

# DIRECTORS' REPORT



IndianOil - constantly innovating to bring the best to you

## Dear Shareholders,

On behalf of the Board of Directors of IndianOil, it is my privilege to present the 62<sup>nd</sup> Annual Report and the Fourth Integrated Annual Report of the Company for the financial year ended March 31, 2021, along with the Audited Standalone and Consolidated Financial Statements and Auditor's Report thereon.

The year stood testimony to the grit and perseverance of IOCians who scripted success stories despite the challenges unleashed by the Covid-19 pandemic. It was the 'never-say-die' spirit and the indomitable courage of the Company's frontline warriors across the entire supply chain that kept India as well as IndianOil on the move during this unprecedented crisis in modern human history. The Company not only maintained the supply of petroleum products across the country, but also

exceeded the tough capital expenditure target for expanding its infrastructure and strengthening its business goals by launching innovative products and services in the retail space.

As the country faced challenges posed by Covid-19, IndianOil stood firm by its philosophy of 'Pehle Indian, Phir Oil'. When the world came to a standstill, IndianOil stopped at nothing. In addition to its 'business as usual' approach, IndianOil stood at the forefront of the pandemic and with a humanitarian approach leveraged its resources of money, material and workforce. When the entire country was reeling under the second wave of Covid-19 infections, the Company continued to serve silently, taking several initiatives towards Covid-19 management and Liquid Oxygen (LOx) arrangement.

## Performance Review

### Financial

The Company registered its highest ever net profit on the back of high inventory gains, healthy petrochemicals margin and low finance cost.

The summarised standalone performance and appropriations for 2020-21 are given below:

Particulars	2020-21		2019-20	
	US\$ Million	₹ Crore	US\$ Million	₹ Crore
<b>Revenue from Operations</b> (Inclusive of Excise Duty & Sale of Services)	69,374	5,14,890	79,892	5,66,354
<b>EBITDA</b> (Profit Before Exceptional Items, Finance Cost, Tax, Depreciation & Amortisation)	5,742	42,614	3,154	22,356
Finance Cost	417	3,094	843	5,979
Depreciation	1,321	9,804	1,237	8,766
<b>Profit Before Tax &amp; Exceptional Items</b>	4,004	29,716	1,074	7,611
Exceptional Items	-	-	(1,595)	(11,305)
<b>Profit Before Tax</b>	4,004	29,716	(521)	(3,694)
Tax Provision	1,062	7,880	(706)	(5,007)
<b>Profit After Tax</b>	2,942	21,836	185	1,313
Interim Dividend paid	1,299	9,640	550	3,902
Final Dividend paid	-	-	130	918
Dividend Distribution Tax	-	-	139	986
Insurance Reserve (Net)	1	11	3	20
General Reserve	1,642	12,185	(637)	(4,513)
Balance Carried to Next Year	-	-	-	-

### SHARE VALUE

	2020-21		2019-20	
	US\$	₹	US\$	₹
Cash Earnings Per Share	0.46	34.46	0.15	10.98
Earnings Per Share	0.32	23.78	0.02	1.43
Book Value Per Share	1.65	120.36	1.35	102.13

Note: Exchange Rate used

For 2020-21: Average Rate 1 US\$ = ₹ 74.22 and Closing Rate 1 US\$ = ₹ 73.12 as on March 31, 2021

For 2019-20: Average Rate 1 US\$ = ₹ 70.89 and Closing Rate 1 US\$ = ₹ 75.67 as on March 31, 2020

The macro-economic, geo-political, financial, industry-specific information and markets in which the Company operates are provided in the Management Discussion and Analysis section, which forms a part of this Integrated Annual Report.



Liquid Medical Oxygen (LMO) being transported across the nation by IndianOil

### Issue of Securities / Changes In Share Capital

There was no change in the share capital of the Company during the year. However, the Company issued Unsecured, Rated, Listed, Taxable, Redeemable, Non-Convertible Debentures (NCDs) aggregating to ₹ 7,915.20 Crore on private placement basis, which were listed on the Debt Segment of the NSE and BSE. The funds were utilised for the purpose for which they were raised and there were no deviations or variations in their utilisation.

### Dividend

The Board of the Company has formulated a Dividend Distribution Policy and the dividends declared / recommended during the year were in accordance with the said policy. The policy is hosted on the website of the Company at: <https://www.iocl.com/download/Policies/Dividend-Distribution-Policy.pdf>

During the year, the Company paid a first interim dividend of ₹ 7.50 per share and a second interim dividend of ₹ 3.00

per share. In addition, the Board of the Company has recommended a final dividend of ₹ 1.50 per share for the year, thereby taking the total dividend for the year to ₹ 12 per share with a total pay-out of ₹ 11,017.25 Crore equivalent to 50.50% of the PAT.

This is the 54<sup>th</sup> consecutive year of dividend declaration with total payout of ₹ 74,937 Crore (including the proposed final dividend for the year 2020-21)

### Contribution to Exchequer

Over the years, the Company has been the largest contributor to the Government exchequer in the form of duties, taxes, and dividend. During the year, ₹ 2,38,786 Crore was paid to the exchequer as against ₹ 1,82,067 Crore paid in the previous year, an increase of 31% over the previous year. An amount of ₹ 1,53,827 Crore was paid to the Central Exchequer and ₹ 84,959 Crore to the States Exchequer compared to ₹ 96,104 Crore and ₹ 85,963 Crore paid in the previous year, respectively.

### Consolidated Financial Performance

In accordance with the provisions of the Companies Act, 2013, and the Accounting Standards issued by the Institute of Chartered Accountants of India, the Company has prepared the Consolidated Financial Statement for the group, including subsidiaries, joint venture entities and associates. The highlights of the Consolidated Financial Results are shared below:

Particulars	2020-21		2019-20	
	(US\$ Million)	(₹ Crore)	(US\$ Million)	(₹ Crore)
Revenue from Operations (Inclusive of Excise Duty & Sale of Services)	70094	520237	81251	575990
Profit Before Tax	4143	30751	(1012)	(7177)
Profit After Tax	2932	21762	(265)	(1,876)
Less: Share of Minority	17	124	(139)	(983)
Profit for the Group	2915	21638	(126)	(893)

Note: Exchange Rate used

For 2020-21: Average Rate 1 US\$ = ₹ 74.22

For 2019-20: Average Rate 1 US\$ = ₹ 70.89

## Operational Performance

The summary of the operational performance of your Company is as under:

Particulars	(in MMT)	
	2020-21	2019-20
Refineries Throughput	62.35	69.42
Pipelines Throughput	76.02	85.35
Product Sales (inclusive of Gas, Petrochemicals & Exports)	81.03	89.70

### Refineries

The spread of Covid-19 and the resultant lockdown as well as other restrictions, severely impacted the entire value chain of petroleum products and, therefore, refineries had to operate at lower levels compared to the previous years. The refineries showed tremendous resilience and passion to strive during these difficult times by optimising operations to meet skewed product demand. While demand for major petroleum products decreased drastically, demand for cooking gas increased and refinery operations were accordingly tuned for LPG maximisation, despite reduction of crude throughput. Due to grounding of the aviation operations, jet fuel (ATF) production had to be reduced drastically, and the streams were diverted to the diesel pool. Consequently, the performance parameters of capacity utilisation, distillate yield and energy performance were lower than that of 2019-20.

Petrochemicals posted encouraging numbers, with naphtha throughput touching 2.67 MMT, which was 11% higher than the annual target of 2.4 MMT. The overall polymer production (Polyethylene + Polypropylene) clocked 1.5 MMT, while overcoming high stocks (due to low dispatches) and low feed availability from reduced refinery operations. LAB production was aligned to meet the increased demand of sanitation products. 134 TMT of LAB was produced, achieving 100% prime percentage continuously for 16 months.

The Company's Panipat Naptha Cracker (PNC) plant was recognised as one of the 'Excellent Energy Efficient Units' by the Confederation of Indian Industries (CII). PNC Polypropylene

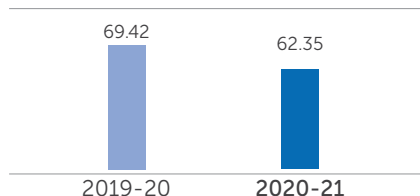
Units ranked first in internal stream factor globally, out of 54 licensees in the Spheripol Benchmarking Survey 2019 for Polypropylene units undertaken by licensor, M/s Basell. The High Density Poly Ethylene (HDPE) unit ranked second in both prime percentage and specific steam consumption out of 19 licensees in the Global Benchmark Survey 2019 carried out by Licensor M/s Basell.

India's **first batch** of the **premium gasoline XP100** was produced from the **Mathura Refinery** using high octane streams from in-house researched and developed **Octamax technology**. Subsequently, other refineries also produced the XP100 gasoline to meet the countrywide demand. With this endeavour, the Company catapulted India globally to a select league of nations with such superior quality fuel.

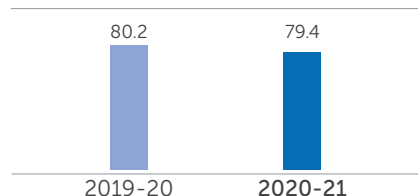
During the year, **16 new crude oil grades** were included in the Company's basket increasing its size to 201 crudes. Over the years, the share of North and South American crude oil grades processed by the Company has increased, standing at 10.1% during 2020-21, thereby improving the flexibility in operations and resilience in crude purchases.

The Company commissioned a new, state-of-the-art INDMAX and Prime-G unit at Bongaigaon (Assam), a new NHT and CCRU unit at Barauni (Bihar), new DHDT units at the Haldia Refinery (West Bengal) and new DHDT and HGU units at its Panipat and Gujarat refineries for improving the bottom line and efficiency of the refineries. The third INDMAX unit at the Bongaigaon Refinery was dedicated to the nation by the Hon'ble Prime Minister on February 22, 2021.

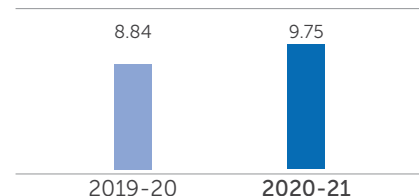
#### Crude Throughput (MMT)



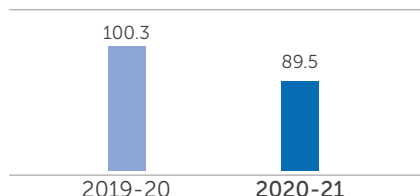
#### Distillate Yield (%)



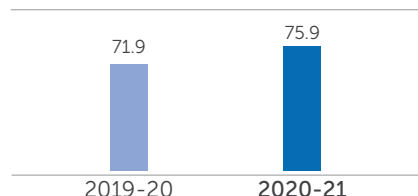
#### Fuel & Loss (%)



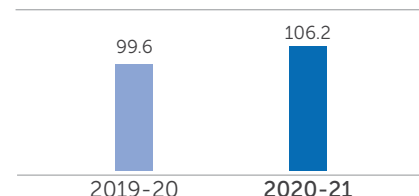
#### Capacity Utilisation (%)



#### Specific Energy Consumption (%)



#### Energy Intensity Index (%)





Chairman, IndianOil and other dignitaries flagging-off indigenously manufactured critical components to the upcoming MEG plant at Paradip Refinery cum Petrochemical Complex

Refinery expansion, coupled with value-added products and petrochemical integration, are the fundamental tenets of the future growth strategy of your Company. Apart from expanding the capacities of its refineries at Panipat (15 to 25 MMTPA), Gujarat (13.7 to 18 MMTPA), Barauni (6.0 to 9.0 MMTPA) and Guwahati (1.0 to 1.2 MMTPA), your Company has decided to establish a **9 MMTPA greenfield Cauvery Basin Refinery** in a joint venture with Chennai Petroleum Corporation Limited (a subsidiary) at Nagapattinam in Tamil Nadu. All refinery expansion with petrochemical and lube integration projects along with other approved capital expenditure (capex) plans translate into an

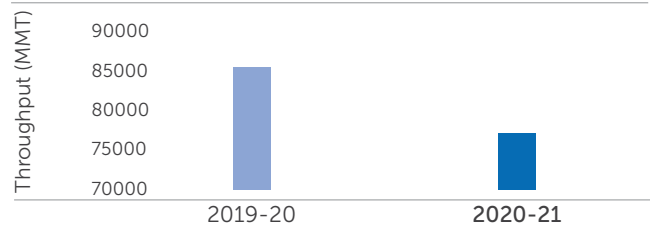
investment commitment of close to Rupees One Lakh Crore in the next four to five years, aimed at a high growth trajectory.

In line with the National Vision of Energy Security and the Paris Agreement, your Company has been working on potential opportunities for developing **Carbon Capture, Utilisation and Storage (CCUS) projects** from its various refineries as an emissions mitigation tool for combating climate change and involving the injection of carbon dioxide into oil reservoirs for enhanced oil recovery (EOR) in India.

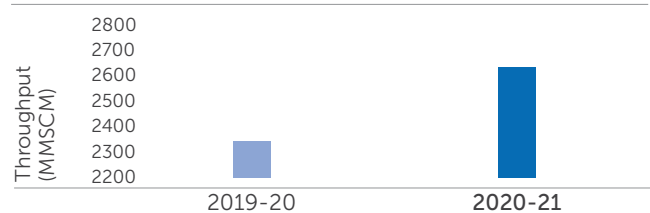
**Pipelines**

The Company continued to expand its pipeline network during the year and crossed yet another **milestone of 15,000 Km** with a combined throughput capacity of 94.56 Million Tonnes per annum for crude oil / product and 21.69 MMSCMD for gas pipelines. During the year, the crude oil pipelines achieved a throughput of 44.13 MMT and product pipelines achieved a throughput of 31.89 MMT. The lower throughput of product and crude pipelines was mainly due to drop in demand caused by Covid-19. However, gas pipelines achieved the highest ever throughput of 2,691 MMSCM, which is 12% higher than the throughput of 2,400 MMSCM achieved during 2019-20. Your Company continued to demonstrate efficient pipeline operation by achieving a **reduction of 13.5% in Specific Energy Consumption (SEC)** vis-à-vis last year.

**Product+Crude**



**Gas**





With over 15000 kms of crude & product pipelines, IndianOil ensures that its petroleum supplies & services reach the last mile

Your Company **commissioned a 337 Km pipeline** during the year, which was dedicated to the nation by the Hon'ble Prime Minister of India. Apart from the commissioning of the Durgapur–Banka (193 Km) section of the Paradip–Haldia–Durgapur LPG pipeline project and the Ramanathapuram–Tuticorin section (143.5 Km) of the Ennore–Thiruvallur–Bengaluru–Puducherry–Nagapattinam–Madurai–Tuticorin natural gas pipeline, capacity augmentation of the Panipat–Bhatinda pipeline was also completed during the year.



Your Company is executing pipeline projects worth ₹ 25,300 Crore, which are under various stages of implementation. Commissioning of these projects will add around 6,600 Km to the existing pipeline network, leading to a total pipeline network length of 21,000 Km with liquid pipeline capacity of approximately 137 MMTA and gas pipeline capacity of approximately 51.70 MMSCMD. Your Company also bagged the consultancy work for the 2,805-Km long Kandla–Gorakhpur LPG pipeline, one of the world's longest LPG pipelines.

It is a matter of pride to inform you that the meticulous efforts of your Company in ensuring safe and continuous operations of its vast network of pipelines and vital offshore crude handling systems were recognised and the Pipelines Division

was bestowed with the 'Oil & Gas Transportation Company of the Year – 2020' award by the Federation of Indian Petroleum Industry (FIPI).



Oil & Gas Transportation Company of the year – 2020 award by FIPI

### Marketing

Amid the lockdown and intermittent travel restrictions during the year, your Company continued to serve the nation by ensuring uninterrupted supply of petroleum products across the country. Domestic sale of 69.35 MMT of petroleum products was registered during the year as against 78.54 MMT registered in the previous year. The Company served around 2.25 Crore customers daily at its retail outlets and delivered around 27 Lakhs LPG cylinders per day to fulfil the energy requirement of India's citizens.

During the year, your Company commissioned 3,000 retail outlets (ROs), which was the highest ever by any Oil Marketing Company. To promote new age fuelling trends, the Company has already commissioned 637 Door-to-door delivery mobile dispensers for diesel.

In a step towards green energy, during the year, 5.95% blending of ethanol with petrol was achieved. Further, your Company is upgrading its supply and retail infrastructure to achieve the Government of India's aggressive target of 20%

ethanol blending by 2023. Recently, on the occasion of World Environment Day on June 5, 2021, the Hon'ble Prime Minister launched the ambitious pilot rollout of bio-fuel E100, i.e., 100% ethanol from your Company's retail outlet at Pune.

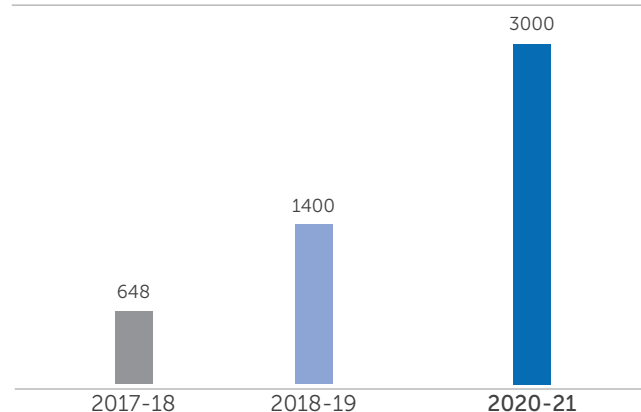
To promote alternative fuels, your Company added 310 new CNG, 17 Compressed Biogas (CBG), 205 electric vehicle (EV) charging and 27 battery swapping stations during the year. As of the close of the year, the Company was operating 1,059 CNG, 21 CBG, 257 EV charging and 29 battery swapping stations in the country.

**India's first super premium petrol, XP100**, with an octane value of 100 was launched by the Company during the year. Currently, XP100 is being sold through 87 ROs across 46 cities.

Subsequently, in May 2021, **XP95 (95 Octane Premium Petrol)** was launched to enable automobile manufacturers accelerate automobile development to meet the Corporate Average Fuel Efficiency (CAFE) and BS-VI Stage 2 norms that will come into effect from 2022.



### RO Commissioning



In an initiative towards promoting women's empowerment in the distribution network, **83 all-women retail outlets** were launched across India, during the year. Your Company decided to percolate this culture into every corner of the country by increasing the share of space for women at the Company's forecourts and customer touch points.

To benchmark digital experience at the forecourt, initiatives like the **Integrated Transaction Processing System (ITPS) and Secondary Dealer Management System (SDMS)** were launched, which will ensure linkage of payment with actual delivery of fuel and loyalty programme through automation with a single PoS terminal for acceptance of CC, DC, UPI, Bharat QR, Wallets, XTRAREWARDS, XTRAPOWERS, etc. Currently implemented at over 3,000 ROs, the same will be expanded to over 30,000 ROs by end of this year.

In an endeavour to have a rejuvenated feel of ROs with various value-added services, newly designed **Retail Visual Identity (RVI)** elements were piloted at four ROs in the National Capital of New Delhi. Scale up has been planned across major cities at identified ROs for wider feedback and pan India rollout soon.

Your Company achieved the highest ever LPG sale of 12.96 MMT during the year and released more than 38 Lakhs new LPG connections. To improve customer reach and customer satisfaction in services, the Company commissioned 293 new LPG distributorships, taking their total number to 12,726.

Among various initiatives for the convenience of LPG customers, a countrywide 24X7 **common booking number (7718955555) for LPG refills** was introduced with options of vernacular languages. Also, for the **first time in the industry**, a single number was launched for refill bookings and requests for new connections through missed calls.

During the year, **Indane XtraTej**, differentiated LPG with nano-additives for enhanced performance, was launched. The 5-kg cylinder, rebranded as **Chhotu**, was a big fillip to brand Indane. In addition, **Indane composite cylinders** were launched in 5 kg and 10 kg units to offer a new-age and lightweight LPG cylinder to customers.

**SERVO**, the lubricant brand of the Company, improved its market share and retained its numero uno position registering

a growth of 26% over the previous year with a sale of 561 TMT. SERVO expanded its footprint to Fiji and Turkey, taking the Superbrand's presence to **32 countries**. Approvals for 38 SERVO grades were obtained from Original Equipment Manufacturers (OEMs) like Tata Motors, Mahindra & Mahindra, KIA Motors, Nissan, Ashok Leyland, Honda, etc. In view of future demand as well as for manufacturing futuristic lube formulations for enhancing performance, your Company is setting up the **world's second largest** integrated ultramodern, state-of-the-art lube complex of 450 TMTPA capacity with the largest product portfolio at Chennai, with an investment of about ₹ 1,400 Crore.

In the aviation sector too, the Company maintained its leadership position with a market share of 62.9% during the year. Two new Aviation Fuel Stations (AFS) were commissioned at Darbhanga (Bihar) and Bilaspur (Chhattisgarh) during the year, taking the total number of AFS set up in the country by the Company to 121. Standing by the country in testing times, the Company refuelled flights under the Vande Bharat Mission and also refuelled the rescue operations spearheaded by the Defence Forces during the Uttarakhand Glacier Burst.

The cryogenics group of the Company maintained its leadership and sold over 30,000 units of cryo-cans during the year. The cryogenics group also manufactured 19 refuellers, 10 aviation containerised tanks with modules, and two customised heavy duty refuellers. In line with the country's requirement the cryogenics group undertook manufacturing of 20 LOx tankers, to be supplied in the current year. To meet the increasing requirement of cryo products, including LNG and LOx equipment in the country, the Company is planning to expand its manufacturing facilities in and around the existing plant at Nashik.

To improve supply infrastructure for supporting increasing demand, your Company has established a modernised lube blending plant at Trombay, Maharashtra, and new LPG bottling plants at Nagpur (Maharashtra), Jabalpur (Madhya Pradesh) and Korba (Chhattisgarh). Construction of an exclusive jetty at Kamarajar Port near Chennai at a cost of ₹ 921 Crore for import and export for LPG and POL products is also underway.

In a first of its kind campaign, Customers Day was celebrated on January 9, 2021, across the network of retail outlets, LPG distributorships, SERVO stockists, AFSs and other supply locations. The widely followed event brought together customers, channel partners and their families, and trended as one of the top grossing events.







Union Petroleum Minister Shri Dharmendra Pradhan, Petroleum Secretary Shri Tarun Kapoor, Chairman Shri S. M. Vaidya and IndianOil Sports Stars with Indane Composite Cylinders



IndianOil Superbrand 'SERVO' is now available in 32 countries

## Research and Development

IndianOil's Team R&D exhibited exemplary resilience in continuing the pursuit of development and commercialisation of indigenous technologies. The Centre pursued cutting-edge research programmes in core petroleum activities like lubricant, refining, petrochemicals, differentiated fuels, high efficiency lubricants and pipeline transportation technology, among others. In addition, the R&D Centre also focussed on research activities in sunrise areas like alternative energy segments like bio-energy, solar energy, hydrogen economy, energy storage, nanotechnology, carbon capture and utilisation, and battery technologies, etc.



IndianOil R&D Campus at Faridabad, Haryana

During the year, these R&D pursuits resulted in the filing of 169 patents (69 in India and 100 overseas) taking the total tally of filed patents till March 31, 2021 to 1,294. A hundred and eighty patents were granted, taking the Company's portfolio of effective patents to 1,165 as on March 31, 2021.

The R&D Centre sustained its efforts in the field of lubricants to achieve self-sufficiency with the Government of India's intent of an 'Aatmanirbhar Bharat' with the issuance of 106 formulations and 47 approvals from Original Equipment Manufacturers (OEM) and customers. The INDMAX technology was selected for a 1.9 MMTPA Petro FCC unit by Numaligarh Refinery Limited, the first success outside the Company's own refineries in the domestic refining sector.

Your Company successfully commissioned the **1.2 MMTPA grassroots IndeDiesel** unit at Haldia Refinery producing on-spec BS-VI diesel. Propylene maximisation study was carried out for the RFCCU at **Haldia Refinery** for improvement of propylene yield with change of catalyst and optimisation of process conditions.

The R&D Centre's indigenous **Octamax technology** enabled the production and launch of XP100, a niche, high octane petrol. A corrosion inhibitor developed by the Centre was accepted for all product and offshore crude pipelines.

In a boost towards green energy, your Company undertook a successful **trial run of 50 buses on HCNG** fuel technology. To reduce import dependency, development of a novel **2G Enzyme** was undertaken for the production of 2G ethanol from lignocellulosic biomass. A demonstration plant of 10 Tonnes Per Day is under construction at Panipat to showcase this technology. A facility was created at Palwal, Haryana, for developing the off-site pre-treatment technology of paddy straw biomass. To support the Government of India's 'Waste to Value' initiative, your Company developed and successfully demonstrated the **eco-friendly Plastic to Fuel (IndEcoP2F) technology** for the conversion of waste plastic at the Digboi Refinery with 95.4 wt% plastic to fuel conversion.

## Business Development

Beyond its core business, the Company also integrated and diversified into new business segments through steady and timely investments. Its expanded portfolio of petrochemicals, natural gas, exploration and production, and alternative energy stands out, as its key strength to take on the changes triggered by the ongoing energy transition.



PROPEL- India's leading Petrochemical brand

### Petrochemicals

The Company is the **second largest petrochemicals player** in the country offering polymers, Linear Alkyl Benzene (LAB), Purified Terephthalic Acid (PTA), glycols and butadiene. The brand, **PROPEL**, is a leading brand in the Indian petrochemicals market.

The petrochemicals business of the Company demonstrated exemplary performance in the face of tough times and uncertainties during the year. The conditions were exacting for the domestic as well as global petrochemical industry due to sharp volatility in demand and feedstock prices. Certain unexpected events like hurricanes and polar storm in the US, and worldwide container shortages further impacted the supply chain, which impacted global trade.

Amid this volatile business environment, the petrochemicals business continued to perform exceptionally, delivering a 159% growth in profit vis-à-vis last year. During the year, sales, including exports, was 2.68 MMT as against 2.22 MMT in the previous year, registering a growth of 20%, which was backed by higher demand mainly from packaging, FMCG, consumer goods, safety equipment, health and sanitation sectors. Within the bouquet of petrochemicals, polymer sales touched a record high of 1.65 MMT, registering a growth of 28% over the previous year.

A new **Product Applications and Development Centre (PADC)** was set up at Paradip (Odisha) during the year, to cater to the

product application and testing needs of the industry as well as to support the entrepreneurial activities in the region. The Company continued to expand its grade basket in polymers and launched four new polymer grades. These developments are in line with the Government of India's 'Aatmanirbhar Bharat' campaign, along with maintaining the Company's competitive advantage in the petrochemicals business. In addition, 21 OEM approvals were received from major Indian and international brands for different polymer grades.

Medical sector centric efforts were one of the core areas of focus this year. The polymer grade 1200-MC was extensively used in medical devices and disposable syringes, thereby lending support in the fight against the Covid-19 pandemic. A new niche grade 1350YH was also introduced to address the emerging requirement in personal hygiene products, such as face masks, sanitary-pads and diapers.

During the year, a 'Share Subscription-cum-Shareholders Agreement & Memorandum of Understanding' was signed with the Odisha Industrial Infrastructure Development Corporation, State Government of Odisha, for the development of the Paradip Plastic Park. The plastic park will help in the development of downstream plastic industries, auxiliary industries and MSMEs in Odisha, generating new employment opportunities in the state and region.

The Paradip port continued to gain prominence as an export destination of the country, with regular exports to nearby South and South East Asian countries commencing from the nearby Paradip Polypropylene Plant of the Company.

The efforts of the Company were duly recognised by the industry and for its exemplary performance in the petrochemicals sector during the year, your Company was awarded the prestigious 'FICCI Chemicals and Petrochemicals Awards 2021' in two categories—namely the 'Company of the year in Petrochemicals (Public Sector)' and 'Best Contribution to Academia'.

### Natural Gas

The Company continued to expand its natural gas business during the year and clocked sales (including internal consumption) of 5.38 MMT as against 5.42 MMT in 2019-20. The Company now has a customer base of 70 R-LNG patrons with the addition of nine new customers during the year, besides supplies to its own refineries at Mathura (Uttar Pradesh), Panipat (Haryana) and Koyali (Gujarat). Sale through the Company's 'LNG at the Doorstep' initiative grew by 25% during the year to reach a level of 104.25 TMT. During the year, 33 LNG cargoes were imported, of which 23 were spot cargoes, while 10 were against long-term contracts.

### City Gas Distribution (CGD)

Your Company is swiftly expanding its presence in the CGD business. Along with its two joint venture companies, Green Gas Limited (with GAIL India Limited) and IndianOil Adani Gas Private Limited (with Adani Total Gas Limited), it has authorisation for 40 Geographical Areas (GAs) spread across the length and breadth of the country. During the year, the Company commissioned its first standalone GA in Rewa (Madhya Pradesh), while eight GAs were commissioned by the Company's joint ventures. With this, 22 of the 40 GAs under the Company's fold are now operational. During the year, 0.68 Lakhs PNG connections were released across all GAs, either by the Company directly or through its joint venture companies. On its own, your Company commissioned 12 CNG stations during the year, and commenced registration and on-boarding of domestic PNG customers in various GAs through its in-house portal. In 2021-22, apart from achieving

the stipulated Minimum Work Progress (MWP) targets, gas-in is planned for the GAs at Aurangabad (Maharashtra), Bokaro (Jharkhand), Ashoknagar (Madhya Pradesh) and Arwal (Bihar).



IndianOil is expanding its CGD network across India

### Exploration & Production (E&P)

The Company continues to explore opportunities in the E&P sphere through participating interests (PI), joint ventures and wholly-owned subsidiaries. The upstream portfolio consists of nine domestic and 11 overseas assets, which are in various stages, viz. eight producing, four under development, four blocks with discovery, one under appraisal and three under exploration.

During the year, the share of production from the producing assets was 3.86 MMT of oil equivalent (MMtoe). Production from the assets stood lower than 4.26 MMtoe registered in the previous year, as OPEC+ cuts and heavy inventory levels affected production in overseas blocks.

During the year, oil flow was established in the appraisal well drilled in the Company's Onshore Block 1 in Abu Dhabi. The Company has 50% participating interest in the asset, which is also its first overseas block with IndianOil as operator.

The Company's Block AAP-ON-94/1 in Dirok Field in Assam recorded the highest ever daily production of natural gas as on August 5, 2020, which was double the Field Development Plan approved at the production level.



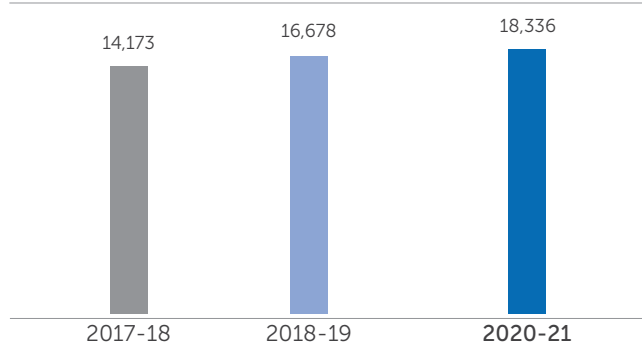
IndianOil is a non-operating partner at the crude processing facility in Lower Zakum Concession, UAE

## Alternative Energy

Your Company is steadily progressing towards harnessing renewable energy to minimise carbon emissions for a green economy. The Company has an installed capacity of 232.95 MW of renewable energy, comprising 167.6-MW wind power capacity and 65.35-MW solar energy capacity as on March 31, 2021. These projects generated 329.45 GWh during the year, resulting in emission mitigation of 2.6 Lakhs Metric Tonnes of carbon dioxide equivalent ('00000 MTCO<sub>2</sub>-eq).

During the year, the company solarised 1658 retail outlets (ROs). As on 31.03.2021, 18336 of IndianOil's ROs were powered by solar power systems with cumulative installed capacity of 102.4 MW. Upscaling initiatives are in hand for meeting the increasing grid power demand of refineries due to future expansion plans.

### Solarised ROs



Committed to enhance its green footprint, your Company is taking strides to contributing towards better air quality by reducing crop burning and lowering vehicular emissions by higher ethanol blending rate (a green and clean fuel). In this regard, the Company is putting up a second-generation ethanol plant at Panipat and a biofuel complex, including CBG plant, at Gorakhpur (Uttar Pradesh). The Company also established

two 'cattle dung to biogas' plants in Madhya Pradesh and Uttar Pradesh, while another is being implemented in Rajasthan.

Your Company is the **first and only Oil and Gas Company** selling CBG through 23 ROs across eight states under the '**IndiGreen**' brand. The Company has issued a Letter of Intent to over 1,500 plants for production and supply of approximately 3.5 MMTPA of CBG under the Sustainable Alternative Towards Affordable Transportation (SATAT) scheme of the Government of India.

Going further on the path towards alternative energy, your Company has tied up with 22 plants through EOIs for supplying biodiesel produced from Used Cooking Oil (UCO) with an annual capacity of 229 TKL. On May 4, 2020, the **first truck load of UCO-based biodiesel** blended HSD was flagged off by the Hon'ble Minister of PNG and Steel from the Tirkri Kalan Terminal in West Delhi.

The Company is taking initiatives in a variety of '**waste to energy**' options and has signed an MoU with the North Delhi Municipal Corporation on January 19, 2021, in this regard. Recently, your Company has signed an MoU with the NTPC and the South Delhi Municipal Corporation (SDMC) for setting up 50 TPD 'waste to energy' demo projects at SDMC's Okhla landfill site.

To support the Government of India's e-mobility initiative, your Company acquired equity stake in Phinergy Limited (an Israeli company specialised in Aluminium-Air Battery technology) and formed a joint venture, namely 'IOC Phinergy Private Limited' (IOP) in February 2021 to commercialise the Aluminium-Air Battery technology in India. Your Company is also exploring the prospects of **green hydrogen** and is working towards exploring possible collaboration in the area of 'waste to hydrogen' technology. Discussions are also ongoing with an electrolyser technology company towards utilisation of electricity generated from renewable energy plants to produce green hydrogen.



## Sustainable Development

As a responsible entity, your Company has taken a number of sustainability initiatives across its locations related to energy conservation, energy efficiency, renewable energy and carbon sequestration, water management through reducing consumption, recycling and rainwater harvesting, and waste management through reducing, reusing and recycling initiatives.

Across the company, rainwater harvesting systems have been installed with catchment area covering more than 2500 Ha and harvesting more than 8 Billion liters of rain water in 2020-21. The increase in rain water harvested during the year is an account of inclusion of the watershed projects implemented in the refineries. The Company launched a unique initiative, **#TreeCheers**, in November 2020, under which the Company planted saplings on behalf of patrons, who refuelled their new vehicles at the Company's outlets. A total of 2.26 Lakhs saplings were planted across the country, during the five-day campaign period, making it one of the biggest success stories in recent times.

The Company is replacing all conventional lights with LED, across its installations. During the year, around 1.12 Lakhs LED lights installed with cumulative replacement count of 7.19 Lakhs of LED lights. Paper recycling is another focus area for the company. During the year, 291 Tonnes of waste paper were recycled through designated recyclers. The Company is also developing a supply chain for plastic recycling with a vision towards plastic neutrality. An MoU was signed with a technology provider for exploring various technological options, such as plastic waste recycling and upcycling, waste-to-chemicals production, anaerobic digestion of organic waste, etc.

## Overseas Business

Your Company's approach to overseas business is underpinned by a four-pronged strategy, which includes investment in overseas projects and assets, opening of branch/ representative offices, export of products, and export of services. To expand its footprint in neighbouring countries, its subsidiary company, IOC Middle East FZE, formed a new joint venture company in Bangladesh for conducting LPG business and for exploring other business opportunities in the hydrocarbon sector in Bangladesh. Recently, the Company opened new branch/ representative offices in Myanmar, Bangladesh and Nepal to develop businesses in the downstream hydrocarbon sector in these countries.

MoUs were signed during the year with established international players of Bangladesh, Vietnam and Nepal for mutual cooperation across the entire hydrocarbon value chain, including oil and gas E&P, refining, transportation, setting up plants/terminals, supply and retailing, collaboration for R&D activities, providing consultancy, capacity building and secondment services, etc.

During the year, export of finished petroleum products was given a big push, with your Company reaching out for supplying petroleum products to neighbouring countries. Your Company expanded its reach to global markets and exported

5,394 TMT of petroleum products to various countries, viz., Bangladesh, Mauritius, Sri Lanka, etc. In addition, 60 TMT of petrochemical products were exported during the year. In another breakthrough, an export contract was finalised for exporting HSD via land to Myanmar for constructing a two-lane road from Kaletwa to Zorinpui along the India-Myanmar Border in the Chin State of Myanmar under the 'Kaladan Multi-Modal Transit Transport' project.

An India Energy Office was set up in Russia by a consortium of five Indian PSUs, including your Company. The office was opened with the objective of promoting the interest of Indian Oil Companies in Russia to support current E&P assets, explore new business opportunities, tie-up for new technologies and the import-export of petroleum products and services.

The Company has been providing consultancy services/ capability building services/ secondment services in the Gulf Cooperation Council (GCC) region, South East Asia and East Africa.

## Explosives

The explosives group achieved an all-time high production and sales of 265.5 TMT of bulk explosives during the year, registering a growth of 29% over the previous year's volume of 205 TMT.



Charging of bulk explosive at a mine site

## Diversification

Your Company has ventured into setting up fertiliser plants at Barauni (Bihar), Gorakhpur (UP) and Sindri (Jharkhand) through a joint venture company, Hindustan Urvarak and Rasayan Limited (HURL), in partnership with National Thermal Power Corporation Limited, Coal India Limited, Fertilizer Corporation of India Limited and Hindustan Fertilizer Corporation Limited. The plants are under advanced stages of construction and slated to be commissioned by the fourth quarter of this fiscal with commercial production expected to start by April 2022.

## International Trade

Your Company imported 53.60 MMT of crude oil during the year, as against 59.75 MMT in the previous year to meet the crude oil requirement for processing at its refineries. The import was lower than the previous year due to drop in demand for petroleum products caused by the Covid-19 pandemic. The selection of crude oil is undertaken from a diversified mix of supply sources to optimise the cost as well as to improve flexibility. The import of petroleum products during the year was 8.58 MMT as against 8.57 MMT in the previous year. Various strategies, such as increasing offshore storage of crude and sale to strategic reserves, were deployed during the year to cope with the sudden drop in demand.

## Projects

Your Company believes that creation of infrastructure is important to make petroleum products available to customers at the least cost. Therefore, the Company continued to invest in greenfield and brownfield projects. During the year, the total capex spent by the Company was ₹ 28,684 Crore (including ₹ 24,051 Crore on its capital projects and the rest towards equity investment in its joint ventures/ subsidiaries). The development of infrastructure was financed through an optimum mix of internal accruals and borrowings from domestic as well as international markets.

Your Company is executing a basket of projects ranging from refinery expansions and augmentation of pipeline network to

diversification through joint ventures. The major projects are focussed on expansion of refineries, fuel quality upgradation, revamp and expansion of petrochemical plants, petrochemical and lube integration as well as grassroot projects for strengthening the hydrocarbon value chain.

Your Company is committed towards the expansion of its pipeline network and is executing pipeline projects to take the length to 21,000 Km by the end of this fiscal. Major ongoing pipeline projects include the Haldia–Barauni crude oil pipeline, the Paradip–Hyderabad product pipeline, augmentation of the Paradip–Haldia–Durgapur LPG pipeline and its extension up to Patna and Muzaffarpur, the Koyali–Ahmednagar–Solapur product pipeline, the Paradip–Somnathpur–Haldia product pipeline, augmentation of the Salaya–Mathura crude oil pipeline system and the Ennore–Thiruvallur–Bengaluru–Puducherry–Nagapattinam–Madurai–Tuticorin natural gas pipeline. In addition, your Company is undertaking massive LPG and natural gas pipeline projects through joint ventures, spanning approximately 9,300 Km. These include the Kandla–Gorakhpur LPG pipeline (the longest LPG pipeline in the world) through IHB Limited and the North East Natural Gas Grid through Indradhanush Gas Grid Limited (IGGL).

Your Company is also establishing a new R&D campus at Faridabad, Haryana, with state-of-the-art facilities at a cost of ₹ 3,200 Crore to boost the research horizon of the R&D Centre, which has evolved into a world-class technology solutions provider.



Chairman Shri S. M. Vaidya, with the Projects team at Panipat Refinery & Petrochemicals Complex

## Health, Safety & Environment (HS&E)

The Company believes that good HS&E performance is an integral part of efficient and profitable business management and, therefore, is committed to conduct its business with a strong environment conscience, ensuring sustainable development, safe workplaces and enrichment of the quality of life of its employees, customers and community. All refineries of the Company are certified to ISO:14064 standards for sustainable development as well as for the Occupational Health and Safety Management System (OHSAS-18001/ISO:45001), besides having fully equipped occupational health centres.

Most of the pipeline installations and some of the marketing installations of the Company are also ISO-14001 certified. The API 1173 based Pipeline Safety Management System was introduced across the entire pipeline network. Compliance with safety systems and procedures as well as environmental laws is monitored at the unit, division, and corporate levels.

The HS&E activities of the Company are reviewed periodically in the Board meetings. During the year, various capability building, and training programmes were conducted on safety-

related topics covering the entire spectrum of activities of the Company.

Your Company undertook various administrative controls, such as implementation of thermal screening at entry points, practice of proper hygiene/sanitation measures, physical distancing, staggered office timings, allowing work from home for identified employees, etc., to safeguard its workforce from Covid-19 infections. An online dashboard was developed for real-time monitoring of the health status of employees and their families with a telemedicine application for online medical consultation too.

During the year, various capability building and training programmes were conducted on safety-related topics, such as all India campaigns for safe decantation of TT, and safe TT driving campaigns, among others. Awareness among LPG domestic customers on safe use of LPG was also generated through Safety Clinics and LPG Panchayats as well as through social media interactions.

Your Company was bestowed with the National Safety Council Award 2020 with the Guwahati Refinery winning the **Sarvashreshtha Suraksha Puraskar**.



A view of Bongaigaon Refinery Eco Park



## DIGITAL INITIATIVES

Your Company marked 2020 as the 'Year of Digitalisation' and aptly transformed processes to best-in-class and deployed various digital tools to further optimise operational performance and effectiveness. Implementation of customer relationship management and secondary dealer management system across LPG, lubes and direct customers business lines was a necessary IT intervention in serving over 25 Crore of our esteemed customers. The **Digitally Advanced Company of the Year 2020** award from FIPI was a fructification and recognition of these initiatives.

The **digital transformation project, i-DRIVE**, made significant strides in 2020-21 and scripted notable successes to accelerate the pace of our digital interventions in the times ahead. Some of these initiatives include the Digital Centre of Excellence (DCoE) for an analytics hub, which operationalised more than 25 AI/ ML-based advanced analytics use-cases, such as yield maximisation of units in our refineries, optimum

cleaning schedule for heat exchanger trains, a decision support system for LPG cylinder supply forecasting, PetChem inventory optimisation, customer churn analysis for industrial customers, predictive maintenance and remote monitoring of critical equipment like gas turbines, etc.

Implementation of emerging tech platforms, increased efficiency through digital assistants/ chatbots, robotic process automation (RPA), business intelligence (BI) dashboarding self-service platforms, pan-IndianOil data management platform (DMP), the Data Lake with IT-OT convergence set the foundational platform for all data-driven decision making.

Implementation of off-the-shelf solutions, viz., the data reconciliation and yield accounting tool (DRYA), shutdown management system, integrated shipping tool, end-to-end project management suite, multi-BU pricing tool, network planning tool, coastal scheduler, and the Geographic Information System (GIS) acted as enablers for enhancing process efficiency.



IndianOil is utilising the best-in-class technology to further optimise its operations

## Human Resources

The strong, dedicated and resilient workforce of 31,648 IOCIans continued to perform their duties, despite challenges posed by Covid-19, to fuel the country. The total number of employees as on March 31, 2021 include 17,762 executives and 13,886 non-executives and 2,775 women employees comprising 8.77% of the total workforce. During the year, the Company recruited 371 executives. To further the cause of apprenticeship training in the country, the Company engaged apprentices under various categories like Trade/ Technician/ Fresher/ skill-certificate holder. The apprentices were imparted practical inputs with a structured monitoring and assessment methodology.

The Company scrupulously follows the Presidential Directives and guidelines issued by the Government of India regarding the reservation in services for SC / ST / OBC / PwBD (Persons with Benchmark Disabilities) / Ex-servicemen / Economically Weaker Sections (EWSs) to promote inclusive growth. Rosters are maintained as per the directives and are regularly inspected by the Liaison Officer(s) of the Company as well as the Liaison Officer of the Government of India to ensure proper compliance. Grievance / Complaint Registers are also

maintained at Division / Region / Unit levels for registering grievances from OBC / SC / ST employees and efforts are made to promptly dispose of the representations/grievances received. In accordance with the Presidential Directive, the details of representation of SC / ST / OBC in the prescribed format are attached as **Annexure – I** to this Report.

The provisions of 4% reservation for persons with disabilities in line with the Government of India's guidelines/ instructions were implemented by the Company. Necessary concessions/ relaxations in accordance with the rules in this regard were extended to physically challenged persons in recruitment. The number of differently abled employees as on March 31, 2021 was 707, constituting 2.23% of the total employee strength.

During the year, cordial industrial relations were maintained across the Company. The Company provides comprehensive welfare facilities to its employees to take care of their health, efficiency, economic betterment, etc., and to enable them to give their best at the workplace. The Company supports participative culture in the management of the enterprise and has adopted a consultative approach with collectives, establishing a harmonious relationship for industrial peace, thereby leading to higher productivity.

The Company believes in holistic and meaningful employee engagement; and their development to catalyse the emergence of the highest potential of employees. To align HR activities with the Corporate Vision and the newly launched Talent Vision, many initiatives were taken during the year. The 'People first' approach of the Company is focused at the well-being of teams and stakeholders.

During the year, a Talent Vision and Strategy Framework for three years was launched. Your Company's vision was to 'Align our People and Talent Capability to deliver our Energy Promise to the Nation'. Along with its core values, the Company will be driven by a DARE2 framework, which emphasises 'Dexterity, Adaptability, Resilience, Engagement and Empathy'.

The Company achieved Level 3 under the **People Capability Maturity Model (PCMM)**, which is a proven set of Human Capital Management practices that provide a roadmap for continuously improving the capability of workforce. The employees of the Company have been provided access to the Bersin-Research and Sensing Portal, a state-of-the-art knowledge platform, which will keep readers informed of the latest developments. The wholehearted adoption of



Our People, Our Strength

## e-learning portal **Swadhyaya**

**e-learning portal Swadhyaya** by employees during the pandemic emerged as a successful engagement-cum-development practice. In all, employees completed more than 1 Million e-modules. A new mentoring framework was institutionalised to provide opportunity for all employees to help one another grow through collaboration, goal achievement and psycho-social support.

As a forward looking responsible corporate, your Company has always strived to establish an inclusive work culture, which ensures providing a secure work environment to its women employees and has initiated many measures to facilitate the same.

### Particulars of Employees

The provisions of Section 134(3)(e) of the Act are not applicable to a Government Company. Consequently, details on Company's policy on Directors' appointment and other matters as required under Section 178 (3) of the Act, are not provided.

Similarly, Section 197 of the Act is also exempt for a Government Company. Consequently, there is no requirement of disclosure of the ratio of the remuneration of each Director to the median employee's remuneration and other such details, including the statement showing the names and other particulars of every employee of the Company, who if employed throughout / part of the financial year, was in receipt of remuneration in excess of the limits set out in the rules are not provided in terms of

Section 197 (12) of the Act read with Rule 5 (1) / (2) of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014.

### Hindi Implementation

The Company is committed to implementing Hindi into the day-to-day functioning at its various offices/ locations/ units. The provisions of the Official Language Act, 1963, and rules notified thereunder were complied with. The communications received in Hindi including any application, appeal or representation written or signed by an employee in Hindi is replied to in Hindi. Official Language Implementation Committees (OLIC) have been formed in all offices/units to review the progress of implementation of official language policies.

## Corporate Social Responsibility

Your Company's CSR objectives are enshrined in its Vision / Mission statement, '...to help enrich the quality of life of the community and preserve ecological balance and heritage through a strong environment conscience...'. CSR thrust areas include 'safe drinking water and protection of water resources', 'healthcare and sanitation', 'education and employment-enhancing vocational skills', 'rural development', 'environment sustainability', 'empowerment of women and socially / economically backward groups', etc., undertaken mainly for improving the quality of life in various communities, including marginalised and under privileged sections of the society. The Company has partnered many life-changing community development projects and has positively impacted stakeholders with around 600 projects across the length and breadth of the country.

During the year, the Company also undertook various CSR initiatives to overcome the challenges posed by the Covid-19 pandemic like insurance coverage for employees of business partners, providing medical equipment to hospitals, procurement of cold chain equipment for transportation of vaccines, contributions to the PM Cares Fund, etc. During the year, as against the CSR budget of ₹ 342 Crore (being 2% of the average profit of the previous three years, as per the provisions of the Companies Act, 2013), the Company set aside an enhanced budget of ₹ 460.37 Crore to ensure continuity in the planned CSR activities including many flagship projects. The entire budget of ₹ 460.37 Crore was spent during the year on various CSR activities. A report on the Company's CSR activities as per the provisions of the Companies Act, along with CSR highlights for the year is attached as **Annexure – II** to the Report. The composition of the CSR Committee is provided in the Corporate Governance Report. The CSR policy of the Company can be accessed on the Company website: [https://www.iocl.com/download/Policies/IOC\\_S&CSR\\_Policy.pdf](https://www.iocl.com/download/Policies/IOC_S&CSR_Policy.pdf).



IndianOil's Mobile Medical Unit catering to the patients

## Right to Information Act (RTI)

The Company has put in place an elaborate mechanism to deal with matters relating to the RTI as required under the Right to Information Act, 2005. Detailed information is hosted and regularly updated on the official website of the Company, [www.iocl.com](http://www.iocl.com), which inter-alia includes details of Central Public Information Officers (CPIOs) / Assistant Public Information Officers (APIOs), third-party audited reports on mandatory disclosures, etc.

The Company has designated a Nodal Officer at its Corporate Office, New Delhi. In addition, 30 First Appellate Authorities, 41 CPIOs and 41 APIOs have been designated across various locations. The Company has aligned with the Online RTI Portal of DoPT, Government of India, and all applications / appeals received through the portal are handled through the portal itself. The quarterly / annual reports are submitted, within the prescribed timeline, on the website of Central Information Commission, [www.cic.gov.in](http://www.cic.gov.in).

During the year, 4,813 requests and 578 first appeals were received and disposed-off within the prescribed timelines. In addition, 90 second appeals were filed before the Central Information Commission, New Delhi, and all were handled without any penalty/disciplinary action by the Hon'ble Commission.

## Compliance with the Sexual Harassment of Women at Workplace (Prevention, Prohibition & Redressal) Act, 2013

The provisions of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013, have been implemented across the Company with the clear objective of providing protection to women against sexual harassment at the workplace and redressal of complaints of sexual harassment. Internal committees have been set up at each Unit / Region / Head Office level, headed by senior-level women employee to deal with sexual harassment complaints.

Six complaints of sexual harassment were pending as on April 1, 2020. During the year, four complaints were received, and eight complaints were handled. As on March 31, 2021, two complaints were pending.

Regular workshops were organised, especially for women employees, to bring awareness about their rights and facilities at the workplace and emphasising the provisions of the Act. During the year, 35 workshops/awareness programmes were conducted. Gender sensitisation programmes and sensitising male employees were also conducted regularly.

### Vigilance

The objective of the vigilance function is to ensure maintenance of the highest level of integrity in the Company. The Company has a separate Vigilance Department, which is headed by the Chief Vigilance Officer. The department acts as a link between the Company and Chief Vigilance Commissioner and also advises the Company on all matters pertaining to the subject. The vigilance department takes preventive, punitive and participative measures, with emphasis on the preventive and participative aspects, and also helps in establishing effective internal control systems and procedures for minimising systemic failures. During the year, 62 vigilance awareness programmes were conducted, which were attended by about 2,400 employees. Disciplinary action under applicable Conduct, Discipline and Appeal Rules, 1980, and Certified Standing Orders were taken by the Company for irregularities/lapses. During the year, 44 disciplinary matters related to vigilance cases were disposed of and 16 such cases were pending at the end of year. The cases pertain to irregularities such as indiscipline, dishonesty, negligence in performance of duty or neglect of work, etc. The Company continuously endeavours

to ensure fair and transparent transactions through technology interventions and system/process review in consultation with the Central Vigilance Commission and internal vigilance set-up. The Vigilance Department (Corporate) of the Company was awarded ISO certification during the year.

### Public Deposit Scheme

The Public Deposit Scheme of the Company was closed with effect from August 31, 2009. The Company has not invited any deposits from the public during the year and no deposits were outstanding as on March 31, 2021, except the old cases amounting to ₹ 55,000, which remain unpaid due to unsettled legal/court cases.

### Corporate Governance

Your Company always endeavours to adhere to the highest standards of corporate governance, which are within the control of the Company. A comprehensive Report on Corporate Governance inter-alia highlighting the endeavours of the Company in ensuring transparency, integrity and accountability in its functioning has been incorporated as a separate section, forming a part of the Annual Report. The certificate issued by the Statutory Auditors on Compliance with Corporate Governance guidelines is annexed to the Report on Corporate Governance.

### Management's Discussion & Analysis Report

The Management's Discussion and Analysis (MDA) Report, as required under Corporate Governance guidelines, has also been incorporated as a separate section forming a part of the Annual Report.



Hydrogen CNG plant at Rajghat, New Delhi

## Business Responsibility Report

The Business Responsibility Report, providing information on the various initiatives taken with respect to environmental, social and governance perspectives, has been prepared in accordance with the directives of SEBI and is hosted on the website of the Company on the link <https://www.iocl.com/business-responsibility-report>

## Audit Committee

The Audit Committee of the Board comprised three members, as on March 31, 2021 of whom two were Independent Directors (including the Chairman) and one non-executive Director. The observations / recommendations made by the Audit Committee during the year were put up to the Board and the same were accepted by the Board. Other details of the Audit Committee, such as its composition, terms of reference, meetings held, etc., are provided in the Corporate Governance Report.

## Other Board Committees

The details of other Board Committees, their composition and meetings, are also provided in the Corporate Governance Report.

## Code of Conduct

The Board of the Company has enunciated a Code of Conduct for the Directors and Senior Management Personnel, which was circulated to all concerned and was also hosted on the Company's website. The Directors and Senior Management Personnel have affirmed compliance with the code of conduct for the financial year 2020-21.

## Risk Management

The Company considers risk management as a key element of its business operations and has put in place effective systems to identify, analyse, monitor and mitigate risks to ensure the organisation's sustained growth and profitability.

The Company's Enterprise Risk Management involves risk identification, assessment and categorisation (based on risk appetite) and is reviewed regularly by risk-owners to optimise risks with appropriate mitigation plan. A Risk Management Compliance Board comprising senior management personnel and headed by Chief Risk Officer reviews the various risks associated with the Company's business. The Company has constituted a Risk Management Committee comprising Whole-time Directors which oversees the risk management activities. A report was, thereafter, put up to the Audit Committee and the Board.

Over and above the various business risks, which are apprehended and analysed in the regular course of business, the Company encountered a totally unprecedented risk to its business posed by the Covid-19 pandemic. However,

your Company demonstrated strong resilience in the face of adversity during the pandemic despite demand destruction and declining product cracks. The risks posed by Covid-19 were closely monitored by the top management of the Company on a regular basis to ensure continuity of business operations in an optimised and safe manner.

## Internal Financial Controls

The Company put in place adequate internal financial controls for ensuring efficient conduct of its business in adherence with laid-down policies; safeguarding of its assets; prevention and detection of frauds and errors; accuracy and completeness of the accounting records; and timely preparation of reliable financial information, which is commensurate with the operations of the Company.

The Company also has a separate Internal Audit department headed by an Executive Director, who reports to the Chairman. The Internal Audit department has a mix of officials from finance and technical functions, who carry out extensive audit throughout the year. The statutory auditors are also required to issue the Independent Auditor's Report on the Internal Financial Controls over financial reporting of the Company under Clause (i) of Sub-Section 3 of Section 143 of the Companies Act 2013. The report issued thereupon has been attached along with the Standalone and Consolidated Financial Statements, respectively.

The Board believes that systems in place provide a reasonable assurance that the Company's internal financial controls are designed effectively and are operating as intended.

## Statutory Auditors

The Office of the Comptroller & Auditor General of India had appointed the Statutory Auditors for the financial year 2020-21. The Auditors had confirmed that they are not disqualified from being appointed as Auditors of the Company. The Notes on the financial statement referred to in the Auditors' Report are self-explanatory. The Auditors' Report does not contain any qualification or adverse remark.

The Auditors' remuneration for the year was fixed at ₹ 200 Lakhs plus applicable taxes for Statutory Audit. In addition, reasonable out-of-pocket expenses incurred are also reimbursed at actuals. The total amount payable to the Statutory Auditors for all services rendered to the Company during 2020-21 was ₹ 402 Lakhs.

## Cost Audit

The Company maintains cost records as required under the provisions of the Companies Act. The Company had appointed Cost Auditors for conducting the audit of the cost records maintained by its refineries, lube blending plants and other units for 2020-21. A remuneration of ₹ 20.20 Lakhs and applicable taxes was fixed by the Board for payment to the cost

auditors for 2020-21, which was ratified by the shareholders in the last AGM. The cost audit reports are filed by the Central Cost Auditor with the Central Government in the prescribed form within the stipulated time.

### Secretarial Audit

The Board had appointed M/s. Ragini Chokshi & Co., Practising Company Secretaries, to conduct the Secretarial Audit for 2020-21. The Secretarial Auditor in their report have stated that during the period under review, the Company has complied with the provisions of the Act, Rules, Regulations, Guidelines, Standards, etc., except as under:

- The Company could not comply with the requirement of having not less than 50% of the Board of Directors as Non-Executive Directors for the period September 22, 2020 to March 31, 2021.
- The Company could not comply with the requirement of having at least half of the Board of Directors as Independent Directors during 2020-21.
- The Company could not comply with Regulation 17(10) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 (SEBI (LODR)), which requires performance evaluation of Independent Directors by the entire Board of Directors, and regulation 25(4) of the SEBI (LODR), which requires review of performance of Non Independent Directors, the Board of Directors as a whole and the Chairperson of the Company by the Independent Directors.

In this regard, it clarified that the Company being a Government Company under the administrative control of the Ministry of Petroleum & Natural Gas, the selection and appointment of Directors (including Independent Directors and Women Directors) vests with the Government of India as per Government guidelines. Further, the Ministry of Corporate Affairs, vide notification dated June 5, 2015, has provided exemption to Government Companies, regarding the provisions related to evaluation of performance of Directors under the Companies Act, 2013, as the evaluation is carried out by the administrative ministry.

The Secretarial Audit report issued by M/s. Ragini Chokshi & Co., Practising Company Secretaries, is attached as **Annexure - III** to this report.

### Reporting of Frauds by Auditors

The Auditors in their report for the year have not reported any instance of fraud committed by the officers/employees of the Company.

### Public Procurement Policy for Micro and Small Enterprises (MSEs) Order 2012

In line with the Public Procurement Policy of the Government of India, as amended, the Company is required to procure minimum 25% of the total procurement of Goods and Services

from MSEs, out of which 4% is earmarked for procurement from MSEs owned by SC/ ST entrepreneurs and 3% from MSEs owned by women. The procurement from MSEs (excluding crude oil, petroleum products and natural gas, API line pipes and certain proprietary items) during 2020-21 was as under:

PARAMETERS	TARGETS	ACTUAL
Total Procurement from MSEs (General, Reserved SC/ST & Women)	25%	28.36%
Procurement from Reserved SC/ST MSEs	4% (Sub-target out of 25%)	0.75%
Procurement from Women-owned MSEs	3% (Sub-target out of 25%)	0.14%

The deficit of 3.25% and 2.86% under the sub-targets was due to non-availability of vendors in the sub-category; however, the overall target was achieved by procurement from other micro and small enterprises in line with the policy.

Several initiatives were undertaken to identify the entrepreneurs for procurement of goods and services from MSEs owned by SC/ST enterprises, including 76 vendor development programmes.

### Subsidiaries, Joint Ventures & Associates

During the financial year, two new joint venture companies were incorporated, as per details given below:

- IndianOil Total Private Limited incorporated on October 7, 2020 with 50:50 equity holding between your Company and Total Marketing and Services S.A., France, for undertaking Bitumen and LPG business.
- IOC Phinergy Private Limited incorporated on February 19, 2021 with 50:50 equity holding between your Company and Phinergy, Israel, for commercialisation of Aluminium-Air Battery technology in India.

In March 2021, your Company exited from an inoperative joint venture, IndianOil Panipat Power Consortium Limited (IPPCL), through sale of its entire equity shareholding.

As required under the provisions of the Companies Act, 2013, a statement on the performance and financial position of each of the subsidiaries, joint venture companies and associates is annexed to the Consolidated Financial Statements. The financial statements of the subsidiaries have also been hosted on the Company website, [www.iocl.com](http://www.iocl.com), under the 'Financial Performance' section.

In accordance with the provisions of SEBI guidelines, your Company has framed a policy for determining material subsidiaries, which can be accessed on the Company's website at, [https://www.iocl.com/download/Policies/Material\\_Subsiidiary\\_Policy.pdf](https://www.iocl.com/download/Policies/Material_Subsiidiary_Policy.pdf).

## Related Party Transactions (RPTs)

During the year, your Company entered RPTs, which were on arm's length basis and were in the ordinary course of business. As required under the provisions of the Companies Act, 2013, and SEBI (LODR), all RPTs were approved by the Audit Committee.

During the year, the Company had not entered into any transaction with related parties, which could be considered material in accordance with the policy of the Company on materiality of related party transactions.

In view thereof, there is no transaction which needs to be reported in Form No. AOC-2, in terms of Section 134(3)(h) read with Section 188 of the Act and Rule 8(2) of the Companies (Accounts) Rules, 2014.

The Policy on Materiality of Related Party Transactions and on dealing with Related Party Transactions as approved by the Board is hosted on the Company's website and can be accessed at: [https://iocl.com/download/RPT\\_Policy.pdf](https://iocl.com/download/RPT_Policy.pdf).

## Energy Conservation, Technology Absorption and foreign Exchange Earnings and Outgo

Energy conservation is accorded utmost importance among the various operating parameters of the Company. The performance of all units is monitored on a continuous basis and efforts are made for continuous improvement by incorporating the latest technologies and global best practices. The various energy conservation measures implemented across the refineries during the year, resulted in energy saving as well as monetary saving. Under pipeline operations, various initiatives were taken during the year, which resulted in reduction in Specific Energy Consumption by 13.5% over 2019-20.

In accordance with the provisions of the Companies Act, 2013, and rules notified thereunder, the details relating to Energy Conservation, Technology Absorption and Foreign Exchange Earnings and Outgo are annexed as **Annexure-IV** to the Report.

## Board of Directors & Key Managerial Personnel

The following changes occurred in the Board / Key Managerial Personnel of the Company:

1. Shri Vinoo Mathur, Shri Samirendra Chatterjee, Shri C.R. Biswal, Dr Jagdish Kishwan, Shri Sankar Chakraborti and Shri D. S. Shekhawat ceased to be Independent Directors w.e.f. September 22, 2020, consequent upon completion of their term.
2. Shri Akshay Kumar Singh, ceased to be Director (Pipelines) w.e.f. February 1, 2021, consequent upon resignation due to his appointment as Managing Director of Petronet LNG Limited.
3. Shri Gurmeet Singh, ceased to be Director (Marketing) w.e.f. April 1, 2021, consequent upon his superannuation.
4. Shri Rajendra Arlekar, ceased to be an Independent Director w.e.f. July 11, 2021 consequent upon his resignation due

to his appointment as the Hon'ble Governor of the State of Himachal Pradesh

Dr S. S. V. Ramakumar, Director (Research & Development) and Shri Ranjan Kumar Mohapatra, Director (Human Resources), are liable to retire by rotation and being eligible are proposed to be re-appointed at the forthcoming Annual General Meeting (AGM).

A brief profile of the Directors proposed to be appointed / re-appointed at the forthcoming AGM is provided in the notice of the AGM.

## Independent Directors

The Company received the Certificate of Independence from the Independent Directors confirming that they meet the criteria prescribed for Independent Directors under the provisions of the Companies Act, 2013, and SEBI (LODR). The Independent Directors have confirmed that they have registered with the Database maintained by the Institute of Corporate Affairs (IICA) under the Ministry of Corporate Affairs and have also cleared the online proficiency self-assessment test as prescribed by the IICA.

The Company being a Government Company, the power to appoint Directors (including Independent Directors) vests with the Government of India. The Directors are appointed by following a process as per laid down guidelines. In the opinion of the Board, the Independent Directors have the requisite expertise and experience.

A separate meeting of Independent Directors was held during the year as per provisions of the Companies Act, 2013, and SEBI (LODR).

## Board Meetings

During the year, 11 meetings of the Board of Directors were held. The details of the meetings attended by each Director are provided in the Corporate Governance Report and, hence, not repeated to avoid duplication.

## Board Evaluation

The provisions of Section 134(3)(p) of the Companies Act, 2013, require a listed entity to include a statement indicating the manner of formal evaluation of performance of the Board, its Committees and of individual Directors. However, the said provisions are exempt for Government Companies as the performance evaluation of the Directors is carried out by the administrative ministry, i.e., Ministry of Petroleum and Natural Gas (MoP&NG), as per laid-down evaluation methodology.

## Significant and Material Orders Passed by the Regulators or Courts

No significant and material orders were passed by the regulators or courts or tribunals, during the year that impact the going concern status of the Company and its operations in the future. The response to the notice issued by the

National Green Tribunal and Haryana State Pollution Control Board last year, with regard to air and water pollution caused by the PTA Unit of Panipat Refinery was provided by the Company. However, as directed by NGT, an amount of ₹ 17.31 Crore was deposited 'under protest' with CPCB as interim compensation for restoration of the environment. Since then plant operations had commenced. Subsequently, based on the directions received from the NGT, a further amount of ₹ 25 Crore was deposited as interim compensation for restoration of the environment. In January 2021, the Joint Committee visited the refinery and petrochemicals plant at Panipat to review the progress of the various initiatives as suggested by the Committee. The restoration plan was submitted by the Committee in January and the final report on the progress of its recommendations to the NGT in February 2021. The case was heard by the Hon'ble NGT in March 2021 and was disposed of with directions to complete all the recommendations of the Joint Committee within a time schedule.

### Vigil Mechanism / Whistle-Blower Policy

The Company promotes ethical behaviour in all its business activities and has put in place a mechanism for reporting illegal or unethical behaviour. The Company has established a robust Vigil Mechanism and a whistle-blower policy in accordance with provisions of the Act and Listing Regulations. Under the whistle-blower policy, employees are free to report any improper activity resulting in violation of laws, rules, regulations, or code of conduct by any of the employees to the Competent Authority or Chairman of the Audit Committee, as the case may be. Any complaint received is reviewed by the Competent Authority or Chairman of the Audit Committee as the case may be. No employee has been denied access to the Audit Committee. The policy on Vigil Mechanism/Whistle-Blower can be accessed on the Company's website at: [https://iocl.com/download/Policies/Whistle\\_Blower\\_policy.pdf](https://iocl.com/download/Policies/Whistle_Blower_policy.pdf).

### Details of Loans / Investments / Guarantees

The Company has provided loans / guarantees to its subsidiaries, joint ventures and associates and has made investments during the year in compliance with the provisions of the Companies Act, 2013, and rules notified thereunder. The details of such investments made, and loans / guarantees provided as on March 31, 2021 are provided in the Standalone Financial Statement.

### Annual Return

As required under the provisions of the Companies Act, 2013, the Annual Return is hosted on the Company's website and can be accessed from the link: <https://iocl.com/annual-return>.

### Compliance with Secretarial Standards

The Company complies with the applicable Secretarial Standards issued by the Institute of Company Secretaries of India (ICSI).

### Credit Rating of Securities

The credit rating assigned by rating agencies for the various debt instruments of the Company is provided in the Corporate Governance Report.

### Investor Education & Protection Fund (IEPF)

The details of unpaid / unclaimed dividend and shares transferred to the IEPF in compliance with the provisions of the Companies Act, 2013, has been provided in the Corporate Governance Report.

### Material Changes Affecting the Company

The Covid-19 pandemic and the consequent lockdown in the country since the end of March 2020 had impacted the operations as well as sales of the Company. However, the gradual relaxations in the lockdown during the year resulted in improvement in sales as well as operations. With the resurgence of the second wave of Covid-19, there has been some impact on the demand of petroleum products since April 2021. The Company is taking necessary steps to overcome the challenges.

### Directors' Responsibility Statement

Pursuant to Sec.134(3)(c) of the Companies Act, 2013 pertaining to the Directors' Responsibility Statement, it is hereby confirmed that:

- (a) in the preparation of the Annual Accounts, the applicable accounting standards had been followed alongwith proper explanation relating to material departures;
- (b) the Directors had selected such accounting policies and applied them consistently and made judgements and estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the Company at the end of the financial year and of the profit and loss of the Company for that period;
- (c) the Directors had taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of the Companies Act, 2013 for safeguarding the assets of the Company and for preventing and detecting fraud and other irregularities;
- (d) the Directors had prepared the annual accounts on a going concern basis; and
- (e) the Directors had laid down internal financial controls to be followed by the Company and that such internal financial controls are adequate and were operating effectively.
- (f) the Directors had devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems were adequate and operating effectively.



## Acknowledgements

The Board of Directors would like to express its appreciation for the sincere, dedicated and untiring efforts of the employees of the Company, the contract labourers, and employees of business channel partners to ensure the supply of petroleum products across the country during the lockdown and restrictions caused by the Covid-19 pandemic, and for achieving an excellent performance despite challenges during the year. The Board would also like to thank the Government of India, particularly the Ministry of Petroleum & Natural Gas, as well as the various State Governments, regulatory and statutory authorities, for

their support as well as guidance from time to time. The Board is also thankful to all its stakeholders, including bankers, investors, members, customers, consultants, technology licensors, contractors, vendors, etc., for their continued support and confidence reposed in the Company. The Board would like to place on record its appreciation for the valuable guidance and significant contribution made by Shri Vinoo Mathur, Shri Samirendra Chatterjee, Shri C. R. Biswal, Dr Jagdish Kishwan, Shri Sankar Chakraborti, Shri D. S. Shekhawat, Shri Akshay Kumar Singh, Shri Gurmeet Singh and Shri Rajendra Arlekar during their tenure on the Board of the Company.

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For and on behalf of the Board

Place: New Delhi  
Date: July 27, 2021

Sd/-  
**(Shrikant Madhav Vaidya)**  
Chairman  
DIN: 06995642

## ANNEXURE-I

## SC / ST / OBC Report - I

Annual Statement showing the representation of SCs, STs and OBCs as on January 01, 2021 and number of appointments made during the preceding calendar year

Name of the Public Enterprises : Indian Oil Corporation Limited

Groups	Representation of SCs / STs / OBCs (As on 01.01.2021)				Number of appointments made during the calendar year 2020									
	Total No. of Employees	SCs	STs	OBCs	By Direct Recruitment				By Promotion			By Deputation / Absorption		
					Total	SCs	STs	OBCs	Total	SCs	STs	Total	SCs	STs
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>Executives</b>														
A	17651	2972	1304	4095	253	48	19	74	3837	634	278	-	-	-
<b>Non-executives</b>														
B	4992	825	514	506	-	-	-	-	116	32	17	-	-	-
C	8710	1591	692	2498	83	14	9	26	1023	198	94	-	-	-
D (Excluding Sweeper)	373	60	24	109	13	2	2	2	-	-	-	-	-	-
D (Sweeper)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total (Executives plus Non- executives)</b>	<b>31726</b>	<b>5448</b>	<b>2534</b>	<b>7208</b>	<b>349</b>	<b>64</b>	<b>30</b>	<b>102</b>	<b>4976</b>	<b>864</b>	<b>389</b>	<b>-</b>	<b>-</b>	<b>-</b>

## SC / ST / OBC Report - II

Annual Statement showing the representation of SCs, STs and OBCs in various group A services as on January 01, 2021 and number of appointments made in the service in various grades in the preceding calendar year

Pay Scale (in ₹)	Representation of SCs / STs / OBCs (As on 01.01.2021)				Number of appointments made during the calendar year 2020									
	Total No. of Employees	SCs	STs	OBCs	By Direct Recruitment				By Promotion			By Deputation / Absorption		
					Total	SCs	STs	OBCs	Total	SCs	STs	Total	SCs	STs
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
40000 - 140000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50000 - 160000	519	110	28	141	214	39	16	64	144	39	7	-	-	-
60000 - 180000	3711	584	294	1074	39	9	3	10	13	1	-	-	-	-
70000 - 200000	4369	686	303	1346	No recruitment is made in this Group.				1709	275	125	-	-	-
80000 - 220000	3537	628	252	776	No recruitment is made in this Group.				692	103	46	-	-	-
90000 - 240000	1884	322	164	376	No recruitment is made in this Group.				454	93	39	-	-	-
100000 - 260000	1384	278	112	245	No recruitment is made in this Group.				281	42	22	-	-	-
120000 - 280000	1230	243	105	116	No recruitment is made in this Group.				259	45	22	-	-	-
120000 - 280000	677	92	41	18	No recruitment is made in this Group.				168	27	16	-	-	-
120000 - 280000	254	23	5	3	No recruitment is made in this Group.				84	8	1	-	-	-
150000 - 300000	86	6	-	-	No recruitment is made in this Group.				33	1	-	-	-	-
<b>Grand Total</b>	<b>17651</b>	<b>2972</b>	<b>1304</b>	<b>4095</b>	<b>253</b>	<b>48</b>	<b>19</b>	<b>74</b>	<b>3837</b>	<b>634</b>	<b>278</b>	<b>-</b>	<b>-</b>	<b>-</b>

## ANNEXURE-II

### Highlights of CSR Activities

"Pehle Indian, Phir Oil" truly epitomises IndianOil's Corporate Social Responsibility (CSR) philosophy and the same was aptly displayed during the difficult year of the pandemic. Being a responsible corporate, IndianOil not only ensured continuous supply of essential petroleum products and services across the nation, but also enhanced the CSR allocation beyond the prescribed CSR budget (i.e. 2% of average net profit of the immediately preceding 3 financial years) as required under the provisions of the Companies Act, 2013. Moreover, IndianOil has exemplified its CSR commitment by utilising 100% CSR budget allocation of ₹ 460.37 Crore, for the fourth year in a row.

IndianOil's CSR objective is enshrined in its Vision / Mission statement - "...to help enrich the quality of life of the community and preserve ecological balance and heritage through a strong environment conscience...". IndianOil's CSR thrust areas include 'Safe drinking water and protection of water resources', 'Healthcare and sanitation', 'Education and employment-enhancing vocational skills', 'Rural development', 'Environment sustainability', 'Empowerment of women and socially / economically backward groups', etc. The CSR activities are undertaken primarily to improve the quality of life in various communities, including marginalised & underprivileged sections of the society viz., schedule caste, schedule tribe, other backward caste, physically handicapped, etc., During the year the Company has patronised / sponsored many life-changing community development projects and has positively impacted numerous stakeholders with around 600 projects across the length and breadth of the country.

In compliance with the Department of Public Enterprises (DPE) guidelines for CSR Expenditure by Central Public Sector Enterprises (CPSE), IndianOil spent ₹ 307.17 Crore (which is 67% of total CSR expenditure) on thematic area i.e. Health and Nutrition during 2020-21; and as against the 18 Aspirational Districts allotted by DPE, the Company spent ₹ 13.76 Crore in 32 Aspirational Districts in 2020-21.

#### KEY CSR INITIATIVES DURING 2020-21

##### IndianOil's CSR contribution in fighting Covid-19 Pandemic

To fight the pandemic, IndianOil contributed ₹ 225 Crore to the 'PM CARES fund'. In addition, IndianOil extended support to set up Covid CARE Centres, Quarantine Centres etc. and provided / distributed 16 Ambulances, 30 ventilators, 37 ICU cots, 460 IR temperature guns, more than 1,900 testing kits, more than 29 Lakhs masks; more than 33 kl of sanitisers; more than 17.5 Lakhs food packets; more than 40 thousand grocery packets; more than 2 Lakhs gloves; more than 10 thousand PPE kits, more than 65 thousand soap / liquid hand wash, mosquito nets, gum boots, etc., across the country.

As a major CSR initiative, IndianOil:

- Provided Health Insurance coverage to more than 3 Lakhs frontline workers including employees / contract labourer of the Business Channel partners who work round the

clock to maintain the supply of essential services at various customer touch points such as Retail Outlets, LPG Distributors, Lubes CFA, Transporter, etc. during the lockdown.

- Extended support to set up Covid Care Centre and 100 bed facility (92 General bed facility + 8 ICU Bed facility) Covid-19 Hospital at Medical College & Hospital (MCH) building of District Headquarter Hospital (DHH), Bargarh, Odisha
- Augmented the country's Covid-19 vaccination programme by providing Cold Chain Equipmnet (CCE) viz. Ice Line Refrigerator (ILR), Deep Freezer (DF), Walk-in-Cooler (WIC), Walk-in-Freezer (WIF), Refrigerated Truck (RT), etc. to the state government in 4 states of Jammu & Kashmir, Tamil Nadu, Bihar and Manipur.

The details of other major CSR activities during the year are as under:

##### Institute of Chemical Technology, Mumbai-IndianOil Odisha Campus (ICTM-IOC), Bhubaneswar, Odisha

In a first-of-its-kind initiative, IndianOil collaborated with Institute of Chemical Technology, Mumbai to set-up an off-campus of the Institute of Chemical Technology, Mumbai at Bhubaneswar. The institute christened as 'ICT Mumbai IndianOil Odisha Campus, Bhubaneswar' (ICTM-IOC), was inaugurated by the Hon'ble President of India in 2018. The institute has been planned to evolve into an R&D / innovation hub to carry out high-end research in chemical engineering, petrochemicals, textiles, pharmaceuticals and energy, in order to become a world-class Centre of Excellence in Chemical Engineering & Technology. The first academic session started in 2018 with the enrolment of 60 students for the 5-year integrated M. Tech Programme. As on March 31, 2021, 178 students are undergoing 5-year integrated M. Tech Programme; 21 students are undergoing 2-year full time M. Tech. Programme; 12 industrial personnel are pursuing 2-year Executive M. Tech course and 37 students are pursuing their PhD at the Institute.



Students of integrated M.Tech programme at Institute of Chemical Technology, Odisha Campus

### Skill Development Institute, Bhubaneswar, Odisha

With an aim to provide livelihood enhancing skill development training to unemployed & underprivileged youth and to provide skilled human resources to the job ready industry, Skill Development Institute, Bhubaneswar (SDI-B) was set up on May 9, 2016 in a temporary campus. On March 18, 2018, Hon'ble President of India laid the Foundation Stone for the SDI Main Campus, which is being developed as mega-world-class, model skill development academy at Jatni Tehsil of Khurda; near IIT Bhubaneswar. Hon'ble Minister of Petroleum & Natural Gas & Steel inaugurated the Main Campus on February 24, 2019. The multi skilling institute (green campus), offering international standards of training is imparting world class skill development courses, supported by industry experts. SDI-B prepares students with adequate skills for pursuing careers as Industrial Electricians, Welders, Computer Data Application (only for girls), Fitter Fabrication, Instrumentation Technicians, Pipe Fitters (City Gas Distribution), Solar PV Installation and LPG Mechanics. About 240 students are enrolled in a single batch and are skilled in 8 trade courses. The course duration ranges between 3 and 6 months. During 2020-21, about 251 youth were skilled and certified. Various Centres of Excellence (CoE) have been established in collaboration with internationally reputed institutions / industry partners such as Schneider Electric, Cisco, Intel, Siemens, Kemppti, etc., to provide relevant skill development training with high potential for generating employment. Once fully functional, about 3,000 to 4,000 youth will be trained every year in 16 regular trades pertaining to the hydrocarbon sector and local industries.



Girl students, attending Computer Data Application course at Skill Development Institute, Bhubaneswar

### IndianOil Vidushi

*"If you educate a man, you educate an individual. But if you educate a woman, you educate a nation."* A famous African proverb by James Emman Kwegyir Aggrey truly depicts the objective of starting 'IndianOil Vidushi' CSR programme in 2018. Under this CSR initiative, specialised coaching and mentoring is provided to under-privileged girls after class XII, to help them succeed in JEE Mains, JEE Advanced & other Central and State Engineering College Entrance Examinations. Till 2019-20, a maximum of 30 girls were selected for each of the 4 residential centres at Noida, Bhubaneswar, Patna and Jaipur through

written tests and personal interviews, on merit-cum-means basis. The entire cost for specialised coaching, study material, boarding, food & other consumables, blankets, hygiene kits, dresses, health insurance etc. is borne by IndianOil. During 2020-21, due to the Covid-19 pandemic, online classes were conducted for 120 girls from 2 centres. Out of the 117 girls enrolled in 2019-20, 25 joined IITs, 26 joined NITs & 47 joined other engineering colleges. Scholarship is also given to students after getting admission in IITs / NITs / government engineering colleges, for 4 year graduate programs [₹ 5,000 per month for IITs / NITs; ₹ 4,000 per month for other government engineering colleges].



Students of IndianOil Vidushi programme, Bhubaneswar Centre, receiving digital aids for online classes

### IndianOil Aarogyam

With the objective to provide primary healthcare at people's doorstep, particularly in rural and under-served areas, IndianOil had started a flagship CSR project 'IndianOil Aarogyam' in 2018-19. Twelve Mobile Medical Units (MMU), each with a 4-member medical team consisting of 1 Doctor, 1 Nurse, 1 Nursing Attendant and 1 Driver-cum-Community Mobilizer have been operating in the catchment areas of 3 Refinery Units, i.e., Mathura (Uttar Pradesh), Bongaigaon (Assam) & Paradip (Odisha). The MMUs conduct health screening, basic diagnosis and provide medical treatment. The MMUs cover more than 140 villages near the 3 Refineries. During 2020-21, patient footfall in the target geographies was around 1.94 Lakhs, out of which about 99,000 were female patients.



Drinking Water Project, Bishnupur, Bongaigaon in Assam

### Assam Oil School of Nursing, Digboi, Assam

India has an average of 1.7 nurses for every 1,000 people, 43% less than the World Health Organisation norm (3 per 1,000). India needs 20 Lakhs nursing personnels to fill this wide gap. The Covid-19 pandemic has further increased the requirement for qualified nursing personnel. The Assam Oil School of Nursing (AOSN), Digboi was established with the dual objective of providing stable career and livelihood opportunities to young underprivileged girls and ensure availability of qualified nurses in the country. AOSN offers 3-year diploma in General Nursing and Midwifery (GNM) to young girls and enrolls 30 students every year. For the 4-year B.Sc. (Nursing) course, 30 students are offered admission every year (since 2014). During 2020-21, 30 girls were provided training for GNM and 30 girls were provided training for B.Sc. (Nursing) courses. Since inception, 469 students have completed the GNM course and 87 students have completed the B.Sc. (Nursing) course with 100% placement record.



Students at Assam Oil School of Nursing, Digboi, Assam

### IndianOil Gyanodaya Scheme in Govt. ITIs & Polytechnics

IndianOil Gyanodaya Scheme provides scholarships on merit-cum-means basis to students pursuing 2-year regular courses in Government ITIs and 3-year regular courses in Government Polytechnic, incentivising them to perform well. The scheme covers 36 Government institutes (18 ITIs and 18 Polytechnics) near 9 IndianOil Refinery locations. 50 students per batch are selected from each institute every year. Each student is provided scholarship of ₹ 1,000 per month for the entire duration of the course. During 2020-21, 1,152 students from 28 ITIs and Polytechnics were selected for scholarship.



Students at Dibrugarh Polytechnic, Assam

### Cleaning of Bindusagar Lake, Bhubaneswar, Odisha

Bindusagar is one of the largest water bodies in the famous Lingaraja Temple, Bhubaneswar. Due to wastewater and sewage from the surrounding buildings, flowers and offerings from the temples, and other waste from the ghats, the lake was polluted and had lost its self-purifying capacity.

IndianOil in collaboration with Institute of Chemical Technology, Mumbai - IndianOil Campus, Bhubaneswar (ICTM-IOCB) undertook the project for cleaning the Lake. ICTM-IOCB used the patented Hydrodynamic cavitation technology to reduce Biochemical oxygen demand (BOD), Chemical oxygen demand (COD) & microbial population in the water body. The project has also reduced turbidity of water in an energy efficient and affordable manner. The project is in line with Government of India 's Swachh Bharat Mission and would help to improve the ecological environment around the lake, adding to its aesthetic value and promoting tourism to the area.



Inauguration of Bindu Sagar Lake cleaning project at Bhubaneswar

### Installation of cattle dung-based Biogas plant at Betul, Madhya Pradesh

Under the aegis of Swachh Bharat Mission of the Govt. of India, IndianOil has set up a 5 TPD (tons per day) cattle dung-based Biogas plant at Village Jamthi, District Betul, Madhya Pradesh. The Hon'ble Minister of Petroleum & Natural Gas and Steel, Government of India inaugurated the plant on January 18, 2021. The location presently has a population of 204 cattle heads and has access to various Gaushalas of nearby villages. Installation of a Biogas plant has provided the option for procuring clean energy for cooking and other purposes and to yield better quality manure. The project is in alignment with the national goals of 'Aatmanirbhar Bharat', Make in India and Swachh Bharat mission.



Cattle dung-based Biogas plant at Betul, Madhya Pradesh

### Assam Oil Division Hospital, Digboi, Assam

Assam Oil Division Hospital, Digboi (Estd.1906) is a 200-bed hospital with modern facilities. It caters to the population residing near Digboi Refinery and other nearby areas of the North East. Every year, about 1 Lakh patients are treated at the hospital, including non-employees. The hospital admits about 4,000 patients and conducts operative procedures on about 2,000 patients every year. General as well as specialised health camps are also organised regularly by the hospital to reach out to poor villagers in the vicinity, who otherwise have no access to medical consultations or treatment. During 2020-21, 4,120 non-employee patients were treated at the hospital.



Assam Oil Division Hospital, Digboi, Assam

### Swarna Jayanti Samudayik Hospital, Mathura, Uttar Pradesh

Swarna Jayanti Samudayik Hospital at Mathura (Estd.1999) is a 50-bed hospital providing medical treatment to residents near Mathura Refinery, Uttar Pradesh. The hospital provides free treatment to the destitute and offers subsidised treatment to others. During 2020-21, 30,707 patients were treated at the hospital, out of which operative procedures were conducted on 337 patients.



Swarna Jayanti Samudayik Hospital, Mathura, UP

### IndianOil Sports Scholarship Scheme

In line with the sports policy adopted in 1985, IndianOil has, over the years, recruited many promising sportspersons, who excelled at National & International levels and brought laurels to the Company and the Country. The Company had introduced Sports Scholarship Scheme in the year 2006-07 for promising young sports persons representing States in team games and National rank holders. The scheme started with 55 scholarships in 7 games / sports. At present, 250 scholarships in 20 games / sports (Olympic sports categories & other popular games such as Cricket, Carom, Chess, etc) are awarded to upcoming junior players from 13 to 16 years of age in two categories viz., Elite Scholar and Scholar. The scholarship amount varies from ₹ 15,000 to ₹ 19,000 per month for Elite Scholars and ₹ 12,000 to ₹ 16,000 per month for Scholars, for a period of 3 years and covers the cost of kits as well. In addition, IndianOil also provides assistance for their travel and lodging. During 2020-21, 166 sportspersons benefitted from the scheme and since inception, more than 1,000 sportspersons have benefitted from the scholarship.



Sports Scholars: ① Mahipal (Hockey) ② Lavanya Verma (India team camp for FIFA U-17 girls World Cup) ③ Diya Chittle (Table Tennis Current Youth & Junior U-18 National Champion) ④ Jemimah Rodrigues (Cricket) ⑤ Riddhi & ⑥ Rishabh Yadav (Archery) ⑦ Manisha (Wrestling)

### Cleaning of Bhalswa Lake, Jahangirpuri, Delhi by remote operated water drone (Floater Boat)

Water is the most precious life sustaining natural resource. Water conservation and availability of clean water has, therefore, become a necessity. To ensure steady supply of water and to maintain ecological balance, cleaning of water bodies is essential.

Contributing towards this cause, IndianOil implemented an innovative project and provided remote operated water drone or Floater Boat to clean the Bhalswa Lake at Jahangirpuri, Delhi. It helped to remove the floating garbage from the lake on a regular basis. It cleaned plastics, micro-plastics, alien vegetation

(e.g. duckweed), floating debris etc. from the water body. It is an unmanned garbage collection marine surface vessel designed for round-the-clock waste collection. It also scans and monitors the environment, sending necessary data to the central command. The project has not only benefitted the flora and fauna dependent on the water body but, has also been a boon for residents of surrounding areas.



Remote-operated water drone (Floater Boat)

### Renovation & upgradation of Anganwadi Centres, Jharkhand

Anganwadi is a rural healthcare and child care centre in India. They were started by the Indian government in 1975 as part of the Integrated Child Development Services program to combat child hunger and malnutrition. These centres provide supplementary nutrition, non-formal pre-school education, nutrition, health education, immunisation, health check-up and referral services, of which the last three are provided in collaboration with public health systems.

IndianOil in collaboration with Govt. of Jharkhand renovated and upgraded 200 Anganwadi Centres into model Anganwadi centres at various villages in 6 Districts of Dumka, Godda, Jamtara, Deogarh, Khunti and Ranchi. IndianOil helped to renovate and upgrade the Anganwadi centers and offered services related to its painting, flooring and making provision for furniture & utensils. Toys and playing equipment for kids were also arranged for the centres. It has benefitted more than 7,500 children.



Renovated and upgraded Anganwadi Centre in village Sarsa, Deogarh, Jharkhand

### Establishment of Fodder bank and Skill training facility, Hyderabad

IndianOil, in association with NTR College of Veterinary Science, Gannavaram, Hyderabad implemented a one-of-its-kind CSR project - 'Establishment of fodder bank and skill based training facility for youth and farmers to mitigate fodder scarcity and improve food and employment security of women farmers'. The project includes cultivation of high yielding locally adaptable fodder varieties like Hybrid Napier grass (Super Napier), Guinea grass, COFS 29 and fodder trees like Moringa, Subabul and Sesbania. Around 2,000 tons of green fodder is being produced every year and it is stored in the form of silage bales. The silage bales, weighing about 50-60 kg, is distributed to landless, marginal and small dairy women farmers whose livelihood depend on cattle and buffalo rearing. A training centre has also been developed to impart training to unemployed youth and women, in the areas of livestock and fodder production, thereby empowering them to become successful livestock entrepreneurs.



Villagers in Hyderabad being trained for silage bales formation

The aim of this project is to eliminate fodder scarcity and ensure steady supply of fodder for small women dairy farmers. The high protein content in the fodder leaves helps to increase milk production, thereby enhancing the income generating capacities of these women. The project has benefitted around 200 women farmers and also provided employment to around 10 people who are involved in silage production and preparation of value-added leaf meal products.

The project also helps in environmental sustainability as an acre of grass can sequester more carbon than an acre of forest. Most of the forage grasses and trees planted in the fodder bank are multi-cut varieties and they serve as vegetative mulch in zero tilled conditions for a period of 10 years, depending on soil fertility and the availability of water.

## ANNUAL REPORT ON CSR ACTIVITIES FOR THE YEAR 2020-21

### 1. A brief outline of the Company's CSR policy

IndianOil's CSR initiatives are guided by its corporate vision of caring for environment and community. IndianOil believes that CSR is its continuing commitment to conduct business in a responsible and sustainable manner and contribute to the economic well-being of the country. It also helps to improve the quality of life of local communities residing in the vicinity of its establishments and the society at large.

IndianOil's Sustainability & Corporate Social Responsibility (S&CSR) vision aims to operate its activities in a manner that is efficient, safe and ethical practices that minimises negative impact on the environment and enhances quality of life of communities, thereby fulfilling its mission of sustaining a holistic business.

### 2. Composition of the CSR & Sustainable Development Committee as on 31.03.2021

Name of Director / Designation	Committee Position	Number of meetings of CSR Committee held during the year	Number of meetings of CSR Committee attended during the year
Shri Rajendra Arlekar Independent Director	Chairman	7	7
Shri G. K. Satish Director (Planning & Business Development)	Member	7	7
Shri Ranjan Kumar Mohapatra Director (Human Resources)	Member	7	7
Shri Gurmeet Singh Director (Marketing)	Member	7	5
Shri Sandeep Kumar Gupta Director (Finance)	Member	7	6

### 3. Provide the web-link where Composition of CSR committee, CSR Policy and CSR projects approved by the Board are disclosed on the website of the company

Composition of CSR committee: <https://iocl.com/InvestorCenter/PDF/Board-Committees.pdf>

CSR Policy: [https://iocl.com/download/Policies/IOC\\_S&CSR\\_Policy.pdf](https://iocl.com/download/Policies/IOC_S&CSR_Policy.pdf)

CSR projects approved by the Board: <https://iocl.com/pages/board-approved-csr-projects>

### 4. Provide the details of Impact assessment of CSR projects carried out in pursuance of sub-rule (3) of rule 8 of the Companies (Corporate Social responsibility Policy) Rules, 2014, if applicable (attach the report)

Not Applicable for the financial year under review

### 5. Details of the amount available for set off in pursuance of sub-rule (3) of rule 7 of the Companies (Corporate Social responsibility Policy) Rules, 2014 and amount required for set off for the financial year, if any

Financial Year	Amount available for set-off from preceding financial years (in ₹)	Amount required to be setoff for the financial year, if any (in ₹)
2020-21	Nil	Nil



6. Average net profit of the company as per Section 135(5): ₹ 17,100.00 Crore.
7. (a) Two percent of average net profit of the company as per section 135(5): ₹ 342.00 Crore  
 (b) Surplus arising out of the CSR projects or programmes or activities of the previous financial years: Nil  
 (c) Amount required to be set off for the financial year, if any: Nil  
 (d) Total CSR obligation for the financial year (7a+7b-7c): ₹ 342.00 Crore
8. (a) CSR amount spent or unspent for the financial year:

Total Amount Spent for the Financial Year	Amount Spent				
	Total Amount transferred to Unspent CSR Account as per Section 135(6)		Amount transferred to any fund specified under Schedule VII as per second proviso to Section 135(5)		
	Amount	Date of transfer	Name of the Fund	Amount	Date of transfer
₹ 460.37 Crore	Nil	NA	Nil	Nil	NA

- (b) Details of CSR amount spent against ongoing projects for the financial year: **Annexure – A**
- (c) Details of CSR amount spent against other than ongoing projects for the financial year: **Annexure – B**
- (d) Amount spent on Administrative Overheads: ₹ 15.31 Crore
- (e) Amount spent on Impact Assessment, if applicable: ₹ 0.01 Crore
- (f) Total amount spent for the Financial Year (8b+8c+8d+8e): ₹ 460.37 Crore
- (g) Excess amount for set off, if any

Sl. No.	Particular	Amount (₹ in Crore)
(i)	Two percent of average net profit of the Company as per Section 135(5)	342.00
(ii)	Total amount spent for the Financial Year	460.37
(iii)	Excess amount spent for the financial year [(ii)-(i)]	118.37
(iv)	Surplus arising out of the CSR projects or programmes or activities of the previous financial years, if any	Nil
(v)	Amount available for set off in succeeding financial years [(iii)-(iv)]	118.37

9. (a) Details of Unspent CSR amount for the preceding three financial years:

Preceding Financial Year	Amount transferred to Unspent CSR Account under section 135 (6)	Amount spent in the reporting Financial Year	Amount transferred to any fund specified under Schedule VII as per section 135(6), if any			Amount remaining to be spent in succeeding financial years
			Name of the Fund	Amount	Date of transfer	
2017-18	Nil	Nil	Nil	Nil	Nil	Nil
2018-19	Nil	Nil	Nil	Nil	Nil	Nil
2019-20	Nil	Nil	Nil	Nil	Nil	Nil

- (b) Details of CSR amount spent in the financial year for ongoing projects of the preceding financial year(s): **Annexure - C**

10. In case of creation or acquisition of capital asset, furnish the details relating to the asset so created or acquired through CSR spent in the financial year (asset-wise details).
- (a) Date of creation or acquisition of the capital asset(s).
  - (b) Amount of CSR spent for creation or acquisition of capital asset.
  - (c) Details of the entity or public authority or beneficiary under whose name such capital asset is registered, their address etc.
  - (d) Provide details of the capital asset(s) created or acquired (including complete address and location of the capital asset).

No capital Asset was created / acquired in the books of account of the Company during 2020-21 through CSR Spent.

11. Specify the reason(s), if the company has failed to spend two per cent of the average net profit as per Section 135(5).

The Company has spent ₹ 460.37 Crore, which is more than two per cent of the average net profit as per Section 135(5) i.e. ₹ 342.00 Crore.

Sd/-

**(Ranjan Kumar Mohapatra)**

Director (Human Resources) &  
Member, CSR&SD Committee

Sd/-

**(Rajendra Arlekar)**

Independent Director &  
Chairman, CSR&SD Committee

## Details of CSR amount spent against ongoing projects for the year 2020-21 (₹ Crore)

Sl. No.	Name of the project	Item from the list of activities in Schedule VII to the Act	Local Area (Yes/ No)	Location of Project		Project Duration (in years)	Amount allocated for the project	Amount spent in current financial year	Amount transferred to Unspent CSR Account for the project as per Section 135(6)	Mode of Implementation-Direct (Yes/ No)	Mode of Implementation -Through Implementing Agency	
				State/ UT	District						Name	CSR Registration No.
1	Contribution to Skill Development Institute, Bhubaneswar. CAPEX	(ii)	Yes	Odisha	Khordha	1.6	17.11	17.11	Nil	No	Skill Development Institute, Bhubaneswar	NA
2	Construction of 100 TPD cattle dung based biogas plant, Jaipur	(iv)	Yes	Rajasthan	Jaipur	1.5	16.89	16.89	Nil	Yes	CEID Consultants & Engineering Private Limited and IRCLASS SYSTEMS AND SOLUTIONS	NA
3	Provision of 27 Tube well and 80 Hand pumps at Jodhpur District, Rajasthan	(i)	No	Rajasthan	Jodhpur	1.3	4.24	4.24	Nil	Yes	Public Health & Engineering Department, Jodhpur	NA
4	Providing scholarships to sports person under IndianOILACERS	(vii)	Yes	All India	All India	2.0	3.77	3.77	Nil	Yes	IOCL	NA
5	Construction of 50 community toilet in Tripura	(i)	No	Tripura	West Tripura	2.5	2.73	2.73	Nil	Yes	DIRECTOR URBAN DEVELOPMENT	NA
6	Providing facilities for Yoga & Naturopathy Centre at New Delhi for general public	(i)	Yes	Delhi	New Delhi	3.0	2.04	2.04	Nil	Yes	IOCL	NA
7	Other CSR Projects approved by Competent Authority with expenditure upto ₹ 2 Crore per project	Various Schedule VII activities	Local & Other Areas both	All India	All India	from 1.1 to 6 years	40.59	40.59	Nil	Direct as well as through others	Multiple Implementing Agencies	NA
<b>Total</b>							<b>87.37</b>	<b>87.37</b>	<b>87.37</b>			

## Annexure B

## Details of CSR amount spent against other than ongoing projects for the year 2020-21 (₹ Crore)

Sl. No.	Name of the project	Item from the list of activities in Schedule VII to the Act	Local Area (Yes/No)	Location of Project		Amount spent for the project	Mode of Implementation-Direct (Yes/ No)	Mode of Implementation -Through Implementing Agency	
				State	District			Name	CSR Registration No.
1	Contribution to PM-CARES Fund	(i), (xii)	No	All India	All India	225.00	Yes	PM-CARES	NA
2	Contribution towards Institute of Chemical Technology- IOC campus, Bhubaneswar	(ii)	Yes	Odisha	Khordha	21.00	Yes	Institute of Chemical Technology- IOC campus, Bhubaneswar	NA
3	Contribution to IOF: Developing tourist friendly facilities at Archaeological Survey of India sites of iconic importance	(v)	No	All India	All India	11.44	No	Indian Oil Foundation	NA
4	Health Cover insurance for employees of business/logistic partners under CSR for Covid-19	(i), (xii)	Yes	All India	All India	7.97	Yes	IOCL	NA
5	CovidRelief - Contribution towards procurement of various equipment for dedicated Covid Hospital & CovidCare Centre at Bargarh, Odisha	(i), (xii)	Yes	Odisha	Bargarh	5.58	Yes	District Administration, Bargarh	NA
6	Running expenses of Swarn Jayanti Samudayik Hospital, Mathura	(i)	Yes	Uttar Pradesh	Mathura	5.34	Yes	Manav Jan Kalyan Samiti, Kanpur	NA
7	Operation of Kendriya Vidyalaya ,Mathura Refinery	(ii)	Yes	Uttar Pradesh	Mathura	3.74	No	Kendriya Vidyalaya Samiti	NA
8	OPEX & CAPEX for Assam Oil School of Nursing, Digboi, Assam	(iii)	Yes	Assam	Tinsukia	3.54	Yes	1.M/s DB Construction 2.M/s Ace consortium	NA
9	Contribution to PCRA for Saksham 2021 towards conservation of energy	(ii)	Yes	All India	All India	3.50	Yes	IOCL	NA
10	Running expenses of Kendriya Vidyalaya School, Barauni	(ii)	Yes	Bihar	Begusarai	3.20	Yes	Kendriya Vidyalaya Sangathan	NA
11	Running expenses of AOD Hospital (in proportion to non-employee patients)	(i)	Yes	Assam	Tinsukia	3.04	Yes	IOCL	NA
12	Running expenses of Kendriya Vidyalaya, Guwahati Refinery	(ii)	Yes	Assam	Kamrup (Metro)	2.97	Yes	Guwahati Refinery	NA
13	Other CSR Projects approved by Competent Authority with expenditure upto ₹ 2 Crore per project	Various Schedule VII activities	Local & Other Areas both	All India	All India	61.38	Direct as well as through others	Multiple Implementing Agencies	NA
<b>Total</b>						<b>357.70</b>			

## Details of CSR amount spent in the year 2020-21 for ongoing projects of the preceding year(s) (₹ Crore)

Sl. No.	Project ID	Name of the Project	Financial Year in which the project was commenced	Project duration scheduled (Years)	Total amount allocated for the project	Amount spent on the project in the Reporting Financial year	Cumulative amount spent at the end of reporting Financial Year	Status of the project - Completed/ Ongoing
1	CO/20/09	Contribution to Skill Development Institute, Bhubaneswar: CAPEX	2019-20	1.6	314.00	17.11	231.11	Ongoing
2	P6BD/20/04	Construction of 100 TPD cattle dung based biogas plant, Jaipur	2018-19	1.5	21.72	16.89	17.25	Ongoing
3	MK/NR/RSP/20/11	Provision of 27 Tube well and 80 Hand pumps at Jodhpur District, Rajasthan	2019-20	1.3	4.53	4.24	4.24	Completed
4	MK/HO/HO/20/03	Providing scholarships to sports person under IndianOil ACERS	2017-18	2.0	22.85	3.77	9.88	Ongoing
5	MK/AOD/AOD/20/12	Construction of 50 community toilet in Tripura	2019-20	2.5	7.39	2.73	2.73	Ongoing
6	MK/NR/NRO/20/01	Providing facilities for Yoga & Naturopathy Centre at New Delhi for general public	2018-19	3.0	6.23	2.04	4.06	Ongoing
7	Multiple Projects	Other CSR Projects approved by Competent Authority with expenditure upto ₹ 2 Crore per project	2014-15 to 2019-20	from 1.1 to 6 years	172.08	40.52	96.02	Completed/ Ongoing
<b>Total</b>					<b>548.80</b>	<b>87.30</b>	<b>365.29</b>	



**IndianOil**  
The Energy Of India

When it comes to serving you  
No terrain is beyond our reach

### Accompanying you on the road least travelled

IndianOil has been at the forefront 24x7x365 to ensure energy supplies to the nation. Accounting for nearly 50% of India's petroleum products market share, IndianOil reiterates its commitment to serve the nation and its people. We take pride in being called as 'The Energy of India'

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REFINERIES | PIPELINES | **MARKETING** | R&D CENTRE | BUSINESS DEVELOPMENT | HUMAN RESOURCES | CSR | ECOPARKS

## ANNEXURE-III

## FORM NO. MR-3 SECRETARIAL AUDIT REPORT

**Pursuant to Section 204(1) of the Companies Act, 2013 and Rule No.9 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014]  
(FOR THE FINANCIAL YEAR ENDED 31<sup>ST</sup> MARCH 2021)**

**To,  
The Members,  
INDIAN OIL CORPORATION LIMITED**

Indian Oil Bhavan,  
G-9, Ali Yavar Jung Marg,  
Bandra (East),  
Mumbai – 400051

We have conducted the secretarial audit of the compliance of applicable statutory provisions and the adherence to good corporate practices by **INDIAN OIL CORPORATION LIMITED (CIN: L23201MH1959GOI011388)** (hereinafter called the "Company") for the financial year ended 31<sup>st</sup> March, 2021. The Secretarial Audit was conducted in a manner that provided us a reasonable basis for evaluating the corporate conducts/ statutory compliances and expressing our opinion thereon.

Based on our verification of books, papers, minute books, forms and returns filed and other records maintained by the Company and also the information provided by the Company, its officers agents and authorised representatives during the conduct of secretarial audit, we hereby report that in our opinion, the Company has, during the audit period covering **1<sup>st</sup> April, 2020 to 31<sup>st</sup> March, 2021** complied with the statutory provisions listed hereunder and also that the Company has proper Board processes and Compliance mechanism in place to the extent, in the manner and subject to the reporting made hereinafter.

We have examined the books, papers, minute books, forms and returns filed and other records maintained by the Company for the audit period 1<sup>st</sup> April, 2020 to 31<sup>st</sup> March, 2021 according to the provisions of:

- (i) The Companies Act, 2013 (the Act) and the rules made there under;
- (ii) The Securities Contracts (Regulation) Act, 1956 ('SCRA') and the rules made there under;
- (iii) The Depositories Act, 1996 and the Regulations and Bye-laws framed thereunder;
- (iv) Foreign Exchange Management Act, 1999 and the rules and regulations made thereunder to the extent of Foreign Direct Investment, Overseas Direct Investment and External Commercial Borrowings;
- (v) The following Regulations and Guidelines prescribed under the Securities and Exchange Board of India Act, 1992 ('SEBI Act'): -
  - (a) The Securities and Exchange Board of India (Substantial Acquisition of Shares and Takeovers) Regulations, 2011
  - (b) The Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015 ;
  - (c) The Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2009;
  - (d) The Securities and Exchange Board of India (Share Based Employee Benefits) Regulations, 2014; **(No such event during Audit Period)**
  - (e) The Securities and Exchange Board of India (Issue and Listing of Debt Securities) Regulations, 2008;
  - (f) The Securities and Exchange Board of India (Registrars to an Issue and Share Transfer Agents) Regulations, 1993 regarding the Companies Act and dealing with client;
  - (g) The Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009; **(No such event during Audit Period)**
  - (h) The Securities and Exchange Board of India (Buyback of Securities) Regulations, 2018. **(No such event during Audit Period)**
  - (i) Guidelines on Corporate Governance for Central Public Sector Enterprises (Guidelines), as issued by the Department of Public Enterprises (DPE) of Ministry of Heavy Industries and Public Enterprises, Government of India.
- (vi) The following Acts and Rules made thereunder pertaining to oil and gas business, as applicable to the Company :-
  - (a) The Petroleum Act,1934;
  - (b) The Oil Fields (Regulation and Development) Act,1948;
  - (c) The Oil Industry (Development) Act, 1974;
  - (d) Mines and Minerals (Regulation and Development) Act, 1957
  - (e) The Energy Conservation Act, 2001;
  - (f) The Petroleum & Natural Gas Regulatory Board Act, 2006;

(g) Petroleum & Mineral Pipelines (Acquisition of Rights of User in Land) Act, 1962

(h) Petroleum & Natural Gas Rules 1959,

We have also examined compliance with the applicable provisions and clauses of the following:

- Secretarial Standards issued by The Institute of Company Secretaries of India.
- Securities and Exchange Board of India (Listing Obligation & Disclosure Requirement) Regulation, 2015 "SEBI (LODR)".

During the period under review the Company has complied with the provisions of the Act, Rules, Regulations, Guidelines, Standards, etc. except mentioned below:

- *The Company could not comply with the requirement of having not less than fifty percent of the Board of Directors as Non-Executive Directors for the period 22<sup>nd</sup> September 2020 to 31<sup>st</sup> March, 2021.*
- *The Company could not comply with the requirement of having at least half of the Board of Directors as Independent Directors.*
- *In view of exemption provided to Government Companies, vide notification dated 5<sup>th</sup> June 2015 issued by Ministry of Corporate Affairs, from complying with the provision of section 134(3)(p) of the Companies Act 2013, the Company has not complied with regulation 17(10) of the SEBI (LODR), which requires performance evaluation of Independent Directors by the entire Board of Directors and regulation 25(4) of the SEBI (LODR), which requires review of performance of Non-Independent Directors, the Board of Directors as a whole and the Chairperson of the Company by the Independent Directors.*

**We further report that :**

- The Board of Directors of the Company is duly constituted and the changes in the composition of the Board of

Directors that took place during the period under review were carried out in the compliance with the provision of the Act. *However, the Company has not been able to appoint requisite number of Independent Directors and Non-Executive Directors as required under the provisions of Section 149 of Companies Act, 2013 and Regulation 17 of SEBI (LODR), during the period as mentioned above.*

- Adequate notice is given to all directors to schedule the Board Meetings, agenda and detailed notes on agenda were sent at least seven days in advance, and a system exists for seeking and obtaining further information and clarifications on the agenda items before the meeting and for meaningful participation at the meeting.
- As per the minutes of the Board duly recorded and signed by Chairman, the decisions of the Board were unanimous and no dissenting views have been recorded.
- The agenda items are deliberated before passing the same and the views / observations made by the Directors are recorded in the minutes.

**We further report that** there are adequate systems and processes in the Company commensurate with the size and operations of the Company to monitor and ensure compliance with applicable laws, rules, regulations and guidelines.

**We further report that** during the year 2020-21:

- The Company has issued Unsecured, Rated, Listed, Taxable, Redeemable and Non-Convertible Debentures aggregating to ₹ 7,915.20 Crore on Private Placement basis.
- The Board of Directors of the Company at its Meeting held on 29<sup>th</sup> January 2021 declared first Interim Dividend of 75% i.e. ₹ 7.50 per equity share of face value of ₹ 10/- each & on 16<sup>th</sup> March, 2021 declared Second Interim Dividend of 30 % i.e. ₹ 3.00 per equity share of face value of ₹ 10/- each for the financial year 2020-21.

**For Ragini Chokshi & Co.**  
(Company Secretaries)

Sd/-

**Ragini Chokshi**  
(Partner)

C. P. No. 1436

FCS No. 2390

UDIN: F002390C000436879

Date: **9<sup>th</sup> June 2021**

Place: **Mumbai**



## ANNEXURE-IV

### Report on Energy Conservation, Technology Absorption and Foreign Exchange Earning as per the provisions of the Companies Act 2013 and rules notified there under

#### (A) Conservation of Energy:

##### a. The steps taken or impact on Conservation of Energy:

During 2020-21, 69 Energy Conservation Schemes (In-house, PCRA-identified and Engineers India Limited (EIL)-identified) were implemented across the Refineries resulting in energy saving of 92,588 Standard Refinery Fuel Tons, SRFT/year, equivalent to a monetary saving

of ₹ 204.55 Crore/year. Out of the total saving, ₹ 108.73 Crore was achieved during 2020-21 and the balance will be achieved in 2021-22. With the implementation of these Energy Conservation schemes, reduction in approximately 0.299 MMT equivalent CO<sub>2</sub> emission per year has been achieved. Details of some of the major energy conservation schemes implemented across refineries are as under:

Sl. No.	ENERGY SAVING SCHEMES	ESTIMATED COST (₹ in Lakhs)	ESTIMATED FUEL SAVINGS (Standard Refinery Fuel Equivalent) MT/Year
1	Stoppage of RFCCU Gasoline splitter operation at Barauni Refinery	-	2930
2	Replacement of 26500 no. of lamps with LED at Barauni Refinery	517	1683
3	Additional supplementary firing in HRSG-2 at Barauni Refinery	1808	1394
4	Additional supplementary firing in HRSG-1 at Barauni Refinery	-	1313
5	AU-1 preheat improvement by Re-arrangement of HE network for heat recovery. Kero tray Column modification job & Preheat heat improvement by utilising circulating refluxes and hot run down at Gujarat Refinery	103	1526
6	Stoppage of flare from LAB Benzene column O/H by changing Pressure control Philosophy at Gujarat Refinery	-	1245
7	Implementation of H <sub>2</sub> recovery from DHDS (stripper off gases), ISOM (LP off gases), Prime-G (MP off gases), OHCU (LP off gases) and DHDT (MP off gases) at Haldia Refinery	-	3500
8	Routing of MP steam generation ex-slurry PA exchangers 18E18A/B to LP steam header at B/L of RFCCU at Haldia Refinery	3	1300
9	Reduction in Steam Consumption @ 5 TPH at Haldia Refinery	246	2963
10	Commissioning of the scheme "Injection of the BFW in preheat train 3 for Preheat Improvement" at Mathura Refinery	10	4000
11	Stoppage of BBU and direct production of bitumen from VDU bottom from March 28, 2020 to September 30, 2020 at Mathura Refinery	-	5000
12	AVU optimisation: PF column modification & optimisation to draw more naphtha at Mathura Refinery	25	4500
13	Optimisation of Motive Steam in the Vacuum column Overhead Ejector System in VDU by replacing existing Ejectors with new Ejectors at Digboi Refinery	286	1725
14	Hydrogen recovery from WHFU & CRU off gas at Digboi Refinery	7	1100
15	Optimisation of ejector combination at AVU- 1 to reduce steam consumption at Panipat Refinery	-	6600
16	Stoppage of RSU Column at Panipat Refinery	-	3433
17	Low end heat recovery from HRSG flue gas at Panipat Refinery	-	11045
18	Provision of CW booster-Pump in PP plant at PNC	-	1280
19	Provision of reduction in MP steam import by Dilution steam generation in reboiler at PNC	-	3600
20	Improve LPG recovery at AVU Naphtha Stabilizer by reducing feed to the Naphtha Stabilizer at Paradip Refinery	4	1043

**b. The following initiatives/projects are planned for the refineries of the Company:-**

**Guwahati Refinery:**

- Import of 15 MW power from 132 KV Grid
- APH replacement in HGU Reformer

**Barauni refinery:**

- Installation of Additional WHB in bypass line of present CO-Boiler line
- Replacement of Naphtha feed in Hydrogen Generation Unit-I and II with Natural Gas
- Routing of Sour gas from SWS unit to SRU- 706

**Gujarat Refinery:**

- Maximisation of Stripper Feed Temperature in NHT (CCR) by recovering heat from reactor effluent
- Application of Electrical Tracing in Offsite Piping and Tank Farm in-place of existing Steam Tracing
- Recovery of Hydrogen from Refinery Off-gases
- Low End Heat Recovery from Exhaust Gas to HRSG-5 by installation of MUH
- Thermal Efficiency Improvement of the FPU-II heater (03-FF-01) by stack temperature optimisation
- Routing of flare gas from AU-1/2 rerun K8 column to DCU WGC

**Haldia Refinery:**

- Recovery of RFCCU Naphtha Splitter off gases
- Crude Preheat Temperature Improvement by Pinch Analysis and modifications in Preheat train in Crude Distillation Unit (CDU II)
- Routing of UCO to RFCC as hot feed
- Replacement of Naphtha feed in Hydrogen Generation Unit-I and II with Natural Gas
- Maximising Feed Preheat Temperature in NHT (CRU) unit

**Mathura Refinery:**

- Application of Electrical tracing in offsite piping and tank farm in place of existing stream tracing
- Reduction in refinery steam load by replacement of existing turbine driven WGC to motor driven WGC at FCCU
- Conversion of the HPC compressor in NPRU from turbine to motor driven

**Digboi Refinery:**

- LP Steam Generation from MP condensate in MS block, SDU & WHFU through a flash vessel.
- Provision for recovery of Hydrogen from Refinery Off-gases
- Thermal efficiency improvement of CDU/VDU heaters (01-FF-001/02-FF- 001) by hardware improvement including redesigning the APH system based on 100% gas firing

**Panipat Refinery:**

- Thermal efficiency improvement of AVU-II heater by partial switchover from FO to NG/FG in AVU-II

**Bongaigaon Refinery:**

- MUG operation for low end heat recovery from exhaust gas of HRSG
- Thermal efficiency improvement in CRU Heater
- Use of Low pressure gas generated in CDU-I as fuel by using LP burner at CDU-I furnace

**Paradip Refinery:**

- Routing of PP off gas to WGC
- H2 recovery from sweet off gas of DHDT & VGO HDT through CCR PSA
- Reduce dead weight in off gas by replacing air with steam for flue gas stripping and fluffing
- Bypass crude column over flash around VDU furnace for heat duty saving
- Coker De-ethaniser/ Stripper inlet feed preheater for reduced MP Steam consumption in DCU
- VDU Furnace heat duty saving by Changing Preflash Vapor's routing in CDU Column

**c. Steps taken by the Company for Utilising Alternate Sources of Energy**

- The renewable energy portfolio of the Company includes grid connected power and off-grid solar power. The Company is replacing fluorescent tube lights & incandescent lamps with LED lighting; for which procurement has been initiated at various refineries. About 4.4 Lakhs LEDs have already been installed across refineries (including around 0.52 Lakhs in 2020-21) as an ENCON initiative.
- The Company has 24.36 MWp of solar panels across various refineries (including installation of solar panels of 4.77 MWp in 2020-21) with a total annual generation capacity of 37.34 Million units.

- Further, installation of 1.96 MWp solar PV is under progress which includes 0.19 MWp at Paradip Refinery, 0.57 MWp at Guwahati Refinery, 0.60 MWp at Gujarat Refinery, 0.10 MWp at Barauni Refinery and 0.5 MWp at Panipat Naphtha Cracker.

## B) Efforts made towards Technology Absorption, Adaptation and Innovation

As a continuous effort towards improvement of product pattern, product quality, improvement of energy efficiency as well as to meet the dynamic environmental emission norms and to improve profit margin, your Company has adopted most modern technologies in line with the latest worldwide developments in the field of petroleum refining and petrochemicals production.

Major technologies adopted by the Company are as follows:-

### a. Indigenous Technology

#### i) indeDiesel® (Diesel Hydrotreatment) Technology

indeDiesel® technology developed for BS-VI quality diesel production by R&D Centre along with 'EIL' have been successfully implemented in Bongaigaon, Gujarat (DHDS revamp and DHDT revamp) and Haldia refineries. The subject technology is also under implementation at Barauni Refinery.

#### ii) indeHex® (Hexane Hydrogenation) Technology

R&D Centre and EIL have developed/commercialised hydrogenation based indeHex® process technology for Food grade Hexane/Polymer grade Hexane production. 2 units are currently operational (Gujarat Refinery and HMEL, Bathinda Refinery).

#### iii) INDAdaptG Technology

INDAdaptG is reactive adsorption-based process technology, developed by R&D Centre and EIL, for production of low sulfur gasoline component meeting BS-IV/BS-VI sulphur specification. INDAdaptG unit with a capacity of 35 kTA was successfully commissioned for BS-IV gasoline production in Guwahati Refinery.

#### iv) indDSK® Technology

indDSK® is low severity hydrotreating technology jointly licensed by R&D Centre and EIL for production of ultra-low sulfur PCK. The technology is under implementation at Paradip Refinery for grass-root 300 kTA unit under BS-VI projects.

#### v) indJet® Technology

indJet® technology is jointly licensed by R&D Centre and EIL for ATF production by selective removal of mercaptan sulfur. The technology is under implementation for a grass-root 400 kTA unit at Barauni Refinery.

#### vi) indDSN® (Naphtha Hydrotreatment) Technology

indDSN® is a process technology, jointly licensed by R&D Centre and EIL, for treating Naphtha range hydrocarbon streams to achieve product stream containing ultra-low sulphur ( $\leq 0.5$  ppmw). A 235 kTA grass-root unit have been licensed at Bongaigaon Refinery for Feed treatment of Isomerisation unit and commissioned in May'21.

#### vii) indSelectG Technology

indSelectG is another in-house developed selective hydrotreating based technology for cracked gasoline desulfurisation with minimum octane loss. A 80 kTA grass-root unit is under implementation at Guwahati Refinery and scheduled to be commissioned in Q3 of 2021-22.

#### viii) INDMAX Technology

INDMAX technology developed in-house by R&D Centre and Lummus Technology for converting heavy distillate and residue into LPG/light distillate products has been implemented successfully at Guwahati Refinery, Paradip Refinery and Bongaigaon Refineries and are proposed to be implemented at Barauni, Gujarat, Panipat and CPCL Refinery.

#### ix) Octamax Technology

Octamax technology, developed by R&D Centre has been successfully implemented at Mathura Refinery for production of High-octane Gasoline blending stream from Refinery LPG streams. A 110 KTPA capacity plant based on this technology is under implementation at Gujarat Refinery under LuPech Project. The technology has also been licensed to CPCL under CBR expansion project.

#### x) AmyleMax Technology

AmyleMax technology, developed by R&D Centre for improvement of octane number of light cracked naphtha through increase in oxygenates has been successfully demonstrated at Gujarat Refinery in 2019. A grassroot unit is being considered to implement at Gujarat Refinery.

#### xi) Hexane Hydrogenation Technology

Hexane Hydrogenation process for production of Food grade Hexane (WHO grade quality), developed by R&D Centre with indigenous catalyst has been successfully implemented at Gujarat Refinery.

#### xii) Delayed Coker Technology

Delayed Coker Technology, developed by R&D Centre and EIL has been successfully demonstrated for Coker-A revamp at Barauni Refinery. The technology is also under implementation for Coker-B unit revamp at Barauni Refinery under BR-9 Project.

**xiii) CBG Technology**

Bio Gas Technology, developed by R&D Centre for production of CBG from Cow dung/ rice husk is under implementation at Gorakhpur and Jaipur.

**xiv) 2G Ethanol Unit**

Technology from M/s Praj for production of Ethanol from rice straw (2G Ethanol unit) is being implemented at Panipat.

**xv) NEECOMAX Technology**

NEECOMAX Technology is developed by R&D Centre for production of Needle grade petroleum coke from Clarified Oil. Calcined Needle Coke is a value-added niche product produced from low value feed stock. Needle Coker unit based on NEECOMAX Technology is proposed to be implemented at Paradip Refinery.

**xvi) SR LPG treatment Technology**

LPG hydrotreater Technology for treatment of SR LPG, developed by R&D Centre is under implementation under Panipat refinery expansion project (P-25).

**b. Imported Technology****i) Alkylation Technology**

For production of MS, Alkylation technology from M/s Exxon Mobil, USA has been implemented at Paradip Refinery.

**ii) ATF Treatment Technology**

ATF Merox Treatment Technology from M/s UOP, USA has been implemented at Gujarat and Panipat Refineries. Technology from M/s Merichem, USA has been implemented at Paradip Refinery.

**iii) Biturox Technology**

To produce various grades of Bitumen as well as to meet the quality requirements, Biturox technology from M/s Porner, Austria has been employed at Gujarat, Mathura and Barauni Refineries.

**iv) Butane Isomerisation Technology**

For production of Alkylate, "Butamer" Technology from M/s UOP, USA has been implemented at Paradip Refinery.

**v) Butene-1 Technology**

For production of Butene-1, Technology from M/s Axens, France has been implemented at Gujarat Refinery and at Panipat complex.

**vi) Catalytic Iso-dewaxing Technology**

For improving lube oil quality in line with international standards and augmenting production capability of API Gr II LOBS, Iso-dewaxing technology from M/s MOBIL, USA has been implemented at Haldia Refinery.

Catalytic Dewaxing Technology from M/s Chevron Lummus Global (CLG) for production of API Gr II and Gr III LOBS has been considered in expansion project at Panipat Refinery and LuPech project at Gujarat Refinery.

**vii) Catalytic Reforming Technology**

For improvement in Octane number of Motor Spirit, Continuous Catalytic Reforming technology (CCRU) from M/s Axens, France has been implemented at Mathura & Panipat refineries. Continuous Catalytic Reforming Technology from M/s UOP, USA has been implemented at Gujarat, Paradip and Barauni Refineries. Catalytic Reforming Technology (CRU) with Russian collaboration has been implemented at Gujarat Refinery and from M/s Axens has been implemented at Haldia, Barauni, Digboi and Bongaigaon refineries.

Continuous Catalytic reforming technology (CCRU) from M/s UOP has been considered in expansion project at Panipat Refinery.

**viii) Coker Gas Oil Hydrotreatment Technology**

Coker Gas Oil Hydrotreatment Technology from M/s Axens, France has been implemented at Haldia Refinery under DYIP project.

**ix) Delayed Coker Technology**

For bottom of the barrel upgradation, Delayed Coker technology from M/s Lummus Technology, USA has been implemented at Panipat Refinery as part of Panipat Refinery Expansion Project. Delayed Coker Technology from M/s Foster Wheeler, USA has been implemented at Gujarat Refinery under Resid upgradation Project, at Paradip Refinery and also at Haldia Refinery under Distillate Yield Improvement (DYIP) Project.

**x) Diesel Hydro Desulphurisation Technology**

Diesel Hydro Desulphurisation (DHDS) Units have been installed at Mathura & Panipat refineries with technology from M/s Axens, France and at Gujarat & Haldia refineries with technology from M/s UOP, USA to meet the Diesel quality requirement w.r.t Sulphur. Technology from M/s Haldor Topsoe, Denmark has been implemented for revamp of DHDS at Mathura Refinery.

**xi) Diesel Hydrotreatment Technology**

Diesel Hydrotreatment (DHDT) Units have been installed at Guwahati, Barauni, Digboi, Panipat & Gujarat refineries with the technology from M/s UOP, USA. Technology from M/s Axens, France is implemented at Mathura, Panipat, Gujarat and Paradip refineries. Technology from M/s Shell Global Solutions, Netherlands is implemented at Paradip Refinery & has been considered in P-25 expansion project at Panipat Refinery.

**xii) Divided Wall Column Technology**

Divided Wall Column (DWC) technology is a new separation technology which separates a multi-component feed into three or more purified streams within a single tower, thereby eliminating the need for a second column to obtain high purity products. This design saves capital and energy costs by eliminating operation of second separation column. DWC of M/s KBR, USA has been implemented at Mathura Refinery at CCRU-NSU.

**xiii) Fluidised Catalytic Cracking Technology**

Fluidised Catalytic Cracking (FCC) technology from M/s UOP, USA has been implemented in Gujarat and Mathura refineries for conversion of Vacuum Gas Oil to LPG, MS and Diesel. Technology from M/s Lummus Technology, USA has been implemented for revamp of FCCU at Mathura Refinery.

**xiv) Hydrocracker Technology**

Full Conversion Hydro cracking Unit (HCU) technologies from M/s Chevron USA and M/s UOP USA have been implemented at Gujarat Refinery and Panipat Refinery respectively for conversion of Vacuum Gas Oil to Jet fuel, Kerosene and Diesel. Revamp of HCU unit based on technology from Chevron Lummus Global is under implementation at Gujarat Refinery under LuPech project to produce feedstock for LOBS / CDW unit

**xv) Hydro-finishing Technology for treatment of Paraffin**

Wax / Microcrystalline Wax Process technology from M/s Axens, France for hydro finishing of paraffin wax has been implemented at Digboi Refinery.

**xvi) Hydrogen Generation Technology**

Hydrogen generation technology from M/s Linde, Germany was adopted for Hydrogen production and supply to Hydrocracker unit at Gujarat Refinery and has been implemented at Barauni Refinery under MS Quality Improvement Project. Hydrogen generation technology obtained from M/s Haldor Topsoe, Denmark is in operation at Gujarat, Mathura, Haldia, Panipat and Barauni refineries and has been implemented at Gujarat Refinery under Resid Upgradation Project. Similar technology from M/s Technip Energies, the Netherlands has been implemented for Hydrogen generation at Guwahati, Digboi, Mathura and Haldia Refinery. Hydrogen generation technology from M/s Technip Energies, Netherlands has been implemented at Bongaigaon Refinery under Diesel Quality improvement project.

**xvii) ISOSIV Technology at Guwahati Refinery**

For production of Isomerate for blending in MS at Guwahati Refinery, ISOSIV technology from M/s UOP, USA has been implemented.

**xviii) Kerosene Hydro Desulphurisation Technology**

Kerosene Hydro Desulphurisation Unit has been installed at Haldia Refinery with technology from M/s Axens, France.

**xix) LPG Treatment Technology**

Coker LPG Merox Treatment technology from M/s UOP, USA has been implemented at Panipat Refinery and at Haldia Refinery under DYIP project. FCC LPG Treatment technology from M/s Merichem, USA has been implemented at Haldia and Paradip Refineries. Straight Run LPG Treatment technology from M/s UOP, USA has been implemented at Paradip Refinery.

LPG Treatment technology from M/s UOP is under implementation in B-9 expansion project at Barauni Refinery.

**xx) MS quality Up gradation Technology**

For MS quality up gradation, Isomerisation technology of M/s UOP, USA have been implemented at Mathura, Panipat and Gujarat Refineries. Isomerisation Technology from M/s Axens, France has been implemented at Haldia, Guwahati, Digboi and Barauni refineries. FCC Gasoline desulphurisation technology (Prime-G) from M/s Axens, France has been implemented at Haldia, Mathura, Panipat Barauni and Bongaigaon Refinery.

Isomerisation technology of M/s UOP, USA is under implementation in expansion projects at Barauni, Panipat and Gujarat Refinery.

**xxi) MTBE Technology**

Technology from M/s CD Tech, USA has been implemented for production of MTBE at Gujarat Refinery.

**xxii) Naphtha Cracker and downstream petrochemical Technology**

Naphtha Cracker Technology from M/s ABB Lummus, USA has been implemented at Panipat Refinery. Technologies from M/s Basell, Italy, M/s Basell, Germany, M/s Nova Chemicals, Canada & M/s Scientific Design, USA have been implemented for downstream polymer plants viz. Poly-Propylene Unit (PP), HDPE unit, Swing Unit (HDPE/LLDPE) and MEG Unit respectively. Technology from M/s ABB Lummus has been implemented for production of Butadiene. Technology from M/s Basell, Italy is under implementation at Paradip Refinery for production of Poly-Propylene. Technology from M/s Scientific Design, USA is under implementation at Paradip Refinery for production of MEG.

Poly-Propylene unit (PP) with technology developed by M/s McDermott has been considered in expansion projects at Barauni and Gujarat Refinery. PP with technology from M/s Basell is under implementation in expansion project at Panipat Refinery.

**xxiii) Naphtha Treatment Technology**

FCC Naphtha Treatment Technology from M/s Merichem, USA for removal of Mercaptans and H<sub>2</sub>S is implemented at Paradip Refinery. Technology for Naphtha Hydrotreating & Fractionating from M/s UOP, USA is implemented at Paradip Refinery & has been considered in expansion project at Barauni, Panipat and Gujarat Refinery. Naphtha hydro treating from M/s UOP, USA has been implemented at Barauni Refinery under BS-IV project.

**xxiv) Once Through Hydrocracking Technology**

Once Through Hydrocracking Units (OHCU) have been installed at Panipat, Mathura and Haldia refineries with the technologies from M/s UOP, USA, M/s Chevron, USA and M/s Axens, France respectively for improvement of distillate yield. OHCU technology by M/s Chevron Lummus Global (CLG) has been considered in B-9 expansion project at Barauni Refinery.

**xxv) Regenerative type Flue Gas De-Sulphurisation Technology**

In order to recover Sulphur Di-Oxide from Boiler flue gases a Regenerative type Flue gas De-Sulphurisation technology from M/s Cansolv Technology Incorporate (CTI), Canada, has been implemented at Paradip Refinery.

**xxvi) Resid Fluidised Catalytic Cracking Technology**

The Resid Fluidised Catalytic Cracking (RFCC) technology from M/s Stone & Webster, USA (now part of Technip) has been implemented at Panipat, Haldia and Barauni Refineries.

**xxvii) Solvent Dewaxing / De-oiling Technology at Digboi**

In order to upgrade the process for production of Paraffin Wax at Digboi Refinery, Solvent dewaxing/de-oiling technology from M/s UOP, USA has been implemented.

**xxviii) Spent Acid Regeneration Technology**

In order to regenerate fresh sulphuric acid from spent sulphuric acid recovered from Alkylation Unit a Spent Acid Regeneration Technology from M/s MECS (Monsanto Enviro-Chem Systems), USA has been implemented at Paradip Refinery.

**xxix) Sulphur Pelletisation Technology**

For production of Sulphur in Pellet form, Technology from M/s Sandvik, Germany has been implemented at Gujarat, Mathura and Panipat Refineries.

**xxx) Sulphur Recovery Technologies for reduction of SO<sub>2</sub> emissions**

Refineries at Gujarat, Haldia, Mathura and Barauni are provided with Sulphur Recovery Technology

from M/s Worley, Netherlands. The Sulphur recovery technology from M/s. Delta Hudson, Canada has been employed at Panipat Refinery. Further, Sulphur recovery technologies from M/s Black & Veatch Pritchard, USA have been implemented at Panipat, Gujarat and Paradip Refineries. Technology from M/s Technip Energies, Spain has been implemented at Haldia Refinery under Once through Hydrocracker Project. Technology from M/s Worley, Netherlands has been implemented under additional Sulphur Recovery Unit at Mathura Refinery. Technology from M/s Lurgi, Germany has been implemented under DYIP project at Haldia Refinery. Technology from M/s Axens, France is under implementation at Panipat Refinery and Bongaigaon Refinery.

Sulphur Recovery Technology from M/s Kinetic Technology is under implementation in expansion project at Barauni Refinery and technology from M/s Worley is under implementation in expansion at Panipat Refinery.

**xxxii) Technology for Linear Alkyl Benzene (LAB)**

Technology from M/s UOP, USA has been implemented for production of Linear Alkyl Benzene at Gujarat Refinery.

**xxxiii) Technology for Para-Xylene**

For production of Para-Xylene at Panipat, technologies from M/s UOP, USA has been implemented.

Technology from M/s UOP, USA has been considered at Paradip Refinery.

**xxxiiii) Technology for Purified Terephthalic Acid (PTA)**

For production of PTA at Panipat Refinery, technology from M/s Invista, USA has been implemented.

Technology from BP Amoco has been considered at Paradip Refinery.

**xxxv) VGO Hydrotreatment Technology**

Technology from M/s UOP has been implemented at Gujarat Refinery under Resid Upgradation Project. Technology from M/s Axens, France has been implemented at the VGO-Treater installed at Paradip Refinery.

**xxxvi) Sulphuric acid Plant Technology**

Technology from M/s HaldorTopsoe for Production of Sulphuric Acid by oxidation of H<sub>2</sub>S is under implementation at Haldia Refinery under BS-VI project.

**xxxvii) TAME Technology**

Tertiary Amyl Methyl Ether (TAME) Technology from M/s Axens is under implementation at Panipat Refinery.

**c. The benefits derived like product improvement, cost reduction, product development or import substitution:**

Benefits derived include:

- Upgradation of heavy oil to higher value products of improved quality such as LPG, gas oil, motor spirit, kerosene, ATF, etc.
- Reduction of Sulphur content impurity in petroleum products (like LPG, Naphtha, MS, Kerosene, ATF, HSD etc.)
- Feed Quality Improvement for subsequent processing resulting in improved product pattern.
- Production of higher-grade lubricant base stocks which help in reducing import dependence.
- Production of better grades of Bitumen
- Reduction of Sulphur dioxide emissions
- Value addition to surplus Naphtha by
  - = Naphtha Cracking & subsequent high value products like Glycols, Polymers, Butadiene, Benzene etc.,
  - = Naphtha conversion to high value Paraxylene (PX) and benzene and subsequent PX conversion to higher value PTA product
- Production of high value speciality products like MTBE, LAB, Food Grade Hexane etc
- Production of products (like Styrene Butadiene Rubber and Butene-1) which are import substitution products.
- Production of sulphur in pellets form which is more environment friendly and easier to handle
- Auto Fuel Quality improvement for HSD and MS so that these fuels can conform to BS-IV/BS-VI fuel standards and latest pollution control norms.
- Use of a number of indigenous technologies resulting in import substitution

**d. Details of imported technology (imported during the last three years reckoned from the beginning of the financial year):**

**i. BS-VI Projects at Panipat refinery:**

The details of technology imported:

- Technology for desulphurisation of gas oils, from M/s UOP, USA
- Technology for production of sulphur from M/s Axens, France
- Technology for Hydrogen Generation from M/s Technip France

- Technology for High Ron Gasoline stream, Axens France
- Technology for TAME for FCC gasoline, from M/s Axens, France

**The year of import:** 2017-18/2018-19

**Whether the technology been fully absorbed:**

The project has been implemented in 2020-21. TAME unit is expected to be commissioned by Dec'21.

**ii. BS-VI Projects at Gujarat refinery:**

The details of technology imported:

- Technology for desulphurisation of FCC Gasoline at Gujarat Refinery, from M/s Axens, France
- Technology for desulphurisation of gas oils, from M/s UOP, USA
- Technology for Hydrogen Generation from HTAS, Denmark

**The year of import:** 2016-17/2017-18

**Whether the technology been fully absorbed:**

The project has been implemented in 2020-21. FCC Gasoline unit is expected to be commissioned shortly.

**iii. BS-VI Projects at Haldia Refinery:**

The details of technology imported:

- Technology for Sulphuric Acid plant at Haldia refinery from M/s HTAS, Denmark

**The year of import:** 2017-18

**Whether the technology was fully absorbed:**

The project is in implementation stage. Expected commissioning of Sulphuric Acid Plant by September 2021.

**iv. BS-VI Projects at Bongaigaon refinery:**

The details of technology imported:

- Technology for production of sulphur from M/s Axens, France

**The year of import:** 2017-18

**Whether the technology been fully absorbed:**

Expected commissioning of SRU by Oct'21.

**v. Mathura Refinery Expansion Residue Up gradation project**

The details of technology imported:

- Technology for Residue upgradation through Ebullated bed Hydrocracker unit, from M/s Chevron, USA

- Technology for production of sulphur from M/s Axens, France
- Technology for production of reformate through Catalytic reforming unit from M/s Axens, France.

**The year of import:** 2017-18

**Whether the technology been fully absorbed:**  
Environmental Clearance for the project is awaited

**vi. Fuel Quality Upgradation Project at Paradip Refinery:**

The details of technology imported:

- Technology for Hydrogen Generation & ROG PSA from M/s Linde, Germany

**The year of import:** 2018-19.

**Whether the technology been fully absorbed:**  
The project is in implementation stage. Expected commissioning of HGU plant by December 2022.

**vii. Off-gas to Ethanol at Panipat Refinery from PSA Off gas of HGU**

- Technology for Ethanol production, from M/s Lanzatech, USA

**The year of import:** 2018-19

**Whether the technology been fully absorbed:**  
The project is in implementation stage. Expected commissioning by February 2022.

**viii. Barauni Refinery Expansion project**

The details of technology imported:

- Technology for processing Vacuum gasoil in Hydrocracking unit from M/s Chevron, USA
- Technology for production of Isomerate through Isomerisation unit from M/s UOP, USA.
- Technology for production of sulphur from M/s KT, Italy.
- Technology for Poly Propylene production M/s CB&I Novolen Technology
- Technology for LPG Treatment from M/s UOP, USA

**The year of import:** 2017-18/2018-19

**Whether the technology been fully absorbed:**  
The project is in implementation stage - Expected commissioning by April-2023

**ix. Catalytic Reforming Unit project in Guwahati Refinery**

The details of technology imported:

- Technology for production of Reformate from M/s UOP, USA.

**The year of import:** 2018-19

**Whether the technology been fully absorbed:**  
The project is in implementation stage - Expected commissioning by Oct-2023

**x. Ethylene Glycol (MEG) Project at Paradip**

The details of technology imported:

- Technology for Ethylene Recovery Unit, from M/s CB&I Lummus, USA
- Technology for Ethylene Glycol from M/s Scientific Design, USA

**The year of import:** 2016-17/2017-18

**Whether the technology been fully absorbed:**  
The project is in implementation stage - Expected commissioning by Oct-2021

**xi. Gujarat Refinery Expansion Project**

The details of technology imported:

- Technology for production of Reformate & Isomerate from M/s UOP, USA.
- Technology for Poly Propylene production from M/s Lummus Novolen, Germany.
- Technology for production of Lube oil base stock through HCU revamp and catalytic Dewaxing unit from M/s. Chevron Lummus Global, USA

**The year of import:** 2018-19

**Whether the technology been fully absorbed:**  
The project is in implementation stage - Expected commissioning by 2024-25

**xii. Panipat Refinery Expansion Project**

The details of technology imported:

- Technology for desulphurisation of gas oils, from M/s Shell,
- Technology for desulphurisation of Vacuum Gas oils from M/s UOP, USA
- Technology for production of Reformate and Isomerate from M/s UOP, USA
- Technology for upgradation of bottom of barrel to distillates by Resid hydrocracking from M/s Axens, France



- Technology for production of API Gr II & Gr III LOBS from M/s CLG, USA
- Technology for production of Polypropylene Unit from M/s Basell Polyolifine, Italy
- Technology for Sulphur recovery unit from M/s Worley

**The year of import:** 2018-19 & 2019-20

**Whether the technology been fully absorbed:**

The project is in implementation stage - Expected commissioning by September-2024

#### xiii. PX-PTA Project at Paradip

**The details of technology imported:**

- Technology for PX Unit, from M/s UOP, USA
- Technology for PTA from M/s BP Amoco, USA

**The year of import:** 2017-18/2018-19

**Whether the technology been fully absorbed:**

The project is in implementation stage - Expected commissioning by January-2024.

#### xiv. Catalytic Dewaxing Unit at Haldia

**The details of technology imported:**

- Technology for CDW Unit, from M/s CLG, USA

**The year of import:** 2018-19

**Whether the technology been fully absorbed:**

The project is in implementation stage - Expected commissioning by December -2022

#### xv. Acrylics/Oxo Alcohol Project at Dumad, Gujarat

**The details of technology imported:**

- Technology for Butyl Acrylate Unit, from M/s Mitsubishi Chemical Corporation, Japan
- Technology for Acrylic Acid Unit, from M/s Mitsubishi Chemical Corporation, Japan
- Technology for Normal Butanol Unit, from M/s JM Davy, U.K

**The year of import:** 2018-19

**Whether the technology been fully absorbed:**

The project is in implementation stage - Expected commissioning by May 2023.

### C) Foreign Exchange Earning and Outgo

The total Foreign Exchange earned and outgo during the year is as under :-

- Foreign Exchange earned : ₹ 10,877.55 Crore
- Foreign Exchange outgo : ₹ 1,88,281.80 Crore

### D) The areas in which R&D activities were carried out during the year are as under:-

- Development & demonstration of Refinery process technologies
- Licensing & commercialisation of R&D developed technologies
- Modeling and simulation – Refinery Processes
- Technical services to refineries, petrochemicals and pipeline division
- Lubricant, Greases and Specialties - Fuel Efficient Products, Combo offers
- Metal Working Tribology and Boundary Lubrication
- Fuel additives development and commercialisation
- Fuel Quality and Emission related Studies
- Development of Carbon Dioxide to Valuable Products
- Carbon Capture & utilisation
- Alternative fuels - HCNG, 2nd & 3rd Generation bio-fuels
- Analytical support for BS-IV/VI Gasoline and Diesel
- Process and catalyst development for Petrochemicals & Polymers application
- Development of Intelligent and Caliper pigs for monitoring health of pipelines
- Nanotechnological interventions for enhanced performance of fuels and lubricants
- Alternate Energy – Gasification, Hydrogen, Fuel Cell and Solar
- Troubleshooting, revamp and optimisation for refinery processes
- Catalysts development for refining and petrochemical processes
- Bituminous products – PMB & CRMB+
- Corrosion, Remaining life assessment and Material failure Analyses,
- Biotechnology interventions for refinery ETP

Expenditure on R&D

- (a) Capital - ₹ 226.16 Crore
- (b) Recurring- ₹ 282.79 Crore
- (c) Total - ₹ 508.95 Crore