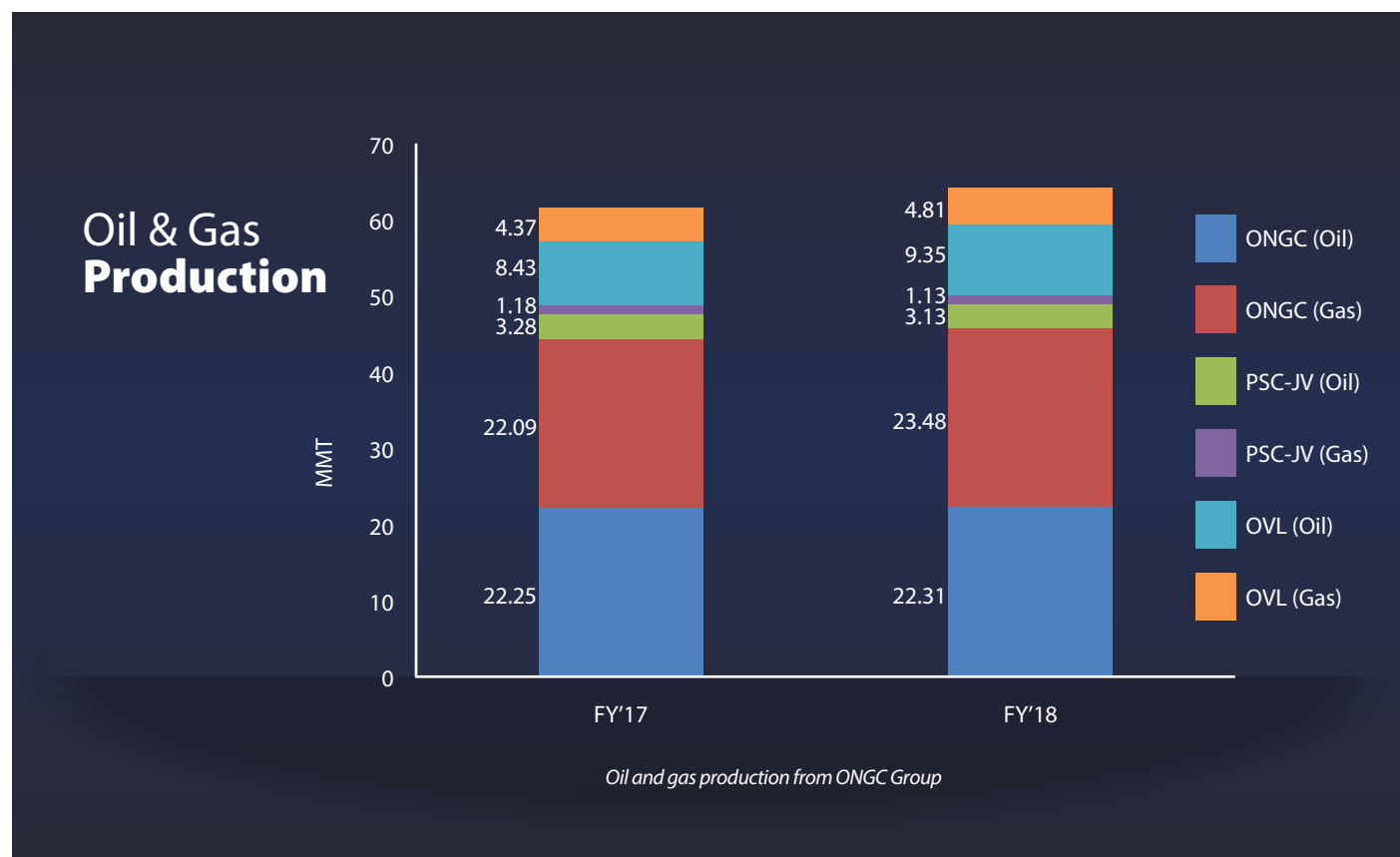
January 30, 2018 respectively. With a Reserve Replacement Ratio (RRR) of 1.48 and a Reserve accretion (2P) of 67.83 MMtoe, we expanded our hydrocarbon resource base for the twelfth consecutive year. This has been possible because of extensive exploration in known basins as well as frontier plays. E&P, the mainstay of our energy business, will continue to be the principal focus area of the management strategy and investments in the years to come. Beyond E&P, acquisition of HPCL added further strength to our already respectable downstream portfolio.

Our crude production volumes remained steady with a marked improvement in gas output. Domestic crude oil and natural gas production of ONGC along with the share in domestic joint ventures (PSC-JVs) during FY'18 has been 50.04 MMtoe, which is about 2.5% higher than FY'17 production (48.80 MMtoe). On standalone basis, crude oil production from ONGC operated fields has been 22.31 Million Metric Tonnes (MMT), against production of 22.25 MMT during FY'17. Considering the largely mature producing field portfolio, it

highlights our prudent reservoir management and effective technological interventions in improving the production. Natural gas production during FY'18 has been 23.48 Billion Cubic Metre (BCM) against 22.09 BCM during FY'17; an increase of 6.3% over the last year. This is a significant achievement as it marks the second consecutive year that the Company has registered an increase in its domestic natural gas output.

## ONGC Videsh

ONGC Videsh, a wholly owned subsidiary of your Company, registered highest-ever production of 14.16 MMtoe of O+OEG during the year. ONGC Videsh has a total of 41 projects, out of which ONGC Videsh is Operator in 14 projects; Joint Operator in 7 projects and remaining 20 are non-operated projects. During the year, ONGC Videsh set its foot-prints in Israel, Namibia and UAE. ONGC Videsh adopts a balanced portfolio approach and has a combination of 15 producing, 4 discovered/ under development, 18 exploration projects and 4 pipeline projects.







ONGC Videsh led Indian Consortium including Indian Oil Corporation Limited (IOCL) and Bharat Petro Resources Limited (BPRL) acquired 10% Participating Interest (PI) in Lower Zakum Concession, Offshore Abu Dhabi. The production from the field was around 419,000 bopd and the share of production to Indian Consortium was around 42,000 bopd, out of which ONGC Videsh's share was around 16,800 bopd. An Exploration Block with License 412/"32" in Israel has been awarded by Petroleum Commissioner to Indian Consortium on March 27, 2018 with exploration duration of 3 years. ONGC Videsh is the operator and each Partner of the Indian Consortium, i.e. ONGC Videsh, BPRL, IOCL and OIL hold 25% Participating Interest (PI) in the License. To further expand its operations, ONGC Videsh signed the following memorandum of understandings (MoUs) during the year:

- **MoU with TPAO, Turkey:** ONGC Videsh has signed a MoU with TPAO on July 12, 2017 to evaluate Oil and Gas opportunities in upstream as well as any other mutually identified and agreed area.
- **MoU with PEMEX, Mexico:** Earlier, a MoU was signed between PEMEX Exploration and Production and ONGC Videsh on September 25, 2014, and the term of this MoU has been extended till September 24, 2019, by an amendment to the original MoU. The MoU aims at cooperation in the upstream sector in Mexico, India and third countries, and cooperation in fields of technology, human resource, research and development.
- **MoU with GeoPark, Latin America:** ONGC Videsh and GeoPark Ltd., a Latin America focused E&P Company, entered into a MoU on 16<sup>th</sup> February, 2018 for cooperation in upstream sector in Latin America. The MoU envisages a long-term strategic partnership between the companies to jointly acquire, invest in, and create value from upstream oil and gas projects with the objective of building a large-scale, economically profitable and risk-balanced portfolio of assets and operations across Latin America.

During the year, the total oil & gas production of ONGC Group was 64.21 MMtoe of (O+OEG), an increase of 4.2% from 61.6 MMtoe in the previous reporting year.

## Mangalore Refinery and Petrochemicals Limited (MRPL)

During the year, MRPL achieved the highest ever gross crude processed of 16.31 MMT, as against the previous highest of 16.27 MMT during FY'17, registering an increase of 0.25% in throughput. Some of the major highlights of FY'18 are as under:

- MRPL's Polypropylene production was 294.5 Thousand MT (TMT) during FY'18 as against 264 TMT in FY'17. MRPL's Polypropylene dispatch was 278.16 TMT during FY'18 as against 263.6 TMT in FY'17.
- MRPL's LPG production and dispatch in FY'18 was 876.8 TMT and 873.08 TMT respectively as against 857.9 TMT and 855.9 TMT in FY'17.
- MRPL has achieved MS Production of 1374.9 TMT in FY'18 as against 1219 TMT in the previous FY'17.

MRPL continued to include newer crude grades in the processing basket with an aim to diversify crude sourcing. Qarun Blend from Egypt and Southern Green Canyon from United States were processed in the refinery for the first time. Similarly, efforts to establish newer markets were fruitful when MRPL exported approximately 7500 Tonne Polypropylene. The new initiatives of MRPL such as setting up of India's largest refinery site based solar power project commissioned in March 2018, is expected to continue improving the energy efficiency of the organization.

## ONGC Mangalore Petrochemicals Limited (OMPL)

OMPL is among the top producers of Paraxylene and Benzene in the country. OMPL's main products namely, Paraxylene and Benzene, are 100% exported. The production of Paraxylene went up from 687 KT during FY'17 to 701 KT during FY'18 (2% increase). Paraxylene was exported mainly to South East and North East Asian countries during the year. India remained as a net exporter of Paraxylene during the year and is likely to continue next year also. Paraxylene prices touched a high of USD 991/Mt during the year.



Similarly, Benzene production also increased from 184 KT during FY'17 to 195 KT during FY'18 (6% increase). Exports of Benzene was mainly to Arab gulf. Benzene prices touched a high of USD 954/Mt during the year.

### ONGC Petro additions Limited (OPaL)

ONGC Petro additions Ltd (OPaL), a 1.1 MMTPA Ethylene Cracker unit, continues to be one of the largest dual-feed crackers in the world today. In a short span of time, OPaL has established itself in the domestic as well as international markets, both with respect to quality as well as price. The capacity utilization of the plant was over 70% during the fiscal FY'19, further reaching 100% utilization toward the end of December 2019.

### ONGC Tripura Power Company (OTPC)

OTPC is playing a significant role in creating energy security for the country by meeting a major part of the energy requirements of the North-Eastern region of India. It became the first dividend-paying standalone gas-based power generation company in India in 2017. The power supply from OTPC is tied up through Power Purchase Agreements (PPA) with states of Assam, Tripura, Nagaland, Meghalaya, Manipur, Mizoram and Arunachal Pradesh. During FY'18, OTPC has sold about 3,894 Million units of electricity, as against 4,040 Million

units during FY'17. The reason for the marginal reduction in units sold was due to plant maintenance shutdowns, outages due to grid disturbances and lower fuel availability during the year.

On the power transmission front, a Joint Venture Company of OTPC, Power Grid Corporation of India Ltd (PGCIL) and North-Eastern States has been created - North Eastern Transmission Company (NETC). This JV (NETC) has developed 400 KV double circuit inter-state transmission line between Palatana, Tripura to Bongaigaon, Assam for evacuation of power from OTPC's 726.6 MW Gas Based Combined Cycle Power Plant at Palatana, Tripura. The transmission line from Palatana is connected to the States of Assam and Meghalaya through sub-stations at Silchar, Azara, Bongaigaon, all three in Assam and Byrnihat in Meghalaya. The transmission line of route length of 662.8 km passes through the highest wind zone in the hilly terrain, reserved forests as well as cultivated lands in the states of Tripura, Meghalaya and Assam. A Shareholder's Agreement has been executed by and amongst OTPC, PGCIL, Govt. of Tripura and NETC, and a Deed of Adherence has been entered into with Assam Electricity Grid Corporation Ltd. (AEGCL), Government of Mizoram, Government of Manipur, Government of Meghalaya and Government of Nagaland pursuant to acquisition of stake in NETC by them.

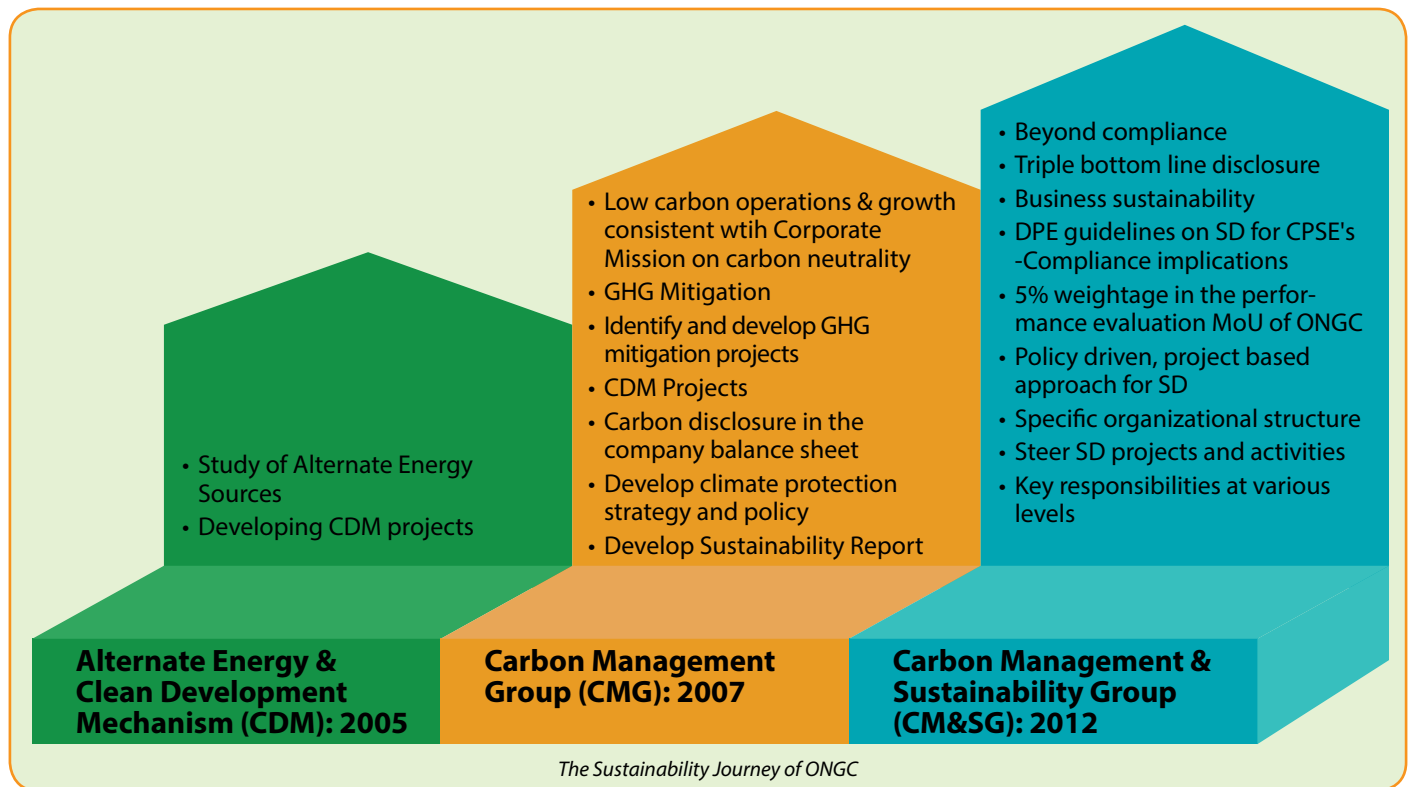


## Moving towards a smaller environmental footprint

ONGC Group has always remained committed to protection of environment and continued to work towards initiatives that contributes positively to environmental conservation. The Group has an integrated HSE policy. We continually strive to mitigate the environmental impact that may arise from our business activities such as exploration, drilling and production by investing in state-of-art technologies, effluent and solid waste management, environment monitoring and reporting, bio-diversity conservation efforts, and upgrade and sustenance of environment management systems. The

Group has a Committee of Directors (COD) on HSE chaired by an Independent Director. This Board Level Committee oversees and reviews decisions on policy matters related to HSE. In line with its commitment, ONGC has also implemented globally recognised Management Standards, namely ISO 9001, ISO 14001 and OHSAS 18001, at all its operational work centres.

The environmental issues that have been identified as high material issues in the materiality assessment exercise are climate change and energy, water and waste management, and biodiversity conservation.



### Climate change and energy

Climate change is a global challenge which poses significant risks to human and natural ecosystems. Following the submission of India's Nationally Determined Contribution (NDC) to UNFCCC and global signing of the Paris Agreement at COP 21 in 2015, various actions are being taken across

India to achieve the targets for climate change mitigation and adaptation. As the leading CPSE in the energy sector of India, ONGC Group considers it a major responsibility to actively address climate change as an issue of pivotal importance. In line with our responsibility, we design and implement



measures that contribute to a reduction in global Greenhouse Gas (GHG) emissions through our clean energy and waste management projects, while also adopting measures that can increase the adaptive capacity of ecosystems around our areas of operation through our biodiversity initiatives. ONGC is among one of the first few Indian companies to initiate climate change mitigation actions. We are aiming to expand the share of renewable energy in our operations through a portfolio of solar and wind power installations at multiple locations, and increasing the use of energy efficient infrastructure.

To institutionalise our commitment of taking purposeful action on climate change, ONGC formed a dedicated Carbon Management & Sustainability Group (CM&SG) in 2005, with a specific mandate of positioning the organization as an industry leader in sustainable development, and to voluntarily take up carbon management for addressing issues related to climate change risks and opportunities. The management has been actively engaging with national and international climate change forums to ensure the organization stays current with global climate change negotiations and India's domestic commitments.

## Energy performance

ONGC Group has continued to work towards its commitment of promoting sustainable energy and combating climate change, which is showcased through its energy performance. The energy conservation and efficiency measures taken during the reporting year have led to a significant reduction in the company's energy consumption. The energy consumption has showed a declining trend in the last three years in ONGC, ONGC Videsh, MRPL and OTPC as can be seen from the table below:

ONGC			
	FY'16	FY'17	FY'18
Energy Consumption (TJ)	181,362.3	162,542.38 <sup>4</sup>	156,033.71

Table 6: Energy Performance – ONGC

ONGC Videsh			
	FY'16	FY'17	FY'18
Energy Consumption (TJ)	13,637	12,912	9,419.36

Table 7: Energy Performance – ONGC Videsh

MRPL			
	FY'16	FY'17	FY'18
Energy Intensity (MBN)	80.24	79.61	77.06 <sup>5</sup>

Table 8: Energy Performance – MRPL

OMPL		
	FY'17	FY'18
Energy Consumption (TJ)	15,568.05	16,097.63

Table 9: Energy Performance – OMPL<sup>6</sup>

OPaL		
	FY'17	FY'18
Energy Consumption (TJ)	17,400.31	37,736.66

Table 10: Energy Performance – OPaL<sup>7</sup>

OTPC			
	FY'16	FY'17	FY'18
Energy Consumption (TJ)	519.53	634.75	657.75

Table 11: Energy Performance – OTPC

<sup>4</sup> There is a small change in the energy consumption data of last two years for ONGC, as ONGC has reorganized its energy data by including renewable energy sources in use.

<sup>5</sup> Due to a change in the process and unit of measurement of energy intensity at MRPL, the values would be reported in MBN - Million British Thermal Units per Barrel of Crude per energy factor of secondary units.

<sup>6</sup> Since this is the second sustainability report of OMPL, the data is being reported only for FY'17 and FY'18. The reported value for FY'17 has been updated due to accounting error in the previous year.

<sup>7</sup> OPaL started commercial production in the month of Jan-17, hence, energy consumption data is being reported only for FY'17 and FY'18. In FY'17 only Captive Power Plant was in operation. Commercial production at DFCU and Polymer Plants started in 1<sup>st</sup> quarter of FY'17. Hence in FY'18 energy consumption was more as compared to FY'17.





## Energy Consumption from Wind & Solar Power (in TJ)

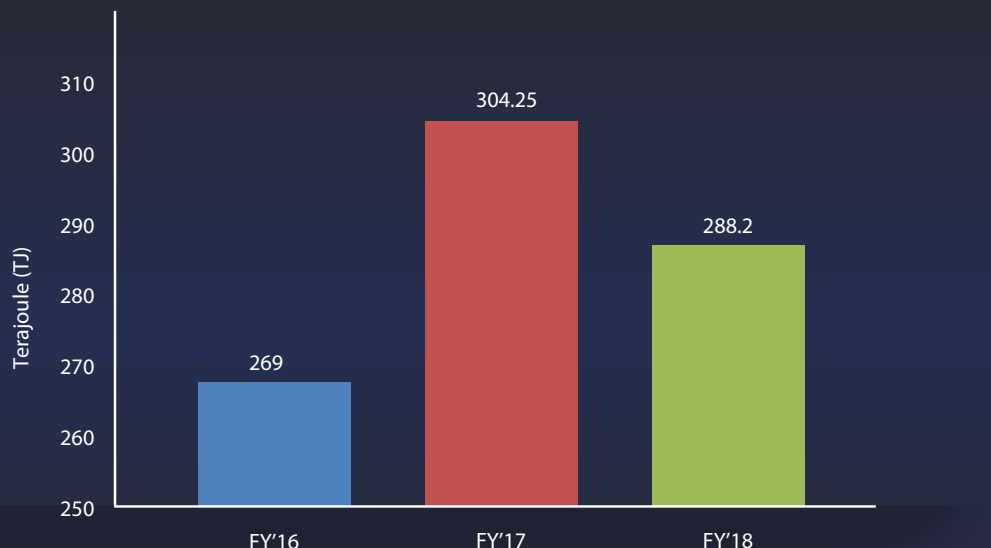


Table 12: Renewable Energy Consumption in ONGC's energy mix

ONGC has been promoting the pursuit of renewable energy installations, and has been increasing the share of renewable energy consumption in its energy mix. The share of renewable energy in the total energy mix of ONGC is provided below<sup>8</sup>:

ONGC			
	FY'16	FY'17	FY'18
Direct energy consumption (in TJ)	178,940	160,856.25	154,336.20
Indirect energy consumption from purchased electricity (in TJ)	2,422.30	1,686.13	1,697.51
Total energy consumption (in TJ)	181,362.30	162,542.38	156,033.71
Energy consumption from wind and solar power (in TJ)	269.00	304.25	288.20
Share of renewable energy (in%)	0.15	0.19	0.18

The total renewable energy generation from some of the major renewable energy projects of ONGC and the consumption of renewable energy in its own operations is provided below:

Renewable Power Plant	FY'16		FY'17		FY'18	
	Total Energy Generation (KWH)	Internal Consumption (KWH)	Total Energy Generation (KWH)	Internal Consumption (KWH)	Total Energy Generation (KWH)	Internal Consumption (KWH)
102 MW Jaisalmer (WIND)	122,730,000	0	131,860,000	0	116,041,531	0
51 MW Bhuj (WIND)	95,039,701	74,130,966.8	106,270,000	82,890,600	97,401,700	75,973,326
10 MW Hazira (Solar)	0	0	0	0	1,601,595	1,601,595
1 MW Rajahmundry (Solar)	0	0	872,030	634,530	1,457,338	1,131,438

Table 13: Renewable energy projects of ONGC

## Emissions

In oil and gas operations, business growth and consequent increase in production lead to an increase in GHG emissions, and we are continuing to work towards reducing emissions and offsetting the impact of these emissions. Carbon

dioxide makes up most of our GHG emissions, and it comes predominantly from our processing and downstream operations, including exhaust from combustion units and flares.

<sup>8</sup>Energy outputs for plants with capacities < 1.0 MW are theoretically calculated with 18% cuf. For others the outputs were actually measured.



ONGC Group is committed to consistent reporting of GHG emissions. We have been following World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) GHG protocol for GHG accounting and applied sector-specific guidance provided in the Compendium of Greenhouse Gas Emissions Estimations Methodologies for Oil and Gas Industry developed by the American Petroleum Institute (API). The global emission factors for estimating emissions of ONGC Videsh and MRPL are sourced from the latest IPCC database and the grid emission factor is sourced from CEA database version 11 (published April 2016).

ONGC			
Emission type	FY'16	FY'17	FY'18
Direct emissions (MMT of CO <sub>2</sub> e)	10.66	10.23	9.76
Indirect emissions (Scope 2) (MMT of CO <sub>2</sub> e)	0.55	0.38	0.39

Table 14: Direct and Indirect Emissions for ONGC

ONGC Videsh			
Emission type	FY'16	FY'17	FY'18
Direct emissions (MMT of CO <sub>2</sub> e)	2.08	1.98	1.38
Indirect emissions (Scope 2) (MMT of CO <sub>2</sub> e)	0.11	0.10	0.12

Table 15: Direct and Indirect Emissions for ONGC Videsh

MRPL		
Emission type	FY'17	FY'18
Direct emissions (MMT of CO <sub>2</sub> e)	4.23	4.2
Indirect emissions (Scope 2) (MMT of CO <sub>2</sub> e)	0.01	0.01

Table 16: Direct and Indirect Emissions for MRPL

OMPL <sup>9</sup>		
Emission type	FY'17	FY'18
Direct emissions (MMT of CO <sub>2</sub> e)	1.05	1.45
Indirect emissions (Scope 2) (MMT of CO <sub>2</sub> e)	-	0.02

Table 17: Direct and Indirect Emissions for OMPL

OPaL <sup>10</sup>		
Emission type	FY'17	FY'18
Direct emissions (MMT of CO <sub>2</sub> e)	3.49	8.58
Indirect emissions (Scope 2) (MMT of CO <sub>2</sub> e)	0.05	0.01

Table 18: Direct and Indirect Emissions for OPaL

OTPC			
Emission type	FY'16	FY'17	FY'18
Direct emissions (MMT of CO <sub>2</sub> e)	1.22	1.44	1.42

Table 19: Direct Emissions for OTPC

## Energy conservation measures taken in the reporting year

### ONGC

A holistic focus on sustainable growth and a strong intent to pursue renewable sources of energy enable us to reduce our internal carbon footprint and explore unconventional hydrocarbons. The following initiatives were undertaken for energy conservation during the year:

**Renewable energy:** In line with ONGC's commitment towards expanding renewable energy installations, a significant capital investment of INR 532.44 Million has been made towards solar-based power plants commissioned during the year. The initiatives for utilizing alternate sources of energy taken during the year include:

- Hazira Plant has installed 10 MWp Solar Power Plant and is in operation, with total investment of INR 527.9 Million
- Roof Top Solar plants of 100 KW and 60 KW have been installed at Vadodara, with total investment of INR 5.4 Million and INR 4 Million respectively.
- 1 MW ground-mounted solar plant at Goa and 5 MW ground-mounted solar plant at Vagra, Ankleshwar are under execution.
- Roof Top Solar Projects are under execution in four states and are expected to be completed in FY'19. The total capacity to be installed is about 7.5 MW (Gujarat 3.9 MW, Uttarakhand 1 MW, Assam 1.8 MW and Tripura 0.7 MW).

<sup>9</sup> Since this is the second sustainability report of OMPL, the data is being reported only for FY'17 and FY'18.

<sup>10</sup> OPaL started commercial production in the month of Jan-17, hence, emissions data is being reported only for FY'17 and FY'18.





**Energy-efficient lighting:** One of the key initiatives for improving energy efficiency has been installation of around 115,000 LED lights across various work centers of ONGC, under LED lighting program. This initiative is estimated to reduce electricity consumption on lighting by 50% and is expected to realize into a saving of INR 180 Million annually.

**Efficient gas utilization:** To optimize gas utilization in our operations, a study for efficient internal utilization of gas was carried out by Technical Services through PCRA, which recommended energy conservation measures to be implemented in one heater treater in Mehsana Asset on pilot basis. The implementation of these measures have resulted into a saving of about 33% in gas consumption. Based on the success of the pilot project, the initiatives are planned to be replicated in all work centres across ONGC.

Energy Management System – ISO 50001 is being implemented across ONGC in phased manner. Central Workshop Vadodara, became the 5<sup>th</sup> installation, after Uran plant, IDT, GCP & GGS-1 Kalol, where it is implemented. The process of implementation of the management system at four more installations is in process.

**Dual fuel technology:** As a measure to reduce carbon footprint, ONGC implemented dual fuel technology in EV-2000-II drilling rig of Ankleshwar Asset on a pilot basis in March - April 2017, with the objective of utilizing the low-pressure gas (which is commercially not exploited/ difficult

to monetize and otherwise flared). This OEM-supported technology has been implemented successfully for the first time in drilling rigs in India. The technology (called DGB system) enables to run rig diesel engines on a mix of diesel and gas, and facilitates substitution of diesel by gas by upto 60%. This substantially reduces the fuel cost as well as the greenhouse gas emissions. The success of the pilot project has resulted in saving of around INR 41.2 Million in FY'18 (after accounting for the cost of gas as well). ONGC is in the process of implementing this technology at other work centres.

**Energy Audits:** ONGC continues to conduct energy audits in various rigs/ installations through in-house energy auditors, recommending measures for improvement in overall energy efficiency. A total of 218 energy audits were carried out in FY'18.

**Gas flaring reduction:** The following measures are being taken in Onshore Assets towards Gas flaring reduction:

- Augmentation of compression capacity by hiring of new compressor and revamping of existing compressors in Ankleshwar Asset.
- Hiring of compressors at Geleki and commissioning of new 16" gas trunk pipe line from Geleki to Dikhow Junction Point (DJP) for transportation of excess gas from Geleki to Lakwa in Assam Asset.
- Commencement of sour gas off-take by consumer from Narimanam GGS in Cauvery Asset.

### Flare Gas Reduction by Bassein and Satellite Asset (B&S Asset)

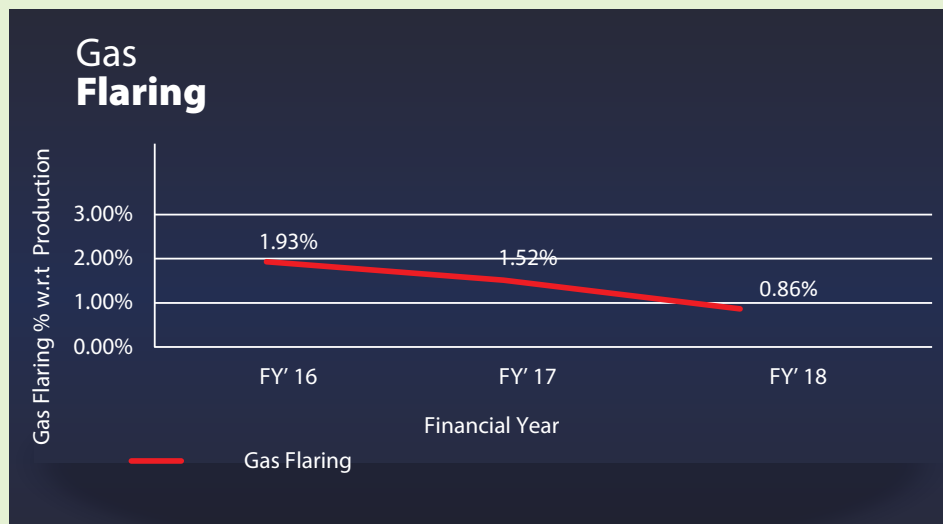
Gas flaring is one of the most challenging energy and environmental problems facing the world today. It leads to rise of CO<sub>2</sub>, CH<sub>4</sub> and other greenhouse gases (GHG) emissions in the atmosphere. On the other hand, the flared gas is very similar in composition to natural gas and is a cleaner source of energy than other commercial fossil fuels. Through the far sightedness of ONGC's sustainable vision and efficient execution, B&S Asset achieved sharp reduction in flare gas from 1.93% in FY'16 to 0.86% in FY'18.

This was mainly achieved by the following interventions:

N.B. Prasad Field which is located in West India in deep waters of Mumbai is producing around 25,000 Barrels of sweet crude per day. Due to efficient execution, B&S Asset is now able to utilize 0.07 MMSCM per day flare gas generated from the process for power generation at FPSO (Floating Production, Storage and Offloading Vessel) and replace the conventional Diesel Generators.

B-193 under B&S Asset produces around 12,000 Barrels sour crude everyday has Low Pressure Compressors in place to recover the low pressure associated gas produced along with oil from LP Separator and thus avoiding flaring.

Another platform, BPA which presently processes around 13 MMSCM gas and 22,000 Barrels Crude oil per day has LP separators at BCPA2, BPA (ADVEP) and BCPA3 designed with ejector system to divert low pressure gas to process gas compressors and hence avoid flaring this low pressure gas.



All these measures have resulted in major reduction in flaring in B&S Asset. Also as part of the technological intervention, majority of wells of B&S Asset are covered under SCADA along with PSHL and can be remotely/automatically closed in case of tripping of free gas compressors. Through reducing flaring and increasing the utilization of fuel gas we are contributing to energy efficiency and climate change mitigation.

To spread larger awareness about the importance of energy conservation, ONGC organized 'Energy Conservation Awareness Campaigns' through various activities and programmes such as

month-long 'Saksham-2018' and 'Energy Conservation Day', thereby educating the masses.

### A Study on Climate Change Risks: Preparedness for Oil and Gas sector

As a measure to strengthen the knowledge base on climate change induced risks, ONGC in association with other oil and gas sector PSUs, conducted a Scientific Study on "Climate Change Risks: Preparedness for Oil and Gas sector" by The Energy and Resources Institute (TERI) and Federation of Indian Petroleum Industry (formerly Petroleum Federation of India). The aim of the study is to understand and assess climate change risks to the upstream, midstream and downstream infrastructure of Oil & Gas sector in India, along with challenges due to emerging climate policies and to develop a framework to facilitate integrate climate change risks in to strategic decision making.

This study is expected to be a future guidance document for ONGC Group in understanding climate change risks to its business, which would help us design meaningful strategy to address these risks.

### ONGC Videsh

ONGC Videsh continued to put dedicated efforts towards energy conservation during the year. The key initiatives taken during the year include:

**APG Project** is in progress at Imperial Energy Russia at an approx. cost of USD 49 Million, which will process about 2.7 lakh M<sup>3</sup>/day of rich gas producing LPG, condensate and lean

gas. Implementation of this project will help in increasing production without the need of flaring associated gas.

**Imperial Energy** has installed fuel gas treatment plant at OTF Maiskoye at the inlet of gas based power generation system. This resulted in enhanced capacity from 750KW to 900KW, which allowed to reduce number of running systems from 8 to 7.





## MRPL

MRPL accords highest priority for energy conservation and takes proactive measures through process optimization, implementation and continuous monitoring of several energy conservation interventions. Some of the major energy conservation measures implemented during the year are:

- Flare Gas Recovery System for Phase-3 Hydrocarbon flare header
- Largest solar project within a Refinery site in India with an installed capacity of 6.063 MW Peak
- Routing of Crude Distillation Unit-1 Full Range Naphtha to Crude Distillation Unit-2 Naphtha Splitter Unit, thereby stopping Crude Distillation Unit-1 Naphtha Splitter Unit
- Recovery of Heat from Crude Distillation Unit-1 short residue by generating Low Pressure Steam
- Utilization of Condensate Transfer Pump for Heat Recovery Steam Generator-1/2 Make up water heater service, thereby stopping of Makeup water heater pumps
- Improving the Heat transfer efficiency of Heat Recovery Steam Generator-2 by dry ice cleaning

These measures have resulted in estimated fuel savings (Standard Refinery Fuel equivalent) of 19,635 SRFT/Year, equivalent to a net savings of nearly INR 461.2 Million/year, with an investment of nearly INR 498.5 Million.

In addition to these measures, the measures which are being implemented currently or are under consideration to reduce of consumption of energy include:

- Implementation of Diesel Pump around in Hydrocracker - 1&2 Recycle Splitter Column
- Heat recovery from Hydrocracker-1/2 Unconverted Oil by Cold Demineralized Water
- Routing of Amine Regeneration Unit-3 Flash drum off gas to incinerator for recovering heat of combustion.
- O<sub>2</sub> enrichment for Sulphur Recovery Unit-2 (SRU): By routing O<sub>2</sub> enriched air from Nitrogen unit to SRU thermal reactor, more acid gas can be processed thereby increasing the steam generation.
- Routing of Crude Distillation Unit-1 Kerosene to Crude

Distillation Unit-2 thereby recovering the heat available with Crude Distillation Unit-1 Kerosene.

The total investment made by MRPL in energy conservation equipment during the year is INR 498.5 Million. This has resulted in a significant reduction in energy consumption of 19,635 Mtoe/year, due to energy conservation measures taken by MRPL during the year.

Name of Initiative	Annual Savings	Unit	Classification
Flare Gas Recovery System for Phase-3 Hydrocarbon flare header	7,208	Mtoe/year	Energy Efficiency & Flare Loss reduction
Largest solar project within a Refinery site in India with an installed capacity of 6.063 MW peak	2,667	Mtoe/year	Renewable Energy Installation
Routing of Crude Distillation Unit-1 Full Range Naphtha to Crude Distillation Unit-2 Naphtha Splitter Unit, thereby stopping Crude Distillation Unit-1 Naphtha Splitter Unit	6,960	Mtoe/year	Energy Efficiency
Recovery of Heat from Crude Distillation Unit-1 short residue by generating Low Pressure Steam	733	Mtoe/year	Energy Efficiency
Utilization of Condensate Transfer Pump for Heat Recovery Steam Generator-1/2 Make up water heater service, thereby stopping of Makeup water heater pumps	412	Mtoe/year	Energy Efficiency
Improving the Heat transfer efficiency of Heat Recovery Steam generator-2 by dry ice cleaning	1,655	Mtoe/year	Energy Efficiency
Total (Mtoe/year)	19,635		

Table 20: Energy savings from energy conservation measures of MRPL



## MRPL's Transition to Clean Energy – India's largest Solar Power Plant in a Refinery

MRPL has continued to make dedicated efforts in transitioning to a clean energy based model of operation. MRPL has successfully commissioned the largest solar power project located within a refinery site in India. The solar power project with a total capacity of 6.063 MWp is spread across 34 sites within the refinery premises comprising both RCC and sloping sheet steel roofs. Built at a cost of INR 260 Million, these solar plants generate more than 24,000 units per day amounting to more than 8.8 Million units per annum. This is a part of MRPL's commitment to sustainable development with a focus on renewable energy generation and reduction in carbon emissions.



*The project is estimated to result in average annual savings of 2,667 Metric tons of Oil Equivalent (Mtoe) per annum, and emission reduction of 8,200 tCO<sub>2</sub>e. The equivalent monetary savings would be approximately INR 63.50 Million per annum.*

## Energy conservation through optimization of power plant Condensate Transfer Pump capacity at MRPL

In its bid to enhance resource and energy efficiency in plant operations, MRPL successfully executed a process modification in the power plant Phase-3 area, involving the interconnection of Makeup Water Heater (MUH) pumps with the Condensate Transfer Pump (CTP), thereby achieving energy savings through optimization of operating load as well as overall equipment running time.

In Phase-3 of the power plant, 2 Gas Turbines (GT) along with Heat Recovery Steam Generators (HRSG) are available for cogeneration of power and steam. HRSGs have a provision for heating the MUH at a convection zone. Two MUH feed pumps (capacities 92.4 TPH and 132 TPH, driven by 75 KW and 150 KW motors respectively) are being operated to absorb waste heat before being rejected from the stack. After external audits and multiple rounds of internal discussions, it was observed that the CTP and the MUH pumps were under-loaded and the former contained adequate capacity to sustain the load of one or both of the MUH pumps. Consequently, it was proposed to interconnect CTP discharge to MUH pump discharge of HRSG-1 and HRSG-2, thus utilizing CTP capacity and conserving energy by stopping running MUH pumps.

This initiative has brought about a net reduction in power consumption by 170 KWH (to the tune of 40%) and annual electrical power saving of 1360 MWH. Monetary saving due to stopping of the pumps is around INR 8.16 Million, which equates to approximately INR 6/KWH.



## OPaL

OPaL Petrochemical Complex has been designed following the best technologies conducive for maximum energy conservation. During the financial year, the following initiatives were taken to promote energy efficiency:

- Dedicated Energy management cell has been started by CTS department to look after energy optimization and conservation activities.
- In DFCU plant, HVAC chiller fan blades have been replaced from GI to FRP material, which has resulted in to saving of 126MWH energy (approx.)
- Operational practices of DFCU furnace operations have been modified, which has resulted in to saving of approx. 100 tons of process steam and equivalent DM water during each bringing up operation.
- C4 Acetylene recovery started in fuel gas. This has reduced requirement of hydrocarbon fuel in furnace leading to saving of Ethane to fuel gas make up.

## OTPC

At OTPC, energy and climate change is addressed by utilising alternative sources of energy and promoting the use of energy-efficient technologies. OTPC is making use of rooftop solar PV cell for supplying power to 35 garden lamps and 5 numbers of street lights. The measures taken for energy conservation during the year are:

- Reduction in Differential Pressure set points across flow control valves resulting in reduction in Auxiliary power consumption by Boiler Feed Pumps.
- Regular updation and improvements in SOPs to minimise the water and fuel consumption across various operations.
- Regular training to O&M officials on improving plant efficiency and optimization of start-up time and thus reducing start up energy consumption.
- Reduction/removal of excess lights in indoor and outdoor application & switching off unnecessary lighting in plant areas.
- Survey routine has been built up in O&M practice for identifying and prompt maintenance of passing high energy valves.

- Gas turbine air filter differential pressure is controlled by timely replacement of inlet air filters which has a direct effect on plant efficiency.
- Prompt actions are taken based on periodic performance assessment of gas turbine, steam turbine and cooling tower to improve the performance.
- Cycle of Concentration (COC) optimization is being done by taking real time decision depending upon process parameters. Maintaining COC on higher side for reduction of raw water consumption.

## OMPL

OMPL is committed to addressing climate change by adopting optimization techniques in energy management, as well as by using efficient production and utility systems. During the year, OMPL has commissioned Captive Power Plant successfully, and a peak power load of 41.5 MW was achieved. Within the design stage of the plant, various conservation measures were taken and are now implemented effectively. The Process Heaters and Gas Turbines at OMPL are already designed to handle environment friendly LNG fuel, as and when available.

In line with its commitment towards optimal use of energy, OMPL successfully carried out in-house development & execution of Dynamic Alarm Limits for Dual Fired Heaters, as directed by CPCB to all refineries in India. Other energy conservation measures under consideration are:

- Heat recovery from the waste process condensate to heat inlet DM water (increases temperature of DM water by 70°C).
- Condensate recovery system to minimize the water usage.
- Recovery of boiler blow down and using it as a makeup to cooling tower.
- Installation of timers in all plant lighting systems for automatic switch on and off.

## Clean Development Mechanism (CDM)<sup>11</sup>

ONGC commenced its CDM journey in 2005 and has registered 15 CDM projects so far with the United Nations

<sup>11</sup> The CDM allows emission-reduction projects in developing countries to earn certified emission reduction ( CER ) credits, each equivalent to one tonne of CO<sub>2</sub>.



Framework Convention on Climate Change (UNFCCC) which yield (potential) Certified Emissions Reductions (CERs) of approximately 2.1 Million annually. During the year, ONGC has taken an initiative to extend the credit period permissible under CDM regulation, subject to the merit of the project, for another 7 years for 51 MW Wind Power Project Surajbari, Gujarat. The project was registered with UNFCCC as a CDM project in the year 2010 with a credit period of 7 years. The OTPC CDM project in Tripura is one of the largest CDM projects in the country and during FY'18, 1.69 Million CERs were issued to OTPC.

The list of CDM projects registered so far are as under:

S. No.	Project	Estimated CER/ annum
1	Waste heat recovery from Process Gas Compressors (PGCs), Mumbai high south (offshore platform) and using the recovered heat to heat process heating oil	5,320
2	Up-gradation of Gas Turbine 1 (GT 1) and Gas Turbine 2 (GT 2) at co-generation plant of Hazira Gas Processing Complex (HGPC) of Oil and Natural Gas Corporation Limited (ONGC)	7,802
3	Flare gas recovery project at Uran plant, Oil and Natural Gas Corporation (ONGC) Limited	97,740
4	Flare gas recovery project at Hazira Gas Processing Complex (HGPC), Hazira plant, Oil and Natural Gas Corporation (ONGC) Limited	8,793
5	Amine Circulation Pumps Energy Efficiency at Hazira works of ONGC	4,043
6	51 MW wind power project of ONGC at Surajbari, Gujarat in India	85,762
7	Energy Efficient Green Building at Mumbai by ONGC Limited	544
8	Green Building at Dehradun	735
9	Gas flaring reduction at Neelam and Heera Asset	65,811
10	Natural gas based combined cycle power plant in Tripura, India	1,612,506

S. No.	Project	Estimated CER/ annum
11	Green Building at Kolkata	1,881
12	Energy Efficient Green Building at New Delhi by ONGC Ltd	5,944
13	Gas Flaring Reduction Project at GGS, Chariali, Sibasagar, ONGC, Assam	15,172
14	Replacement of Main Oil Line (MOL) Pumps at Neelam & Heera Asset of ONGC	10,539
15	102 MW Wind Power Project, ONGC, Rajasthan, India	180,177
	<b>Total</b>	<b>2,102,769</b>

Table 21: CDM Projects of ONGC Group

ONGC Group's management has been proactively engaging with national and international climate change forums to ensure the organization stays updated with global climate change negotiations and India's domestic commitments. Fugitive methane emissions from oil and natural gas systems are primarily the result of normal operations and system disruptions. These emissions can be cost-effectively reduced by upgrading technologies or equipment as well as by improving operations. In August 2007, the company tied up with the Global Methane Initiative (GMI)<sup>12</sup>, then known as the United States Environmental Protection Agency, to undertake Methane to Market projects and formed a dedicated in-house team and procured methane emission detection and measurement equipment, which resulted in the reduction of about 16.7 MMSCM of fugitive methane over the years. ONGC has also drawn an effective plan to map all its production installations for fugitive hydrocarbon emission and make them leak-free by conducting gas leak surveys and using Gas Find Infrared Camera to identify methane emission reduction opportunities.

<sup>12</sup> The Global Methane Initiative (GMI) is an action-oriented initiative from USEPA to reduce global fugitive methane emissions to enhance economic growth, promote energy security, improve the environment, and reduce greenhouse gas emission. GMI facilitates cooperative mitigation activities that result in bringing more gas to markets through the Identification, Quantification, and Reduction (IQR) path.





## Awards and recognition

In recognition of our continued efforts towards ensuring sustainable development, ONGC Group has received some of the most prestigious awards.

### ONGC:

1. ONGC received the prestigious "Environmental Sustainability - Company of the Year" Award from the

Federation of Indian Petroleum Industry (FIPI) during a ceremony held on August 8, 2017 at New Delhi.

2. ONGC was awarded Best Company in promoting Clean India during Swachhta Pakhwada 2018 instituted by Ministry of Petroleum and Natural Gas, Government of India.



Team ONGC receives the "Environmental Sustainability -Company of the Year" Award from the Federation of Indian Petroleum Industry (FIPI)



ONGC awarded Best Company in promoting Clean India; Dr MM Kuttu, Secretary MoPNG gives away the Swachhta Award to Mr Shashi Shanker, CMD ONGC



Team ONGC receives the "Environmental Sustainability Research and Development" Award at 5<sup>th</sup> Governance Now PSU Awards

3. ONGC was conferred with "Environmental Sustainability Research and Development" Award by Governance Now in its 5<sup>th</sup> edition of PSU Awards during a ceremony held on February 27, 2018 at New Delhi.
4. ONGC received 'Environment Management Award 2017' in Platinum Category which was awarded to Hazira plant of ONGC on August 3, 2017 during a function conducted by Grow Care India Foundation (GCI) at Chandigarh.

### **IPSHEM-Goa bags prestigious Grow Care India Environment Gold Award second time in a row**

Institute of Petroleum Safety, Health and Environment (IPSHEM), Goa won the 'Grow care India environment Gold Award' in recognition of its outstanding achievement in Environment Management in Petroleum Sector on August 3, 2017 at Chandigarh.

### **ONGC Videsh:**

1. Golden Peacock Award 2017 in the category PSU (oil production).



Golden Peacock Award 2017 in the category PSU (oil production) awarded to ONGC Videsh

2. Strategic Performance award instituted by Governance Now in the 5<sup>th</sup> edition of its PSU awards ceremony.
3. ICICI Lombard & CNBC-TV18 India in the category Best Risk Management Framework & Systems – PSU.

### **MRPL:**

1. MRPL was recognized with Silver Medal by International Research Institute for Manufacturing (IRIM) as part of India Green Manufacturing Challenge (IGMC) for the year 2017.

### **OTPC:**

1. Environment Excellence Award 2017 for Clean Generator of the Year – Gas by Mission Energy Foundation, New Delhi on 23<sup>rd</sup> September, 2017.
2. FAME Excellence Award 2017 in Platinum (Environment Management) category by Foundation for Accelerated Mass Empowerment (FAME) New Delhi on 24<sup>th</sup> September, 2017.
3. National EHS Award 2017 for Outstanding Contribution for Carbon Emission Reduction by World Quality Congress, Mumbai on 23<sup>rd</sup> November, 2017.
4. CII-ITC Sustainability Award 2017 for Excellence in Environment Management category by CII-ITC Centre of Excellence for Sustainable Development, New Delhi on 12<sup>th</sup> December, 2017.



Team OTPC with CII-ITC Sustainability Award 2017



## Water and waste management

Water is an essential natural resource, not only for our operations, but also for the society and ecosystems. However, growing demand for freshwater sources and reduction in freshwater supplies due to increasing usage has restricted the availability of good quality water for all. In the same context, the oil and gas industry faces risks of physical, reputational and regulatory challenges, in terms of access to water. Pursuant to these conditions, ONGC Group has adopted a proactive and prudent approach towards management of water in its operations.

ONGC Group is committed towards reducing the overall water footprint of our operations. At ONGC Group, the focus is to further efficiently manage water usage by minimizing the share of fresh water and increasing the share of recycled water in the overall water consumption in its operations. Some of the operational areas of the Group are remote, where access to clean water for communities is a challenge. The group takes due cognizance of the criticality of water resources for the local community and the ecosystem. To track the water consumption and to explore opportunities of further reducing it, regular monitoring and evaluation is being carried out. Environmental statements are duly submitted to the respective regulatory authorities to comply with statutory obligations.

Key highlights of our water performance for FY'18 are as below:

ONGC			
Water Source	FY'16	FY'17	FY'18
Ground water (in Billion litres)	1.13	3.34	9.24
Municipal water (in Billion litres)	5.49	5.08	4.39
Surface water (in Billion litres)	17.67	9.24	0.95
Other sources <sup>13</sup> (in Billion litres)	-	-	4.74

ONGC			
Total (in Billion litres)	24.29	17.66	19.32

Table 22: Sources of water consumption at ONGC

ONGC Videsh			
Water Source	FY'16	FY'17	FY'18
Ground water (in Billion litres)	4.78	4.79	4.76
Municipal water (in Billion litres)	0.21	0.22	0
Surface water (in Billion litres)	0.001	0.0007	0.00097
Total (in Billion litres)	4.99	5.01	4.76

Table 23: Sources of water consumption at ONGC Videsh

MRPL			
Water Source	FY'16	FY'17	FY'18
Ground water (in Billion litres)	0 (Note-1)	0 (Note-1)	0
Collected rainwater (in Billion litres)	0.34	0.38	0.38
Municipal water (in Billion litres)	4.42	3.33	3.53
Surface water (in Billion litres)	0	0	19.22
Total (in Billion litres)	22.30 (Note-1)	18.86 (Note-1)	23.13

Note-1: Data changed from previous reports

Table 24: Sources of water consumption at MRPL

OMPL		
Water Source	FY'17	FY'18
Surface water (in Billion litres)	1.98	2.17
Total (in Billion litres)	1.98	2.17

Table 25: Sources of water consumption at OML

OPaL		
Water Source	FY'17	FY'18
Surface water (in Billion litres)	9.58	13.06
Total (in Billion litres)	9.58	13.06

Table 26: Sources of water consumption at OPaL

OTPC	
Water Source	FY'18
Surface water (in Billion litres)	4.78
Total (in Billion litres)	4.78

Table 27: Sources of water consumption at OTPC

<sup>13</sup> Other sources include packaged water, desalinated water, rain water and other smaller sources.





Company	FY'16		FY'17		FY'18	
	Volume of produced water (Billion litres)	Percentage of produced water recycled / reused	Volume of produced water (Billion litres)	Percentage of produced water recycled / reused	Volume of produced water (Billion litres)	Percentage of produced water recycled / reused
ONGC	48.92	5.78	58.97 <sup>14</sup>	1.62	60.96	4.82
ONGC Videsh	21.47	5.00	20.80	5.71	14.53	5.90

Company	FY'16		FY'17		FY'18	
	Volume of waste water (Billion litres)	Percentage of waste water recycled / reused	Volume of waste water (Billion litres)	Percentage of waste water recycled / reused	Volume of waste water (Billion litres)	Percentage of waste water recycled / reused
ONGC	-	-	-	-	0.78	55.80
MRPL	-	-	6.19	53.00	6.19	58.46
OMPL	-	-	0.42 <sup>15</sup>	63.00	0.36	34.00
OPaL	-	-	0.36	9.95	3.75	72.00

Table 28: Produced / waste water across ONGC Group

## Sustainable Water Management

ONGC is committed to the development of water management practices in a sustainable and responsible manner as an integral part of its corporate vision of sustainable growth. The company has rolled out a policy on Sustainable Water Management (SWM) in the year 2011; incorporating the principles of Reduce-Reuse-Recharge-Replenish philosophies of water management. We exercise responsible stewardship in various aspects of water management such as freshwater access and use, handling of produced water during extraction, treatment of waste water, and the use of brackish or saline water. We proactively undertake initiatives such as water footprint studies, construction of sewage treatment plants, rainwater harvesting systems, setting up of seawater desalination plants, etc.

The major initiatives taken by ONGC for efficient water management include:

### Water Conservation through Rainwater Harvesting

To conserve fresh water, ONGC Group has a rainwater harvesting policy that is mandatory for all future projects. The details of the company's existing rainwater harvesting

projects are given below:

- o 29 ground water recharge wells at various locations of Ahmedabad Asset
- o Rainwater from rooftop and surface run off harvesting at Green Building, Mumbai
- o Percolation well for ground water recharge at a residential complex, Ankleshwar Asset
- o RWH system as an integral part of C2-C3 plant, Dahej, Gujarat
- o RWH at Rajahmundry Asset Base Complex
- o 16 infiltration wells in IPSHEM, Goa
- o 2 ground water recharge wells at IRS, Ahmedabad
- o 6 ground water recharge wells at KDMIPE, Dehradun
- o 1 ground water recharge well at Base Complex, RFB, Jodhpur
- o RWH system at K. V. School, NOBH and officers' club at Agartala, Tripura Asset
- o RWH system at PPCL building, Uran Plant, Raigad, Maharashtra
- o Bhavale Hill RWH system, Panvel, Maharashtra
- o RWH system at SPIC campus, Panvel, Maharashtra

<sup>14</sup> Units of a few data was misquoted in cubic meter instead of Barrel. The error has been rectified and the corrected data is given in this report.

<sup>15</sup> The data reported for OPaL and OMPL in FY'17 was inadvertently printed in Billion Liter.





- o RWH systems at various locations at Western Onshore Basin, Vadodara

## Waste Water Management

One of the major outputs of ONGC's operations is the formation of produced water which is discharged from oil and gas production operations. This water needs to be monitored and controlled on a regular basis, since it contains process chemicals as well as contaminants (such as hydrocarbons, heavy metals, salts, etc.) which occur naturally in oil and gas reservoirs. We have installed Produced Water Conditioners (PWCs) for treatment of produced water across sites. They ensure that pollutants stay within prescribed limits before discharging them onshore / offshore.

ONGC Group monitors the quality of effluent discharge to return the treated water to water cycle with minimal impact on environment. The Group strives for optimal treatment of water to recycle produced water for various operational processes, such as drilling and water injection. To achieve this, 26 ETPs have been installed across various work centers to treat waste water produced during E&P operations. This is done along with the processing of oil and gas to meet statutory requirements for discharge of treated effluent at surface/ subsurface. Drilling rigs have been provided with mobile ETPs to treat the waste water produced during exploration and production operations. In order to cope up with enhanced liquid production due to high water cut from aging of oil fields, 17 new ETPs have been planned to be installed.

## Lining of Drill Site Waste Pit with HDPE Sheets

To avoid contamination of ground water quality of surrounding areas, High Density Polyethylene (HDPE) lining is laid in the waste pit at drill sites. This prevents percolation of waste water into the ground during drilling of wells, thus, helping us monitor and protect ground water quality.

Offshore Monitoring to check Marine Pollution at Indian Western and Eastern Coasts:

To study the impact of exploration and production operations on marine environment, ONGC has instituted regular offshore monitoring at West Coast and East Coast covering the entire operational areas. Monitoring reports are regularly submitted to the regulatory authorities.

## Waste Management

Undertaking waste management practices in a structured manner is integral throughout the oil and gas exploration and production operation in order to minimize localized risks to the environment and communities, to improve the utilization of resources, and to potentially reduce costs. At ONGC, waste management is considered to be a critical component of operational efficiency. Environmental issues have been identified and actions have been initiated based on the management hierarchy of preventing pollution at source, recycling and reuse of waste, treatment and disposal of the waste.

The waste production of ONGC Group and JVs is reported below:

ONGC			
Source	FY'16	FY'17	FY'18
Hazardous Waste (in MT)	27,519	25,220	54,012
Non-Hazardous Waste (in MT)	30,193	24,157	46,818

Table 29: Waste Production at ONGC

ONGC Videsh			
Source	FY'16	FY'17	FY'18
Hazardous Waste (in MT)	312.0	337.8	332.9
Non-Hazardous Waste (in MT)	851.0	805.7	626.6

Table 30: Waste Production at ONGC Videsh

MRPL			
Source	FY'16	FY'17	FY'18
Hazardous Waste (in MT)	2,501	4,800	3,240
Non-Hazardous Waste (in MT)	2,035	1,299	2,164

Table 31: Waste Production at MRPL

OMPL		
Source	FY'17	FY'18
Hazardous Waste (in MT)	197.85 <sup>16</sup>	180.50
Non-Hazardous Waste (in MT)	10.06	7.80

Table 32: Waste Production at OMPL

OTPC			
Source	FY'16	FY'17	FY'18
Hazardous Waste (in MT)	7.2	3.0	3.9
Non-Hazardous Waste (in MT)	8.6	7.5	11.2

Table 33: Waste Production at OTPC

<sup>16</sup> The value reported for FY'17 has been revised due to improved reporting process being implemented from this year.





ONGC Group has adopted several methods for scientific disposal of hazardous and non-hazardous waste generated during operations. A three pronged approach is followed for waste management:

- o Know your waste footprint – Establish the waste base line
- o Undertake waste management project wherever feasible and apply
- o Manage waste and reporting

Drilling waste is a mining/oil and gas industry specific waste, and comprises of drilling mud and rock cuttings. These may contain additives and contaminants that are naturally occurring in oil and gas reservoirs, including hydrocarbons, salt, and heavy metals, and can create harm to the environment if handled in an irresponsible and unplanned manner. Drilling waste and cuttings are disposed, re-used in land filling or sold to authorized vendors as per industry practices. Other wastes generated during exploration and production operations include chemical sludge and tank bottom sludge (hazardous in nature). Chemical sludge is collected in lagoons with leachate collection feature where water is drained to reduce the quantity of sludge. This chemical sludge is disposed by land filling in accordance with norms of the State Pollution Control Board. To treat tank bottom sludge, which is mainly organic in content, bio-remediation techniques are employed. After the oil is recovered from the oily waste produced during drilling operations, the remaining waste and oil contaminated soil is subjected to bioremediation, where the oil content is reduced to less than 1% TPH by using a consortium of hydrocarbon degrading bacteria developed by the OTBL since March 26, 2011. During the reporting period, an amount of 54,012 MT of oily sludge / oil contaminated waste has been bio-remediated.

ONGC has well-established systems for management of hazardous chemicals and materials. Separate designated areas are provided for storage of hazardous chemicals and all personnel are provided with Personnel Protective Equipment (PPE), first aid training, and training for safe handling practices of hazardous chemicals.

ONGC Group ensures compliance with all the requirements of the regulatory authorities, which regulates the recycling/

reprocessing of hazardous wastes such as used/waste oil, used lead acid batteries and other non-ferrous metal waste. Such waste is sold or auctioned to only those units which possess Environmentally Sound Management (ESM) facilities and are registered with regulatory authorities. Similarly, for ensuring safe disposal of e-waste, ONGC invites tenders from the firms registered with Central Pollution Control Board for e-waste disposal, and the items of e-waste are sold to them. ONGC has updated its e-waste management practices, in line with the requirements under the E-Waste (Management) Rules, 2016.

Some of our key initiatives in the area of waste management during the reporting period are as below:

- o Oily sludge generated during various field activities are hazardous in nature. For environmentally safe disposal of these wastes, ONGC has established a Joint Venture with TERI which has developed a state-of-the-art "Oil-Zapper" to efficiently biodegrade the oily content in the waste before its disposal to comply with Hazardous and Other Waste (Management and Trans-boundary Movement) Rules, 2016.
- o Halon is a liquefied, compressed gas that stops the spread of fire by chemically disrupting combustion. It is an extraordinarily effective fire extinguishing agent, even at low concentrations with a key benefit is its ability to extinguish fire without the production of residues that could damage the assets being protected. Montreal Protocol in 1989 determined the depletion of ozone layer due to Halon and the US Environment Protection Agency banned its manufacture since 1994, the Halon was to be replaced with clean agents. However, in vital oil and gas ONGC offshore installations, replacing Halon based fire extinguishing system is yet to be implemented. Therefore, to sustain the existing system, clarification was obtained from Ozone Cell, MoEFCC that recycled Halon 1301 can be purchased only through registered vendors with MoEFCC to continue the operations of existing fire systems.
- o ONGC has revised its Environment & E-Waste Policy in line with newly enacted environmental regulations.



## Biodiversity

Biodiversity is an integral part of our ecosystem which affects the environmental, social and economic well-being of the country. At ONGC Group, we link business success with our environmental and social performance, and have consequently spearheaded several initiatives to showcase our stewardship in biodiversity conservation. We strive to make a positive contribution to biodiversity conservation, and minimize any negative impacts that may occur on the ecosystems around our areas of operation. By integrating biodiversity considerations into our enterprise level decision making process, we have identified and developed effective strategies and programs aimed towards conservation of flora and fauna. We have gone beyond applicable legislative requirements across all jurisdictions where we operate, to incorporate an inclusive set of management actions comprising of mitigation, compensation and investments towards conservation of biodiversity.

ONGC Group follows an Environment Management System based on the precautionary principle. Therefore, no activity is carried out in areas notified as environmentally sensitive. We practice the implementation of inclusive, scientifically sound and transparent procedures that integrate land use planning, biodiversity conservation, and exploration. Prior to all new ventures and sizeable modifications of existing processes, our assets incorporate biodiversity considerations into their environmental impact assessments, along with any

potential risks through our operations on local communities. During EIA study, the baseline environmental status of air, water, land and biological environment is carried out. Moreover, ONGC is the first PSU to have mandatory NABET-QCI accreditation for conducting EIA studies. The baseline status of biological environment is established by studying the distribution pattern, community structure, population dynamics, and composition of species of flora and fauna. This information plays a major role in preparing the environmental management plan for the respective site. However, sites allocated prior to the enforcement of EIA notifications may not necessarily have the baseline assessment data. During the reporting period, Ministry of Environment, Forest and Climate Change (MoEFCC) has granted 21 Environment Clearances for Exploration, Development and Production activities. These include clearance for 441 wells in onshore and offshore; Combined Cycle Power Plant at Hazira; Desalination Plant and LPG Storage Bullets at Uran; and Shale Gas exploration in Cambay and KG-PG Basin.

ONGC, its group companies and joint ventures regularly organize plantation drives across their operations. Green belts are developed and maintained around major installations to retain the biodiversity of the surrounding areas, in compliance with various permits obtained from the respective regulatory authorities. Tree plantation is carried out by selecting trees as per bio-geo-climatic conditions of the area to ensure a desirable rate of survival. The measures taken by ONGC Group for biodiversity conservation include flagship programmes which have been ongoing since a long time, and some initiatives introduced during the reporting year.

### Tree Plantation Initiatives

ONGC, with the assistance of Gujarat Forest department, has committed to develop nearly 250 acres of land in Gandhar and Vagra areas belonging to ONGC Ankleshwar asset in Gujarat. A tree plantation activity was undertaken on the World Environment Day, for which around 200 saplings of neem species were procured from Gujarat Narmada Valley Corporation (GNVC) Bharuch. Forest department officials not only provided around 5000 saplings of various fruit bearing species (Amla, Jamun, Lemon, Pomegranate, and Guava), but also actively volunteered in the plantation of saplings.

The large scale sapling plantation was made possible by the active participation of ONGC and CISF personnel along with Mahila Samiti members, collectives and support workers at Gandhar.



## Green Hub Project

This is a unique initiative to train 20 youths of the Northeast every year in wildlife videography and documentation. The Green Hub project is implemented in partnership with the Northeast Network. The main objective of the project is to create a team of environment enthusiasts having expertise in conservation. In the last three years, 60 youth and women have been trained. The Centre was recently been conferred with Manthan Awards in the category of Environment & Green Energy for leveraging the power of youth to conserve biodiversity through a digital platform. An amount of INR 6 Million has been sanctioned towards implementing this project in the last three years.

## Mansarovar Energy: Strengthening the production and commercialization of Cocoa

Mansarovar Energy, a joint venture of ONGC Videsh and Sinopec Corp., has taken up an ambitious project of strengthening the production and commercialization of Cocoa in Colombia. The project is focused on working with 350 farmers within the Ciénaga del Opón district of the municipality of Barrancabermeja - (Santander), area of influence of the Velásquez Galán Pipeline, in order to improve technique and institutionalize their production practices, provide training for sustainable production through better agricultural practices, build capacity of community members through permanent accompaniment to be able to develop and consolidate new markets, both locally and nationally.



This project seeks to link rural cocoa producers to the market under advantageous conditions, through an inclusive business model that promotes the work of the communities of the Ciénaga del Opón in the different links of the value chains, creating mutual benefits for the private sector as well as for the communities (shared value). The foregoing, in order to contribute to the reduction of poverty through the generation of capacities, the transfer of technology and the improvement of the economic viability for families.

This strategy will benefit the social development, the improvement of the productive capacity, the strengthening of the local management, the promotion of the active participation, the respect of the human rights and the development of healthy environments in the areas of influence of Mansarovar Energy.



### Mangrove Plantation Project



The 'Mangrove Plantation' project is a flagship project being undertaken by ONGC for several years, with the aim of protecting and stabilising the shoreline close to ONGC Assets. During Phase-I of the project, plantation of a total of 17,85,250 mangrove saplings, seedlings and propagules in 100 hectare area of Gandhar field, Ankleshwar in Gujarat; and in Phase-II, plantation of a total of 2.16 Million mangrove saplings, seedlings and propagules in Gandhar field, Ankleshwar and near Hazira Plant in Gujarat were taken up.

### Environmental Protection

ONGC strives for excellence and effective management of its environmental impacts throughout its value chain, right from research, development and production up to sales and end use. Environmental protection is an integral part of sustainable development for ONGC. A holistic approach is followed across the organization to devise and implement operational strategies in a cognitive and accountable manner, while undertaking corrective actions whenever necessary.

We ensure strict compliance with environmental laws across all areas where we operate. In order to foster a culture of proactive industrial environmental compliance, we have

adopted numerous practices such as maintaining pollution inventories through monitoring and dissemination of data on ambient environment and pollution loads, cleaner production techniques backed by commitment from management, environmental management systems based on continual environmental improvement, and entering into negotiated agreements and government-industry partnerships for achieving defined environmental goals. There were no statutory penalties or fines paid by ONGC Group during the reporting period.

### World Environment Day at OMPL

OMPL celebrated the World Environment Day with a tree plantation programme held within OMPL premises and neighbouring schools, in association with Forest Department. During the event, a jute bag was presented to the Karnataka State Environment Minister, followed by distribution of 1,000 jute bags to the participants.





ONGC Videsh also participated in the World Environment Day celebrations, to promote public awareness about nature and environment conservation.

### World Environment Day at ONGC Videsh

World Environment Day was celebrated at ONGC Videsh with the commitment to “Beat Plastic Pollution”. Managing Director and CEO, Mr. Narendra K. Verma, while addressing the gathering, encouraged all employees to re-dedicate all employees for adopting international best practices for sustainable development.

Talking on the above theme, MD in his clear actionable message not only directed ONGC Videsh to prohibit the use of plastic water bottles, disposable cups, plastic folders, etc., but also advised all employees to avoid the usage of the same.



*Celebrating World Environment Day at ONGC Videsh with tree plantation drive in Tomsk, Russia*





## Our People, **Our Strength**

### Our human capital

***We believe that our people are our torchbearers to a path of excellence.***

ONGC Group strives to build a work culture with a strong value system based on the principles of transparency, inclusivity and diversity. We understand that an organization's human capital is its strongest pillar in creating and maintaining the economic value of the organization. Our objective is to empower and inspire our employees by providing them with continued learning and development opportunities, periodic incentives and benefits, and constant knowledge creation.

ONGC Group has a well-structured human resource department and effective HR policies in place to retain talent and promote human capital development. The HR Manual and Code of Conduct define organization-level policies which our employees need to comply with. These policies are designed to communicate the ethical values which ONGC Group aims to imbibe across the workforce for a successful work culture. The details of our current human capital are provided below:

### ONGC Group : Workforce Headcount Trend

Workforce Headcount	FY'16	FY'17	FY'18
ONGC + ONGC Videsh	33,927	33,660	32,265
MRPL	1,812	1,917	1,916
OMPL	465	457	476
OPaL	587	774	951
OTPC	68	66	74

Table 34: Workforce Headcount at ONGC Group

### ONGC and ONGC Videsh: Total Workforce by Age group

Age Group	SC		ST		OBC		GN		Total Nos	
	Nos	%	Nos	%	Nos	%	Nos	%	Nos	%
< 30	626	12.66	427	13.07	1,809	27.50	2,303	13.18	5,165	16.01
30-50	1,803	36.45	1,523	46.60	3,082	46.85	4,654	26.64	11,062	34.28
50-60	2,517	50.89	1,318	40.33	1,688	25.66	10,515	60.18	16,038	49.71
Grand Total	4,946	100.00	3,268	100.00	6,579	100.00	17,472	100.00	32,265	100.00

Table 35: Total Workforce by Age group



ONGC and ONGC Videsh					
Total Workforce by Employment type, Employment Contract and Region broken down by gender					
SECTOR	Gender	Workforce Strength as on 31-03-2018			
		Regular	Tenure	Term	Deputation In
01- Headquarters	Male	3,216	2	16	1
	Female	526	-	-	-
01- Headquarters Total		3,742	2	16	1
02- Mumbai Sector	Male	6,893	80	1	1
	Female	608	3	2	-
02- Mumbai Sector Total		7,501	83	3	1
03- Western Sector	Male	9,197	51	-	-
	Female	401	1	-	-
03- Western Sector Total		9,598	52	-	-
04- Eastern Sector	Male	5,624	15	-	-
	Female	316	1	-	-
04- Eastern Sector Total		5,940	16	-	-
05- Southern Sector	Male	3,618	482	1	10
	Female	240	8	1	-
05- Southern Sector Total		3,858	490	2	10
06- Central Sector	Male	1,541	7	1	2
	Female	85	-	1	-
06- Central Sector Total		1,626	7	2	2
Grand Total		32,265	650	23	14

Table 36: Total Workforce by Employment type, Employment Contract, Region and Gender

As workforce demographics across the world are shifting with the emergence of global markets, ensuring workplace diversity has become a business necessity. ONGC Group continuously strives to improve its human resource management strategy by strengthening the ability to attract diverse and qualified employees. We believe that it is critical to implement inclusive recruitment practices to ensure optimal acquisition of talent. To promote a healthy

organizational culture, we strive to maintain diversity in our workforce across age groups, gender, and region of employees, which is reflected in our hiring practices. Our objective is to imbibe the values of embracing change and diversity in our organizational policies and practices, which is reflected in our workforce. The details on the breakup of current workforce by age group, gender and region across ONGC Group is provided below:



ONGC and ONGC Videsh				
Total number and rate of employee turnover by Age Group, Gender and Region & Number of New Hires during FY'18				
Parameters		Employee Turnover during FY'18		
		Total Separations	New Hires	Rate of Turnover
Age Group	< 41 years	119	918	<b>Attrition= 0.4%</b> (Resignations/ Average Manpower)
	41-45 years	3	3	
	45-50	7	1	
	50-55	32	4	
	55-60	2,135	6	
	<b>Total</b>	<b>2,296</b>	<b>932</b>	
Gender	Male	2,173	833	<b>Employee Turnover= 7%</b> (Total Separations/ Average Manpower)
	Female	123	99	
	<b>Total</b>	<b>2,296</b>	<b>932</b>	
Region	Headquarters	314	46	<b>Average Manpower</b> during the year: 32,946
	Mumbai Sector	499	245	
	Western Sector	636	251	
	Eastern Sector	490	80	
	Southern Sector	204	272	
	Central Sector	153	38	
	<b>Total</b>	<b>2,296</b>	<b>932</b>	

ONGC and ONGC Videsh				
ONGC and ONGC Videsh: Breakdown of Employees per Employee Category according to Gender and Minority group				
Employee Category	Total Strength as on 31-03-2018	Gender		Minorities
		Male	Female	
<b>Executives</b>	20,965	19,475	1,490	1,834
<b>Non-Executives</b>	11,300	10,614	686	987
<b>Grand Total</b>	32,265	30,089	2,176	2,821
		93%	7%	9%

Table 37: Total number and rate of employee turnover- ONGC and ONGC Videsh



We believe in workforce that comprises of a good mix of both seasoned and youthful employees. From young professionals to experienced employees, members of different generations are helping us further build our business. Following is the age wise division of our employees working at executives and non-executive positions.

## Age group wise division of employees at ONGC and ONGC Videsh

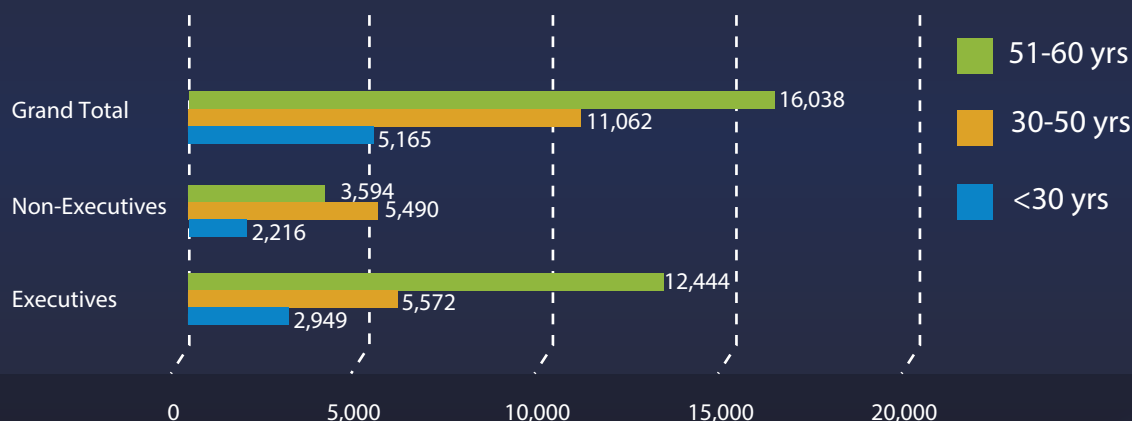


Table 38: Employee categories - ONGC and ONGC Videsh

MRPL					
Total number and rate of employee turnover by Age Group, Gender and Region & Number of New Hires during FY'18					
Parameters		Employee Turnover FY'18			
		Total Separations	Only Resignations	New Hires	Rate of Turnover
Age Group	< 30 years	3	3	12	<b>Attrition= 0.31%</b> (Resignations/ Average Manpower)
	30-50 years	4	3	9	
	>50 years	13	-	-	
	<b>Total</b>	<b>20</b>	<b>6</b>	<b>21</b>	
Gender	Male	16	4	21	<b>Employee Turnover= 1.04%</b> (Total Separations/ Average Manpower)
	Female	4	2	-	
	<b>Total</b>	<b>20</b>	<b>6</b>	<b>21</b>	
Region	Mangalore	19	6	18	<b>Average Manpower</b> during the year: 1919
	Bangalore	1	-	3	
	Mumbai	-	-	-	
	Delhi	-	-	-	
	<b>Total</b>	<b>20</b>	<b>6</b>	<b>21</b>	

Table 39: Employee turnover – MRPL





OMPL				
Total number and rate of employee turnover by Age Group, Gender and Number of New Hires during FY'18				
Parameters		Employee Turnover FY'18		
		Total Separations	New Hires	Rate of Turnover
Age Group	< 41 years	12	29	<b>Attrition= 2.57%</b> (Resignations/ Average Manpower) <b>Employee Turnover= 2.57%</b> (Total Separations/ Average Manpower)
	41-45 years	0	0	
	46-50 years	0	0	
	> 51 years	0	0	
	<b>Total</b>	<b>12</b>	<b>29</b>	
Gender	Male	10	27	<b>Average Manpower during the year: 466</b>
	Female	2	2	
	<b>Total</b>	<b>12</b>	<b>29</b>	

Table 40: Employee turnover – OMPL

OPaL				
Total number and rate of employee turnover by Age Group, Gender and Number of New Hires during FY'18				
Parameters		Employee Turnover FY'18		
		Total Separations	New Hires	Rate of Turnover
Age Group	< 41 years	36	197	<b>Attrition= 4.73%</b> (Resignations/ Average Manpower) <b>Employee Turnover= 4.98%</b> (Total Separations/ Average Manpower)
	41-45 years	1	7	
	46-50 years	2	7	
	> 51 years	-	5	
	<b>Total</b>	<b>39</b>	<b>216</b>	
Gender	Male	38	212	<b>Average Manpower during the year: 782</b>
	Female	1	4	
	<b>Total</b>	<b>39</b>	<b>216</b>	

Table 41: Employee turnover – OPaL

OTPC				
Total number and rate of employee turnover by Age Group, Gender and Region & Number of New Hires FY'18				
Parameters		Employee Turnover FY'18		
		Total Separations	New Hires	Rate of Turnover
Age Group	< 41 years	1	7	<b>Attrition= 2.7%</b> (Resignations/ Average Manpower) <b>Employee Turnover= 2.7%</b> (Total Separations/ Average Manpower)
	41-45 years	-	-	
	46-50 years	1	2	
	51-55 years	-	-	
	56-60 years	-	1	
	<b>Total</b>	<b>2</b>	<b>10</b>	
Gender	Male	2	9	<b>Average Manpower during the year: 74</b>
	Female	-	1	
	<b>Total</b>	<b>2</b>	<b>10</b>	
Region	Headquarters	0	4	
	Palatana Tripura	2	6	
	<b>Total</b>	<b>2</b>	<b>10</b>	

Table 42: Employee turnover – OTPC



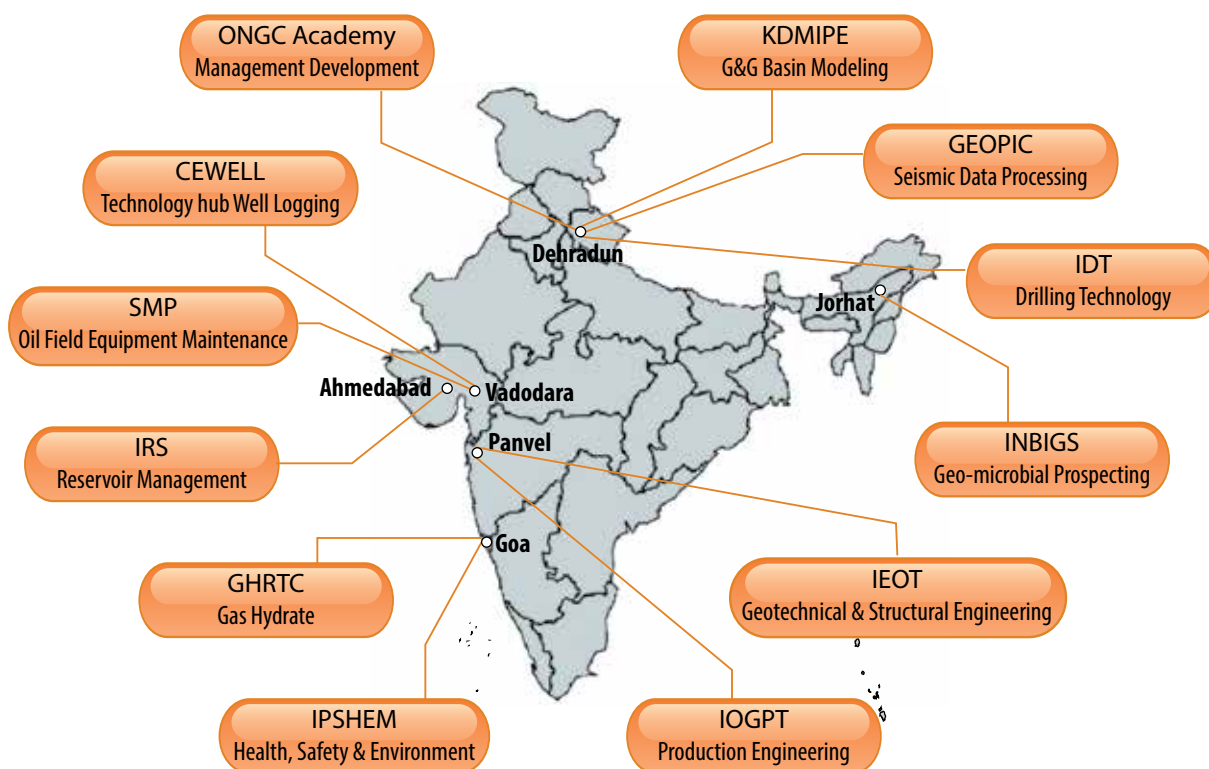


## Workforce Competency and Engagement

ONGC Group attaches utmost importance to the development of its human resources. Our continuous training programs are developed to build skills across various domains such as business process and behaviour, technology ethics and are designed to keep the competencies of our experienced employees, current and relevant to the business needs. Through our effective

systems and processes for knowledge management, we are striving to create an ecosystem for knowledge-sharing across the Group. These programs not only help the employees to remain abreast with the new developments in the sector, but also help them to build a lifelong career trajectory at ONGC Group. These trainings are conducted by various training institutions of ONGC.

### Institutes of ONGC



### FY'18 Highlights - Trainings

- 167,369 executive man-days spent on training 17,947 executives
- 17,898 non-executive man-days spent on training 5,319 non-executives

In order to absorb new and emerging technological advancements pertaining to oil and gas exploration and production, 1,066 training programmes, including 34 foreign faculty programmes pertaining to functional disciplines, were organized by ONGC with the best of faculties from India and abroad, during the year. To solidify the understanding of our employees on business fundamentals, global business environment and leadership skills, 11.9% of ONGC and ONGC Videsh Executives of E-5 level and above were provided with an opportunity to participate in trainings through Centres of Excellence viz. IITs, IIMs, NITs, ICAI etc. To provide intelligence



on innovations pertaining to technologies, products, and processes, along with strategic insights, in the upstream and downstream processes in the oil and gas industry, 14 training programmes were conducted through foreign faculty,

through which 302 participants got the requisite exposure. During the year, OTPC has also constructed a training center, and planning for external trainings through collaborations with reputed institutions is ongoing.

ONGC															
Total number of training programmes and training man-days during FY'18															
			Non-Executives						Executives						Total Man-days
Sl.	Name of Institute	No. of Programmes organized	No. of Non-Executives	Non-Executives Man-days	SC	ST	OBC	Female	No. of Executives	Executive Man-days	SC	ST	OBC	Female	
1	ONGC Academy	276	0	0	0	0	0	0	8,876	134,015	1,284	489	1,072	749	13,4015
2	SDC, Mumbai	31	748	1,620	134	56	264	146	352	673	61	26	42	48	2,293
3	SDC, Chennai	41	396	1,570	91	13	189	23	536	1,607	125	20	137	28	3,177
4	SDC Sivasagar	38	624	3,254	43	81	345	10	371	933	32	48	183	125	4,187
5	SDC Vadodara	104	1,135	3,586	154	164	366	81	1,176	2,109	146	98	132	37	5,695
6	IOGPT, Panvel	40	0	0	0	0	0	0	684	5,392	91	50	345	49	5,392
7	IPSHM, Goa	212	1,544	4,529	195	240	481	22	3,378	8,318	490	223	191	26	12,847
8	SMP, Vadodara	160	450	1,758	78	70	202	20	782	5,215	143	99	159	21	6,973
9	IDT, Dehra Dun	164	420	1,581	41	59	167	2	1,792	9,107	288	130	439	40	10,687
<b>Total</b>		<b>1,066</b>	<b>5,319</b>	<b>17,898</b>	<b>736</b>	<b>683</b>	<b>2,014</b>	<b>304</b>	<b>17,947</b>	<b>167,368</b>	<b>2,660</b>	<b>1,183</b>	<b>2,689</b>	<b>1,164</b>	<b>185,266</b>

Table 43: Training man-days at ONGC

Training in overseas between April 2017 to March 2018 for ONGC and ONGC Videsh								
Sl.	Name of Institute	No. of Programmes organized	No. of Executives	Executive Man-days	SC	ST	OBC	Female
1	ONGC Academy	34	381	6,131	61	35	52	18
<b>Percentage</b>					<b>16%</b>	<b>9.18%</b>	<b>13.64%</b>	<b>4.72%</b>

Table 44: International trainings – ONGC and ONGC Videsh

During the year, ONGC Group also conducted various business games to build the business acumen of its executives in a competitive scenario under simulated business constraints. As business games involve constant interaction with group members and solving problems using suitable strategies, it improves the leadership and management skills of employees. On the same lines, Fun Team Games (FTG) were organized for employees to inculcate Multi-disciplinary Team concept and spirit of belongingness to the organization. Around 476 employees participated in the event which was very well received and appreciated by them.



ONGC Group believes that the quality of benefits for our employees is a key factor in improving employee retention and enhancing their productivity. With this perspective, ONGC Group extends various welfare benefits to its employees and their families in the form of comprehensive medical care, education, housing and social security. In addition

to the benefits for full-time employees, there are collective bargaining agreements in place under which 32% of ONGC and ONGC Videsh employees are covered. The agreements cover matters related to pay, allowances, perks, social security and employee welfare. The details of welfare benefits for full time employees of ONGC Group are provided below:

ONGC and ONGC Videsh	OTPC
Type of benefits offered to full time employees	
Group Term Life Insurance	Group Term Life Insurance
Employee Deposit Linked Insurance	Annual Health Check-Up
Personal Accident Policy	Personal Accident Policy
The Post Retirement Benefit Scheme (PRBS) Trust	Group Mediclaim Policy
Medical Benefit Scheme for the Regular Employee	Medical Reimbursements
The Composite Social Security Scheme (CSSS)	Disability Leave
Disability Leave	Paternity Leave
Paternity Leave	Children Education Allowance
Child care leave	Leave Travel Allowance
Child adoption Leave	Maternity Leave
Maternity Leave	Shift Allowance
Superannuation Fund	Gratuity
Gratuity Fund Trust	Provident Fund
Provident Fund	National Pension Scheme
Employee Pension Scheme	Reimbursement of Newspaper and Magazine Expense
Sahyog Trust (ex-gratia financial grant for sustenance, medical assistance, treatment, rehabilitation, education, marriage of female dependent, alleviation of any hardship or distress)	
Asha Kiran Scheme (for emergency needs of the ex-employees retired prior to January 01, 2007)	
Performance linked incentive	
Employee loans and education loans	

Table 45: Employee benefits - ONGC, ONGC Videsh and OTPC

ONGC Group has been persistent in promoting gender diversity in its workforce and promoting women empowerment within the organization. As of March 2018, 6.7% of ONGC's workforce comprised of women employees, with nearly 2,208 permanent women employees. We are continuously putting efforts in improving the gender balance of our workforce by putting in place women-centric HR policies and promoting an inclusive work culture. With this objective, various programmes on women empowerment and development, including programmes on gender sensitization, were organized during the year.

Over 2,000 employees across ONGC underwent online gender sensitization module. ONGC actively supported and nominated its women employees for programmes organized by reputed agencies.

In line with the requirements of the sexual Harassment of Women at the Workplace (Prevention, Prohibition & Redressal) Act, 2013, ONGC Group has an Anti-Sexual Harassment Policy. In ONGC and ONGC Videsh, during FY'18, the Internal Complaint Committee (ICC) has received four complaints on sexual harassment. Reports of ICC have been submitted in all the cases. There were no cases filed on Sexual Harassment of



Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 in OMPL, MRPL, OTPC and OPaL.

At ONGC Group, we strongly believe that a good work-life balance for employees can improve staff motivation, increase staff retention rates, reduce absence, attract new talent, and reduce employee stress. Some of the benefits provided to employees to support the work-life balance of

our employees are:

- Paid maternity leave and extended maternity leave
- Paternity Leave
- Child care leave
- Sabbatical for Higher Education
- Flexi-hours
- Adoption leave
- Provision of crèche facility at all work centres

ONGC			
Number of employees that took parental leave in FY'18		Number of employees who returned to work after parental leave	
Total		Total	
205		195	
MRPL			
Number of employees that took parental leave in FY'18		Number of employees who returned to work after parental leave	
Male	Female	Male	Female
128	11	128	5
OMPL			
Number of employees that took parental leave in FY'18		Number of employees who returned to work after parental leave	
Male	Female	Male	Female
19	3	0	0
OTPC			
Number of employees that took parental leave in FY'18		Number of employees who returned to work after parental leave	
Male	Female	Male	Female
5	0	5	0

Table 46: Parental leave – ONGC, MRPL, OMPL, OTPC

A structured and a robust employee grievance redressal mechanism is in place for employees and the CDA (Conduct, Discipline and Appeal) rules have been outlined along with the procedures to support employees to communicate their grievances to the management. ONGC's Grievance Management System for employees provides a three-tier channel for grievance redressal with an Independent Appeals Committee at Corporate Level, which is chaired by an external professional to ensure transparency and justice. The Appeals Committee situated at Corporate Office can also be accessed

for settlement of grievances in case the location Channels are not effective in resolving the grievance. Further, provision for representation through Chief Liaison Officers of SC/ST/OBC in the Appeals Committee has also been in-built to protect the interest of reserved category employees. ONGC has also implemented an effective online response mechanism (<https://grievance.ongc.co.in>) since 2015 to enable all stakeholders including employees, to register and get online redressal to their grievances related to any operational wing. For ONGC Group, our people are our greatest assets. We



treat the information about human capital with similar rigor and accountability as is afforded to our financial capital. We are striving to understand employee capacity as well as the potential and quality of our leadership for continuous improvement of our organizational culture.

## Human rights

ONGC Group has a strong commitment towards ensuring high standards in anti-corruption, labour rights, and human rights, in alignment with international best practices. We take consistent measures to undertake periodic review of our human rights practices to update them in a timely manner. Across ONGC Group, we maintain our systems and processes in a manner that minimizes human rights violations in our operations as well as our supply chain. We ensure that regular due diligence is undertaken to prevent exposure to risk arising out of human rights violations.

ONGC Group employees represent people from diverse nationalities, age groups, cultures and all levels of physical ability. We follow a multi-pronged approach to promote diversity and inclusion within the group. At ONGC Group, we believe in acting ethically and with transparency in all dealings

with employees and contractors. Employees are encouraged to report any instances of violations of the human rights. We ensure compliance with all applicable regulations related to human rights such as Payment of Wages Act, 1936; Minimum Wages Act, 1948; Equal Remuneration Act, 1976; Industrial Dispute Act, 1947; ESI Act, 1948; Employees Provident fund and Miscellaneous Act, 1952; Contract Labour (Regulation & Abolition) Act, 1970; Child Labour (Prohibition and Regulation) Act, 1986. As a responsible principal employer, ONGC Group ensures that contractual labour is treated fairly and immediate corrective actions are taken in response to any complaints or disputes. Various in-house policies of ONGC Group such as service rules, leave rules, gratuity rules, CPF rules, and other employee welfare measures like house building advance, conveyance advance, medical facilities, and education loans also confirm to Human Right values. ONGC Group is also fully committed to the principles of United Nations Global Compact (UNGC) on human rights, and ensures adherence to these principles, in all its operations.

The key principles on which human rights principles of ONGC Group are based on include:

Child Labour	Forced and Bonded Labour	Non-Discrimination	Operational Responsibility
ONGC Group prohibits child labour in its business activities. In order to ensure this, every prospective employee is required to submit a proof of age including contractual employees. In addition there are regular internal and external audits. The Company also encourages its suppliers to work towards a no child-labour policy. There were no cases of child labour reported within the Organization or came to Company's notice involving its suppliers during FY'18.	ONGC Group respects the dignity of labour and denounces all forms of forced and compulsory labour. The Group therefore, ensures that its terms of employment are transparent and voluntary. The Company encourages its suppliers and service providers to adhere to a no forced and compulsory labour Code. No incident of forced or compulsory labour at the suppliers end came to group's notice during this reporting period.	ONGC Group prohibits any form of discrimination or harassment on the basis of age, caste, sex, religion or any other ground. Equal remuneration is provided to the male and female members of the workforce for the similar set of work. During FY'18 no case of discrimination was reported to the Ombudsman's Office.	At ONGC group, implementation and monitoring of aforesaid Human Rights policies and Code of Conduct lies on the Human Resource (HR) Head at each facility reporting to the Corporate HR Head. HR Head oversees the implementation of the human rights policies and takes responsibility of resolving any violations. ONGC has Whistle Blower Policy and a dedicated Ombudsman office for addressing employee grievances in neutral and unbiased manner.

Human rights principles - ONGC Group





## Safety and Security

Safety and security has consistently been among the core values of ONGC Group. Maintaining plants and equipment to be safe, reliable, secure and efficient is not only essential for mitigation of operational hazards, but also for the creation of a productive and hospitable workplace. Oil and gas operations, being susceptible to catastrophic hazards owing to the slightest neglect, must develop, implement and execute coordinated plans together with managerial control to ensure plant integrity, equipment reliability, security of installations and safety of all associated stakeholders. At ONGC Group, all aspects of operations including occupational safety and security have been comprehensively designed, constructed, tested, operated, inspected and maintained in a sustainable and systematic manner, thus ensuring safety of our workforce, plants and equipment.

### Occupational Safety

Safety is the fulcrum of all operational activities at ONGC Group. There is a strong commitment from top management towards safety and use of effective risk management tools and techniques. We ensure that a safe and healthy work environment is provided to our workforce. All the functional heads, supervisors, workmen and contractual employees are empowered to exercise safe practices in everyday work and also in operational planning and development activities. ONGC Group has identified key areas to further strengthen its safety and security domain, which include occupational health & safety management system and environmental protection & conservation.

At ONGC Group, leaders establish the vision, communicate the key principles of safety, provide the requisite tools and resources, engage the workforce, monitor progress, adapt to changes and recognize accomplishments related to occupational safety. All employees are inculcated with a sense of personal responsibility in preventing injury to themselves, their fellow workers and the public in general. Strict compliance with all statutory, and other applicable

requirements related to occupational health and safety is ensured across operations.

In its endeavour to achieve mission "Zero Fatality", ONGC had adopted "Ten Safety Rules", as below, which serve as the cornerstone of safety across the organization.

1. Keep Your Workplace & Environment Clean
2. Do Not Use Mobile Phones in Operational Areas
3. Safe Handling of Loads
4. Safe Working at Height
5. No Smoking, Use of Illegal Drugs, Consumption of Alcohol
6. Obtain Authorisation Prior To Bypassing 'Safety Critical Equipment'
7. Ensure Safe System of Work
8. Work with a Valid Permit when Required
9. Protect Yourself by using PPE
10. Drive Safely

Various key executives, line managers, and HSE managers are entrusted with the responsibility of ensuring the implementation of these rules across installations, rigs, and field operations. To ensure the acquaintance of all employees and contractual workers with these rules, they have been condensed into a handy and user-friendly manual which is available in several regional languages such as Assamese, Bengali, Gujarati, Tamil and Telugu, in addition to English and Hindi. ONGC Group has undertaken proactive measures towards ensuring holistic implementation of these rules across operations, by working progressively with concerned stakeholders. Over 29,000 persons have been trained till date on these safety rules.

Globally recognized HSE Management System is implemented across all work centres. This system is designed to assist employees in understanding the hazards in oil and gas field operations, and to comply with the best safety, health, and environmental practices. All ONGC work centres are ISO 9001, ISO 14001 and OHSAS 18001 complied. ONGC Videsh and MRPL are also certified for ISO 9001, ISO 14001 and OHSAS 18001 at company level. Corporate guidelines on online



incident reporting, investigation and compliance monitoring of various rules and regulations have been developed and implemented for maintaining uniformity throughout the organization in line with international practices. We periodically measure our safety performance through regular monitoring and reporting in line with international standards and practices.

To check the conformity and alignment of activities to prevalent regulations, guidelines, standards and rules, ONGC has instated an all-inclusive audit routine comprising of internal as well as external audits. Internal Safety Audits (ISA) are conducted at regular intervals based on the risk matrix of the functional units to comply with the respective QHSE Management System. In FY'18, a total of 250 ISAs have been conducted. Status of compliance of ISA recommendations is 92% as on 31<sup>st</sup> March 2018. External Safety Audits (ESAs) conducted at ONGC are of the following types:

- Oil Industry Safety Directorate (OISD) audits: OISD is a

technical directorate under the Ministry of Petroleum and Natural Gas which conducts External Safety Audits on regular basis, averaging around 50 ONGC facilities annually. During FY'18, External Safety Audit / Surprise Safety Audit at 34 on-shore installations, 13 off-shore installations and 2 Gas Processing plants were carried out. Additionally, pre-commissioning Safety Audit of Navagam - Koyali pipeline and two units of Hazira Gas processing plant were carried out during FY'18. As on 31<sup>st</sup> March 2018, status of compliance of OISD recommendations is 92%.

- Directorate General of Mines Safety (DGMS): DGMS is a regulatory agency under the Ministry of Labour and Employment, Government of India, in matters pertaining to occupational safety, health and welfare of persons employed in mines (Coal, Metalliferous and oil-mines). It carries out periodic inspections of ONGC onshore facilities. As on 31<sup>st</sup> March 2018, status of compliance of DGMS recommendations is 93%.





The table below indicates the safety performance of the organization:

Parameter	ONGC			ONGC Videsh			MRPL			OMPL		OPaL		OTPC	
	FY'16	FY'17	FY'18	FY'16	FY'17	FY'18	FY'16	FY'17	FY'18	FY'17	FY'18	FY'17	FY'18	FY'17	FY'18
Fatality	9	6	8	2	4	0	0	0	0	0	0	0	0	0	0
LTIF <sup>17</sup>	0.44	0.402	0.47	0.38	0.53	0.13	0	0	0.30	0	0	0	0	0	0
TRIR <sup>18</sup>	0.80	0.92	0.82	1.14	1.49	0.52	0	0.000015	2.55	0.103	0.233	0	0	0	0
Recordable incidents	483	755	631	44	59	19	0	2	3	4	5	3	2	0	0
Lost -days	818	747	1,761.9	214	220	55	0	394	119	0	0	0	0	0	0
Near-miss	6,572	7,153	8,822	11,577	15,732	14,260 <sup>19</sup>	11	72	714	116	221	109	161	204	323

Table 47: Incidents data - ONGC Group

## Process Safety

At ONGC Group, Process Safety Management (PSM) is a critical component of the overall QHSE Management System, which primarily targets prevention and control of events that have the potential to release hazardous materials and energy which result in toxic exposure, fire, explosion, and could ultimately lead to serious incidents including fatalities, injuries, property damage, lost production and environmental damage.

To avoid the occurrence of such incidents, a comprehensive process and technique for hazard management has been instated at ONGC Group. This process and technique is based on a systematic approach for identifying, analyzing, evaluating, and controlling hazards of pertinent processes, carried out by a combination of internal teams and external experts with proficiency in engineering and process operations. These management techniques are updated and revalidated periodically according to the best industry practices, as applicable.

## Contractor Safety

ONGC Group has established a comprehensive and systematic contractor safety management program to ensure well-being and occupational safety of all partners, contractors, and employees. It is targeted towards reducing the damage to facilities and equipment, and reducing the number of occupational safety related incidents in order to curtail project overruns and regulatory implications.

## Safety Training

To enhance the competency of employees and contractors engaged with ONGC Group various capacity building programs have been established. ONGC has invested heavily into ensuring safety of all employees using a combination of proactive and reactive measures. The primary objective of these initiatives is to enable employees to effectively identify hazardous situations, ensure proper mitigation and control measures, prevent incidents, injuries and illnesses, and understand their responsibilities if confronted with a potentially dangerous situation at work.

At ONGC, training needs assessment is carried out centrally by the ONGC Academy, Dehradun and Institute of Petroleum Safety, Health and Environment Management (IPSHEM), Goa which serve as the organization's specialized training arms. ONGC also has its own Regional Training Institutes (RTIs) for delivery of training programmes to its employees. Upon identification of training needs, both ONGC Academy and IPSHEM publish yearly calendar. These institutes cater to the training requirements of the overall ONGC Group.

Instructor-led classroom safety training sessions (practical and vocational) are conducted by industrial experts from external agencies as well as in-house faculty comprising of functional heads, department heads, and line managers, among others. Additionally, other initiatives targeted towards capacity building and awareness of employees have been

<sup>17</sup> Lost time injury frequency (LTIF): The number of lost time injuries (fatalities + lost work day cases) per million hours worked.

<sup>18</sup> Total recordable injury rate (TRIR): The number of recordable injuries (fatalities + lost work day cases + restricted work day cases + medical treatment cases) per million hours worked.

<sup>19</sup> ONGC Videsh includes reporting of unsafe acts and unsafe conditions, along with near miss incidents.



## ONGC CONTRACTOR SAFETY MANAGEMENT PROGRAM

	<b>SAFETY MANAGEMENT PLAN</b> Contractor develops a written plan that identifies specific objectives and documents necessary procedures with clearly defined accountabilities, performances measurements and evaluation criteria, alongside provisions for meetings regulatory requirements.		<b>CONTRACTOR SELECTION PROCESS</b> Prior to selection and on-boarding, the contractors exhibits that their employees are qualified to perform the work to be done, based on a comprehensive review and understanding of the scope of work, and associated HSE legal requirements.
	<b>INBUILT HSE CLAUSES IN BID PACKAGE</b> All bid packages prepared by ONGC include requisite HSE related clauses based on legal regulation, applicable and accepted industry HSE practices, requirements of management systems and international standards, etc.		<b>PRE-JOB VERIFICATION</b> Contractors thoroughly acquaints their employees with the location, facility, personnel, management program, process hazards, facility requirement and other information before commencement of work.
	<b>SAFETY ORIENTATION OF THE CONTRACTUAL WORKFORCE</b> Contractors are mandated to identify and present to their employees various important safety rules, applicable to working in ONGC facilities. This information may be communicated through written material, verbal instructions, presentations, etc.		<b>VERIFICATION OF PRE-REQUISITE MANDATORY TRAINING FOR CONTRACTORS</b> ONGC validates the completion of all mandatory trainings for contractor, fitness/medical test certificates by competent agencies, etc.
	<b>MONITORING WHILE WORK IN PROGRESS</b> ONGC continuously supervises and monitors contractors' activities during execution of projects. Periodic reviews are jointly conducted with the contractors' supervisors. Random work-site inspections and mock drills are conducted by ONGC.		<b>WORK EVALUATION</b> At the completion of the contracted work, ONGC evaluates the overall performance of the contractors, and determines the safety results to qualify the contractors as eligible for bidding in future works.

initiated by ONGC, which include awareness and wellness programmes, safety committee meetings, toolbox talks, and a variety of other engagement activities involving various stakeholders critical to operations.

Under Mines Vocational Training (MVT) Rules, 1966, trainings are provided to full time employees as well as contractual workers involved in working in mines on the surface or in opencast, with a view to make them aware of the dangers of working in mines so that they can work safely. A total of 2,034 personnel (523 ONGC employees and 1,511 Contract persons) have been imparted trainings during FY'18.

Details of key seminars and trainings related to occupational safety conducted during the reporting period are as under:

- As per the mandate given by Ministry of Environment, Forest and Climate Change (MoEFCC) for creating awareness towards Environmental, Safety and Health aspects of Volatile Organic Compounds (VOCs) & Hydrocarbons, Corporate HSE and HSE - Cauvery Basin in technical collaboration with Central Pollution Control Board (CPCB) organized a two day training program on "Volatile Organic Compounds & Hydrocarbons: Monitoring and Management" at Chennai from 17<sup>th</sup> to 18<sup>th</sup> August 2017 to sensitize the Scientists, Technocrats, Environmentalists, Consultants and other concerned communities. This was second such program conducted on VOCs. Volatile Organic Compounds (VOCs) are

organic chemicals that have a high vapor pressure at ordinary room temperature, and many VOCs are toxic for environment and health. Lectures were taken by experts in this domain from CPCB, NEERI and IIT-M.

- To create awareness among the updated OMR-2017, Corporate HSE in association with Mehsana Asset organized a two day workshop on "Oil Mines Regulations - 2017" named as "Viniyaman Sangam" from 15<sup>th</sup> to 16<sup>th</sup> September 2017. The first day session was chaired by Director General-DGMS, Mr. P.K. Sarkar, and the second day session was chaired by the then Director (Onshore) Sh. Ved Prakash Mahawar. As the new OMR-2017 is OISD standard based, ED - OISD also attended the program which was also attended by more than 110 participants including officials from DGMS, OISD, CHSE and Key executives and officers from Mehsana, Ahmedabad, Ankleshwar, Cambay and Jodhpur Assets.
- A two day workshop on "Transformation of the Safety Culture in ONGC through Behavior Based Safety (BBS) Process" was organized by Corporate HSE on 5<sup>th</sup> and 6<sup>th</sup> September 2017 at Deendayal Urja Bhawan, inaugurated by Director (Exploration)-I/c HSE. The workshop was conceptualized by Corporate HSE to take a step further towards strengthening and improving safety culture in ONGC in the coming years and was attended by HSE personnel from various work centers. Leading





BBS companies like DuPont, ERM, Ernst & Young, Cholamandalam, Dekra Insight etc. gave detailed presentations on implementation of BBS in ONGC.

- ONGC participated in Global HSE 2017 International Conference & Exhibition for Health, Safety & Environment at Hyderabad from 21<sup>st</sup> to 22<sup>nd</sup> September 2017. Conference was held in association with the Ministry of Labour and Employment, Government of India, National Safety Council, PETROTECH Society, OISD and major corporate organizations, trade bodies & government entities. Director (Onshore), ONGC gave keynote address to the gathering of organizational leaders, senior managers and HSE practitioners. ONGC representatives also held panel discussions and gave technical presentations at the conference.
- A workshop on Oil Mines Regulations-2017 was organized at Rajahmundry on 26<sup>th</sup> & 27<sup>th</sup> February 2018 where nearly 240 officers and staff from all southern work centres attended to understand the nuances of the recently promulgated Regulations. This was second such workshop, the first one was held at Mehsana in September 2017.
- Corporate HSE organized a conference on new ISO standard 2015 on 22<sup>nd</sup> December 2017 at Delhi office for preparation of QHSE documents and implementation. Lectures were given by internal faculty to take up the issues regarding changes in standards.

The average safety training hours for ONGC and its group companies are indicated in the table below:

Average training hours on safety – Full time employees			
Parameter	FY'16	FY'17	FY'18
ONGC and ONGC Videsh (man-days)	12,029	12,107	12,847
MRPL	-	11,144	11,568
OPaL	-	1,872	3,960
OTPC	275	389	984

Table 48: Average training hours spent on safety trainings - ONGC Group

## Case Study: E&P Park

For providing first-hand knowledge and training to students from schools and colleges about the activities under exploration and production, an Exploration & Production (E&P) Park was constructed at Ankleshwar - ONGC Colony. Geological Model, Oil Samples, Core Samples, Artificial Lift Model, a workover rig, sucker rod pump, mud pump, CMT module, group separator, test separator, gas flaring facility, heater treater, x-mas tree, knock out facility & flexible water tank were shown to provide insights in E&P operations and equipment. ONGC plans to use the facility to give training to local ITI students, on-the-job and MVT trainings.

## Case Study: Oil Spill Management – Response and Combat

ONGC's E&P operations, especially in offshore areas, face high risks of Oil Spill incidents which can lead to disastrous consequences to environment and economy. To handle such incidents, depending upon the severity, ONGC has three tier preparations:

- TIER – I (up to 700MT)
- TIER – II (up to 10,000MT) facilities are in place to handle of oil spillage using its oil spill response equipment kept on different Multi- Support Vessels
- For larger spills (TIER-III) arrangements with M/s Oil Spill Response Limited, UK are in place.

Further, ONGC is also involved in following exercises regarding oil spill management:

### a) Mock Drills and Exercises

Exercise "Prasthan" was conducted by Regional Contingency Committee (RCC, West) on 21<sup>st</sup> to 22<sup>nd</sup> November 2017 by activating Regional Contingency Plan (RCP), Western Offshore. The purpose of Regional Contingency Plan (W) is to outline procedures for coordinated joint action, should a major emergency occurs during peacetime, involving installations of the Exploration & Production (E&P) member operators off the Western Coast of India within the Exclusive Economic Zone (EEZ). RCC comprises of 12 agencies



viz. Navy, ICG, Air Force, ONGC, JV, Cairn, DG Shipping, MbPT, JNPT, Govt of Maharashtra, Gujarat, and SIB.

**b) Oil Spill Exercise by Indian Coast Guard**

An Oil spill Response exercise was conducted by Indian Coast Guard on 13<sup>th</sup> & 14<sup>th</sup> March 2018 off Kakinada Coast in Eastern Offshore. ONGC, Reliance India Ltd., Vedanta Cairn India Ltd., Kakinada Sea Ports Limited, District Disaster Management Authority and

Andhra Pradesh Pollution Control Board participated in the exercise.

c) Further, mock drills are being regularly conducted at Offshore Process Complexes, Offshore Drilling Rigs, FPSO (Floating Production Storage and Offloading) and Multi Support vessels to check the level of preparedness, identify grey areas and take corrective actions.



*Fire Fighting training at ONGC's premier safety institute - IPSHEM, Goa*



*ONGC regularly conducts mock drills at various work-centres periodically to be prepared for any eventuality*



## Security

Ensuring security for the workforce is the first and foremost concern for ONGC Group. ONGC is committed to secure its men, material, data and operations. A dedicated Security Policy at the corporate level ensures full-proof physical security for installations and workers across all work centres. This policy assesses present threats and vulnerabilities, and ensures infallible security for installations and workers across all work centres. This policy also delineates the organization's security philosophies, strategies, goals, programs, and processes. It is used to guide the organization's development and direction in these areas in a manner that is consistent with the company's overall business plan. Industrial Security Inspection Team of Intelligence Bureau (Ministry of Home Affairs, Govt. of India) is mandated to carry out periodic security inspection of our installations and internal security audits are frequently conducted by the senior officers of ONGC Group to identify gaps and areas of improvements.

The Onshore Assets of ONGC are protected by various Government Security Forces like Assam Armed Police Bn. (Assam), CISF (Assam, Gujarat, Mumbai, Andhra Pradesh, and Dehradun), SRPF (Gujarat), APSPF (Andhra Pradesh), TSR (Tripura) etc., who work under the overall supervision of ONGC departmental Security. Additionally, at some locations, contractual security guards/ex-servicemen are deployed for the security of ONGC Work Centres. The choice of the force for guarding a particular ONGC Work Centre depends on the sensitivity and threat perception, which is carried out and reviewed periodically. The overall responsibility of securing the Offshore Installations of ONGC lies with Indian Navy/Indian Coast Guard and is coordinated by Flag Officer Offshore Defence Advisory Group (FODAG), situated at Mumbai. Seamless Surveillance of Offshore Development Areas is done through Vessel and Air Traffic Management System (VATMS), installed at both the East Coast (Kakinada) and West Coast (Mumbai). Besides, an area extending up to 500 meters around ONGC offshore structures/platforms is identified as notified/designated area and any unauthorized access to offshore structures/platforms in this zone is liable for prosecution. On board security is the responsibility of ONGC and ONGC has deployed Marine Security Supervisors (MSS), who are ex-naval sailors for the same. Furthermore,

modern security gadgets like CCTVs, Flap barriers etc. are also in various stages of installation.

Given the global nature of operations at ONGC Videsh, it is imperative to ensure the adoption of comprehensive security practices to safeguard its employees at all times. ONGC Videsh holds contract with International SOS (ISOS), who along with consortium partner Control Risk provides 'Comprehensive membership for medical and security emergencies for ONGC Videsh expats and travelers' along with travel tracker. ISOS sends travel advisory to each individual based on ticket booking. Apart from this the employees can get latest updates through ISOS app on mobiles or contacting their call centres worldwide. In case of any security or medical emergency, ISOS is obliged to provide services at cost to company.

Other key initiatives taken by ONGC for improvement of operational security are as below:

- Besides periodic reviews on security matters at Corporate level and implementation of OSCC's decision, Annual Security Conference followed by a Review Meeting of Security executives is conducted every six months to deliberate upon various issues for improving security provisions and to curb theft/pilferage of crude oil/other material in the affected areas and arrests of culprits thereof, monitoring trials in the Courts, incidents of sabotage, if any, etc.
- Sensitizations of the Coastal population, especially fishermen, is being conducted with the help of Security agencies on regular basis by ONGC on Coastal and Offshore Security, including theft from unmanned platforms, as it can result in serious collateral damages, etc. Short Sensitization film for fishermen community has been translated (sub-titles) in six languages viz., Marathi, Gujarati, Tamil, Telugu, English & Hindi for making it useful on Pan-India basis in all ONGC operational area. It is screened during civic action/ community programme.
- The Oil Sector Infrastructure Protection Plan (OSIPP) approved by MoP&NG is already under implementation.





- In view of the continuous threats to Offshore/Oilfield Development Areas (ODAs) and gaps identified by the Security & Intelligence Agencies, the Comprehensive Security Solution (CSS) for the Offshore Assets has been prepared after getting inputs and presentation from M/s. BEL, ECIL and other reputed private security companies on the matter. Board approval has been accorded to the proposal and necessary action is being taken as per the decision of the Board.
- With the help of Police and local administration, special sensitization programmes were organized for villagers residing around the oil fields in Gujarat, Assam and Karaikal. These programmes also included scrap-dealers and brick kiln workers for their sensitization against possible dangers from theft and pilferages of crude/metal parts from ONGC oil wells/establishments. In order to educate the local population about serious environmental, safety and fire hazards involved in crude oil theft and pilferage, presentations were also organized in the villages. The villagers are also being sensitized to various stringent provisions of Petroleum & Mineral Pipelines (Acquisition of Right of use in Land) Amendment Act, 2011 and PNGRB Act 2006, regarding theft, pilferage, tampering and other damages caused to oil and gas pipelines.
- Enterprise Wide Access Control System (EACS), through M/s. BEL, is under implementation. This would help in further strengthening the Access Control and monitoring the incidents of theft & pilferage as well as sabotage.
- Benchmarking of 28 security gadgets for all Work Centres/Installations of ONGC and their procurement has been approved as a part of the implementation of the Oil Sector Infrastructure Protection Plan.
- Oil tankers are equipped with Global Positioning System (GPS) at Ahmedabad, Ankleshwar, Mehsana Asset & Hazira Plant. Similarly, Rajahmundry and Assam Asset are also initiating case to install GPS on oil tankers. Ahmedabad and Mehsana Assets have already introduced GPS system to monitor the movement of Line walkers on our Trunk Pipelines.
- Security and Fire Mock Drills are being conducted regularly in the various Work Centres.



*At ONGC, security and safety in all areas of operations is top priority; Above picture taken during offshore safety and security drill conducted in coordination with Indian Coast Guard at Mumbai offshore*



## Information Security

Digital proliferation has empowered us to access and interact with data and information in innumerable ways and through various systems, applications and devices. Increase in the volume of organizational data means they are further exposed to a slew of other vulnerabilities and compliance violations. ONGC understands the importance of Cyber Security as a domain and has been a pioneer amongst the PSUs to implement commensurate security measures for mitigating the risks emanating from the Cyber World. EC approved Information Security Policy has been in place since 2009 and is being reviewed and updated on a regular basis as per the need. ONGC has also implemented Information Security Management System (ISMS) which is in line with the National Information Security Policy of Government of

India. The data centres of ONGC are ISO 27001:2013 certified, which are audited by both internal and external auditors. ONGC has also dedicated one day as Information Security Awareness day during its annual Security Awareness Week to create awareness on cyber security issues. The CISO team is continuously involved in spreading awareness amongst ONGC employees by organizing sessions on information security. Besides, to inculcate awareness amongst Graduate Trainees of ONGC, lectures are organised for them during induction training at ONGC Academy. Additionally, publishing monthly e-newsletter and conduct of online quiz competitions on information and cyber security etc., using intranet platform are done for awareness generation of the stakeholders concerned.

## Awards and Recognition

- 1 Shri Ram Nath Kovind, Hon'ble President of India, conferred National Safety Awards (Mines) for 2013 and 2014 of Directorate General of Mines Safety in August 2017 in following categories:
  - a) Ahmedabad Oil Mine for Longest Accident Free Period for the year 2013 (Oil Mines producing less than 7 Million cubic meter of oil or oil equivalent gas).



ONGC receiving National Safety Awards (Mines) from Shri Ram Nath Kovind, Hon'ble President of India





- b) Mehsana Production Oil Mine for Lowest Injury Frequency Rate for the year 2013 (per lakh man-shift oil mines).
  - c) Mehsana Oil Mine for Longest Accident Free Period for the year 2013 (Oil Mines producing less than 7 Million cubic meter of oil or oil equivalent gas).
  - d) Krishna Godavari Drilling Mine for Lowest Injury Frequency Rate for the year 2014 (per lakh man-shift oil mines).
- 2 Hon'ble Minister of Petroleum & Natural Gas presented ONGC with prestigious OISD Safety Awards for the year

2015-16 & 2016-17 on 13<sup>th</sup> January 2018 at Bhubaneswar in following categories:

- a) Best Offshore Platform: BPB, B&S Asset, Mumbai (2015-16)
- b) Individual Award: Shri Labeeb Baasit, E.E. (Mech), Sagar Ratna (2015-16)
- c) Best Onshore Asset: Rajahmundry Asset (2016-17)
- d) Best Offshore Asset: Mumbai High North with Drilling Rig Valient Driller (2016-17)



ONGC receiving OISD Safety Award

- 3 Corporate HSE has been selected as Best Performing Strategic Business Unit in Corporate Services category by Performance Management and Benchmarking Group (PMBG) for FY'17. The then CMD ONGC conferred the award on 15<sup>th</sup> August 2017 at Dehradun.



Best Performing Strategic Business Unit award by PMBG

### OPaL's

OPaL's commitment towards excellence in the area of occupational health and safety performance received industry-wide recognition when the organization was conferred with the Green Tech Safety Award in Platinum Category (the highest award in its class) for noteworthy safety performance and commissioning of the Mega Petrochemical Complex in FY'18 without significant setbacks or incidents. This recognition was extended to OPaL at the 17th edition of the awards during November 2018 at Guwahati in the presence of several industry delegates as well as government officials.

This award corroborates OPaL's highest level of commitment towards promoting best in class safety at various work centres.



## Supply Chain

ONGC Group's supply chain consists of multiple tiers of suppliers, contractors, JVs/partners and governments due to the diverse geographic spread and coverage of its operations. The Group's reporting boundary comprises of ONGC's domestic

exploration and production operations (Assets and Basins), processing plants and institutes. For the reporting year, ONGC engaged with 11,032 new suppliers and the amount of business volume with suppliers was over INR 7,454.83 Million.

The details of new suppliers created by ONGC Group of companies during the reporting year are provided below:

New Suppliers				
S.No	Description	Indian	Overseas	Total
ONGC				
1	No. of new suppliers created during FY'18 (Goods & Services)	10,880.00	152.00	11,032.00
2	Total value of orders placed on the above suppliers during FY'18 (in INR Million)	5,552.30	1,902.53	7,454.83
ONGC Videsh				
1	No. of new suppliers created during FY'18 (Goods & Services)	210.00	15.00	225.00
2	Total value of orders placed on the above suppliers during FY'18 (in INR Million)	111.49	16.92	128.41
MRPL				
1	No. of new suppliers created during FY'18 (Goods & Services)	1,275.00	87.00	1,362.00
2	Total value of orders placed on the above suppliers during FY'18 (in INR Million)	1,717.03	418.73	2,135.76
OMPL				
1	No. of new suppliers created during FY'18 (Goods & Services)	584.00	11.00	595.00
2	Total value of orders placed on the above suppliers during FY'18 (in INR Million)	412.80	105.47	518.27
OPaL				
1	No. of new suppliers created during FY'18 (Goods & Services)	409.00	48.00	457.00
2	Total value of orders placed on the above suppliers during FY'18 (in INR Million)	22,397.10	1,863.50	23,760.60
OTPC				
1	No. of new suppliers created during FY'18 (Goods & Services)	14.00	0.00	14.00
2	Total value of orders placed on the above suppliers during FY'18 (in INR Million)	5.20		5.20

Table 49: New suppliers added by ONGC Group in the financial year



ONGC Group is highly committed to ensuring all vendors operate in a healthy and safe working environment and maintain a high quality of services. A systematic approach is deployed to ensure compliance with applicable labour practice regulations including child labour and human rights aspects, across our supply chain. Compliance to applicable legal and HSE requirements are incorporated in all of our service contract agreements with suppliers and is ensured during execution. We continue to engage with all supplier segment and focus on conducting training on Health and Safety, Compliance and Anti-Corruption, the protection of Human Rights and Anti-Harassment. ONGC has also introduced an E-Grievance handling mechanism for quick redressal of grievances from all stakeholders including suppliers. The vendors and suppliers of ONGC Group also have the facility of approaching Independent External Monitors to redress their grievance.

## Product Quality

ONGC Group has consistently followed an integrative management philosophy embedded in its systems and processes, aimed at continuously improving the quality of products and processes to achieve customer satisfaction. One of the most important missions of the Group is to strive for customer delight through quality products and services. The adoption of the integrated management philosophy includes customer focus, leadership commitment, continual improvement, employee empowerment and supplier support in the continuous and sustainable improvement of products, processes and services. This commitment delivers improved productivity, enhanced quality, increased customer satisfaction, reduced costs and increased competitive advantage.

ONGC Group has appropriate policies and guidelines in place for determining and maintaining product quality across all of our product categories. The guidelines are primarily focused on satisfying internal customers, external customers and the business associates through maintaining continual

excellence in quality of products and processes. ONGC Group complies with ISO 9001:2015, thus, demonstrating its ability to consistently provide products and services that meet customer requirements and applicable statutory requirements, and to enhance customer satisfaction through the effective application of the system. The three key products of ONGC are Crude Oil, Natural Gas & Liquefied Petroleum Gas. All the products of ONGC Group conform strictly to the respective product-making-procedures, laws, statutes and standards governing their production. The exploration and production (E&P) business activities are pursued and aligned in a way that E&P of resources is done in a sustainable manner throughout their life cycle. For crude oil sale, batch wise certificates are issued, which includes various quality parameters including the BS&W. Product labelling related to storage procedures and safety precautions is clearly indicated at ONGC installations holding the crude. All natural gas supplied by ONGC to various customers conforms to the agreed contractual specifications.

We also place tremendous importance on updating our product quality with evolving global and national standards. MRPL has taken up the enhancement of the refinery's capacity with low cost revamping. At OPaL, Quality Policy and Objectives have been approved by President, OPaL and are displayed at prominent places in laboratory. Their Quality Labs have Service Level Agreements (SLA) for inspection and testing of Product Quality as per applicable testing protocols such as ASTM, BIS, APHA, UOP, Licensors Methods and laboratory validated methods to meet customers' expectations. OPaL has also designed and implemented 'Quality Manual' in line with ISO 17025:2005, 'General Requirements for Testing and Calibration Laboratories'. The company is drafting an IMS Policy in line with the requirements of ISO 9001:2015, ISO 14001:2015 and ISO 45001:2018 which is in process for approval. OPaL has gone another step ahead to set goals and targets for FY'19 for maintaining product quality & norms developed for all three Polymer Plants.



Customer satisfaction is of paramount significance at ONGC Group. We interact with our B2B customers on a regular basis, with respect to product quality and pricing. This kind of engagement with our partners enables us to identify and address all concerns related to our products and services by any of our customer/consumers immediately. The Company engages with customers and consumers in a manner that demonstrates best business practices and is a win-win proposition for all parties doing business with ONGC Group in line with mutually agreed upon business principles and deliverables. The Company's main customers are Oil Refining & Gas Marketing Companies to which the Company's produce (oil and gas) is allocated by the Government of India. The Company enters into a Crude Oil Sale Agreement (COSA) with the Oil Marketing Companies (OMCs) and Gas Sales Agreement (GSA) with GAIL to whom it sells the Crude Oil & Natural Gas. The COSA/GSA of ONGC Group have been arrived at in consultation with OMCs and Gas marketing companies on mutually agreed principles. Other sales or purchase agreement are also agreed mutually, and are signed by the designated authorities after seeking approval as per Book

of Delegated Powers 2015. These agreements incorporate suitable provisions with regard to the quality and quantity of the product being supplied by ONGC. The Company has therefore laid down policies and guidelines for engaging with and providing value to their customers and consumers in a responsible manner. The specifications of product quality and measurement in COSA/GSA are in accordance with international standards and guidelines of the Government of India. The agreements also have an in-built mechanism for stakeholders' grievance redressal. ONGC Group has a structured and dedicated marketing department to oversee implementation of relevant policies in this regard. Further, the general guidelines on standard terms of business and also contract terms and conditions of conducting business with ONGC are available on the company's website.

Maintaining strong customer relations is a key priority at the ONGC Group in line with the quality policy of the respective Group companies. Any incidents or complaints concerning provision of our products and services are duly addressed and resolved with the customers at the work center level.



## Towards self-sustaining **communities**

Corporate Social Responsibility (CSR) is a strong pillar of our value system in ONGC Group. We consider it as a strong opportunity for social value creation in alignment with the Triple Bottom Line Approach - People, Planet & Profit. The approach is to create a positive impact on the society to develop stakeholder-inclusive models of development. In line with Companies' Act 2013 and Companies (CSR Policy) Rules 2014, ONGC has put in place a Corporate Social Responsibility (CSR) & Sustainable Development (SD) policy. The CSR SOPs have been standardized across various work centres through CSR Manual of the Company.

CSR activities are identified by the need of the community and CSR projects are implemented in project mode as per focus areas defined under Schedule VII of the Companies Act, 2013. CSR projects are preferably undertaken in operational areas. These projects are monitored continuously through a systematic approach followed by the management, with appropriate controls and review mechanisms.

### **Vision:**

To support responsible and sustainable initiatives, while taking care of the concern for People, Planet and Profit.

### **Mission:**

Continually enhance the triple bottom line benchmarks of economic, environmental and social performance through committed involvement of the employees. To develop social wealth for the communities we engage with. Promote efficient usage of scarce resources, encourage green energy initiatives and develop innovative solutions to fulfil the vision by stepping beyond the mandatory provisions.

### **CSR Journey of ONGC**

ONGC has been a pioneer in implementing initiatives for community development way back since 1980 even before its inception as a Company, in the name of Socio Economic

### CSR Expenditure of **ONGC** in the last three years

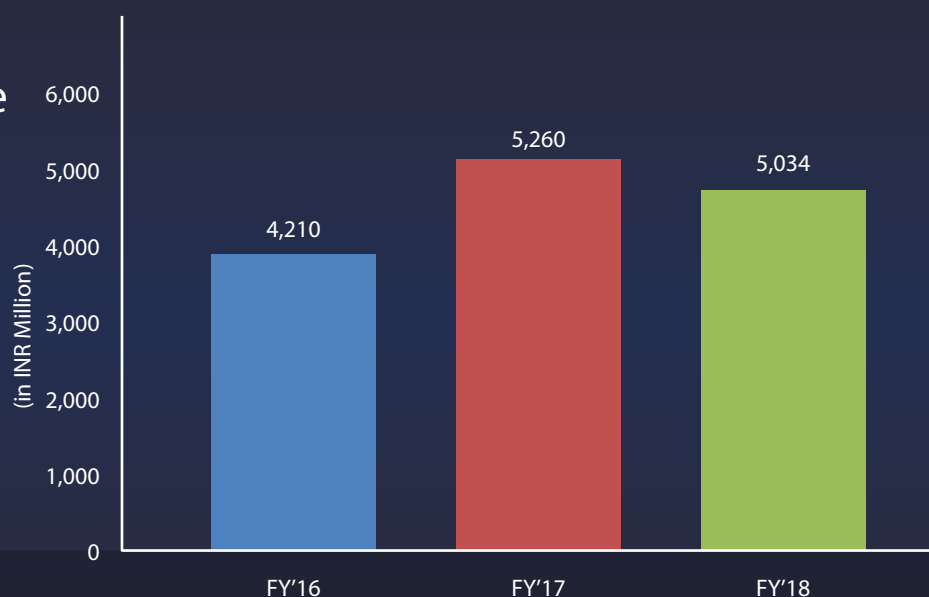


Table 50: CSR Expenditure of ONGC in the last three years





Development Program (SEDP). It has history of earmarking 0.75% PAT for CSR in 2003 with well documented Corporate Citizenship Policy which was revised in 2006 and allocation of CSR budget was increased to 2% of PAT. The company was first time to issue separate CSR Guidelines in 2009 which prepared base for DPE Guidelines 2010. Today, after enactment of Companies Act, 2013; the Company has a separate CSR&SD Policy and SOP Manual approved by CSR & SD Committee headed by an Independent Director. It is not just compliant with statutory provisions but also future ready. The Company has today capacity to spend an average budget of INR 5,000 Million on CSR activities with more than 2,500 projects in a year.

To promote sustainable development and inclusive growth in a streamlined manner, ONGC's CSR activities are guided by a project-based approach. ONGC's CSR initiatives have helped the organization in making a positive impact in lives of the beneficiaries. The CSR projects of the company have resulted in creation of social infrastructure and capacity building of the communities surrounding its operations.

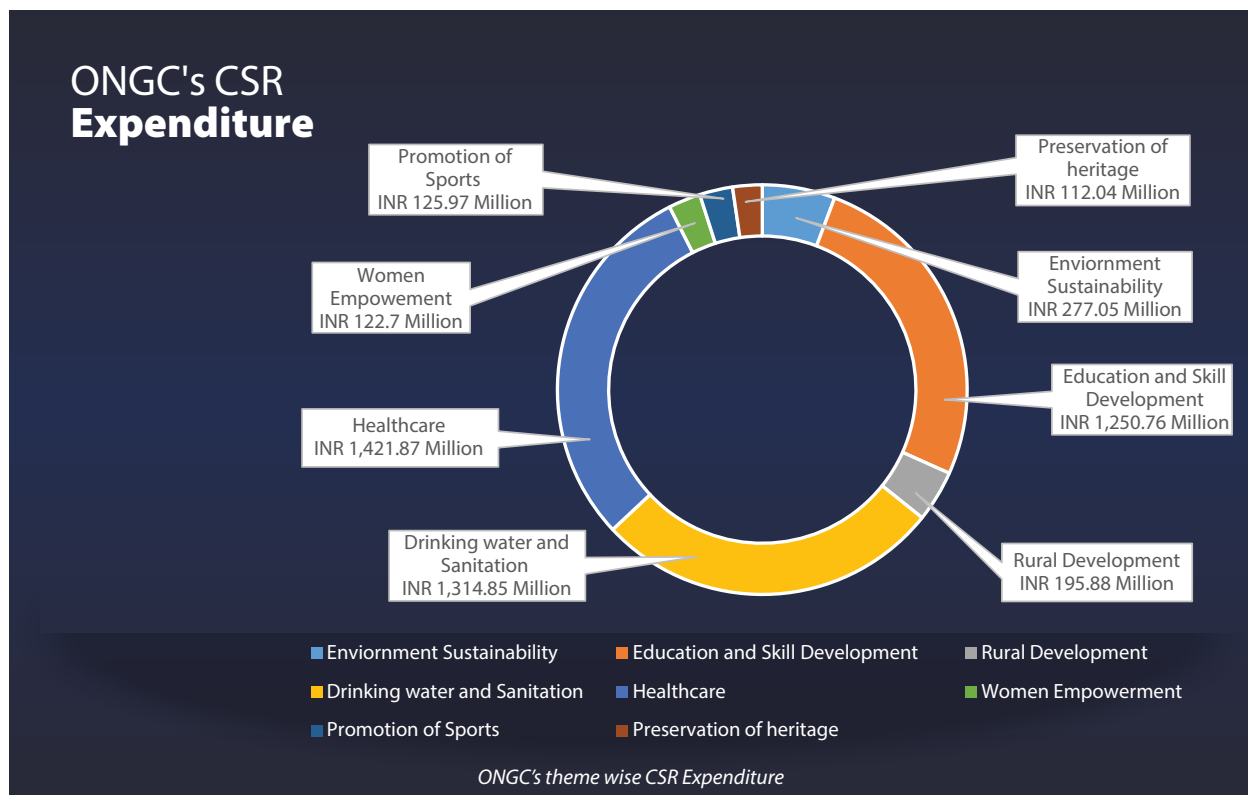
In FY'18, ONGC has spent an amount of INR 5,034 Million for its various CSR programs spanning from healthcare, sanitation, education, skill development, environment sustainability, rural development as the major themes covered under section VII of the Companies Act.

#### CSR Expenditure of Group Companies (in INR Million)

	FY'16	FY'17	FY'18
ONGC Videsh	89.33 (outside India)	40.02 (outside India)	41.11 (outside India)
MRPL	41	14.5	103
OPaL	-	0.06	4.1
OTPC	3.6	3.7	11.7

Table 51: CSR Expenditure across ONGC Group of Companies

#### Thematic areas of ONGC



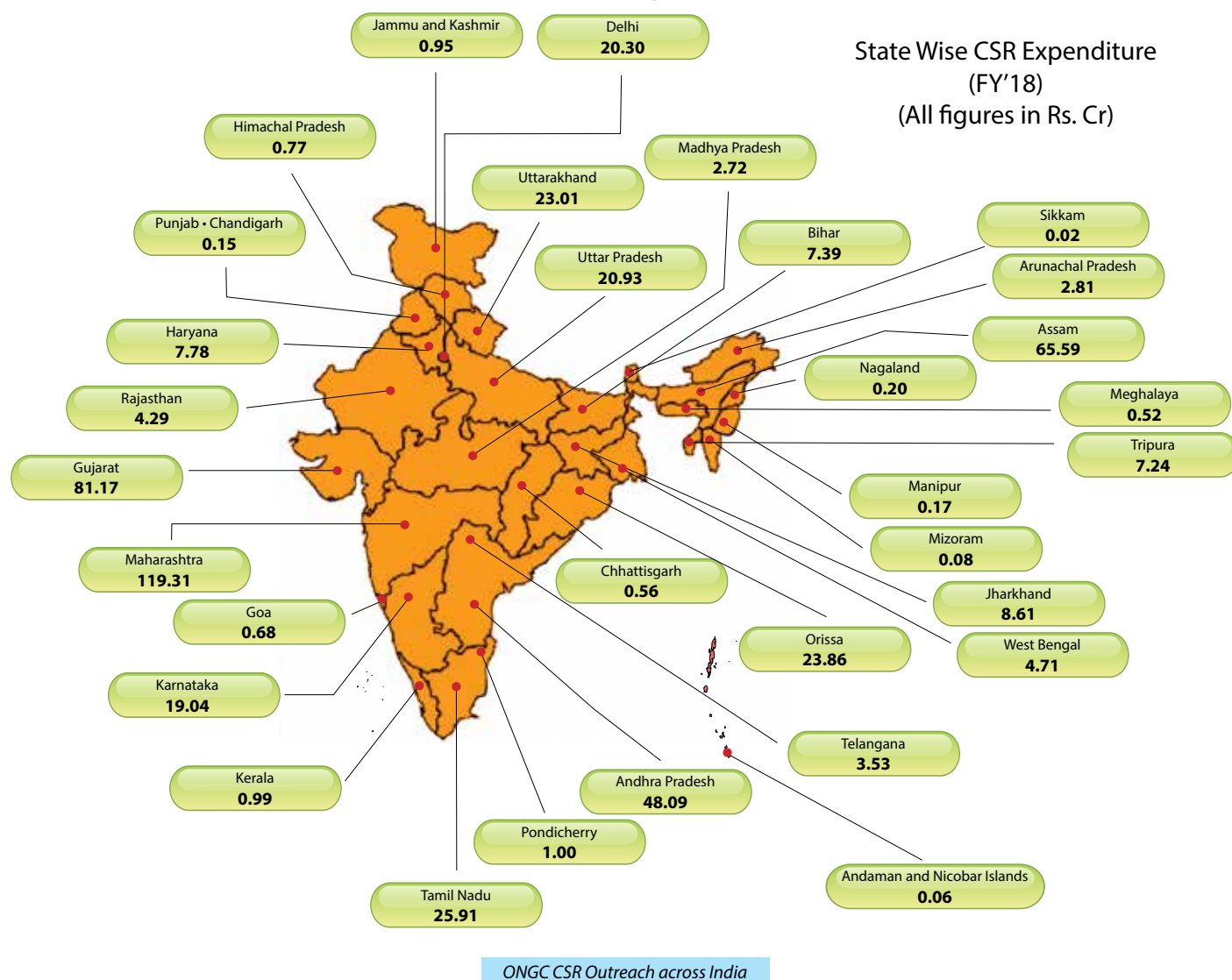


The company, through its CSR initiatives, is committed to bring a positive change in the community, and create positive value for all its stakeholders.

As a leading Indian corporate, ONGC is fully engaged in

ensuring equitable and sustainable growth in its areas of operations. More than 2,400 projects have been taken up under CSR across different states in the FY'18 under the themes are mentioned below:

### CSR in ONGC- Touching lives across India



### Linkage with Sustainable Development Goals (SDGs)

Introduced as part of the 2030 Agenda for Sustainable Development, the SDGs are aimed at ending poverty, protecting the planet and ensuring that all people enjoy peace and prosperity. SDGs serve as a global reference framework for supporting ONGC in improving its Corporate Social Responsibility (CSR) engagement in a way that contributes to sustainable development. In the following section, the major

CSR initiatives of ONGC and its JVs are mapped against the respective SDG in which they are contributing.

ONGC has identified the following CSR focus areas, which are aimed at resolving specific social and community issues, and enabling the beneficiaries of these programmes to secure a better future.



SDG Mapping of ONGC's CSR activities



ONGC has identified the following CSR focus areas, which are aimed at resolving specific social and community issues, and enabling the beneficiaries of these programmes to secure a better future.

## Health Care Initiatives

ONGC strives to improve the health conditions in the country by providing better health facilities in remote areas; establishing mobile medicare units for elderly people; creating awareness about cancer and providing affordable medical treatment for patients suffering from cancer. Some of the major initiatives in this field are:

### Key Highlights

- INR 1,421 Million worth of projects implemented towards Health Care Initiative.
- INR 3,130 Million Multi- Speciality Hospital project launched at Sivasagar, Assam.
- 541,208 Nos. door step medical treatment provided through Mobile Medical Unit in FY'18.
- INR 1,000 Million sanctioned towards setting up of National Cancer Institute at Nagpur.

## Varisthajana Swasthya Sewa Abhiyan: Doorstep medical treatment for elderly, women and children

Varisthajana Swasthya Sewa Abhiyan (VSSA) is ONGC's initiative in partnership with HelpAge India to implement Mobile Medicare Units (MMUs) across India. The objective of this project is to provide healthcare support to India's excluded elderly population to help them live their lives with dignity. This section of population usually faces challenges in getting proper access to healthcare delivery facilities either due to poor level of services by the existing healthcare facilities or lack of financial resources or other physical / mobility reasons.

The project was initially launched from 2010 to 2016 with 20 MMUs through which more than 1.58 Million treatments were provided to the needy population. Based on the impact assessment report of the first phase, approval was accorded for extension of the project till 2019 along with engaging

11 new MMUs. As a result, currently 31 MMUs are providing door step medical consultation, medicines, basic diagnostics test, home care visits for bedridden elderly, Physiotherapy Care, Palliative Care and Training and Health Education & Awareness to lakhs of senior citizen, women and children residing in remote corners of our country. The total amount sanctioned towards implementing this project from 2010 to 2019 is INR 364 Million. This project has been successful in providing more than 2.5 Million treatments.

The MMU Team comprises of a Medical Consultant, a Social Protection Officer, a Nurse, a Driver and a Physiotherapist.

## National Cancer Institute, Nagpur

The National Cancer Institute at Nagpur, will be 455 bed quaternary care oncology centre. The centre will provide

### Sickle Cell and Thalassemia Prevention Control and Research Programme supported by ONGC Ankleshwar

Sickle Cell Anaemia is a public health problem in Gujarat, responsible for lower life expectancy and higher rates of infant mortality in people suffering from such illness. Prevalence of Sickle Cell gene is 5% to 34% in certain communities which are socio-economically disadvantaged and are frequently medically underserved. ONGC Ankleshwar is working with Gujarat Red Cross on Sickle cell & Thalassemia screening programme. This project covered nearly 1,500 people from villages of Dediya & Sagbara taluka of Narmada District. Blood samples including children, youth and elders were taken for this research project.

Among them sample population, 23.68% were detected as sickle cell trait, whereas 1.20% was affected by sickle cell disease, 0.26% was found as Thalassemia minor, among the population 0.53% are having Iron Deficiency and 0.20% were detected as other Haemoglobinopathies. Studies of these nature are imperative to minimise the rate of Sickle cell and Thalassemia disease from the society. Both ONGC Ankleshwar and Gujarat Red Cross have pledged to work for this continuously.





comprehensive cancer treatment, patient care and research through sustainable charity. In addition to providing general cancer care, the institute will also create specialty groups of highly skilled professionals. The institute also plans to start an University recognized training courses for nurses, paramedical staff and medical fraternity including super specialty training in Oncology and PhD programs.

ONGC has extended support of INR 1,000 Million for construction of first, second floor and procurement of medical equipment for radio diagnostic facilities (like MRI, CT scan, ultrasound, mammography, x-ray and bone marrow density meter etc.) for the hospital. The equipment has already been commissioned on the ground floor of the hospital and is already being used for investigations of patient. Dr. Aabaji Thatte Seva Aur Anusandhan Sanstha is the implementing partner for this project. Primary beneficiaries of the project will be patients referred by NGOs, local physicians in and around 500 km radius of Nagpur. It is expected to benefit people from Vidharbha region of Maharashtra, parts of Chhattisgarh, Madhya Pradesh and Andhra Pradesh.

## Swachh Bharat Initiatives

During the year, number of flagship initiatives have been undertaken under Swachh Bharat Abhiyan, with an expenditure of INR 1,844.6 Million. The company has not only

### Swachh Bharat Initiative: Key Highlights

- INR 1,844.6 Million worth of CSR projects/Program implemented across the country
- 21,085 Individual Household Latrines (IHHL) constructed across India
- 53 community toilets projects successfully executed
- 234 school toilets constructed
- 181 Water RO Plant/ Water ATM projects executed
- 358 Tube Wells were installed
- 11 Solid Waste Management projects initiated
- 14 projects on Smoke Free Village
- 3 projects on development and beautification of parks

## Project Saraswati

The ancient and mythological river Saraswati has been known since the Indus valley civilization. There are several places in Haryana, Punjab and Rajasthan where evidence is found of its existence, as the water from this river is known to surface at several places. To tap the water of river Saraswati which is flowing several hundred meters below the surface, Haryana Saraswati Heritage Development Board (HSHDB) approached ONGC. A survey was conducted by a team of experts from ONGC to locate the paleo-channels existing underground in the northern part of indo-gangetic plains. Accordingly, it was agreed by ONGC for drilling of 10 wells, where there is a high possibility of tapping water. An agreement was signed with Water and Power Consultancy Services Limited (WAPCOS) for drilling these wells. Nine out of ten wells have been successfully drilled and producing water in good quantity. ONGC is further getting this water tested through the National Institute of Hydrology-Roorkee, for its quality and carbon dating to ascertain whether it is actually Saraswati water.







constructed toilets, but is also working on the root cause of the problem like improper maintenance of toilets due to lack of awareness and other behavioural issues in the community. ONGC is also conducting educational campaigns on the importance of health, hygiene and good sanitation facilities. ONGC's contribution to Swachh Bharat Abhiyan envisages the promotion of health of the community by providing clean environment and thus breaking the cycle of disease.

### Constructing toilets to curb open defecation

ONGC has undertaken an initiative for making villages near its area of operation Open Defecation Free (ODF). The Company has taken this initiative for construction of Individual Household Latrine across the country in partnership with district administration and other NGOs. In FY'18, more than 21,085 IHHLs were constructed in and around ONGC's operational areas in Gujarat, Tamil Nadu, Jharkhand, Assam and other states of the country with an investment of INR 846.6 Million. The company is ensuring the sustainability of this intervention by involving communities from the very beginning.

### Clean Himalaya Initiatives

ONGC became the leading company to spearhead the Swachhta initiative in the Himalayas. The project is being implemented in partnership with the Indian Mountaineering Foundation (IMF) at a cost of INR 8.76 Million.

- Thirteen cleaning expeditions undertaken in Himachal Pradesh & Uttarakhand in last three years
- Tons of garbage brought and disposed in an eco-friendly manner.



Glimpses of ONGC's Clean Himalaya Initiative

### Solid Waste Management Project at Rameswaram

With a vision to make the city of Rameswaram Clean and Green, "Green Rameswaram" Initiative was launched by the Former President of India, Late Dr. A P J Abdul Kalam. Vivekananda Kendra Vidyalaya, Nardep committed itself to turn the vision of the former President a reality and started cleaning initiative along with not-for-profit organization 'Hand In Hand'. The initiative was targeted at four municipal wards of Rameswaram, located around 25 km from ONGC Ramnad GCS. Being close to ONGC's operational area and considering the positive impact of the project on community, ONGC contributed INR 9.5 Million towards the initiative. The project activities include setting up of robust infrastructure for solid waste management, providing vehicles for door to door waste collection, developing and putting in place systems and human resources for ensuring cleaning of roads, drains, collection of garbage and waste, segregation of waste into recyclable and biodegradable categories and processing of the waste in both the categories in a sustainable manner.

Based on the success and the impact of the first phase of the project, the second phase of the project was extended and an amount of INR 9.49 Million has been sanctioned towards implementing the second phase.



Temporary storage and segregation of solid waste



## Harit Moksha

This is a unique CSR initiative of ONGC undertaken with Mokshda Paryavaran Evam Van Suraksha Samiti (MPEVSS) to reduce burning of fossil fuel by setting up Mokshda Green Cremation Systems (MCGS). This is an ongoing project commenced in 2010 with 30 units of green cremation system installed in 8 cities of 7 different states with a budget of INR 91.9 Million.

The project was successfully completed and has resulted in savings of approximately 13,700 tonnes of wood and 26,500 tonnes of GHG emissions till date. Considering the impact of this project, 4 new centers have been installed in Pilibhit and Delhi.



*Green cremation system installed by ONGC*

## Bio-CNG Plant at Haridwar

ONGC has undertaken a unique initiative in Haridwar to convert cow dung to useful fuel and value added products by setting up Bio-CNG cum Fertilizer & Bottling Plant at Haridwar at a cost of INR 16 Million. The plant will be run by the largest Gaushala in Uttarakhand and will help maintaining clean hygienic waste management in the Gaushala premises. It will facilitate availability of clean environment to the local population of Haridwar and also help in protecting the fauna i.e. 2,200 non-milching cows at Gaushala by way of making the Gaushala self-sustaining from the revenue generated from the project. The plant will also produce organic solid and liquid fertilizers which will be distributed among the local farmers thereby promoting organic farming.



### Restoration of Kunds in Varanasi

ONGC has been consistently taking concrete steps to revive the vividity of Varanasi city. It took the responsibility of cleaning and beautification of four famous Kunds of Varanasi namely Durga Kund, Lakshmi Kund, Lat Bhairav Kund and Karim Kund at a cost of INR 114.6 Million. This initiative is supporting Swachh Bharat Abhiyaan driven by Government of India. The project is being implemented in partnership with National Buildings Construction Corporation Ltd and Nagar Nigam Varanasi.



*Restoration of Kunds in Varanasi*

### Promoting education, skill development and livelihood enhancement

ONGC's initiatives under this thematic area covers a wide range of subjects from promoting Sanskrit language to setting up a B.Ed. College to establishing Ekal Vidyalayas. ONGC has undertaken various projects for the promotion of education, skill development and enhancement of livelihood. Some of the major initiatives in the field of education and skill development are as follows:

#### Key Highlights

- Project worth INR 1,250.76 Million implemented towards education, livelihood and skill development.
- Imparted skill development training to 6,058 youth and women.
- Created employment opportunity for 4,821 youth & women.
- Spent more than INR 192 Million towards creating the infrastructure like class rooms, hostels and smart class rooms.
- Funded for 420 Ekal Vidyalayas in the remote areas of the country.
- Assistance in the form of Scholarships amounting to INR 4,000/- p.m. to more than 1,500 students belonging to SC/ST and BPL families across the country.





## ONGC Skill Development Institute at Ahmedabad

In line with the Skill India Mission of Government of India, Ministry of Petroleum and Natural Gas has taken the initiative to set up six Skill Development Institutes (SDI) across the country with funding from Oil sector PSEs. ONGC was directed to set up a SDI at Gujarat. NSDC and KPMG was engaged to carry out a detailed need assessment survey to start the SDI in Gujarat. Based, on the report of these two expert agencies, SDI Ahmedabad was set up by engaging M/s Aspire Disruptive Skill Foundation as the training partner for the institute. The training was imparted in three different trades namely Fitter Fabrication, Industrial Welding and Technician (Production), with 30 students in each batch. The first batch of 90 students has successfully completed their training in 3 different courses in March 2018. All the 90 students were successfully placed in different companies located near Ahmedabad. Considering the success of the first batch, the number of trades will be increased from three to nine from next year onwards benefiting 780 youths. ONGC contributed an amount of INR 136.20 Million towards setting up of these 6 SDIs across India.



*Students at SDI, Ahmedabad*

## Revival of Sanskrit Language

To revive the Sanskrit language, the company has taken up an initiative through the Sanskrit Promotion Foundation with a total financial implication of INR 57 Million. This project includes the development of online tools and tutorials for students, teachers and guardians at formal and in-formal school levels. This project is a step-forward towards the

revival of Sanskrit in India and abroad. Research on Sanskrit education, nationwide survey and data collection are some highlights of this project. The Phase-2 of the project has been launched from November 2017, for which an amount of INR 59 Million has been sanctioned.



## Ekal Vidyalaya

Understanding the significance of quality education for children, especially in their early years, ONGC has partnered with Bharat Lok Shiksha Parishad for reaching remote villages across the country in its operational area for providing free education to children through 'Ekal Vidyalaya'. This project covers 420 Ekal Vidyalayas, in rural, tribal and backward areas in 10 states. It is targeted to impart free basic informal education to 24,000 students, with a financial implication of INR 19 Million, for a period of two years.



*Ekal Vidyalaya class in progress*

## ONGC Super 30

Under an innovative initiative to support willing and hardworking students to get admission in premier institutes of India, ONGC has set up an ONGC Super 30 centre at Sivasagar. This is a flagship programme of ONGC, where the objective is to train 30 aspiring students every year to get admission in IITs and other premier engineering institutes of our country. A total of 85 students in three batches have already completed the training since 2014 out of which 18 secured admission in institutes like IIT's and NIT's, 54 got admission in other premier institutes and the remaining 13 students opted for other courses. The fourth batch of 30 students are currently undergoing training at Sivasagar, "ONGC Super 30 centre". The project is being undertaken in partnership with an NGO Centre for Social Leadership. An amount of INR 28 Million has been sanctioned towards this project since the last four years.



*ONGC Super 30 centre at Sivasagar*





## Skill Development through CIPET

Two separate projects were undertaken with CIPET for training economically underprivileged youth in plastic technology at Bhubaneswar and Jaipur respectively. A total of 217 youth have been trained in two different courses in tool room mechanic operator and injection moulding machine operator. The total cost for both projects is INR 15 Million. After completing 6 months residential training, all the 217 youth have been placed at different companies related to plastic engineering.

### Water Hyacinth project for rural women of Sivasagar

Through this CSR initiative of ONGC, 50 women of Sivasagar district, Assam have been trained by North Eastern Development Finance Corporation Ltd. (NEDFi) to develop product from water Hyacinth. 20 of these women were further trained by experts from National Institute of Design to make superior products, as per the demand of the market. The complete value chain has been mapped under which a facilitation centre has been set up at Nimajan in Sivasagar and a retail outlet has been opened for selling the finished products. The women trained under this program are currently imparting training to others. An amount of INR 3.3 Million has been sanctioned towards implementing this project.



Women trained by North Eastern Development Finance Corporation Ltd. (NEDFi)

## Rural Development Projects

### Model Village Development for Revival of Korbong Community at Tripura

With a surviving population of only 120, the Korbong community of Tripura was on the verge of extinction. To save this rapidly disappearing community, ONGC partnered with Tribal Engineer's Society to develop this village into self-sustained model by utilising the Integrated Village Development approach. As part of this project, permanent infrastructure was developed for community centre, market shed, toilet blocks and irrigation facilities. Also, livelihood opportunities were created for piggery, goatery, fishery, etc. It was a holistic intervention for revival of the Korbong community with a financial implication of INR 6.5 Million.



Community Center at Korbong, Tripura

### Key Highlights

- INR 196 Million worth of rural development projects undertaken.
- Undertaken infrastructure development work for two Model Village project Under Sansad Adarsh Gram Yojna at Yigi Kaum village in Arunachal Pradesh and Natun Jelom village, in Assam.
- Undertaken 67 different projects for strengthening rural roads near ONGC operational areas.



### ONGC Solar Street Lights project

ONGC has sanctioned 8,853 solar street lights worth INR 177 Million for lighting remote villages of the country in the last one year. MNRE recognized partners are empanelled by the Company for installing the solar street lights as per the predefined specifications. These agencies also ensure maintenance of these street lights through AMC.



*Solar Street Lights installed by ONGC*

### Development of Mangalajodi, Odisha

Chilika Lake, the largest brackish water lake and a unique bio-diversity of our country attracts Millions of migratory birds from across the globe. Mangalajodi, a tiny village located at the backwater of Chilika Lake has been the host to these birds. ONGC is in the process of taking up a project with UNESCO to help declare Chilika Lake as a World Heritage site. But, prior to taking up the project with UNESCO, the Company has taken up a 360 degree approach to develop Mangalajodi village. Based on need assessment, multiple



*Mangalajodi village, Odisha*

CSR interventions have been taken up which include open defecation free Initiative by constructing 1,300 Individual Household Latrine (IHHL), lightning the dark alleys of the village by installing 200 Solar lights, creating drinking and portable water facilities, providing 12 nos. of boats to the villagers for creating sustainable livelihood, construction of 40 nos. of school toilets and several livelihood generation and infrastructure development project in the last one year. ONGC has contributed INR 63 Million for this project.

### Awards and accolades

#### 'Good Corporate Citizen' - PHD Chamber Awards

PHD Chamber of Commerce bestowed 'Good Corporate Citizen' award to ONGC during Annual Awards for Excellence-2017 in October 2017. The award was given to ONGC for its meaningful CSR policies as well as a robust Health Safety & Environment (HSE) framework in operations.

#### Indian Chamber of Commerce PSE Excellence Awards

ONGC was declared the Winner in the Corporate Social Responsibility & Sustainability, Human Resource Management, Corporate Governance categories in the PSE Excellence Award. These awards were given away during the 7<sup>th</sup> Summit of the Indian Chamber of Commerce in September 2017. ONGC was also bestowed with the Company of the Year, Jury award.

#### Ankleshwar bags Governor's Award for CSR

ONGC Ankleshwar Asset has been awarded special award for promotion of Thalassemia Prevention by Indian Red Cross Society, under CSR. The award was presented during an award ceremony held at Raj Bhavan, Gandhinagar.

### ONGC Videsh

All of ONGC Videsh's operations are based outside India. However, ONGC Videsh has been undertaking community development projects in and around its project locations (i.e. outside India) as per local requirements/guidelines/practices prevailing in the countries of operations as per contractual



requirements without using the CSR funds. For FY'18, the company spent a total of INR 41.11 Million towards CSR activities outside India directly or through its JVs. For the previous FY'17, its CSR expenditure was INR 40.02 Million.

Carrying forward the spirit of parent company towards CSR, Imperial Energy (part of ONGC Videsh), Tomsk organized several welfare related events in Tomsk region of Russia during FY'18.

## MRPL

Since its inception, MRPL has been undertaking CSR activities under the name 'Samrakshan'. Pursuant to the introduction of the Companies Act, 2013, followed by the release of Company (CSR Policy) Rules, 2014 by the Ministry of Corporate Affairs and Guidelines on CSR and Sustainable Development (SD) for CPSEs by the Department of Public Enterprises (DPE), MRPL is rededicating itself to ensuring sustainable and equitable development through a well-orchestrated CSR programme.

The key focus areas of MRPL's CSR activities are rural transformation, health, education, sanitation. The company has taken up programs that benefit the communities in and around its operational areas, which results in enhancing the quality of life & economic well-being of the local populace over a period of time. MRPL focuses on such CSR initiatives which results in community goodwill for MRPL and help reinforce a positive & socially responsible image of the Company as a corporate entity. During the FY'18, MRPL has contributed INR 103.0 Million towards various community development initiatives as against INR 14.5 Million spent in FY'17.

## CSR in the area of health and sanitation

The CSR initiative taken up by the company has been successfully adopted by the community. There are lots of improvements in the area of education, sanitation, health, infrastructure development, environment in rural and downtrodden communities of the society. The quality of living with respect to hygiene has improved in rural SC/ST communities. Smoke free village programme initiative taken by the company has helped in improving the health condition of the women in village. Solar street lights installed in villages have helped the villagers to save energy. Construction

of Anganawadis has helped in nurturing the children and pregnant women. Physically handicapped persons are supported with the help of artificial limb in the camp organized by MRPL and also with the aids and equipments provided through the District Health Department. Villagers are benefitted by the services of the doctor & free medicines are given by MRPL in the neighbouring two villages.

## Shiksha Samrakshan

Activities that promote education, especially in Anganawadis, government and government aided schools. Under the focus area of education, MRPL is working for the betterment of schools by facilitating mid-day meals in schools, distributing books and building toilet blocks in schools located around the refinery. MRPL has also organised a programme on environment protection and emergency, LPG safety for 4 Pre-university colleges and High Schools around the refinery. The company has also aided in development of Science Lab at Govt. P.U. College, Krishnapura.

## Arogya Samrakshan

MRPL is promoting health care, by way of running Primary Health Centres in rural areas. MRPL is running a free PHC at Chellairu Rehab Colony. The company is also promoting preventive healthcare by taking steps towards making Jokatte, Permude, Soorinje and Chelaieru Grama Panchayat smoke-free villages.

## Bahujana Samrakshan

This is an umbrella Integrated Village Development thematic area for MRPL. As part of this programme, infrastructural support is being provided to the villages near the operational areas. The sub-projects implemented under this programme are specially designed for vulnerable population like women, children, SC/ST communities and physically and mentally challenged population.

## Prakriti Samrakshan

MRPL is working towards providing infrastructural support for drinking water supply to the neighbouring villages. As part of the larger gamut of the project, awareness programmes are also being conducted in the schools and villages on environment management.



## Sanskriti Samrakshan

MRPL is continually striving towards protection of local historical and cultural artefacts, historical monuments and heritage sites. The company is also taking steps towards promotion of local artisans, craftsmen, musicians and artists to preserve our culturally rich art forms.

## Swachhta Mission

MRPL is actively supporting the Swachh Bharat Mission by Government of India. Under the initiative, MRPL is providing financial assistance to Swachh Mangaluru Abhiyan, which is being implemented in association with the Ramakrishna Mission. As part of Swachh Vidyalaya Abhiyan, MRPL is also providing support for construction and maintenance of toilets in government schools.

MRPL also conducts impact assessment studies after completion of every CSR project, by taking feedback from the beneficiaries. Different mechanisms are used to gather feedback from different set of stakeholders. In order to provide, robust school infrastructure in schools, feedback is collected regarding impact indicators such as improvement of attendance, academic performance of the students, and

improvements in extra-curricular activities of the students. Similarly, feedback on improvement of the living standard of the village residents is taken from the Gram Panchayats, where various CSR projects involving construction of class rooms, science/ computer laboratories, toilets, distribution of scholarship, uniform, books, furniture such as class room desks/ benches, computers, are taken up.

## ONGC Mangalore Petrochemicals Ltd. (OMPL)

OMPL is fully committed to ensuring equitable and sustainable growth of society in and around the area of its operations besides complying with government directives to discharge its social responsibility. CSR activities are essentially guided by project based approach in line with the provisions of Companies Act, 2013. A CSR Policy has been approved by the Board of Directors in its 55<sup>th</sup> meeting held on August 01, 2016, which is uploaded on OMPL's website. The Committee has not made any provision for CSR activities during FY'18 as there was no average net profit during the immediately preceding three financial years. However, OMPL continues to engage with the surrounding communities to promote sustainable development through the following initiatives:

### Blood Donation Camp

OMPL, in association with AJ Hospital in Mangalore, organised a blood donation camp at OMPL on 9<sup>th</sup> August 2017. A total of 125 members participated in the blood donation camp.

### Swachh Bharat Abhiyan in OMPL

An employee volunteering activity for Swachh Bharat Abhiyan was organised by OMPL in Kateel Area and Bajpe area (in association with Bajpe Grama Panchayat). The event witnessed participation from 150 employees of OMPL, who also performed street plays after the cleanliness drive. Eight dustbins were also distributed to the temple authorities after the event.





## Joint Ventures - CSR Expenditure

### ONGC Petro additions Limited (OPaL)

OPaL aims to harmonise its core values and business operations to meet the expectations of all stakeholders. Since its inception, OPaL has been implementing numerous social welfare activities for the benefit of the local population. With the issuance of DPE guidelines on CSR for PSUs, OPaL has re-invigorated the CSR programme in right earnestness. OPaL's CSR objective is to continue and strengthen the neighbourhood development programme (NDP)/CSR activities for achieving inclusive growth of the surrounding population.

For its CSR programmes, OPaL has identified three key areas- education including skill development, healthcare and infrastructure development for improving the quality of life of the local population near the Dahej site.

In FY'18, OPaL's CSR expenditure has been INR 4.1 Million. Over the years, OPaL has contributed towards providing drinking water facilities, organising health camps in villages, and providing school bags and other articles for school students.

### ONGC Tripura Power Company (OTPC)

OTPC has always considered CSR as its responsibility and a part of its extended business activity. The company believes that giving back to society is not a mandate but something that is integral to its vision and values. The total CSR budget of OTPC for the reporting year was INR 13.5 Million. During FY'18, the company, based on the need assessment study, took various CSR initiatives for promoting education, sports, health, sanitation, skill development and community development in the nearby areas of its power plant in Palatana, Tripura. This aided in enhancing the quality of life and economic well-being of the general public and weaker sections of the society. OTPC spent INR 11.7 Million in this process. OTPC could not spend INR 1.8 Million during FY'18, as a major CSR project on development of Rural Road could not be undertaken due to General Elections in the State of Tripura, leading to non-identification of suitable road in due time by the authorities. The project will be taken up in FY'19 and the budget has been carried forward for the same.

OTPC considers education as key focus area for creating impact. With this view, OTPC implemented CSR projects aimed at construction of infrastructure for schools at various locations during the year.

OTPC believes that for long-term sustainability of the projects, it is imperative to involve the community. Thus, the CSR activities are carried out with the involvement of local panchayats, authorities, bodies and local villagers. Initiatives undertaken by the company were appreciated by local community.

In addition, OTPC has organised general health check-ups and free distribution of medicines for villagers at Purbo Mugpushkarni Gram Panchayat, Tripura.

The company is keen to work towards the betterment of sports in the state. In order to strengthen sports in schools, the company is laying a strong foundation by distributing sport equipment. One such example was distribution of sports equipment at Jamjuri HS School and Kakraban Girls High School in Tripura.

# Independent Assurance Statement

## Introduction and Engagement

Oil & Natural Gas Corporation Limited (hereafter 'ONGC' or 'the Company') engaged TUV India Private Limited (TUVI) to conduct the independent assurance of ONGC Group's sustainability report (hereinafter 'the Report'). ONGC Group includes ONGC, ONGC Videsh, MRPL, OMPL, OPaL and OTPC. This engagement comprises the "limited assurance" of ONGC's sustainability information for the applied reporting period. This assurance engagement has been conducted against the Global Reporting Initiative Standards and AA1000AS (2008) Protocol (Type 1, Moderate Level) for verification of the Sustainability Report. The verification was conducted in December 2018 at ONGC Delhi office. The Report covers ONGC Group's sustainability information for the period 01 April 2017 to 31 March 2018.

## Scope, Boundary and Limitations of Assurance

The scope of the assurance includes the Economics, Environmental and Social disclosures in the report as per "Core" option required in GRI Standards. In particular assurance engagement included the following

- Verification of the application of the Report content, and principles as mentioned in the GRI Standards, and the quality of information presented in the Report over the reporting period (01<sup>st</sup> April 2017 to 31<sup>st</sup> March 2018);
- Review of the policies, initiatives, practices and performance described in the Report;
- Review of the disclosures made in the Report against the requirements of the GRI Standards and limited level of assurance;
- Verification of the reliability of the GRI Standards Performance Indicators (as identified under materiality test);
- Specified information is selected based on the materiality determination and needs to be meaningful to the intended users;
- Confirmation of the fulfillment of the GRI Standards; 'in accordance' with the Core criteria, as declared by the management of ONGC Group

The reporting boundary is based on the internal and external materiality assessment covering the Oil & Natural Gas Corporation Limited (ONGC), ONGC petro additions Ltd (OPaL), Mangalore Refinery and Petrochemicals Limited (MRPL), ONGC Mangalore Petrochemicals Limited (OMPL), ONGC Videsh Limited and ONGC Tripura Power Company (OTPC). The reporting aspect boundaries are as set out in the Report covering the sustainability performance of ONGC Group of companies.

Our engagement did not include assessment of the adequacy or effectiveness of ONGC Group's strategy or management of sustainability related issues and during the assurance process, TUVI did not come across limitations to the scope of the agreed assurance engagement. The financial disclosures in the Report are based on the audited financial statements issued by the Company's statutory auditors. No external stakeholders were interviewed as a part of the sustainability engagement for the period FY 2017-2018.

## Verification Methodology

This assurance engagement was planned and carried out in accordance with the GRI Standards. The Report has been evaluated against the following criteria:

- Adherence to the principles of Stakeholder inclusiveness, Materiality, Completeness, Sustainability context, Accuracy, Balance, Reliability, Comparability, Clarity and Timeliness; as prescribed in the GRI Standards
- Application of the principles and requirements of the GRI Standards for its 'in accordance' Core criteria

During the assurance engagement, TUVI adopted a risk-based approach, concentrating on verification efforts on the issues of high material relevance to ONGC Group's business and its stakeholders. TUVI has verified the statements and claims made in the Report and assessed the robustness of the underlying data management system, information flow and controls. In doing so:

- TUVI reviewed the approach adopted by ONGC Group for the stakeholder engagement and materiality determination process. TUVI performed limited internal stakeholder engagement to verify the qualitative statements made in the Report;
- TUVI verified the sustainability-related statements and claims made in the Report and assessed the robustness of the data management system, information flow and controls;
- TUVI examined and reviewed the documents, data and other information made available by ONGC Group for the reported disclosures including the Disclosure on Management Approach and performance indicators;
- TUVI conducted interviews with key representatives including data owners and decision-makers from different functions of the Company during the verification activities;
- TUVI performed sample-based reviews of the mechanisms for implementing the sustainability related policies, as described in ONGC Group's Sustainability Report;
- TUVI verified sample-based checks of the processes for generating, gathering and managing the quantitative data and qualitative information included in the Report for the reporting period

### Opportunities for Improvement

The following is an extract from the observations and opportunities for improvement reported to the Management of ONGC Group and are considered in drawing our conclusions on the Report; however they are generally consistent with the Management's objectives.

- ONGC Group can increase the share of application of renewable energy (solar energy), also water recycling and reuse at each site
- Nitrogen oxides (NOx) / sulfide oxides (SOx) and other significant air emissions, Significant spills shall be reported, further GHG emission can be verified by accredited third party firm
- Supplier's environmental and social assessment ought to be made on periodic basis
- ONGC Group can perform the biodiversity study at all operational site and implement the mitigation measures
- ONGC Group can develop the SROI (Social return on investment) study based on implemented CSR projects
- ONGC Group can introduce the IoT platform solution to accelerate the data acquisition and compilation

### Conclusions

The Sustainability Report was prepared based on the GRI Standards Reporting Principles and Standards Disclosures 'in accordance' with Core option. In our opinion, based on the scope of this assurance engagement, the disclosures on sustainability performance reported in the Report along with the referenced information provides a fair representation of the material aspects, related strategies, and performance indicators, and meets the general content and quality requirements of the GRI Standards Core option.

- **Disclosures:** TUVI is of the opinion that the reported disclosures generally meet the GRI Standards reporting requirements for 'in accordance'- Core reporting criteria. Organization referred the General disclosure to report contextual information about an organization while Management Approach is discussed to report the management approach for each material topic



- **Topic Specific Standards:** TUVI is of the opinion that the reported topic specific disclosures for each material topic generally meet the GRI Standards reporting requirements for 'in accordance' - Core reporting criteria.

Below topic specific material aspects are verified by assurance team

- Disclosure 302-1: Energy consumption within the organization
- Disclosure 303-1: Water withdrawal by source
- Disclosure 303-3: Water recycled and reused
- Disclosure 305-1: Direct (Scope 1) GHG emissions
- Disclosure 305-2: Energy indirect (Scope 2) GHG emissions
- Disclosure 306-1: Water discharge by quality and destination
- Disclosure 306-2: Waste by type and disposal method
- Disclosure 403-2: Types of injury and rates of injury, occupational diseases, lost days, absenteeism, and the number of work-related fatalities
- Disclosure 404-1: Average hours of training per year per employee

**Limited Assurance Conclusion:** On the basis of the procedures we have performed, nothing has come to our attention that causes us to believe that the information subject to the limited assurance engagement is not prepared, in all material respects. TUVI found the sustainability information is reliable in all material respects, with regards to the reporting criteria ("Core") of GRI Standards.

ONGC Group procedures on the prospective information, such as targets, expectations and ambitions, disclosed in the Sustainability Information are at discretion of organization. This assurance statement has been prepared in accordance with the terms of our engagement. Limited level assurance engagement with respect to sustainability related data involves performing procedures to obtain evidence about the Sustainability Information. The procedures performed depend on the practitioner's judgment, but their nature is different from, and their extent is less than, a reasonable level assurance engagement. It does not include detailed testing of source data or the operating effectiveness of processes, internal controls and consequently they do not enable us to obtain the assurance necessary to become aware of all significant matters that might be identified in a reasonable level assurance engagement.

TUVI has evaluated the Report's adherence to the following principles with respect to the requirements of the GRI Standards.

**Stakeholder Inclusiveness:** Stakeholder identification and engagement is carried out by ONGC Group on a periodic basis to bring out key stakeholder concerns as material aspects of significant stakeholders. In our view, the Report meets the requirements.

**Sustainability Context:** ONGC Group established the relationship between sustainability and organizational strategy within the report, as well as the context in which disclosures are made.

**Materiality:** The materiality assessment process has been carried out, based on the requirements of the GRI Standards, considering aspects that are internal and external to the Company's range of businesses. The Report fairly brings out the aspects and topics and its respective boundaries of the diverse operations of ONGC Group. In our view, the Report meets the requirements.

**Completeness:** The Report has fairly disclosed the General and Specific Standards Disclosures, including the Disclosure on Management Approach, covering the sustainability strategy, management approach, monitoring systems and sustainability performance indicators against the GRI Standards, 'in accordance' Core option. In our view, the Report meets the requirements.

**Reporting Principles for defining report quality:** The majority of the data and information was verified by TUVI's assurance team at ONGC's premises and found to be fairly accurate. Some inaccuracies in the data identified during the verification process were found to be attributable to transcription, interpretation and aggregation errors and these errors have been corrected. Therefore, in accordance with the GRI Standards and limited level assurance engagement, TUVI concludes that the sustainability data and information presented in the Report is fairly reliable and acceptable. In our view, the Report meets the requirements. The disclosures related to sustainability issues and performances are reported in a balance and clear in terms of content and presentation. In our view, the Report meets the requirements.



TUVI expressly disclaims any liability or co-responsibility for any decision a person or entity would make based on this Assurance Statement. The intended users of this assurance statement are the management of ONGC Group. The Management of the Company is responsible for the information provided in the Report as well as the process of collecting, analyzing and reporting the information presented in the web-based and printed Reports, including website maintenance and its integrity. TUVI's responsibility regarding this verification is in accordance with the agreed scope of work which includes non-financial quantitative and qualitative information (Sustainability Performance – environmental and social indicators) disclosed by ONGC Group in the Report. This assurance engagement is based on the assumption that the data and the information provided to TUVI are complete and true.

### **TUV's Competence and Independence**

TUVI is a global provider of sustainability services, with qualified environmental and social assurance specialists. TUVI states its independence and impartiality with regard to this assurance engagement. In the reporting year, TUVI did not work with ONGC Group on any engagement that could compromise the independence or impartiality of our findings, conclusions and recommendations. TUVI was not involved in the preparation of any statements or data included in the Report, with the exception of this Assurance Statement. TUVI maintains complete impartiality toward any people interviewed during the assurance engagement.

**For and on behalf of TUV India Private Limited**



Manojkumar Borekar  
Project Manager and Reviewer  
Head – Sustainability Assurance Service  
TUV India Private Limited

Date: 02/01/2019  
Place: Delhi, India  
Project No : 8116316239  
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## ABBREVIATIONS

List of Abbreviations	
API	American Petroleum Institute
BCM	Billion Standard Cubic Meter
bopd	Barrels of oil per day
CDM	Clean Development Mechanism
COD	Committee of Directors
CPSE	Central Public Sector Enterprise
CSR	Corporate Social Responsibility
CVO	Chief Vigilance Officer
DFCU	Dual Feed Cracker Unit
DGMS	Directorate General of Mines Safety
DPE	Department of Public Enterprise
EMS	Environment Management System
ETP	Effluent Treatment Plant
ETCS	Effluent Treatment and Collection System
FIPI	Federation of Indian Petroleum Industries
FY	Financial Year
GHG	Greenhouse Gas
GOHDS	Gas Oil Hydro-De – Sulphurising
GMI	Global Methane Initiative
GRM	Gross Refining Margin
GRI	Global Reporting Initiative
GNPOC	Greater Nile Petroleum Operating Company
HPDE	High Density Polyethylene
HSD	High speed diesel
HSE	Health, Safety and Environment
IPPAI	Independent Power Producers Association of India
IPSHEM	Institute of Petroleum Safety, Health and Environment Management
ISO	International Organisation for Standardisation
JV	Joint Venture
KDMIPE	Keshav Dev Malviya Institute of Petroleum Exploration
KTPA	Kilo-Tonnes Per Annum
LNG	Liquefied Natural gas
LPG	Liquefied Petroleum Gas
MCA	Ministry of Corporate Affairs
MECL	Mansarovar Energy Columbia Ltd.
MMSCM	Million Metric Standard Cubic Meters
MMT	Million Metric Tonnes
MMtoe	Million Metric Tonnes of Oil and Oil Equivalent Gas
MMTPA	Million Metric Tonnes per annum
MRPL	Mangalore Refinery and Petrochemicals Limited



MSEZ	Mangalore Special Economic Zone
NELP	New Exploration Licensing Policy
NGO	Non-Governmental Organization
OGSS	Oil and Gas Sector Supplement
OHS	Occupational Health and Safety
ONGC	Oil and Natural Gas Corporation
ONGC Group	Refers to ONGC group of companies - ONGC, ONGC Videsh, MRPL and Joint Ventures- OMPL, OPaL and OTPC
OMPL	ONGC Mangalore Petrochemicals Limited
ONGC Videsh	ONGC Videsh Limited
OISD	Oil Industry Safety Directorate
OPaL	ONGC Petro additions Limited
OTBL	ONGC Teri Biotech Ltd.
OTPC	ONGC Tripura Power Company
OVVL	ONGC Videsh Varkorneft Pte. Limited
O+OEG	Oil and Oil Equivalent of gas
PMHBL	Petronet MHB Limited
PPE	Personal Protective Equipment
PX	Para-xylene
PWC	Produced Water Conditioner
SCOPE	Standing Conference on Public Enterprises
SDG	Sustainable Development Goal
SKO	Superior Kerosene Oil
UNFCCC	United Nations Framework Convention on Climate Change
UNGC	United Nations Global Compact
UNISDR	United Nations International Strategy for Disaster Reduction
WBCSD	World Business Council for Sustainable Development
WRI	World Resource Institute
ZBRR	Zero Based Risk Review







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