



GAIL (India) Limited

Energizing Possibilities



Energizing Growth

Sustainability Report

2020-21

“We have to move towards ‘zero-defect and zero effect’. Zero defect in production with no adverse effect on the environment.”

Shri Narendra Modi
Prime Minister of India

Energizing Growth

We as a Business grow when the air around is fresh, when the flora is abundant, when the local community is empowered, when the avian soar high in the sky, when the sound of cicadas and birds hum along with the sound of development, and when the water is clean and blue.

Biodiversity is a very important element of sustainable development. It impacts the quality of human life and is an essential part to the sustainability of all human activity, including business.

Sustainable development is all about meeting the needs of present generations while safeguarding the ecosystems, species, and genetic components that make up biodiversity, a crucial factor in meeting the needs of future generations.

We at GAIL, believe Biodiversity is everyone’s responsibility; definitely ours as a responsible corporate entity.

The theme of the report is “**Energizing Growth**” because we are the catalyst to sustainable growth and believe growth is achieved when various ecosystems are in harmony with each-other.

This report carries images of various Flora, Fauna and Avian species shot at our facilities at Pata, Gandhar, Vijaypur, and Hazira showcasing GAIL’s commitment to coexist and grow along with its rich ecosystem.

जीवेषु करुणा चापि मैत्री तेषु विधीयताम्।
Be compassionate and friendly to all living beings

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Message from CMD

The threats of climate change are evident ever than before. It has become imperative now to reduce our carbon emissions for a cleaner environment.

Dear Stakeholders,

With the advent of the COVID-19 pandemic, the situation around the world continues to affect the economy with respect to global supply chains, wages, and productivity. The year tested the resilience of the organizations in managing the relationship between the employees and employers. Organizations whose foundations are built on strong values, trust, and a shared vision of serving the nation survived during this pandemic. In this regard; I would like to salute all the COVID warriors whose sacrifice for the safety and welfare

of humanity is priceless and deserves lifelong gratitude on our end. I appreciate the commitment and hard work of GAIL employees also, who despite the challenges, maintained uninterrupted operations of its Petrochemical plant, LPG Plants, pipelines, and other facilities to ensure delivery of essential products such as polymers (for PPE kits manufacturing) PNG, CNG, LPG, and other hydrocarbons products to the customers.

I would like to present GAIL's 11th Sustainability report 'Energizing Growth', which shows our efforts towards improving Environmental, Social, and Governance (ESG) performance. Our report is aligned with the Global Reporting standards of "Comprehensive" reporting. Additionally, it is also compliant with the updated IPIECA 2020, Sustainability Accounting Standards Board (SASB) requirements, and the Ministry of Corporate Affairs' National Guidelines on Responsible Business

Conduct. This year, we have also published our first integrated report, on which I would like to congratulate all GAIL employees.

The threats of climate change are evident and it is imperative to reduce carbon emissions for a cleaner environment. At GAIL, we are committed to reduce our carbon footprint by foraying into the Renewable Energy Sector through organic and inorganic routes. We understand that tackling climate change requires a multifaceted approach; thus, our focus is not only limited to renewable energy but also extended to promote compressed biogas (CBG), thereby making the GoI SATAT initiative a success. CBG is aimed at replacing fossil fuel as well as reducing waste and related emissions, thus contributing to a Swachh Bharat. To reduce import bills to the exchequer, carbon footprint & emissions further, GAIL is working on Ethanol and Hydrogen. GAIL values continuous improvement which is reflected in our best-in-sector operational efficiency.

Our business has a direct positive impact on environmental and social parameters and our company's role in energy security is unparalleled. Natural gas, the lifeline of the country, is a key raw material for fertilizer and the CGD sector. In the industrial sector, apart from giant enterprises, medium and small-scale enterprises are also shifting to natural gas to minimize their environmental and GHG impact. We are committed to fulfil the GoI's vision of 'One Nation One Grid'. GAIL is presently constructing the 'Pradhan Mantri Urja Ganga' pipeline project and 'North East Gas Grid' in Joint Venture mode to promote a gas-based economy.

At GAIL, we stand focused to maintain world-class standards for ensuring operational safety, performance, and growth. We take various measures to ensure the health and well-being of our employees as well as for the community. We strive to enrich the lives of thousands of underprivileged people by creating social capital across our CSR focus areas of education, healthcare, skill development, women empowerment, environment protection, etc under the GAIL Hridaya program.

Apart from providing medical consultations in the remotest places across the country, GAIL's Arogya initiative has also contributed crucially to serve the community by distributing much-needed personal protective equipment and oximeters. We are also supporting vaccination drives through cold chain refrigerator trucks.

During the pandemic, to ensure the well-being of all employees, including superannuated employees

and their family members, GAIL team interacted with and remained in constant contact with all the employees and seniors under the initiative 'Sparsh' aimed at 'bridging the physical distance to let the employees feel GAIL's Sparsh with our kind words and care'. As a special measure, GAIL has decided to take care of the education, housing, and medical requirements of the dependent family members of the deceased employees.

As a responsible organization, we are trying to contribute our best in taking GoI COVID-related initiatives to the public. Under the aegis of MoPNG, GAIL has set up and commissioned PSA oxygen plants in 12 government hospitals across 4 states namely, Uttar Pradesh, Madhya Pradesh, Karnataka, and Rajasthan. GAIL, on behalf of Oil and Gas PSUs, has placed an order for the supply of 25,000 Oxygen cylinders. Further, along with other Oil and Gas PSUs, GAIL is also contributing toward the procurement of 10,000 Oxygen concentrators. However, we should not be complacent and continue taking necessary precautions to beat the next surge.

Covid-19 pandemic has taught us the importance of local vendors and suppliers. Aligning with the PM's vision of 'Vocal for Local', we are also committed to increase the presence of local vendors and suppliers in our supply chain. It will not only reduce environmental impact but also create a positive social impact through our operations in the long term.

GAIL has added another Landmark in its Sustainability Journey this year. GAIL Vaghodia and GAIL Vijaipur have been awarded GreenCO "Silver" Rating by CII which reflects how sustainability is deeply ingrained in our working.

I am happy to announce that GAIL has been included in the FTSE4Good Index Series (FTSE ESG Rating) as part of the London Stock Exchange Group Sustainability Index 5th year in a row for demonstrating strong environmental, social, and governance practices of international standards. GAIL has been featured in the Forbes list of World's Best Employers 2020, and GAIL remains committed to do better for its people and society.



Manoj Jain

Chairman & Managing Director

Message from Director (Finance)



FY 2021 has been a challenging period for all of us. The COVID-19 pandemic has affected the industry in multiple ways. Globally, the oil and gas sector witnessed supply shock and price drop for a while. The bleak demand outlook created by the nationwide lockdown due to the COVID-19 pandemic has influenced our company's profitability.

However, the Company has taken all its effort to maintain operation and profitability. Despite the impact of pandemic, GAIL has achieved a gross turnover and profit after tax of Rs 56,738 crore and Rs 4,890 crore respectively. The downfall in the operation and financial capital was for temporary period and not held back on delivering our commitment towards building a gas-based economy.

The unexpected wake of the pandemic has enabled us to strengthen our operational efficiencies to meet the new normal requirements including cost optimization in our operations across our sites.

Our business has rebounded in a short span of time. With concerted efforts, we have witnessed new heights in petrochemical production, made natural gas and LPG transmission pipelines available as per customer demand; and ensured uninterrupted supply during the financial year. In this way, GAIL has made it possible to create value for its stakeholders during this transformational year.

During this period, Digital technologies have played an important role in maintaining business continuity and sustainable growth of the Company. We took many digital initiatives in GAIL and most of these initiatives were enabled before the pandemic hit us. The Digital yatra started by the Company, smoothen the business process and technicalities.

We have created an enabling environment to access risk and implement mitigation measures to improve the company's financials in the coming years. The Company has not only taken care of its business but also taken various relief measures for its employees and society.

The Company has compliant to all the environmental and regulatory requirements. We have already commenced a transformative sustainable journey to maximize value for our people, offer improved customer service and develop superior products while creating a positive impact on the environment and society.

The Company has been marching on the path of moving from being a natural gas Company to an integrated energy Company with global presence. I am confident that we will be able to outperform the current margins and grow sustainably.

A K Tiwari
Director (Finance)

Message from Director (Marketing)



The year 2020 has changed the world and people's lives in ways we could never have imagined. It was a tough year for everyone, everywhere. At GAIL, resilience in the face of adversity is our inherent core value. Even during these testing times, while keeping safety as an utmost priority, we have been harnessing efficiency in our operations, enhancing productivity and leveraging digital technologies to bring in transformative measures in our businesses.

We as a Company have not stopped working towards our mission i.e. to enhance the quality of life through clean energy and beyond. Energy that is accessible and affordable is the substance of inclusive growth. GAIL has aligned itself strongly with the vision of Government of India to shift the nation towards gas-based economy by increasing percentage of Natural Gas to 15% in the energy mix from the current 6.3%.

GAIL currently manages 70% of India's gas transmission network, and has been expanding the network across the India to presently ~ 13,718 km of natural gas pipelines. We are providing that last-mile connectivity to various industrial consumers which aids them to shift to more sustainable alternate fuels. In the last year, we have transported gas volumes of up to 104 MMSCMD. GAIL takes immense pride to have India's largest and most diverse LNG portfolio with a volume of around 14 MMTA. GAIL is further working towards transportation of LNG by truck to augment the reach of this clean fuel in the transport sector.

GAIL has presence directly and through its subsidiaries and joint ventures in City Gas Distribution in most of the major metropolitan cities and state capitals. We are currently authorized to operate in 61 geographical areas across India, connecting over 2.4 million vehicles with CNG and 5.08 million households with PNG connections. During this year, we have registered a record addition of 10.10 lakh household PNG connections, 341 CNG stations, which is the highest figure ever achieved.

We are fully aware that sustainable growth is only possible when we grow and prosper along with the community we serve. With our Hawa Badlo movement, an initiative spearheaded by GAIL, we are changing mind-sets and encouraging people to adopt to cleaner and more sustainable lifestyle habits.

Moving forward, we will continue using the transformative power of clean energy to improve the quality of life, build trust, so that we can energize growth wherever we go by building self-reliant India.

E S Ranganathan
Director (Marketing)

Message from Director (Business Development)



At GAIL, we acknowledge that sustainable growth is only possible by thoughtfully integrating economic, environmental and social parameters into our growth strategy. Our company's overall performance is a culmination of all our efforts in this direction. GAIL constantly endeavors to meet the growing energy demand to empower our nation to be self-reliant.

We are pushing our limits to achieve energy security while addressing the growing concerns on climate change and carbon emissions to enable a gas-based economy. In an effort to achieve this, we have completed laying of ~ INR 2,400 crore Dhobi-Durgapur pipeline that will bring cheap piped natural gas to Eastern India.

GAIL is also setting up a compressed biogas (CBG) plant at Ranchi which would process 150 tons per day Municipal solid waste to produce biogas and bio manure. To support GoI's ambitious Sustainable Alternative Towards Affordable Transportation (SATAT) scheme, GAIL along with its JVs have issued 200 letter of intents to prospective CBG entrepreneurs to guarantee offtake. GAIL, under guidance of MoPNG, is implementing CGD-CBG synchronization scheme to assist CBG producers. GAIL is also exploring to add 1GW renewable energy in its current portfolio both through organic and inorganic route. Under the aegis of MoPNG, plans are being made to set up a 1G Ethanol plant for Ethanol Blended Petrol Program. GAIL has also forayed in Green Hydrogen business segment. These alternate fuels would be a step towards Atmanirbhar Bharat.

These business initiatives would provide a more sustainable business by ensuring that we create no negative impacts on society and the environment. By making conscious business decisions in association with our valued and trusted partners, we are energizing growth and creating long-term value for all our stakeholders.



M V Iyer

Director (Business Development)



Ditch Jewel
(Brachythemis contaminata)
Location: **Vijaipur**



Operates **3/4th** of the total Natural Gas transmission pipelines in India



Produces every **33rd LPG cylinder** sold in India



Contributes more than **53%** of the Natural Gas (NG) sold in India

National Gas Grid (NGG)

GAIL's Presence



A gas-based economy is crucial for India and work is being done in the direction of One Nation, One Gas Grid! One Nation, One Gas Grid refers to the integration of various regional grids thus establishing a National Grid for providing energy produced by natural gas to various stakeholders like the central government, the state governments, the public and the private sectors.

GAIL is executing projects to lay around 6,000 km of gas pipelines across India and another 2,000 km pipelines through its two JVs to develop National Gas Grid. Despite the COVID-19 pandemic and related disruptions, 1000 km of pipeline has been commissioned in FY 20-21.



Pradhan Mantri Urja Ganga

In sync with the Government of India's vision, GAIL is striving to build a gas-based economy by the expansion of the natural gas grid. GAIL is enhancing our nation's gas infrastructure from Kutch to Kohima, Kashmir to Kanyakumari, connecting gas sources to major demand centers, removing regional imbalance in access to natural gas.

Pan India Natural Gas Pipeline Length

JHBDPL

Jagdishpur-Haldia-Bokaro-Dhamra pipeline



2655 KM

BGPL

Barauni-Guwahati pipeline



729 KM

IGGL

Indradhanush Gas Grid Limited pipeline



1656 KM

KKBMPL

Kochi-Koottanad-Bengaluru-Mangaluru pipeline



889 KM

GAIL and it's JV's Facilitating Cleaner Energy for a Greener India

Enhancing clean energy availability and accessibility for Indians, GAIL has been augmenting its CGD network across India. The company's PNG and CNG networks are providing people with cleaner, sustainable and affordable natural gas.

Strengthening India's City Gas Distribution Network



PNG
5 MILLION
HOMES



CNG
2.5 MILLION
VEHICLES



INDUSTRIAL
PNG OVER
16,500 UNITS



Towards New Horizon



- Memorandum of Understanding (MoU) 2020-21 has been signed between Secretary, Ministry of Petroleum & Natural Gas & CMD, GAIL on 19th October 2020. MoU was signed in the presence of JS(GP), Director (HR), Director (Finance) & Director (Marketing) along with other senior officials from Ministry. Parameters in MoU include critical aspects like key financial parameters, gas marketing, gas transmission, project implementation, capital expenditure etc. The MoU is majorly aligned towards GOI's vision of making India a gas-based economy.



- GAIL and Ranchi Municipal Corporation (RMC) have signed a Concession Agreement (CA) at Ranchi for setting up Compressed Biogas (CBG) plant in Ranchi. The agreement was signed in the presence of Hon'ble Chief Minister of Jharkhand Shri Hemant Soren, Joint Secretary, Ministry of Petroleum & Natural Gas Shri Ashish Chatterjee, Director (Business Development), GAIL Shri K B Singh, Executive Director (ER & Projects), GAIL Shri M V Iyer, Executive Director (Business Development), Shri Santanu Roy by Ranchi Municipal Commissioner Shri Mukesh Kumar, IAS. As per the agreement, GAIL will setup CBG Plant for processing 150 tons per day of organic Municipal Solid Waste (MSW).

Towards New Horizon



- Honorable Secretary Ministry of Petroleum and Natural Gas Sh. Tarun Kapoor, IAS visited DT Eloor GAIL Kochi along with Mr. Ranganathan, Director (Marketing) and Senior officials of BPCL and Petronet in the backdrop of dedication of the Kochi-Mangalore Section of the KKB MPL PH II pipeline network by Honorable PM of India.



- Mr. M V Iyer, Director (Business Development) GAIL reviewing Pata Expansion Plan.

Towards New Horizon



- Hon'ble Minister Shri Dharmendra Pradhan, Hon'ble Minister of Petroleum and Natural Gas and Steel press interaction and launch of Catalytic Iso-Dewaxing Unit at Halida Refinery. Dhobi, Durgapur dedicated to Nation.



- The signing of the agreement between GAIL Gas Limited and Confidence Petroleum India Limited for CNG stations in Bengaluru on full DODO model

Excellence in Corporate Governance



→ GAIL received the 'Golden Peacock Award for Excellence in Corporate Governance - National category' in Gas



GAIL has been adjudged as
WINNER (PSU category) in
United Nations Global Compact Network India
(UNGCNI) **Sustainable & Innovative**
HR Practices - Case Study Contest.

***GAIL team presented on the topic of "Ensuring Flow
through HR Gateway - HR as a Business Partner."***

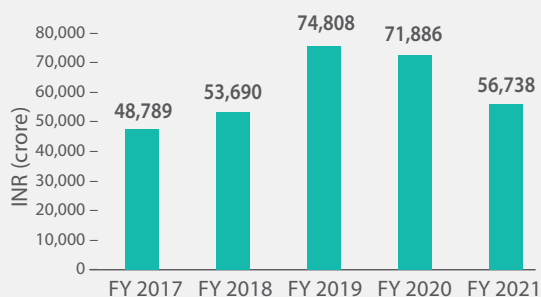
CII GreenCo Rating Implementation



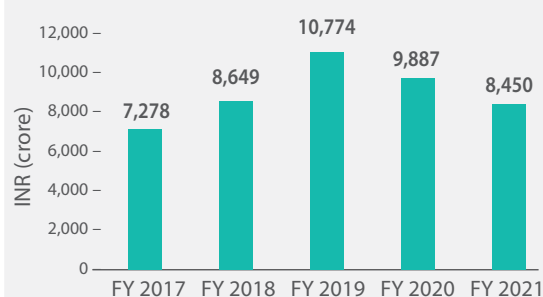
- GreenCo Rating is the “first of its kind in the world” holistic framework that evaluates companies on the environmental friendliness of their activities using the life cycle approach. In FY 20 and FY 21 Vaghodia and Vijaipur respectively have received a silver rating for its exceptional performance. Further implementation of the GreenCo rating is under progress at different operational sites

Financial Performance

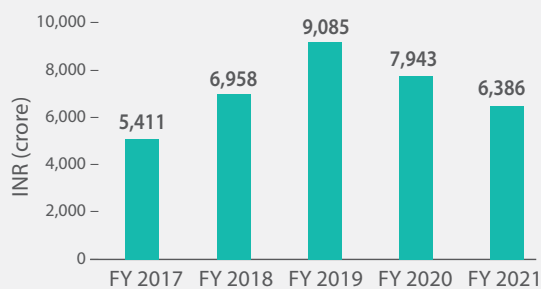
Turnover (Gross)*



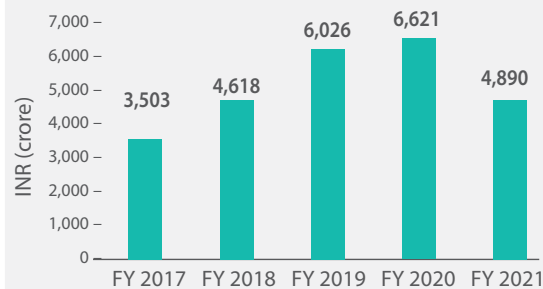
Gross Margin (EBIDTA)*



Profit Before Tax (PBT)*



Profit After Tax (PAT)*



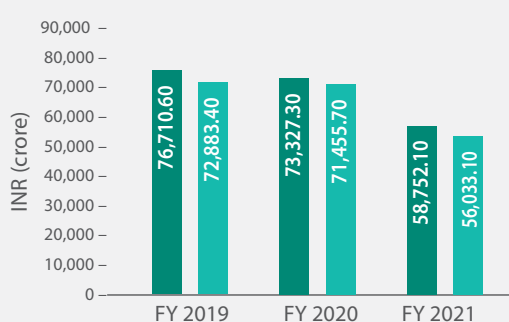
GAIL witnessed a decline in the financial performance with respect to previous years:

- In FY 2021, the gross turnover declined by 21% due to the decline in natural gas marketing and transmission volume
- The PAT has shown a decrease of 26% while PBT has registered a decrease of 20% because of lower gas marketing spread

*Financial performance of standalone GAIL

Economic, Social & Environmental Performance

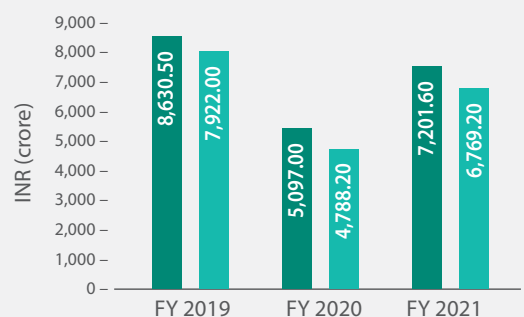
Economic Value Generated vs Distributed*



■ Economical Value Generated ■ Economical Value Distributed

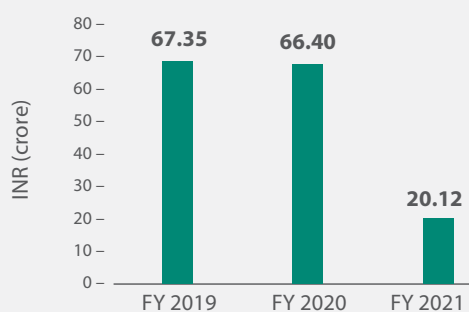
*Economic value generated, and distributed calculation methodology is different from other reported data

Procurement Highlights

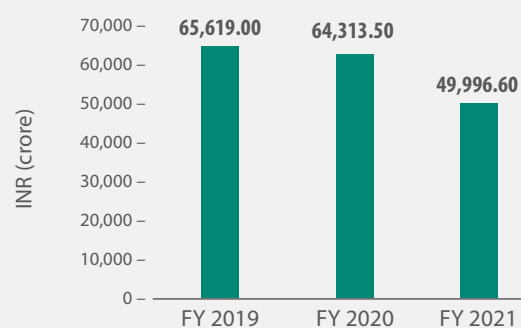


■ Total amount spent on procurement of goods and supplies
■ Total amount spent on procurement of goods and supplies from local suppliers

R&D Expenditure

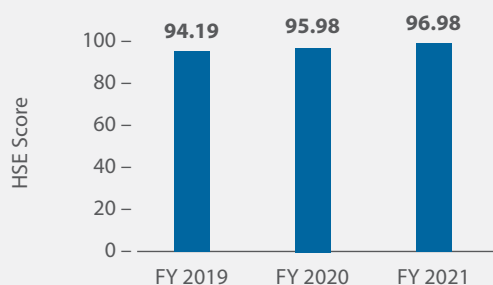


Operating cost

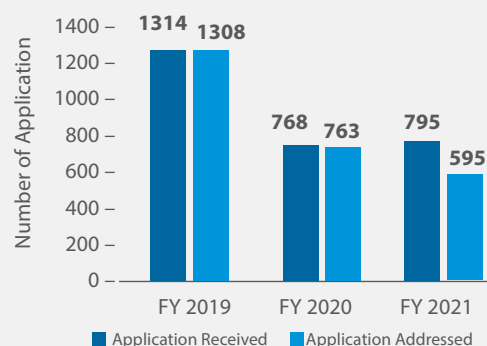


Economic, Social & Environmental Performance

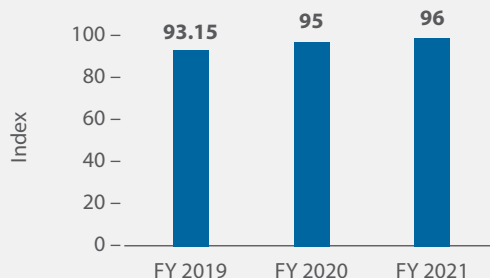
Health Safety & Environment Score



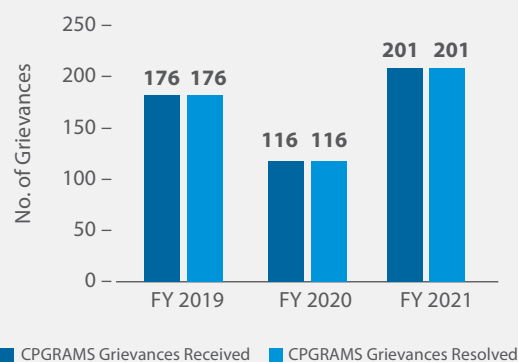
RTI Application



Customer Satisfaction Index

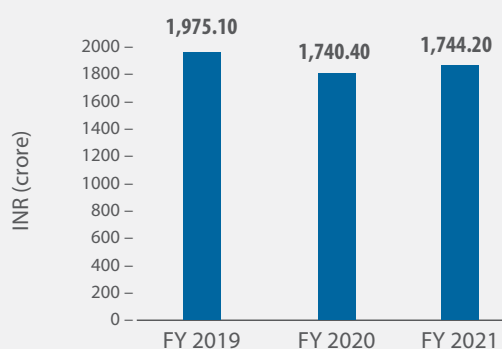


CPGRAMS Grievances

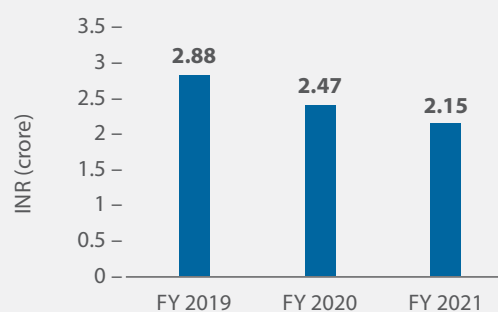


Economic, Social & Environmental Performance

Employee wages and benefits

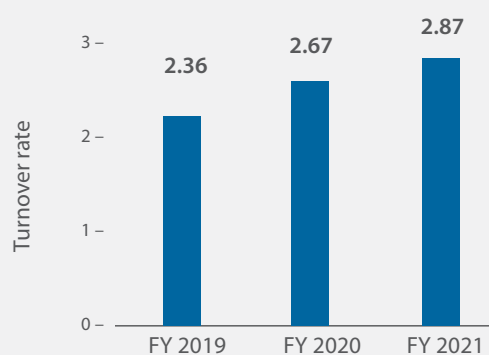


Value Add Per Employee

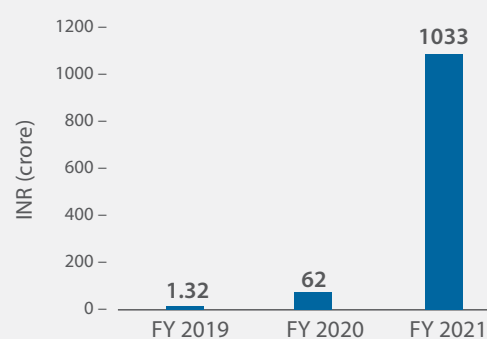


*Employee wages and benefits incl. t/f to CWIP+ contribution to PF & Other fund (Prior Period) & Welfare+ Other income from deputation

Total employee turnover rate

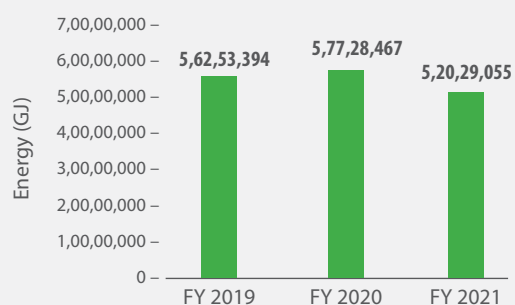


Procurement from Government eMarketplace (GeM)

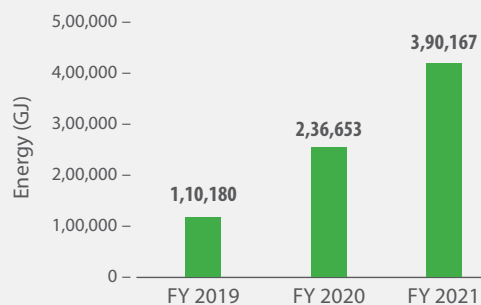


Economic, Social & Environmental Performance

Energy Consumption

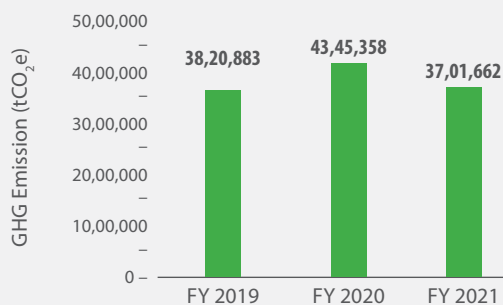


Energy Savings

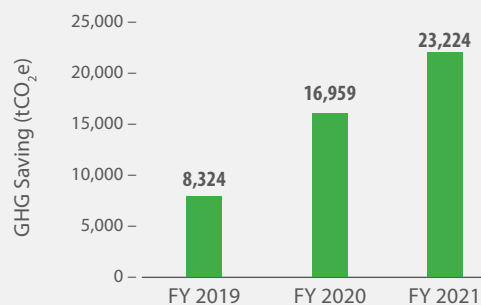


Savings are reported based on energy saving initiatives implemented at sites/offices.

GHG Emissions



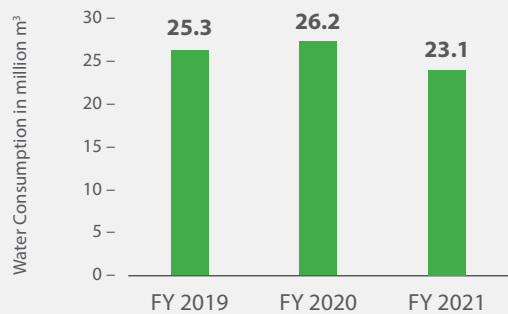
GHG Savings



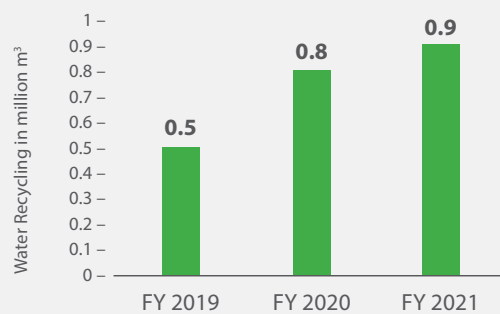
Savings are reported based on energy saving initiatives implemented at sites/offices.

Economic, Social & Environmental Performance

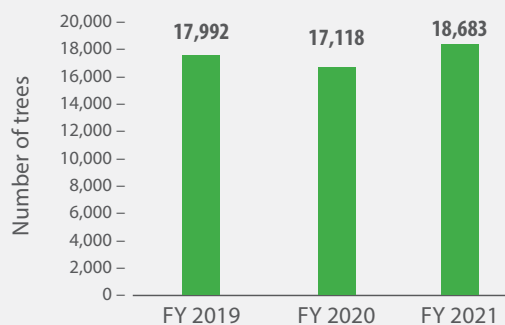
Water Consumption



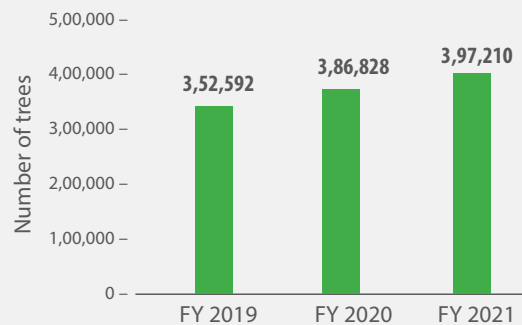
Water Recycling



Tree Plantation



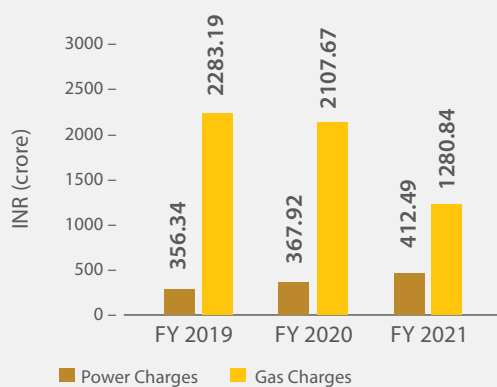
Cumulative No. of Tree Plantation (Sites+Township)



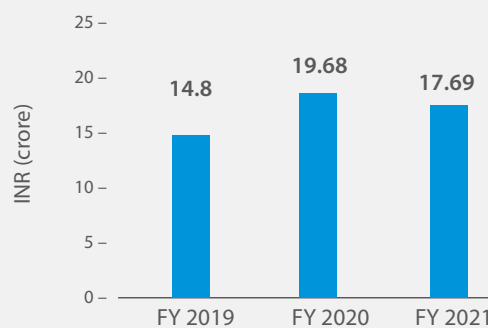
We are streamlining the process of plantation data collection from various sites/offices in our sustainability portal.

Economic, Social & Environmental Performance

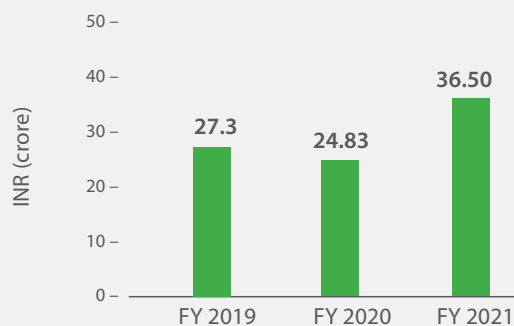
Power & Gas Charges



Water Charges



Total Environmental Expenditure



Health and Safety at GAIL



SAFETY AND PERFORMANCE

The health, safety and environmental management performance of GAIL's operation & maintenance installations are measured through the "HSE score", which is evaluated every month, considering the key elements of HSE Management System. GAIL achieved "HSE Score" of 96.98 average achieved for the FY 21 against the internal target of 94.50 in the FY 21.

CORPORATE HSE POLICY

GAIL endeavors to generate value through sustainable development by placing commitment to occupational health, safety and environment of its plants, pipelines including CGDs and personnel, and these beliefs are embedded within our core organizational values.



SAFETY AND TRAINING AWARENESS

"Safety Day" is observed on the 10th of every month at each O&M site of GAIL. Short film on the HSE Management system has been developed to enhance awareness among GAIL employees about the HSE management system implemented in GAIL.



OCCUPATIONAL HEALTH

In the current scenario of COVID-19 pandemic, awareness sessions and multiple motivational programs were conducted with proper protocols for employees and their family members at GAIL different sites.

GAIL has implemented occupational hygiene measures and medical surveillance progress to monitor and control the occupational health of its employees based on defined guidelines.



SAFETY AUDITS

Audits are performed by PNGRB accredited third-party inspection agencies, other external agencies and our experienced in-house team, in accordance with the applicable national codes and standards.

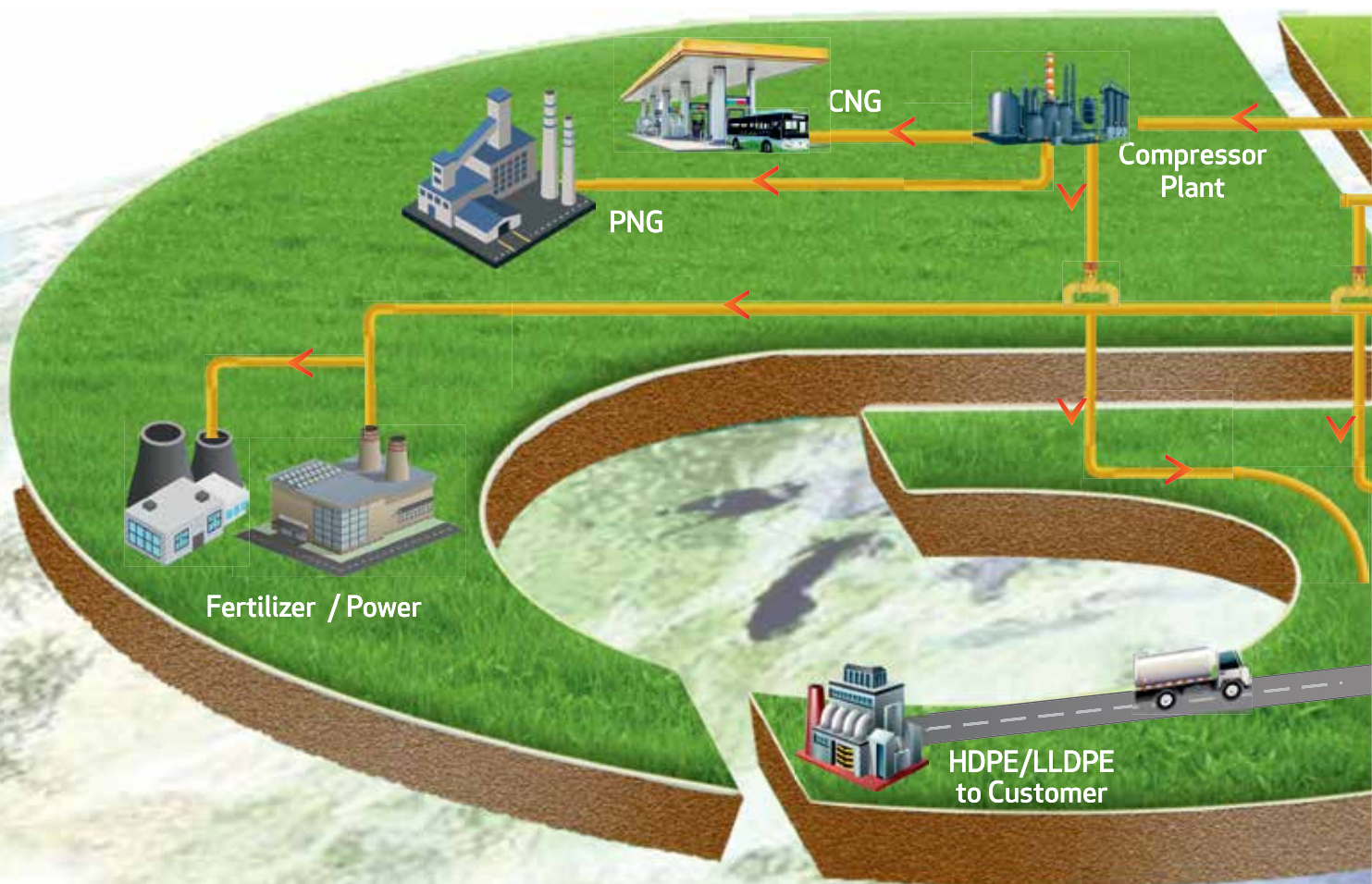
Internal safety audit is being conducted by an in-house team to identify the improvement areas with respect to PNGRB and other regulations, OISD standards, management governance.

VISION

Be the leader in the natural gas value-chain and beyond, with a global presence, creating value for stakeholders with environmental responsibility

MISSION

Enhancing quality of life through clean energy and beyond



55%

Operates more than 55% of India's total CNG stations

65%

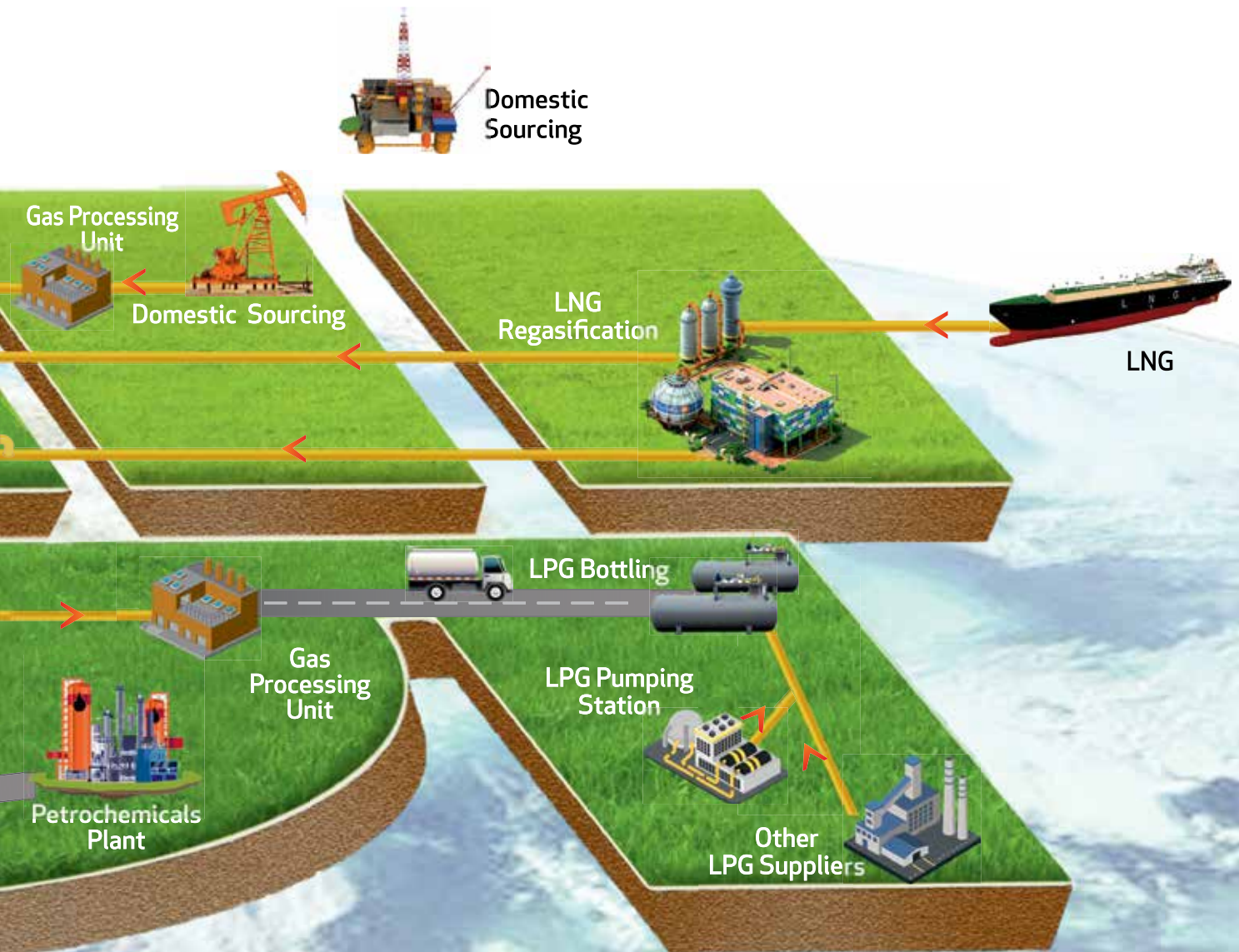
Operates 65% of PNG connections in India

2nd

2nd largest player in Indian polyethylene portfolio market

GAIL's Supply Chain

India's Natural Gas Leader


61

Authorized to operate in 61 geographical areas throughout India including the metro cities

55%

Supplies gas for about 55% of India's gas-based power

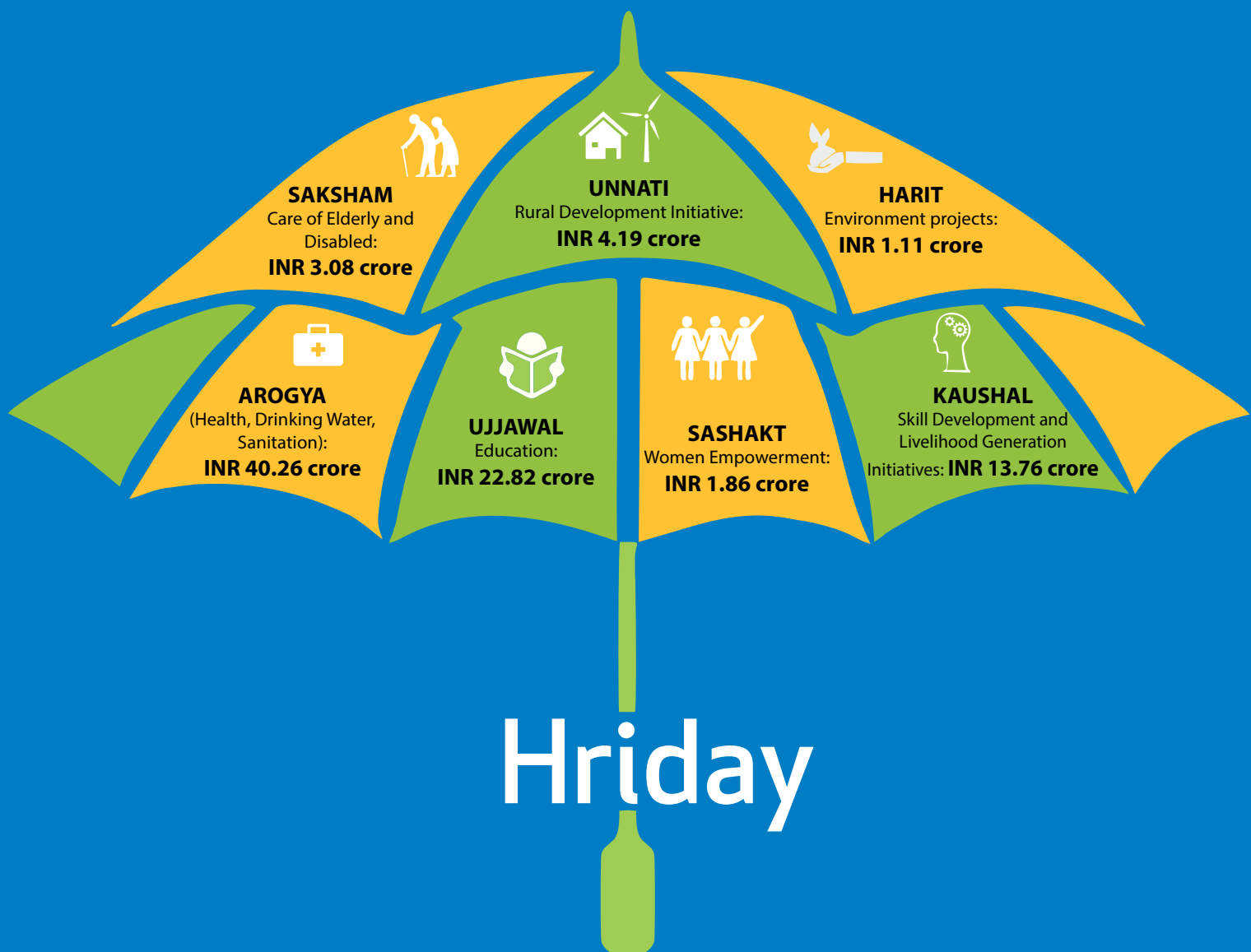
73%

Supplies gas for about 73% of India's total fertilizers produced

Our Social Outreach

During this reporting year, GAIL has taken up several projects to meet its commitment towards its society. GAIL has spent INR 147.67 crore in FY 21, exceeding the mandated 2% of INR 141.91 crore.

7 major focus areas of our CSR program- Hriday



Others (disaster management activities, promotion of sports, etc.): **INR 60.60 crore**

Creating Value Through Community Initiatives



- GAIL's Project "AVANT" aims to improve and enhance the quality of education for underprivileged and deprived kids in rural areas, through innovative measures and evaluating progress by continuous assessment.



- Ration and kits distribution at Rajahmundry

GAIL's Efforts on COVID-19 Pandemic



The global COVID-19 health emergency had a serious impact on our lives, business and the economy. Outbreak from the last year onwards. GAIL's dedicated working groups and the management has been tirelessly working to ensure business continuity, the safety of its people and society responsibly.

GAIL has partnered with several government bodies in conducting vaccination drives, setting up PSA oxygen plants and providing several pieces of medical equipment across the nation.

GAIL's efforts reflect on its duty to its people and the nation. GAIL has taken utmost care of its employees to keep them safe from the outbreak. The necessary safety precautions were implemented at the workplace to maintain a good hygiene workplace environment. Awareness sessions on COVID-19 precautions were carried out for employees and workers at all levels. GAIL also implemented a weekly roster for employees at offices/plants on 50% rotational attendance based on work exigencies; work-from-home was granted to employees on a rotational basis.

In addition, GAIL provided resources to address the social, physical and mental wellbeing of the employees. Well-equipped occupational health centres, ambulances were kept ready for employees with the full-time medical officer. It was ensured that all employees and workers are going through necessary occupational health check-ups at regular intervals.

During the initial phase of the pandemic, operations were significantly impacted. As a resilient company, within a short period, GAIL has bounced back to normalcy. To achieve business continuity, GAIL has deployed emergency measures and organisational instructions to ensure continuity of operations according to the level of risk identified. With improved digital and technological solutions such as the introduction of virtual meeting platform, e-note-sheet, secure access of systems for remote working, online transactions, mobile apps, etc, GAIL ensured business continuity and provided uninterrupted services to its customers.

As a response to mitigate the COVID-19 challenges, GAIL has spent INR 80 crore to help its people and society. GAIL has contributed INR 50 crore towards PM CARES Fund, INR 30 crore on projects to provide oxygen cylinders, concentrators, PSA plants, set up super-speciality ICU unit in Dakshina Kannada, Karnataka and supported in setting up quarantine ward in Rajahmundry, Andhra Pradesh.

Mapping GAIL Initiatives with SDGs



The Sustainable Development Goals (SDG's) comprises of a set of targets building a framework for leading development for the period till 2030. By endorsing the universal 2030 Agenda for Sustainable Development, including its 17 SDGs and 169 Targets, the global community reaffirmed its commitment to sustained and inclusive economic growth, social inclusion, environmental protection, and fostering peaceful, just and inclusive societies through a new global partnership.



- » GAIL Kaushal, Unnati and Sashakt initiatives under GAIL Hriday



- » Diversity inclusion for the hiring process
- » GAIL Shashakt initiative under Hriday Program
- » GAIL Kaushal initiative under GAIL Hriday



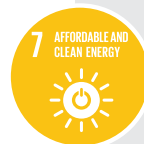
- » Supplies gas for about 73% of India's total fertilizers produced.
- » GAIL Kaushal, Unnati and Sashakt initiatives under GAIL Hriday.



- » Water Management
- » Waste Management
- » GAIL Arogya initiative under Hriday Program



- » Employee engagement activities
- » Behaviour-based safety
- » HSE Management System
- » COVID-19 Precautionary measures
- » GAIL Arogya initiative under Hriday Program
- » Corporate medical Cell for Regular health check-ups
- » GAIL Emergency Responders and First Aid Training
- » Hawa Badlo Campaign



- » Partnership with BHEL for Solar based power project
- » Energy Management System
- » Solar Power System commissioned at Mumbai Pipeline Network
- » Development of National Gas Grid
- » Compressed biogas
- » Target of 1 GW of renewable energy



- » GAIL Ujjawal, GAIL Kaushal, GAIL Sashakt initiatives under GAIL Hriday



- » GAIL's contribution to Start-Up India
- » Transparency in Doing Business
- » Grievance Redressal Mechanism
- » Workforce Management
- » GAIL Kaushal
- » Management Development Program
- » Learning Management System



- » GAIL's contribution to Start-Up India
- » Digital Transformation
- » Marketplace (GeM) and Trade
- » Receivable Discounting System (TReDS) for Procurement
- » Workforce Management
- » GAIL Ujjwal initiative under Hriday Program
- » GreenCo Assessment of the sites
- » Construction Management Plan (CMP)



- » GAIL Shashakt initiative under Hriday Program
- » GAIL Saksham initiative under Hriday Program
- » General Conditions of Contract
- » Public Procurement Policy at GAIL
- » GAIL Indigenization (INDEG) Group Meets
- » Local procurement



- » SIA (Social Impact Assessment)
- » GAIL Initiatives to tackle COVID-19 Impacts
- » GAIL's contribution to Start-Up India
- » GAIL Arogya
- » GAIL Unnati
- » Hawa Badlo campaign



- » Implementation of the rich lean corridor
- » Energy Management System
- » Energy-saving initiatives at GAIL sites and townships
- » Water Management
- » Waste Management
- » Contribution to Start-Up India
- » Total Quality Management (TQM)
- » Integrated Management System (IMS)



- » The sustainability Governance Framework and Sustainability Policy
- » Implementation of the rich lean corridor
- » Environment Management System
- » Energy Management System
- » Biodiversity Management
- » Emission Management
- » GAIL's contribution to Start-Up India
- » Combating Climate Change Risk

- » Green Procurement
- » Local Procurement
- » State-of-art Digital Technology to measure the Carbon footprint
- » CNG Mobile Refueling
- » Afforestation projects following the Miyawaki technique
- » State-of-art Digital Technology to measure the Carbon footprint
- » Target of 1 GW of renewable energy
- » Coastal regulatory zone clearance



- » Functional excellence Framework
- » Biodiversity Management
- » Water Management
- » GAIL Harit initiative under Hriday Program
- » EIA (Environment Impact Assessment)



- » Environment Management System
- » Biodiversity Management
- » Waste Management
- » GAIL Harit initiative under Hriday Program
- » Green Procurement
- » Local Procurement
- » Hawa Badlo campaign



- » Ethics and Integrity
- » Transparency in Doing Business
- » Labour Practices
- » General Conditions of Contract
- » Stakeholder engagement
- » Customer satisfaction survey



- » GAIL's contribution to Start-Up India
- » Partnership with TERI
- » GAIL's support to Sustainable Alternative Towards Affordable Transportation (SATAT) initiative of GoI
- » GAIL's Start-Up Initiative 'Pankh'
- » Founding member of the Global Reporting Initiative (GRI) Focal Point India's Sustainability & Transparency Consortium



Lotus (Nelumbo nucifera)

Location: **Gandhar**



This is GAIL's 11th
Sustainability Report

GRI

Sustainability Report has been
prepared in accordance with
the "**GRI Standards**"



About the Report

GAIL (India) Limited (hereinafter referred to as GAIL) has been disclosing environmental, economic, and social performance since 2011 through annual sustainability reports. Through sustainability reporting, we analyze our company's strategy, set goals and targets, measure and advance our performance, and ultimately develop a sustainable business model that adds value to society.

We report in accordance with the latest version of the International Petroleum Industry Environmental Conservation Association (IPIECA) global oil and gas industry association for environmental and social issues guidelines. We also follow GRI Sustainability Reporting Standards; Sustainability Accounting Standards Board (SASB) the National Voluntary Guidelines (NVG); Business Responsibility Reporting (BRR), Sustainable Development Goals (SDG), guidelines of the American Petroleum Institute (API), ISO 26000:2010, and the United Nations Global Compact and its 10 principles covering human rights, labor, environment, and anti-corruption.

Reporting Year

The financial accounting and performance data provided in the report covers information from GAIL's financial year, 01 April 2020 to 31 March 2021. The same period is used to report sustainability performance as well. The sustainability report for the financial year 2019-20 was published on 22nd September 2020. This is GAIL's 11th sustainability report, showcasing the environmental, economic, and social performance for the financial year 2020-21.

Reporting Cycle

The reporting cycle is aligned with the financial disclosure cycle. The electronic version of the report can be found on our website for reporting on sustainability.

Please visit. <https://gailonline.com/SBReports.html> for more details.

Report Boundaries

The scope of reporting covers GAIL's performance on various environmental, economic, social and governance parameters across all the locations. Company-joint ventures, subsidiaries, leased facilities, outsourced operations and other entities have been excluded from the scope. There is no restatement of information as well for there has been no change in the reporting boundaries or the nature of the firm in the given financial year. The material topics have not changed substantially since our previous report, we have included climate change and cyber security as additional material topics. Wherever applicable, India is our significant location unless and otherwise specified. The word 'local' refers to India, wherever applicable. Unless specified, the last financial year is considered as a baseline for calculating reduction in energy & GHG savings.

Data Management

This report has been prepared in accordance with the GRI standards: Comprehensive option and covers the data from 01 April 2020 to 31 March 2021. We have assigned sustainability coordinators at all plants/offices to locally drive and monitor various initiatives and collect

Our Sustainability Reports (SRs)



data for reporting. Sustainability coordinators submit sustainability related data such as fuel & electricity consumption /saving, water sourcing, consumption and discharges, training hours and other relevant parameters at our sustainability portal. The information is verified by various irrespective departmental heads for clarity and accuracy. Further to calculate our emissions, we have used IPCC Guidelines for National Greenhouse Gas Inventories, 2006 and Central Electricity Authority (CEA) grid emission factor.

The GAIL Sustainability Report outlines our company's engagements with our stakeholders, and the programs and initiatives that were undertaken to achieve our shared mission. Details pertaining to the material aspects that are important to our business and stakeholders are also provided in this report. Additionally, various plans, projects, policies, and strategic frameworks for sustainability issues have also been covered in this report.

The coronavirus pandemic continues to have unprecedented impacts on our economy. We are focused on creating a safer work environment for our employees, customers, and supporting communities from the implications unleashed by COVID-19. Details about our commitments and initiatives taken to manage the effect of this outbreak are also provided in this report.

Data Validation and Assurance

External assurance agency has assured this report. We do not have working relationship with external assurance agency, no other work order is provided to them. This sustainability report is a type 2 moderate level assured report and has been conducted based on the AA1000AS v3 standard. The assurance process includes desk review as well as site visits to multiple locations to validate the data provided. Apart from data validation, the

assurance process helps to refine and improve our processes and data management systems. The data of material aspects is compiled by each of the process owners from functional departments and are used to develop the report. It is then developed by the Sustainability Department and approved by the Sustainable Development Committee of the Board of GAIL.

The Sustainability Report, in hand, is both a communications tool to all our stakeholders and an operational document that assists us in informed decision-making. Any feedback or query related to this report can be communicated to Mr. R K Mittal, CGM (SD) rk.mittal@gail.co.in, Mr. S K Agarwal, GM (SD) skagarwal@gail.co.in. Readers can also reach out to us at sustainability@gail.co.in to provide feedback on improving our performance and sustainability disclosures.

Reporting Boundary of GAIL

- » GAIL's gas processing units at five locations (Pata, Vijaipur (2), Vaghodia, Gandhar,)
- » One petrochemical plant at Pata and C2/C3 plants at Pata and Vijaipur
- » Natural gas compressor stations (Hazira, Vaghodia, Jhabua, Khera, Vijaipur, Dibyapur, Kailaras, and Chhainsa)
- » Liquefied Petroleum Gas (LPG) pumping/receiving stations (Loni, Mansarampura, Nasirabad, Abu Road, Samakhiali, Jamnagar, Kandla, Vizag, G Konduru, and Cherlapalli)
- » GAIL Training Institute Noida, Jaipur. Office buildings at the corporate office in New Delhi
- » E&P business
- » Info-Hub and Jubilee Tower offices at Noida
- » Zonal marketing offices
- » Regional pipeline offices at NCR, Baroda, Mumbai, Puducherry, Rajahmundry, Agartala, and Dhabol Bengaluru Pipeline (DBPL)

Disclaimer

Statements in the GAIL Sustainability Report FY20-21 may be "forward looking statements", identified by words like 'plans', 'expects', 'will', 'anticipates', 'believes', 'intends', 'projects', 'estimates' and may be progressive within the meaning of the applicable laws and regulations. The company disclaims any obligation to update these forward-looking statements, except as may be required by law.



Innovative **Educator Award'**
at Asia Pacific Excellence
Award 2021



GAIL Contributes
more than **53%** of
the NG sold in India



GAIL operates around
13,718 km of natural gas
pipeline network

About GAIL

Incorporated in August 1984, GAIL was established as a Central Public Sector Undertaking (PSU) under the Ministry of Petroleum and Natural Gas (MoP&NG).

On a mission to enhance the quality of life through clean energy and beyond, GAIL has played a pivotal role in the development of the Indian energy sector and is the country's leading gas company with diversified interests across the natural gas value chain including the exploration and production, processing, transmission, distribution, and marketing.

GAIL currently operates 13,718 km of natural gas pipeline network and 2,038 Km of LPG pipeline across India. The business portfolio includes natural gas, liquid hydrocarbons, petrochemicals, city gas distribution, LPG transmission, power, and renewables.

GAIL commands ~75% market share in gas transmission and has a gas trading share of 53% in India. GAIL and its subsidiaries/JVs also have a formidable market share in the City Gas Distribution. We also have a significantly large portfolio in the LNG market and being cognizant of the environmental impact, we are expanding our presence in the renewable energy segment with a focus on solar, wind and biofuel. Our aim is to maximize the potential of each portfolio company by clarifying its business

models, capitalizing on its market positions and strengthening areas for value creation.

With a vision to be a leader in the natural gas value chain, our aim is create value for our stakeholders with an awareness of environmental stewardship. In 2013, we were granted the prestigious 'Maharatna' status by the Government of India (GoI) and within a short span of time, we have achieved a strong global presence with our subsidiaries in the United States of America as well as Singapore.

Over the years, we have seen a transformation in the form of rising demands, technological innovations, geopolitical shifts and environmental concerns in the Indian energy sector, and as a company, it is imperative for us to adjust and adapt to the ever- evolving landscape. We have developed and implemented a long-term strategic action plan - 'Strategy 2030' to guide and support us in navigating the challenges and identify opportunities for growth and development in a volatile market.

GAIL (India) Limited is headquartered in New Delhi, India. We are a government-owned enterprise, in which GoI holds 51.45% of the paid-up equity capital. The company is listed and publicly traded on the BSE as well as the National Stock Exchange.

Business Portfolio

Exploration & Production

- Participating interest in 11 E&P blocks
- A new gas discovery was made in A-3 Myanmar offshore block in the 2nd exploratory well (Mahar-1)
- GAIL's E&P share of average oil production from Cambay blocks is 182 BOPD and gas production is 1.45 MMSCMD from Myanmar blocks (A1&A3)

Overseas Presence

- Set up wholly owned subsidiaries - GAIL Global (USA) Inc. and GAIL Global (Singapore) Pte. Ltd.
- Acquired 20% interest in Carrizo's Eagle Ford Shale acreage in the USA
- Presence in Egypt, China and Myanmar

GAIL Business Highlights

- Contributes 53% of the NG sold in India
- Supplies gas for about 55% of India's gas-based power
- Operates more than 54% of India's total CNG stations
- 2nd largest player in Indian Polyethylene Portfolio Market
- Produces every 33rd LPG cylinder in India
- Operating 65% of PNG connections in India
- Operates 70% of total Natural Gas transmission in India
- Supplies gas for about 69% of India's total fertilizer sector consumption

Power & Renewables

- 118 MW wind power capacity
- 12.26 MW solar power capacity

City Gas Distribution

- Serving over 2.5 million vehicles and 5.08 million households
- Operates more than 54% CNG stations through alliances
- Sectorial gas sales of around 67% in CGD
- Authorized to operate in 61 geographical areas across India
- Supplies natural gas to around 65% of the country's Piped Natural Gas (PNG) connections

LPG & Liquid Hydrocarbons

- 5 Gas processing plants producing LPG, Propane, Pentane, Naphtha, etc. (1.4 MMTPA)
- LPG transport capacity 3.8 MMTPA (2,038 Km)

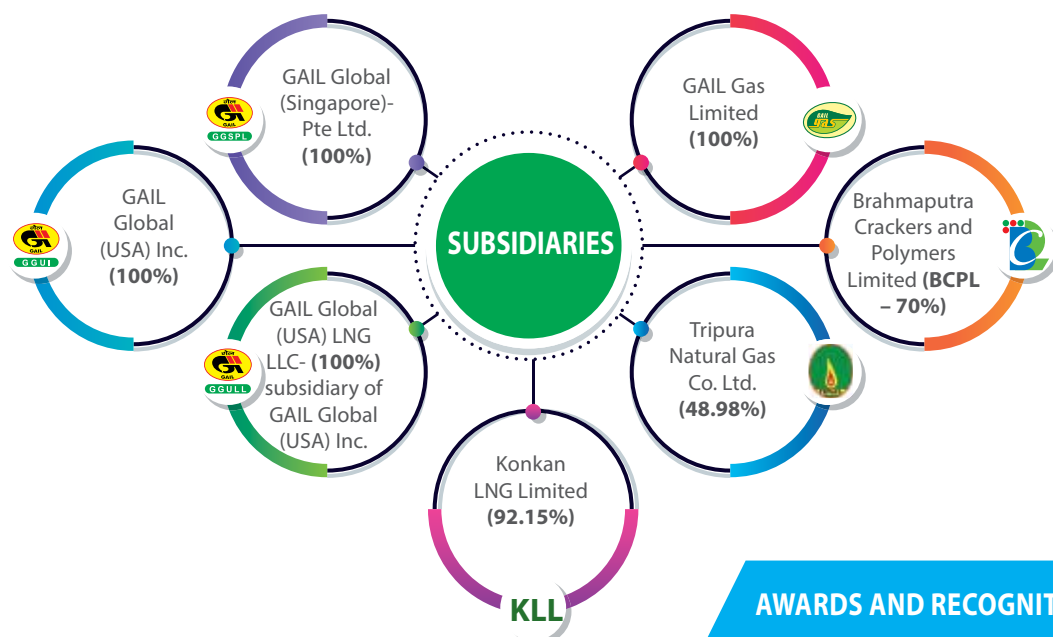
Petrochemicals

- Petrochemical plant at Pata, Uttar Pradesh and BCPL plant at Lepatkata, Assam with a capacity of 810 KTA and 280 KTA respectively
- Combined production share of 17.4% of the high density and linear low-density polyethylene (LLDPE) market in the country

Natural Gas

- Around 13,718 km of Natural gas pipeline network. Adding further 6000 Km as a part of National Gas Grid
- Long-term import portfolio: 14 MMTPA

Subsidiaries, JVs & Awards



AWARDS AND RECOGNITIONS

JOINT VENTURES

Aavantika Gas Limited (49.99%)
Bengal Gas Company Limited (50%)
Bhagyanagar Gas Limited (48.73%)
Central UP Gas Limited (25%)
China Gas Holding Limited (2.88%)
Fayum Gas Company (19%)
Green Gas Limited (49.97%)
Indradhanush Gas Grid Limited (20%)
Indraprastha Gas Limited (22.5%)
Mahanagar Gas Limited (32.5%)
Maharashtra Natural Gas Limited (22.5%)
ONGC Petro Additions Limited (OPAL) (49.21%)
Petronet LNG Limited (12.5%)
Ramagundam Fertilizers and Chemicals Limited (14.69%)
South-East Asia Gas Pipeline Company Limited (4.17%)
Talcher Fertilizers Limited (33.33%)
TAPI Pipeline Company (5%)

CORPORATE

- » GAIL India limited declared the winner of Golden Peacock award for excellence in corporate governance for the year 2020
- » GAIL India Limited Pata unit bagged 1st Position in 16th National award for excellence in Cost management
- » GAIL has won the Leaders Award in the Mega Large Business, Process Sector category in the 11th edition of Frost & Sullivan - MEASA and TERI - The Energy and Resources Institute's Sustainability 4.0 Awards 2020
- » GAIL Gas has been awarded as 'City Gas Distribution- Established Company of the Year' by FIPI New Delhi, January 28, 2021
- » GAIL, the country's Natural Gas leader, has featured in the Forbes list of World's Best Employers 2020
- » GAIL (India) Ltd. conferred with Investor Relation Award under Environmental, Social and Governance (ESG) Disclosures Category
- » In 2020, Vaghodia became the first GAIL location to get Silver rating by CII GreenCo, followed by Vijaipur which also received a silver rating by CII GreenCo in 2021. GAIL embarked upon the journey of adoption of GreenCo Rating in FY 2019-20

CSR

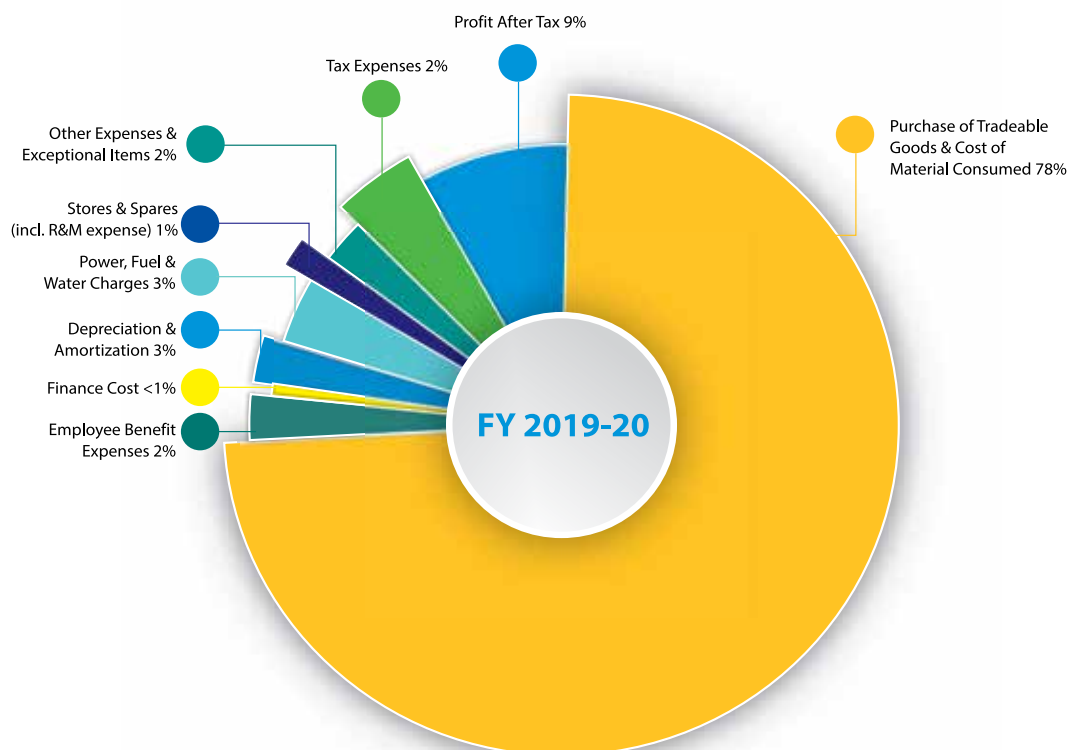
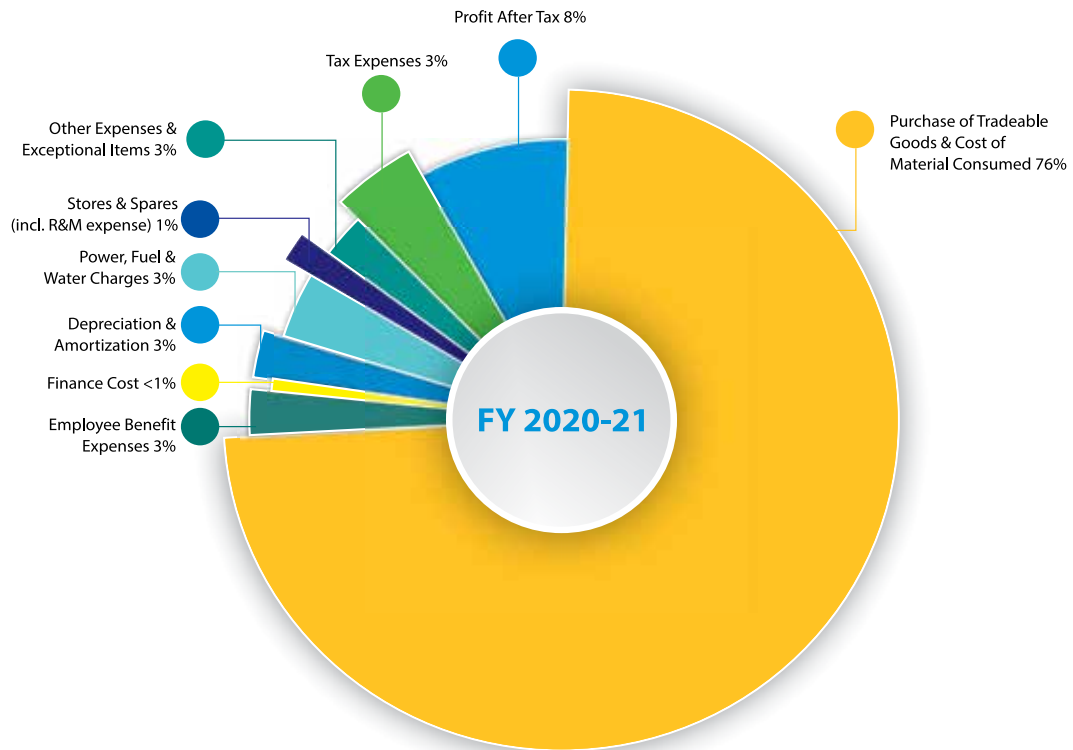
'Project Shikhar' - GAIL is supporting the functioning of a public library at RK Puram Police Station to promote education and build a positive interface between the policy and the public. This initiative has won the following awards:

- » Shiksha Bharti Award 2020
- » World Best Brand and Business Award 2020
- » Innovative Educator Award' at Asia Pacific Excellence Award 2021

HSE

- » "International Safety Award 2020" with Merit from British Safety Council, UK for GPU Vaghodia and GPU Gandhar
- » "Safety Innovation Award 2020" by The Institution of Engineers (India) for GPU Vijaipur for implementing Innovative Safety Management Systems.

Cost & Profit as a % of Total Revenue





37 Years of Energizing Possibilities

1987

- India's first natural gas pipeline- Hazira-Vijaipur-Jagdishpur (HVJ) commissioned

1984

- Birth of GAIL: Natural Gas Transmission and Marketing Company

2001

- JLPL, the world's longest LPG transmission pipeline commissioned

1999

- First petrochemical plant at Pata

2011

- First public sector undertaking (PSU) to acquire shale gas acreage in the US
- Subsidiary in the US

2012

- 2200 km Dahej- Vijaipur (DVPL) pipeline dedicated to the nation

2013

- Achieved Maharatna status
- Commissioned Dabhol Terminal and Dabhol-Bengaluru natural gas Pipeline
- Capacity booking in cove point LNG terminal in the US

2021

- Target of 1 gigawatt of renewable energy
- GAIL has received GreenCo silver rating for two major sites Vaghodia and Vijaipur
- World record of adding 201 CNG station in a day
- Kochi- Mangaluru Natural Gas Pipeline dedicated to the Nation
- Dobhi- Durgapur Natural Gas Pipeline Dedicated to the Nation

2018

- Varanasi CGD project inaugurated
- India's first LNG cargo from USA received in GAIL's first charter hired vessel
- First LNG cargo under a long-term contract with Russia received

2020

- Jamshedpur CGD project inaugurated
- FTSE4Good Index inclusion continues
- All the Six CGDs awarded to GAIL under JHBDPL Pipeline started its operations

2019

- Launch of commencement of work of Talcher Fertilizers Limited (TFL)
- Ranchi CGD project and Patna CGD Project inaugurated

2017

- Bengaluru CGD project inaugurated
- CNG stations inaugurated in Cuttack
- PNG supply launched in Bhubaneswar

2016

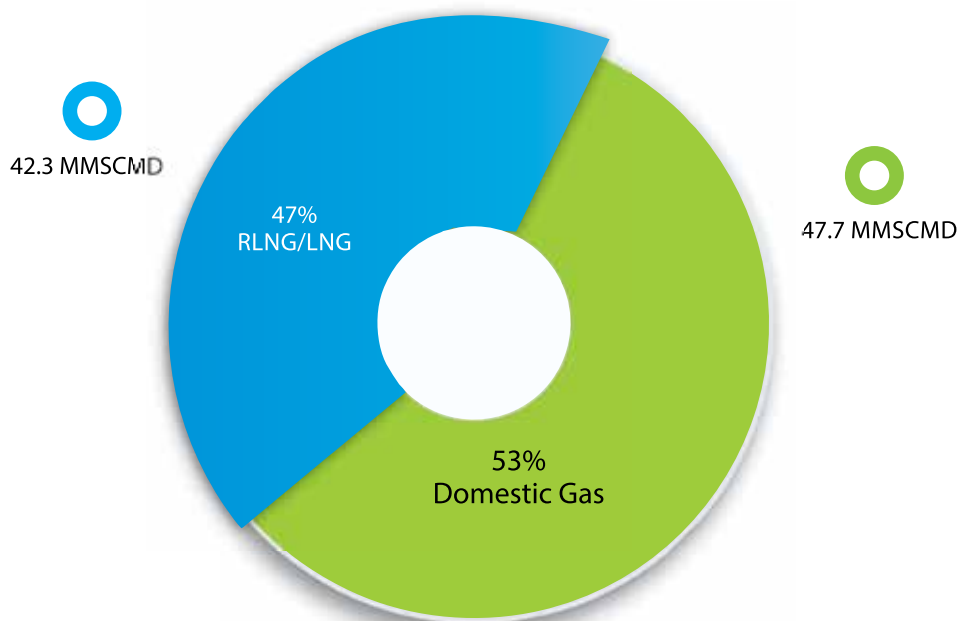
- Brahmaputra Cracker and Polymer Ltd. Petrochemical Complex dedicated to the nation

2015

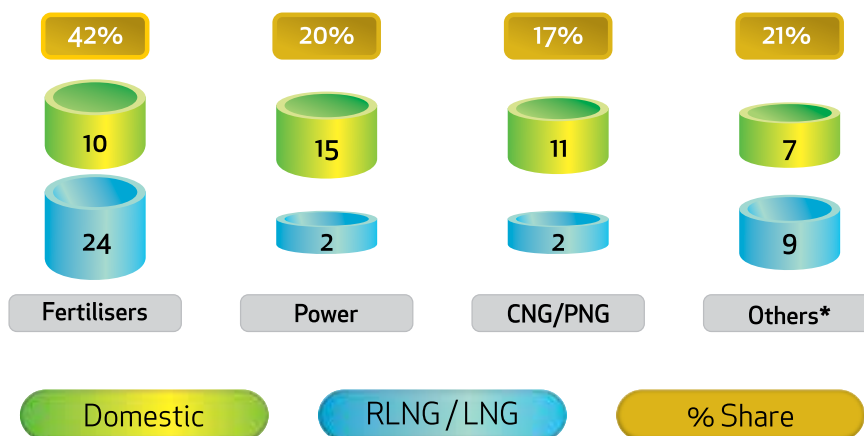
- Construction work of Jagdishpur- Haldia and Bokaro-Dhamra Pipeline Project launched
- Doubled petrochemical production capacity at Pata

Gas Sourcing & Distribution

Gas Sourcing (MMSCMD, % share)



Gas Distribution



- Imported Gas primarily consists of Long Term RLNG, Mid Term RLNG, LNG and Spot
 - Major sources for domestic gas are ONGC (APM & Non APM), Ravva, Ravva satellite etc.
 - Highest demand of Natural Gas from Power & Fertilizer companies
 - The above Number excludes Gas volumes sold in the international market-~10.5 MMSCMD for FY 19 & ~11.7 MMSCMD for FY 20
- *Others include Steel, Refineries, Sponge iron, Petrochemicals, GAIL Internal Consumption etc.



Dragonflies
Location: **Gandhar**



In FY 20-21, GAIL received zero corruption related cases



We map and manage both financial and non-financial risks through Enterprise Risk Management (ERM).



GAIL Risk management involves a 3-step assessment consisting of identification, analysis and evaluation



Governance and Risk Management

As a responsible Public Sector Undertaking, GAIL leads the way for ethical corporate behavior by placing paramount importance upon establishing and implementing an effective and strong corporate governance framework. The corporate governance framework at GAIL is designed to identify, analyze and address the company's risks and deliver constructive evaluations in order to align the Management's responsibilities with the Board's oversight of the organization. We continuously review and update the Company's policies and practices in order to manage systemic risks, which are crucial for the smooth functioning of our business.

Governance Structure

The Board of Directors remains at the top of the governance structure, inclusive of the shareholders and multiple committees of the board. GAIL has a unitary board structure, which is governed by a formal Board Charter that sets out the composition of the Board, its responsibilities and the process of selection of its members. The Directors on the Board are nominated/ appointed by the Government of India. As on 31 March 2021, there are a total of eight members in the board, that comprise of five Functional Directors including the Chairman and the Managing Director, and three Non-Executive Directors (comprising two Government Nominee Directors, and one Independent Director). There are two women director's on our board. The average tenure of the Board member is 3-4 year. All the board members are over 50 year old. GAIL's policy on diversity of board of directors provides that the board of directors shall have an optimum combination of executive and non executive directors with at least one woman director. The director's are nominated/appointed by Govt. of India. Our leaders bring multidimensional

experience in the areas of marketing, business development, finance and governance and they place enormous importance on ESG. We also regularly conduct capacity building sessions on the evolving ESG landscape which has been discussed in Our People chapter in detail. Further details pertaining to the composition and profiles of the Board members are available on our website and annual report.

The Board of Directors oversees the organizational management and ensures that all the stakeholder needs are met promptly. By responsibly addressing the concerns of the stakeholders in our value chain, the Board of Directors and the senior management team strive to recognize the long-term interests of multiple parties. The thoughtfully crafted induction and orientation programs assist the newly appointed Directors to understand the organizational structure, while enabling them to contribute towards the holistic organizational growth. The welcome kit provided to them during the induction period contains the detail of its roles and responsibilities, including the legal and regulatory policies it may be obligated to follow. To enhance and upgrade the skill and expertise of the Board members, we provide them with adequate training, based on our training policy. As a part of this policy, the Board members including the Directors are often nominated to participate in conferences on industry matters organized by parties such as the Department of Public Enterprise (DPE), Standing Conference of Public Enterprises (SCOPE), and other Global associations such as the World Economic Forum (WEF), International Energy Agency (IEA), International Gas Union (IGU), and Bloomberg.

Committees of the Board

The governance structure of GAIL is comprised of 12 sub-committees of GAIL's Board as on 31.03.2021. Since each committee carries out specific functions, the well-defined terms-of-reference enable them to function efficiently, including the swift resolution of concerns. The combination of independent and non-independent directors in each committee not only brings in diversity but also becomes instrumental for the board to be fair and just in their deliberations. While the board works on its pre-defined strategic focus areas, it is committed to set its targets to improve the operations throughout the year. The Board of Directors assesses and reviews the functioning of the committees, in addition to periodically reviewing the targets and goals of the team.

The elaborate information about GAIL corporate governance practices can be found in our Annual Report for FY20-21. The board has constituted the following committees:

Committees of the board	Number of meetings held in 2020-21
Audit Committee	11
Business Development and Marketing Committee	08
Corporate Social Responsibility Committee	02
Empowered C&P Committee	16
Empowered Committee (Natural Gas, LNG & Polymer)	05
Finance Committee	05
HR Committee	04
Nomination and Remuneration Committee	02
Project Appraisal Committee	05
Stakeholders Relationship Committee	01

Committees of the board	Number of meetings held in 2020-21
Sustainable Development Committee	02
Stakeholders Grievance Redressal Committee	Nil

Performance Evaluation, Remuneration and Incentives

GAIL is a Public Sector Enterprise, the Directors of the Company are appointed/nominated by the Government of India, therefore, the performance evaluation is also to be done by Government of India being appointing authority. The role of Nomination and Remuneration Committee is as per SEBI (LODR) Regulations, 2015; The Companies Act, 2013 and DPE guidelines on Corporate Governance for Central Public Sector Enterprises, 2010 as amended from time to time. The Nomination and Remuneration Committee is responsible for examination of issues relating to pay and perks other than PRP prior to consideration by the Board. The performance evaluation of members of the Board is done on both financial and non-financial parameters as prescribed in the MoU between GAIL and Ministry of Petroleum and Natural Gas (MoPNG). The performance evaluation of the top management including CMD, Directors, EDs and GMs consists of the parametric scoring of the individual, based on business, financial, CSR, human resource, and R&D performance of the GAIL during the reporting period. This includes financial as well as non-financial targets to holistically improve the ESG performance of the company. Further details of the performance target and its equivalent compensation can be found in the annual report and the MOU signed with the government.

The average salaries of female employees at the management and non-management level are INR 124,501 and INR 58,948, while the same for the male counterparts at the executive

and management levels are INR 276,999 and INR 149,730 respectively. The vesting period for CMD compensation is 5 years or date of superannuation, whichever is earlier. The ratios (average female salary to average male salary) of the management and non-management levels are 0.82 and 0.92. During this reporting year, GAIL experienced no delay in the payment of wages to the employees. Payments are processed promptly based on the determined pay cycle.

The increase (from FY19-20 to FY20-21) in annual total compensation for the organization's highest-paid individual is 44.78%. The median increase (from FY19-20 to FY20-21) in annual total compensation for all the employees (excluding the highest-paid individual) is 6.38%. The ratio of the annual total compensation for the organization's highest-paid individual to the median annual total compensation for all the employees (excluding the highest-paid individual) is 2.60.

Performance of MoU for financial year 2019-20 is under evaluation by DPE. GAIL is expected to achieve a 'Very Good' MoU rating for the financial year 2019-20. GAIL has achieved Excellent rating in most of the parameters, in spite of the restrictions posed in the last month of the financial year due to COVID-19.

GAIL has made earnest efforts in fulfilling MoU obligations despite adverse effects faced due to the COVID-19 situation. Self-evaluation of MoU FY 2020-21 will be carried out and submitted to Department of Public Enterprises (DPE) in due time. The compensation related to the performance is assessed based on the performance evaluation score and the composite score. Highlights related to the remuneration are provided.

Highlights of Remuneration and Incentives at GAIL

1. In FY 20-21, the total compensation of the CEO/CMD was **INR 1,50,42,650**
2. In FY 20-21, the median compensation of all employees (except CEO/CMD) was **INR 1,14,599.4**

3. In FY 20-21, the mean compensation of all employees (except CEO/CMD) was **INR 1,32,051.6**
4. The ratio between the CEO's annual compensation and the median of all employees' compensation is **2.60**
5. The ratio between the CEO's annual compensation and the mean of all employees' compensation is **2.30**

Avoidance of Conflict of Interest

We strive to create a culture of ethics and trust by setting the right tone at the top. We are promoting transparency and accountability amongst all our stakeholders to ensure that there is no possible way of conflict of interest in workforce operations. Besides, we are creating a trustworthy environment, in which the employees are not afraid to bring up and disclose their conflicts of interest. Further to properly manage such issues and concerns, a board-level deliberation is carried out. In this regard, GAIL policies on conflict of interest are provided next:

In case, a director is directly or indirectly interested in an agenda/matter, the one abstains oneself from participation in the discussion of such an agenda. Each director gives the disclosure of his interest in any company or body's corporate firm, or other association of individuals by giving a notice in writing; and the same is put up to the board.

The Related Party Transaction Policy at GAIL enables us to deal with all the issues and concerns raised on related party transactions. This policy follows requirements set by the SEBI (Listing Obligations and Disclosure Requirements) (Fourth Amendment) Regulations, 2018 and The Companies Act, 2013. Additionally, it comprises materiality policies and guidelines for managing related party transactions. Our annual Sustainability Report is the medium, through which we disclose our issues pertaining to the conflict of interest.

The details of attendance, number of other Directorships and Chairmanship/ Membership of

Committees of each Director and stock ownership details are available in our Annual Report. Please refer to Annual report 2020-21 pg. 93-101.

Internal Control System and their Adequacy

We have developed promising guidelines, frameworks, and policies as a part of our internal control system in order to strengthen operational and financial integrity. Improved controls over the financial reporting process help in developing more accurate and reliable financial statements and make audits more comprehensive. GAIL's Internal Financial Control System (IFC) is useful in developing an updated formal, centralized, and managed internal financial control documentation for the company. A Risk Control Matrix (RCM) was formed in consultation with external consultants after the IFC compliance study.



→ Received 'NIL' comments from Comptroller and Auditor General (CAG) for 12th year in a row in FY 21

Audit Committee plays a critical role in overseeing internal control. Our internal audit team provides advice and recommendations on the potential gaps and risks, including potential efficiencies and enhancements to business and processes. The professionally qualified audit team members have an academic and professional background in accounting, IT, and engineering. This team assesses the risk management system and reports the same to the audit committee. The

audit committee of the board is responsible for approving the annual audit program and reviews the findings of the audit team and the CAG audit. Promoters' audit of subsidiaries, joint ventures, and E&P blocks are also carried out by the internal audit team

Ethics and Integrity

We are committed to conducting business, using the highest ethical standards; and GAIL's code of conduct is designed to further that commitment. Our business processes and practices are directed to achieving excellence while managing issues related to the environment, health and safety, human rights, etc.

GAIL's Code of Conduct and related circulars set forth our values, principles, and rules, on which we base our operations. We develop and enable sustainable growth and build relationships of trust with our clients, employees, and business partners. Employees including senior management and board members, contractors, and all company representatives are required to follow this code of conduct policy mandatorily.

We, as responsible corporate citizen, including our subsidiaries, comply with anti-corruption, antiboycott, export control, and trade sanctions laws across our sites. In FY20-21, 151 employees (3.23% of total employees) received training on anti-corruption policies and other organizational procedures.

Our strong policy frameworks enable us to grow our business sustainably and safeguard us against corruption and other unethical activities. Our organizational policies are provided below.

- » Code of Conduct, Discipline and Appeal (CDA) Rules/Standing Orders
- » Fraud Prevention Policy
- » Whistle Blower Policy
- » Code of Fair Disclosure and Conduct
- » Practices and Procedures for disclosure of unpublished price sensitive information.
- » Code of Conduct to Regulate, Monitor and Report Trading by Insiders
- » Code of Conduct for Board Members and Senior Management Personnel

We have also incorporated a policy for the determination of materiality disclosure for timely disclosure of our material concerns to our stakeholders. This policy is in accordance with Regulation 30 of SEBI LODR, 2015.

We conduct awareness workshops periodically to ensure that our employees and suppliers are committed to fighting corruption and make us 100% corruption free. Additionally, we undergo periodic risk assessments to identify the risks related to corruption in our operational units.

During FY 20-21, GAIL received zero corruption related cases and no significant risk of corruption was identified and reported through this risk assessment process.

The Right to Information, Whistle Blower Policy, Fraud Prevention Policy and the Integrity Pact encourage the employees to report, in good faith, any suspicious, illegal, unethical, or inappropriate activities undergoing in the organization. It helps strengthen the organization against corruption and make the vigilance system more robust.

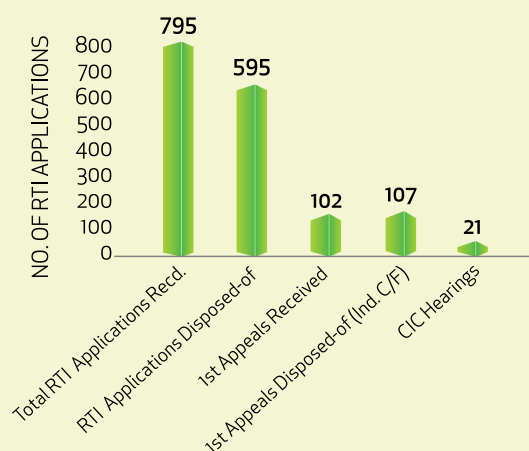
Governance Mechanisms

Right to Information:

In order to promote transparency and accountability, an appropriate mechanism has been set up across the company in line with the provisions of the Right to Information Act, 2005. We have nominated CPIO/ACPIOs/ Appellate Authorities at our units/offices across the company to provide information to the citizens under the provisions of the RTI Act. GAIL has hosted RTI Guidelines and related information on its website and these may be accessed at http://www.GAILonline.com/final_site/RTI.html. Besides, MIS Report on RTI Applications, Record Retention Schedule and latest RTI Audit Report has also been hosted under the same link.

For the Financial Year 2020-2021, GAIL's Corporate RTI Cell has 100% disposal rate with respect to RTI Applications received. Further, GAIL has received 'NIL' penalty/adverse remark from the Central Information Commission for the year 2020-2021 regarding the second Appeals filed by Appellants.

RTI Application Status 2020 - 2021





Whistle Blower Policy:

We encourage our employees, with concerns about the suspected misconduct, to come forward and express without the fear of retaliation. This policy aims to provide a confidential platform for the employees to raise concerns without being victimized or being harassed in any manner.



Fraud Prevention Policy:

This policy is put in place for detection, prevention, and reporting of frauds or suspected frauds/fraudulent activities at GAIL. It applies to frauds or suspected frauds in connection with the business transaction(s) with GAIL committed by employee(s), employee(s) working as an advisor(s), the person engaged on ad-hoc/temporary/contract basis, vendor(s), supplier(s), the contractor(s), the customer (s), lender(s), consultant(s), the service provider(s), any outside agency(ies) or their representative(s), employees of such agencies, and/or any other parties.



Related Party Transaction:

In line with the requirement of Regulation 23 of SEBI LODR, 2015 and The Companies Act, 2013, the audit committee of GAIL quarterly reviews the details of related party transactions. Approval of the audit committee/or board/or shareholders, as required, is taken for the related party transactions. Initiatives such as e-tendering, e-payments, bill watch system, etc. have been put in place to improve transparency in the system.



Anti-corruption:

GAIL strongly upholds the guidelines and circulars of the Central Vigilance Commission (CVC) for dealing with issues related to ethics, bribery and corruption at the organization level. The policy applies to GAIL and its subsidiaries as well as in Joint Ventures having jurisdiction of GAIL Vigilance Department. To sensitize stakeholders of GAIL against corruption, an annual vigilance awareness week is also organized.

Transparency in Business

We hold regular meetings and communication with our stakeholders, shareholders, policy makers and peer companies to take necessary actions to make better approach towards advocacy. This helps us in making better ethics, improving and strengthening anti-corruption practices, in the aspects of our sustainability initiatives. The Board of Directors periodically reviews internal policies related to training, implementation, monitoring actions. Through discussions and forums, we publicly state clear stances, voice our concerns, moreover, keep ourselves updated with the industry best practices to adapt and improve our initiatives.

Tax Strategy

GAIL is a public sector undertaking. GoI holds 51.45% of the paid-up equity share capital. Policy related to tax strategies are governed by the GoI. We are in compliance with statutory requirements including provident fund, employees' state insurance, income-tax, sales-tax, service tax, duty of customs, duty of excise, value added tax, cess, Goods and Service Tax and any other statutory dues with the appropriate authorities. We strictly adhere to amendments to tax policies notified by the GoI.

Anti-competitive Behavior

The collective efforts of all our stakeholders help us to encourage and maintain clarity in our business processes. To make our business stronger, we ensure to deter anticompetitive behavior. We follow this by lining up our systems and practices with the national and international norms at all levels of our businesses. For such kind of wrong practices, GAIL made no payment of fine and/or settlements in the past 5 years. Cases, which were brought to attention through the dispute resolution mechanisms, are yet to be resolved. In addition to that, the status reports pertaining to the anticompetitive behavior, violations of anti-trust, monopoly legislation, and unfair trade practices; where GAIL has been identified as a participant, were also submitted. The status of causes related to anti-competitive behavior, irresponsible advertising, unfair

trade practices, and violations of anti-trust and monopoly legislation; in which GAIL has been identified as a participant, is submitted.

We submit the status of the following cases up to FY 20-21, which were settled/pending with regard to unfair trade practices, anti-competitive behavior, monopolization as identified against GAIL:

1. GSPCL filed a case against GAIL before Petroleum & Natural Gas Regulatory Board (PNGRB) claiming Restrictive Trade Practice (RTP) for not allowing to change connectivity from GAIL-PLL to GSPL-PLL connectivity. PNGRB made rulings against GAIL. GAIL challenged the same before Appellate Tribunal for Electricity (APTEL), which decided in favor of GAIL. GSPCL appealed against that order before Supreme Court, which is pending.
2. GSPC Gas filed a case against GAIL, claiming RTP before PNGRB but the same was held in favor of GAIL. GSPC Gas has filed appeal against the said order before APTEL and the order of PNGRB has been reversed. Now GAIL has pressed appeal before Supreme Court, which is pending.
3. Sravanthi Energy Pvt. Ltd., Beta Infratech Pvt. Ltd. and Gamma Infraprop Pvt. Ltd. have filed complaint before PNGRB alleging RTP against GAIL, which went against GAIL vide order dated 11.04.2016 and imposed a penalty of INR10 lakh, thereby directing GAIL to cease RTP and pay a cost of INR 2 lakh each to each of the party. Further directed to return the BG and SD to the parties, GAIL has filed appeal before APTEL which is pending.
4. GSPCL filed a complaint against GAIL before PNGRB, alleging restrictive practice while booking of pipeline capacity on RE Basis. PNGRB, while disposing of the complaint filed by GSPCL for booking of capacity on RE Basis, held that practice adopted by GAIL while booking common carrier capacity is discriminatory and amounts to restrictive trade practice in as much as it offers bundled services to its customers without requiring



- GAIL Vijaipur Successfully Hosted the 3rd Onshore Security Coordination Committee (OSCC) Meeting of M.P State at Bhopal on 23rd February 2021. GAIL-Vijaipur successfully hosted the 3rd OSCC meeting of Madhya Pradesh state at Bhopal. The meeting was convened by Shri Pramod Kumar, Advisor (Security) and Convenor OSCC Madhya Pradesh Shri Vivek Johri, IPS, DGP, M.P. and Chairman of OSCC M.P. chaired the meeting. Senior officials from M.P Police, Intelligence Bureau, Oil & Gas PSU attended the meeting.



- Details on current operations, security arrangements, future plans, problem areas and support required from police were presented by O&G companies. ADGP (Int), M.P. Police has given a general review of law and order and security situation in M.P. and DD-SIB has given an overview of the latest threat perception in M.P. Shri Vivek Johri, DGP and Chairman of OSCC M.P. state gave assurance that, all possible necessary police assistance will be provided to O&G companies in the state of M.P, as and when required. The meeting than ended with vote of thanks to the chair proposed by Capt G Nagaraj, GM (Security), GAIL-Vijaipur.

them to execute standard GTA on ship or pay basis and puts such restriction on other gas suppliers. PNGRB directed GAIL to cease RTP and has also imposed civil penalty of INR1 lakh on GAIL. GAIL challenged the said order before APTEL. APTEL vide order dated 28.11.2014 dismissed the appeal of GAIL, post which GAIL preferred an appeal before the Supreme Court. The Supreme Court vide order dated 31.01.2016 set aside the order of PNGRB and remanded back to PNGRB for fresh determination, taking the affiliate code of conduct into account. However, the PNGRB once again held RTP against GAIL. GAIL challenged the said order before APTEL wherein vide order dated 28.02.2019, the matter was referred back to PNGRB for redetermination as per PNGRB Act. However, GSPCL filed appeal in the Supreme Court against APTEL order wherein notice has been issued and status quo to be maintained. The matter is pending yet.

5. M/s. Pioneer Gas Power Ltd has filed a complaint alleging RTP against GAIL for charging Ship or Pay charges under the GTA. The said complaint is pending before PNGRB.
6. GIPCL- GIPCL had filed complaint against GAIL before CCI alleging abuse of dominant position in the market. However, CCI declined the complaint. But GIPCL appealed against that order before Competition Appellate Tribunal's (COMPAT), which directed investigation by DGI against GAIL for such abuse. GAIL has filed appeal against the said order before the Supreme Court, wherein the direction for investigation has been stayed and is pending before the Supreme Court.
7. Rath Special Steel, Rath Bars and Rath Dakshin Steel and Ors. have filed complaints before CCI alleging anti trade practices under Competition Act. However, same was rejected vide order dated 08.11.2018. Aggrieved by CCI judgment, Rath Special Steel, Rath Bars and Rath Dakshin Steel and Ors. have appealed before NCLAT. The matter is pending in NCLAT.

Disposal During 2020-21

1. Sabarmati filed a case against GAIL and BPCL before PNGRB claiming RTP, which PNGRB

held RTP on part of BPCL and not on the part of GAIL. BPCL has appealed against the judgment in APTEL and has made GAIL a party. Hon'ble APTEL disposed of the case without any adverse remark against GAIL / BPCL.

2. GAIL filed complaint regarding abuse of dominant position by M/s Eagle Burgmann India Private Limited in Competition Commission of India (CCI). CCI vide Order dated 10.03.2021 ruled that the market structure and construct do not appear to indicate any significant market power possessed by any of the players including the Eagle Burgmann. In the absence of any dominant position enjoyed by the Eagle Burgmann, it is unnecessary to delve into the issue of increase in the prices of mechanical seals. In view of the above, the Commission is of the view that no case is made out against the Eagle Burgmann for contravention of the provisions of Section 4 of the Act, i.e., abuse of dominant position, and the information is hence, ordered to be closed forthwith in terms of the provisions contained in Section 26 (2) of the Act.

Stakeholder Grievance Redressal

GAIL allows its stakeholders to engage with them systemically and to enable them to express their individual views and opinions by establishing various systems and processes. Stakeholder Engagement and Materiality Assessment chapter describes all those systems and modes of engagements in detail. We provide opportunity to stakeholders in our value chain to obtain effective redressal of violation of their rights through enabling them to receive access to relevant and reliable information regularly.

During the reporting period, 351 complaints were received from all the stakeholders, out of which 95.16% complaints were resolved by the management. The remaining cases will be carried forward to the next period for resolution. The complaints were received from various stakeholders including shareholders/investors, customers, employees, contractors, suppliers (related to Integrity Pact Program) and from the public.

Vigilance Initiatives at GAIL

Guidelines and circulars of the Central Vigilance Commission are followed while dealing with issues related to ethics, bribery and corruption at GAIL and its subsidiaries as well as in joint ventures (JVs) having jurisdiction of the GAIL Vigilance Department.

In order to ensure transparency, equity and competitiveness in procurement, GAIL has adopted the provision of Integrity Pact in its tenders of value more than INR 1 crore for works and undertaken procurement of goods and services as recommended by the Central Vigilance Commission. Dr Meeran Chadha Borwankar, IPS (Retd), Mr. Ajit Mohan Sharan, IAS (Retd.) and Mr. Sanjeev Bihari, IRS (Retd.) have been appointed as Independent External Monitors for looking into complaints as per the provision of an integrity pact.

GAIL Vigilance Department carries out regular surprise checks, periodic inspections, and examination of CAG /internal audit paras for the detection of vigilance angles, if any. Various system improvements have been undertaken to ensure greater transparency and automation of processes for reducing manual intervention. Review of policies and procedures has also been carried out, which can minimize corruption and ensure all-round good governance. To spread vigilance awareness and address grievances; vendor meets, customer interactive meets, vigilance awareness workshops/sensitization programs, and engineer-in-charge coaching are held periodically for all the stakeholders.

During the period, based on the investigations of the cases, the following system improvements have been implemented:

- » To ensure greater transparency, additional information viz Health and Safety Policy, Information Security Policy, Quality Policy and Risk Management Policy has been published on GAIL website. In addition, the list of parties/vendors banned/ put on holiday by GAIL is also being displayed on GAIL's website.

- » In order to have uniformity in the tender conditions for the submission of EMD & CPBG in the form of DD/ Bank Guarantee by the bidder/ Vendor, provisions have been made, which describes that EMD and CPBG will not be accepted in case the same has to reference of remitter/financer other than bidder on the aforementioned financial instrument of EMD/ CPBG.
- » To avoid the time gap between the date of complaint uploaded by the complainant in the Online Complaint system on GAIL's website and the date when Complaint system is accessed by Vigilance Executive, provision for generating auto e-mail alerts have been developed. In FY 20-21, we received 101 complaints under vigilance, 114 complaints (including previous year complaints) were successfully resolved.

Grievance Redressal Mechanism

Our stakeholder responses and concerns are two of our top priorities. The grievance redressal mechanism allows reception and redressal of complaints or grievances by our stakeholders, enabling prompt actions on any issue raised by them, thus allowing for better services. We have developed an online grievance redressal forum named 'Samadhan' that is accessible to all of our stakeholders to raise their concerns. Complaints on vigilance, a blatant violation of systems and corruption, forgery, cheating, misappropriation, favors, willful negligence, reckless decision making, procedures, and irregularities in the exercise of delegated power can be raised and resolved through our online portal: <http://GAILonline.com/onlineComplaints.html>. At every location of our operation there is also a provision to raise complaints or concerns directly with the factory head through the OIC Sampark email.

In order to provide citizens and the public at large with a grievance redressal mechanism, all the written complaints received from all the workplaces and centers are uploaded to the Centralized Public Grievance Redressal

and Monitoring System (CPGRAMS), which is accessible to all the citizens, who have lodged this complaint. CPGRAMS is a Government of India Portal, aimed at providing the citizens with a platform for redress of their grievances, where complaints are directly received by the MoPNG.

During FY 20-21, a total of 201 public grievances through centralized public grievance redress and monitoring system (CPGRAMS) were received during the reporting period. All those received complaints on CPGRAM portal are resolved under the grievance redressal system.

Grievances/complaints received through CPGRAMS - FY20-21

Environment		Labor practice		Human rights		Society		
Source of grievances/complaints								
Internal stakeholder	External stakeholder	Internal stakeholder	External stakeholder	Internal stakeholder	External stakeholder	Internal stakeholder	External stakeholder	Total
0	06	02	41	Nil	Nil	Nil	152	201

Risk Management

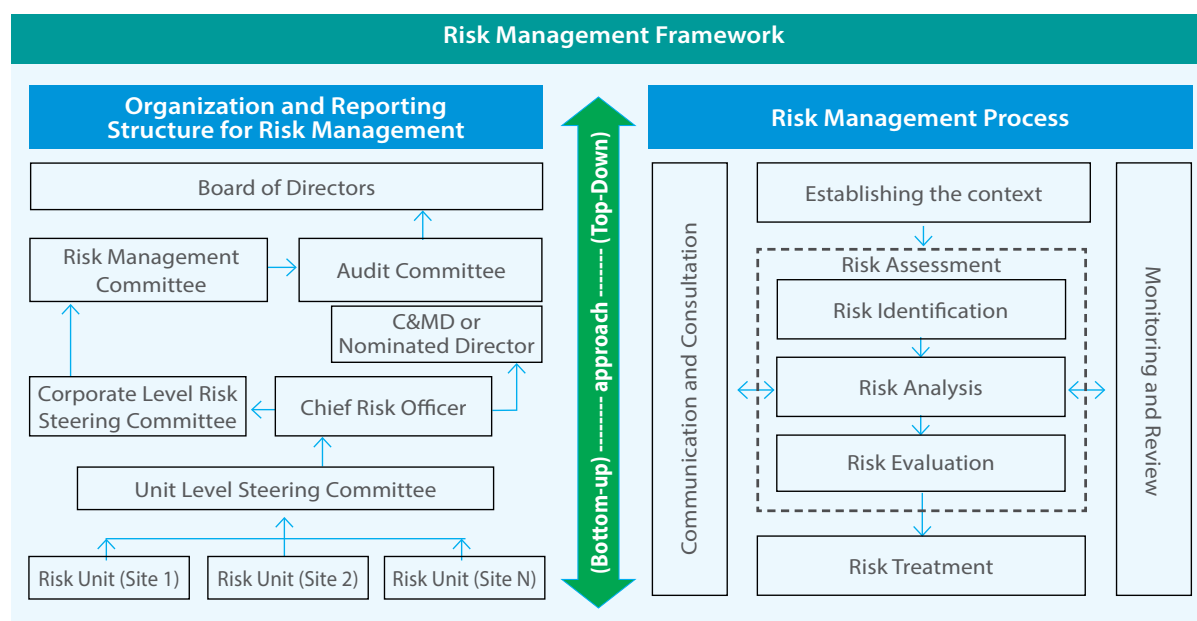
Our approach towards a sustainable environment to work and grow is focused on achieving a zero injury/ fatality/accident environment through preventive precautionary measures. The precautionary approach enables our decision-makers to adopt measures when an environmental or human health hazard is uncertain and the stakes are high.

Risk Management is an ongoing process of identifying, analyzing, and managing risks within all the operational units of GAIL. While

we adhere to all the standards and keep pace with our industry peers, we map and manage both financial and non-financial risks through Enterprise Risk Management (ERM).

Risk assessment of several factors (climate change, fuel prices, energy supply security, etc.) that could potentially influence our business growth is studied and analyzed through Enterprise Risk Management. As a part of the process, the risk management plan includes business continuity planning, risk communication, resource allocation, etc.

Following framework describes risk management structure and risk management process at GAIL:



Overarching Management Approach

Our comprehensive policy framework such as the risk management policy is deployed on both the corporate and business levels by our committed and independent Risk Management department to improve our approach to managing risks to meet the demands of an evolving business environment. The risk management policy enables us to take proactive measures to review, report, and mitigate risks at our organization while contributing to the sustainable business growth.

The ERM Framework provides an integrated framework to periodically review the organizational risks by the boards by providing an objective view of the overall control system that leads to the overall risk management at GAIL and its subsidiaries. Additionally, it provides a deeper understanding of the possibilities for the improvement in businesses practices related to the operations.

The ERM has been rolled out across the organization in all assets including zonal marketing offices. The highest governance body in reviewing the effectiveness of GAIL's risk management processes is the Board of Directors. The board, through the Audit Committee, Risk Management Committee, Corporate Level Risk Steering Committee oversees the establishment and implementation of an adequate system of risk management across the organization. The Chief Risk Officer (CRO), site-level risk steering committee chairman and Corporate Level Risk Steering Committee review various types of risks whether existing and or anticipated in the short, medium and long-term in future. Risk Management Department apprises the Corporate Level Risk Steering Committee (CLRSC) of executive directors chaired by the Director (BD) quarterly, RMC of functional directors chaired by the Director (Finance) biannually and Audit Committee biannually and the Board annually.



→ We map and manage both financial and non-financial risks through Enterprise Risk Management (ERM)

Unit level risks including Social and Environmental risks are mapped and being monitored quarterly through Unit level Risk Steering Committee headed by unit OICs/ Functional Heads. Mitigation measures are also devised and monitored by respective units. GAIL has identified top Corporate Key Risks which includes Market, Logistic, Strategic, JV Subsidiary and Financial Risks.

Risk Management and Strategic Initiatives

GAIL's effective risk management initiatives enable us to achieve our organization's objectives and safeguard operations while complying with legal, regulatory, and societal expectations. By managing risks, we are enhancing our capabilities to better respond and adapt to the changing environment.

Risk management involves a 3-step assessment consisting of identification, analysis and evaluation of the possible risks that can impact the business operations. This process helps oversee the strategic direction and management of our business operations, including the effective management of risks. A risk register review report is submitted by the unit risk owners quarterly by the 10th day, following the quarter-end, and a risk database review report is submitted



annually by 15th June, following the financial year-end through risk management online Risk Management System (RMS).

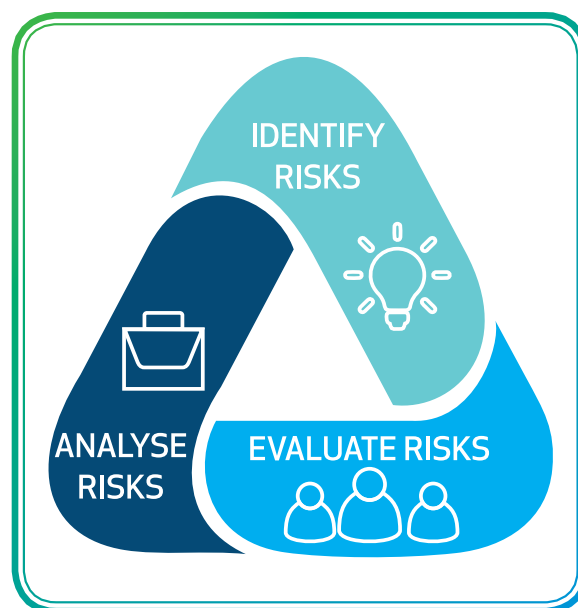
The Company assesses all types of risk including business and financial risks as well as the non-financial risks such as climate change, fuel prices, energy supply security that could potentially influence and impact the business in future. The identified risks are assigned "Risk Rating" based on their impact on the organisation and the likelihood of the occurrence. "Risk Velocity" is taken into consideration based on basis the time between the occurrence of an event and its impact on the Company.

As per approved Risk Management policy, Corporate Level Risk Steering Committee (CLRSC) is required to review the status of all corporate level residual key risks including economic, environmental and social, if any, on a quarterly basis. Prior to placing before Audit Committee, the status is deliberated in the Risk Management Committee (RMC). The status is put up to the Board annually for approval. GAIL is very sensitive to the environmental impact of our operations. Efforts are always in place to minimize / neutralize

the impact of greenhouse gases and zero waste disposal. Various units are in process of identifying the risk due to climate change. There are specific groups within GAIL HSE coordinating all risks pertaining to environmental and safety issues. The CSR group is responsible for coordinating all risks pertaining to Social and CSR related issues. These groups must ensure all the current and expected exposures of Environmental, Economic and Social risks are identified, qualitatively and quantitatively evaluated, analyzed and appropriately managed by placing effective mitigation plans. Both groups update the Management of GAIL periodically.

There are specific groups in GAIL HSE and CSR to coordinate all the risks associate matters. These groups have to ensure that all the current and expected risk exposures of environmental, economic and social risks are identified, qualitatively and quantitatively evaluated, analyzed and appropriately managed by placing effective mitigation plans.

The detailed risk are can be referred from Management, Discussion and Analysis section of GAIL Annual Report FY 20-21 through GAIL Website.



→ GAIL Risk management involves a 3-step assessment consisting of identification, analysis and evaluation

Key Risks and Mitigation Measures

Some risks are easier to manage while others often require an adequate amount of time. Hence, it is difficult to bind risks in terms of the financial year. GAIL Corporate Level Risk Steering Committee has identified risks and mitigation actions to improve the operational performance. We are taking appropriate action to resolve/deliberate the identified risks. For detailed risks, stakeholders may refer to MD&A section of AR.

S. No.	Risk Category	Risk Description	Major KPI of the Risks	Mitigation Plan
1	Markets Risk	Market Risk of LNG linked with HH, in case of adverse movement of crude oil price, continuously suppressed spot LNG prices and expected increase in domestic gas volume.	Impact on margins due to change in demand /supply scenario. Fluctuation in international prices of crude oil resulting fluctuation in spot gas prices lower side trend.	Volume risk has largely been mitigated up through various measures such as Destination Swap of LNG volumes, Sale in International Markets, Time Swap and Hedging. Additional efforts for mitigating the risk are also under progress by way of ramping up of marketing of LNG volumes in domestic market and / or sell LNG in international markets from time to time based on market conditions. HH linked cargoes are being allocated to existing sales in the Indian market on a case-to-case basis and hedging transactions are also being entered into, to ensure profitability on such transactions.
2	Markets Risk	Risk of Underutilization of pipelines due to sluggish growth in gas energy consumption.	Pricing comparison of natural gas to alternate/ conventional fuels.	Regular initiatives to increase customer base, promoting use of gas in new markets including close interaction with Gol for favourable policies for development of gas market. More customer friendly flexible GTA/GSA for small customers Developed framework agreement for deferred delivery services on gas transportation. Approved guidelines on "Amicable settlement of Disputes with Consumers/shippers under Gas Transportation Agreement" applicable for small Consumers/shippers up to 0.1 MMSCMD.

S. No.	Risk Category	Risk Description	Major KPI of the Risks	Mitigation Plan
				<p>Facilitate prospective customers by online NG capacity booking through website Discussion with Shippers for booking of capacity.</p> <p>Pursue with PNGRB / MoPNG for synchronization and prioritization of CGD bidding along with existing and upcoming pipelines.</p>
3	Markets Risk	Risk of reduction in margin of Petrochemical due to lower industry demand, lower sale price & high input cost.	Impact on margins due to change in demand / supply scenario and input cost.	<p>Optimization of feedstock and Conversion Cost (C2/C3 & Polymer).</p> <p>Close coordination between operation and marketing for optimising margins, including new grades development and marketability.</p> <p>Longer Production runs are planned for reduction in cost of production.</p> <p>Efforts for expanding newer domestic and International markets.</p>
4	Strategy Risk	GAIL's Restructuring Risk.	<p>Shift in Government priorities and Policy changes.</p> <p>Asset monetization.</p> <p>Creation of TSO</p>	<p>Efforts are being made for monetization of assets and structuring the same in a manner to ensure maximum value accretion, while minimising operational impact, within provisions of SEBI Regulations on INVIT and Gol guidelines.</p> <p>GAIL supports creation of an independent TSO to manage and provide access to common carrier capacities of various pipeline operators.</p>
5	Cyber security Risk	Inadequate controls to protect the systems against malicious attacks may result in loss of data and disruption of operations.	<p>Intrusion attempts</p> <p>Reporting by stakeholders on Phishing attempts.</p>	<p>The IT systems operate on latest version of software. Software patches and threat definitions are being updated regularly to keep the systems less prone to cyber-attack.</p> <p>Several layers of cyber security systems are in place and continuously being monitored through Security Operation Centre (SOC) to protect the systems and data from external/ internal threats.</p>

S. No.	Risk Category	Risk Description	Major KPI of the Risks	Mitigation Plan
				Regular audit and updating of the operating systems and software used in operations and plants, for compatibility with OEM systems.
6	Operational Risk	Major LPG Leakage in RT / SV Stations / LPG Pipeline and in Natural Gas Pipeline.	Third party activities near the pipeline without permission.	<p>Regular monitoring of health & Integrity of pipeline as per laid down Integrity Management System.</p> <p>Monitoring pipeline leakages by Online Leak Detection System (LDS)</p> <p>Pipeline Intrusion Detection System (PIDS) has been implemented.</p> <p>Emergency Response and Disaster Management Plan (ERDMP) and Evacuation Standard Operating Procedure is in place.</p> <p>Hot / Mobile flare system is in place.</p>

Advocacy through Coalitions and Associations

We continuously engage in public policy debates and legislative developments directly through trade and industry associations. In FY 20-21, GAIL was a part of 31 National and International institutions, the list of which is provided below:

1. Indian Wind Power Association (IWPA)
2. Chemical & Petrochemicals Manufacturer's Association (CPMA)
3. International Group of Liquefied Natural Gas Importers (GIIGNL)
4. Indian Centre for Plastics in the Environment (ICPE)
5. Natural Gas Society (NGS)
6. Biogas Indiantech Association
7. International Swaps and Derivatives Association (ISDA)
8. Confederation of Indian Industry (CII)
9. All India Organization of Employers (AIOE)
10. National Institute of Personnel Management (NIPM)
11. World Environment Foundation
12. India Energy Forum
13. Indian Society for Training & Development
14. Asian Professional Security Association (APSA)
15. British Safety Council
16. National Fire Protection Association (NFPA)
17. Transparency International India
18. Pipeline Operators Forum (POF)
19. Project Management Associates
20. Standing Conference of Public Enterprises (SCOPE)
21. Global Reporting Initiative India Private Limited
22. Federation of Indian Chambers of Commerce and Industry (FICCI)
23. TERI CBS & CSO Forum
24. Federation of Indian Petroleum Industry (FIPI)
25. India Myanmar Chamber of Commerce (IMCC)
26. Centre for Battery Engineering and Electric Vehicles (CBEEV)
27. Quality Circle Forum of India
28. United Nation Global Compact (UNGC)
29. International Market Assessment CFO Forum
30. Society of Petroleum Accountants
31. Institute of Directors

GAIL is part of various prestigious industry bodies and associations, which provide a platform to discuss industry issues and convey the industry voices to the government in a collective way to make better inclusive policies and bring reforms. This forms a significant basis for advancement of public good. To create a positive and nurturing environment for businesses and stakeholders, during this reporting year, GAIL has contributed INR 1.9 crore to support various trade association and think tank groups. GAIL also regularly interacts with PNGRB, the regulatory body to update them on current status and industry viewpoint. In FY 2020-21, GAIL was part of the following associations

GAIL is one of the three full members of **International Group of Liquefied Natural Gas Importers (GIIGNL)** in India. GIIGNL offers GAIL a forum for exchange of information and experience amongst industry counterparts to enhance safety, reliability and efficiency of LNG imports activities and the operation of LNG imports terminals.

GAIL is member of the **Federation of Indian Petroleum Industry (FIPI)** and part of the Governing Council. FIPI has many specific executive committees of GAIL's interest, having member representations from GAIL. FIPI functions as oil industry interface with the Government, regulatory authorities, public and representative bodies of traders in India to work on issues such as optimization of resources, promoting safety, tariff, investments, healthy environment and energy conservation among other issues related to industry.

GAIL is an active member of **Standing Conference of Public Enterprises (SCOPE)**, which is the apex body, representing the entire spectrum of public sector enterprises (PSEs) in India. SCOPE has representations in various high-level Committees/Boards and helps its member PSUs to reach their voice to various platforms.

CMD, GAIL is the member of **Federation of Indian Chambers of Commerce & Industry**

(FICCI) Executive Committee and Co-Chair of FICCI Hydrocarbon Committee. Hydrocarbon committee endeavors to deliberate on issues related to energy security of the country and supplement various efforts of the Government of India and other bodies engaged in this area through its intellectual input. CMD, GAIL is also a member of the **Oil Industry Development Board (OIDB)**.

GRI (Global Reporting Initiative) is an independent, international organization that helps businesses and other organizations take responsibility for their impacts, by providing them with the global common language to communicate those impacts. GAIL is a founding member of **GRI South Asia Consortium** since 2013. As a member, GAIL has strongly contributed to GRI's mission and further development of the GRI Standards. GRI consolidate best practice into the global common language for sustainability reporting, enabling companies, investors, policy makers and other stakeholders to manage and evaluate corporate activities in support of sustainable development.

GAIL is a member of **CPMA (Chemicals & Petrochemicals Manufacturers' Association)**, which is the apex forum, representing the Indian Petrochemical Industry. Established in 1993, the Association offers its members a podium to collectively present their ideas, voice concerns, and offer suggestions on relevant issues. It provides a linkage between the industry, the Government, and the society. It interacts with the policy authorities and industry associations to develop and maintain harmonious and conducive business conditions.

GAIL is a member of **TERI- Council for Business Sustainability (TERI-CBS)**, which is an industry led consortium of sustainability practitioners. GAIL, along with TERI, has developed a document, which outlines the Indian corporate vision on various aspects of tackling climate change and aligning the vision with Government schemes in this direction.



Location: **Pata (Uttar Pradesh)**



40% Landholding covered by green belt and water bodies



130 MW *Renewable energy* portfolio



GAIL has embarked upon the journey of adoption of the GreenCo Rating



Sustainability at GAIL

GAIL is committed towards leading the gas industry with sustainability anchored at the core of its strategy and operations. Sustainability for us is managing the available resources to optimize operations for greater safety, reliability, efficiency, environmental and social awareness. Therefore, we strongly emphasize on embedding sustainability into our business operations.

Our sustainability roadmap; created based on our stakeholder requirements, national priorities and the growing natural gas consumption, provides us a guidance in ensuring that we have a positive impact on the environment. We are intending to develop proactive and transparent sustainability strategies by identifying new opportunities arising out of the transition to a low carbon economy.

Sustainability Policy

The approach towards sustainability is encapsulated in our sustainable development policy, which helps us in aligning our sustainability commitments and facilitates business in a responsible manner. Concern for the environment and promoting a broader sustainability agenda are integral to our business and we aim to promote sustainability practices throughout our value chain. Currently, we have established a company-wide process to identify, address and report sustainability-related matters. The policy can be accessed from the Sustainability section on GAIL's website (<https://gailonline.com/SBPolicy.html>).

Sustainability Governance

Strong governance forms the foundation of our sustainability practices and stems from our values of integrity, ethics, respect, customer, safety, excellence, technology and innovation. We have a robust governance structure with a dedicated 4-member board-level Sustainable Development Committee (SDC), which helps us implement sustainability strategy across the business, manage goal setting, reporting processes, strengthen relations with external stakeholders, and ensure the overall accountability across the organization. Our sustainability governance aims to ensure group's commitments to different stakeholder groups, including customers, consumers, employees, shareholders, suppliers, decision-makers and representatives of the community.

GAIL had a 4-member Board level Sustainable Development Committee in place. As on 31 March 2021, the committee comprises of GAIL's Chairman and Managing Director (CMD) as its head along with Director (HR), Director (Finance) and Director (Marketing) as its members for deliberation on organization's sustainability agenda. The Committee also reviews the emergency response plan and the HSE performance of the company. In FY 20-21, the SDC met twice.

Sustainable Development Steering Committee

The Sustainable Development Steering Committee comprises of the departmental

Leapfrogging in Sustainability

GAIL is on a path to work with the best knowledge and expertise holders, by signing an Memorandum of Understanding (MoU) with the Principal Scientific Adviser (PSA) to the Government of India. This collaboration will set stones to the journey ahead to establish relevant impactful projects on topics, which will include setting up Afforestation projects following the Miyawaki technique to enhance the carbon sink, preserve biodiversity, mainstream nature based solutions to deal with issues of pollution and ultimately address the fight of climate change.

The importance of decarbonization has been felt across the globe. We recognize the urgency of climate change and the need to work collaboratively in a scientific and

practical manner, which is why, the other projects in vision under the guidance of the PSA will be to work towards making GAIL Carbon Neutral or Net Zero GHG Emissions company by 2035. This can be substantiated by setting ambitious goals, which will be based on the capacity of GAIL while at the same time encouraging innovation and creativity. The sharing of ideas and knowledge will be a continuous and fruitful collaboration, extending to exploring new ways of Waste Management at GAIL, and mainstreaming more SDGs with the business actions and decisions.

Our management is already in action to fulfill our carbon neutral ambitions. Our Chairman and managing director has announced the installation of 1,000 MW of renewable energy to make our operations carbon neutral.

Projects	Financial and physical savings
Dibiyapur - Renovation of Sewage Treatment Plant has been completed at GAIL Vihar colony	11.89% reduction of Ground Water Consumption
Vaghodia - Registration and successful achievement of GreenCo rating-SILVER from Confederation of Indian Industries after thorough rounds of assessment.	2,20,482 units of electricity have been generated through the renewable energy source
Installation of Rooftop Solar panel 190 KWp in Central warehouse Replacement of lightings within plant premises with LED lights	21,460 units saved
Vijaipur - Installation of flare gas recovery unit	Financial savings of INR 12 crores / Annum
Samakhiali - Installation of rooftop solar power panel of 40KWp capacity at IPS Samakhiali above Switchgear room	Total Savings - INR 269,894
Chhainsa - Replacement of traditional irrigation system of lawns with pop-up sprinkler type micro irrigation for lawns	Power saved- 127 MWh per year
Gandhar - Creation of a rainwater harvesting pond within the premises for collection of natural run-off and recharging of ground water	Approximately 2,000 m ³ Water utilized for horticulture purpose

Sustainability Outlook 2020-21

ECONOMIC

- **INR 4,890 crore** - (Profit After Tax)
- **INR 56,738 crore** - Revenue (Gross sales)
- Over **13,718 km** of natural gas pipeline network
- Total petrochemical production capacity **1090 KTA**



SOCIAL

- CSR projects- Expenditure of **INR 147.67 crore**
- GAIL achieved an "HSE Score" of **96.98** against the internal target of **94.5** in FY 21
- The customer satisfaction index stood at a remarkable **96** in FY 21
- GAIL has signed **5** investment agreements worth **INR 15.30 crore** with start-ups focused on CBG
- Received 'NIL' comments from Comptroller and Auditor General (CAG)
- **78.2 lakh** domestic PNG connections in the country
- GAIL has contributed **INR 50 crore** to the PM funds and **INR 30 crore** on acquiring medical equipment, oxygen etc to help in the fight against COVID 19



ENVIRONMENT

- 130 MW – Renewable energy portfolio (118 MW– Wind and 12.26 MW - Solar)
- 40% – Landholding covered by green belt and water bodies
- INR 64.9 crore spent on energy conservation equipment
- 64 Sustainability projects registered
- Renewable energy generation– 151354 MWh of electricity has been generated
- GAIL has commissioned its first FGRU project that reduces emissions of 11100 tCO₂
- Engaged in collaboration with RMC to setup compressed biogas plant capacity of 150 tonnes/day
- Installations of HRSG to utilize heat from gas turbines exhaust expected to save 1171kg/hr fuel



heads, HoDs of C&P, HR, SD, F&A, Risk, CSR, CC, CST, Mktg-PC, Mktg-Gas and HSE, making it multidisciplinary and diverse. It assists the board level committee in fulfilling its oversight responsibilities concerning sustainability, which include the strategy, operational model, reporting and frameworks. It is also responsible for executing the company's sustainability goals as well as risk and performance management and ensures compliance with the policy through direct supervision of all sustainability initiatives.

Annual Sustainability Workplan FY 20-21

GAIL, with its futuristic approach and commitment, towards India's energy security, is diversifying its basket. We are actively pursuing opportunities for acquisition of shale gas assets in overseas countries and making efforts to shift to a cleaner future.

During the reporting year, we executed several projects and programs within the Annual Sustainability Workplan across numerous sites in order to drive sustainable growth within the firm.

- » A total of 64 sustainability projects were registered across sites for FY 20-21 and over INR 80 crore.
- » A bilateral power purchase arrangement of 20 MW has been finalized for GAIL Pata with a leading power trading company through open tendering.
- » GAIL and Ranchi Municipal Corporation (RMC) have signed an agreement for setting up Compressed Biogas (CBG) plant for processing 150 tonnes per day (tpd) of Organic Municipal Solid Waste (MSW). The CBG plant will produce 5 Tons of CBG per day and approximately 25 Tons of Fermented Bio Manure per day.
- » We have implemented an energy management system (ISO 50001:2018) across major locations.

Monitoring and Reporting Sustainability Projects

Dashboards

GAIL has developed dashboards for real-time monitoring of essential equipment built with in-house resources. The digitizing initiative covers significant energy users (SEUs). Gas Turbines, Heavy Duty Steam Turbines, Centrifugal Compressors, Gas Cracking Furnaces, Boilers, HRSGs, other process heaters, Extruder units, and other SEUs are among the key SEUs discussed.

E-Magazine 'Sanjeevani'

A Sustainable Journey depicting the Environment Management at GAIL, Pata released on 01 January 2021. The theme of the magazine was 'Biodiversity' covering sustainability initiatives at the Pata site. It also included articles, poetry paintings and photographs from employees and their family members. The objective of the theme was to bring sensitivity and commitment towards protection of the environment.

GAIL Included in FTSE4Good Index Series

GAIL's continuous inclusion in the FTSE4Good Index series over the years as a part of London Stock Exchange sustainability index affirms our strong commitment towards ESG practices in the Oil & Gas Sector.

GAIL Publishes First Integrated Report <IR>

GAIL is also upgrading the content and quality of non-financial performance in the annual report and has published its first Integrated Report <IR> in alignment with the guidelines of the International Integrated Reporting Council (IIRC) and the SEBI notification of February 2017.

GreenCo Assessment of the sites

GreenCo Rating is the "first of its kind in the World" holistic framework that evaluates companies on the environmental friendliness of their activities using life cycle approach. Implementation of GreenCo rating provides

leadership and guidance to companies on how to make products, services and operations greener. Industry personnel are trained on the latest Green concepts and facilitated for implementing better systems and implementing global best practices in green. United Nations Industrial Development Organization (UNIDO) has acknowledged GreenCo as one of the top 50 best practices in the world promoting green industry initiatives.

GAIL has embarked upon the journey of adoption of the GreenCo Rating. This rating helps in making products, services and operations greener. Several sites had already initiated the implementation of the same. Administrative approval for implementation of GreenCo rating at GAIL Hazira Compressor Station from CII-Sohrabji Godrej Green Business Centre, Hyderabad completed.

Vaghodia and Vijaipur have received silver rating for their exceptional performance in FY 20 and FY 21 respectively.

Global Reporting Initiative Community Member

GAIL has been a founding member of GRI South Asia Consortium since 2013. GRI South Asia Sustainability and Transparency Consortium is a platform for key players in the South Asian

corporate responsibility and sustainability landscape to demonstrate their inspirational presence in the sustainability field. Through the strong multi-stakeholder network of GRI South Asia, Consortium members ensure that South Asia insight supports the work of GRI – and helps to make sustainability reporting standard practice.

Some of the ways through which GAIL engaged with GRI

- » Engagement with GRI Board: Exclusive session and interaction between GAIL & GRI Board
- » SDG Agenda 2030 South Asia Dialogue Forums: A breakthrough initiative to understand SDGs in a business context in the South Asian region through a peer-learning platform
- » In-house Consortium workshop for GAIL Board, senior and mid management level staff on sustainability topics
- » GRI Standard Alignment Check service done on GAIL's sustainability report
- » GAIL representation as a speaker on Global & National forums of GRI



Wedelia urticaetfolia - Nettle-leaved Wedelia
Location: **Gandhar**



17 material topics
identified



Mapping based on
six capitals



GAIL's strategic focus lies in
creating purpose-led value for
all the stakeholders



Stakeholder Engagement and Materiality

The Indian economy is set to grow faster and cleaner in this decade, and the country is embarking on a gas-based clean economic journey. We are witnessing a transition enabled by digitization, the COVID-19 pandemic, and the ambitious aspirations of the Government of India to achieve the Sustainable Development Goals. In addition to that, ESG goals have emerged as a focus area for companies across the world and have been increasingly a priority for industry leaders such as GAIL.

As the leading gas company in India, GAIL, along with its valuable stakeholders is catalyzing this transition while fostering social, economic, and environmental progress. To fuel the transition to a cleaner future while taking into consideration of the contemporary sectoral changes, we are identifying its impacts on our stakeholders and vice versa. Hence, determination (materiality assessment) of key aspects (material topics) that impact GAIL's operation as well as our stakeholders remains an important exercise. This enables GAIL to align its sustainability and business objectives with societal needs and expectations, thereby ensuring long-term sustainability and enhancement of stakeholder value.

GAIL's list of GRI Material Topics represents the issues that are of priority to our business operations as well as to our stakeholders. Considering the dynamic nature of the sectoral demands and stakeholder expectations, reassessment of the company's sustainability strategy and materiality determination periodically is imperative. During FY21, our team

has undertaken 'Rethinking GAIL Sustainability Aspirations- Engagement Survey 2020-21 as a key step to gather our stakeholder's feedback. Around 202 stakeholders from the selected stakeholder groups have participated in the survey. The outcome of the materiality assessment is utilized in defining the report content and the boundaries of this year's GAIL sustainability report.

Strengthening Stakeholder Relations

Creating value for all the stakeholders in our company's value chain and beyond has always been our vision. To actualize this vision, we communicate our progress towards building a sustainable company and our efforts to create a responsible firm for our stakeholders periodically. We believe that, by actively involving them with us, we are developing a rigid and transparent partnership and enabling us to disclose the challenges and progress made by our company.

Effective engagement helps us in identifying matters that are material to our business model and operational geographies. With that understanding, we realign our business practices with the industry best practices, expectations, interests and concerns of our stakeholders. Integrating the voices of stakeholders into our business strategy results in unexpected opportunities to improve, innovate and collaborate on shared challenges to upgrade the company's overall performance.

We have identified priority stakeholder groups by understanding their relevance and ability to provide value to our business. By considering

the parameters and stakeholder attributes defined by global standards such as GRI Sustainability Reporting Guidelines, the AA1000 Series including AA100AP and AA1000SES, National Guideline for Responsible Business Conduct (NGRBC), IFC Performance Standards on Environmental and Social Sustainability, and Integrated Reporting <IR>, we have mapped our stakeholders as it contributes to the quality and credibility of the materiality process. The six parameters of identification and prioritization are provided below.

At GAIL, we interact with multiple stakeholders throughout the year. By utilizing the aforementioned processes, we have identified 13 key stakeholder groups including the public at large while the stakeholder engagement exercise carried out during the reporting period. They are further classified into external and internal stakeholders. The internal stakeholders comprise all the employees, whereas the key external stakeholders include the remaining 12 stakeholder groups.

1. Government and other Regulators
2. Financial Institutions
3. Employees
4. Suppliers
5. Customers
6. Joint Ventures and Subsidiaries
7. Industry Associations
8. Community
9. Contractors/Implementing Agencies
10. Academic and Research Institutions
11. NGOs /Civil Society Organizations
12. Public at large
13. Media

Finding Focus Areas: Materiality Assessment

A six-phased Materiality Assessment and Stakeholder Engagement process was designed

to identify material topics that are relevant to GAIL. Each step is defined while taking multiple global reporting standards into consideration. This comprehensive and strategic materiality assessment framework has enabled GAIL to identify, review, and analyze potential ESG issues that could impact GAIL's operations and its stakeholders. Through the materiality assessment this year, we have recalibrated the GAIL materiality matrix considering contemporary relevance. This information that has been made accessible to all of our respected stakeholders is a promise to our sustainability vision.

The outcome of the materiality analysis was integrated into GAIL's overall corporate strategy to amplify GAIL's sustainability aspirations.

The Right Way to do the Right Things: Materiality Assessment Methodology [3]

The materiality assessment consists of six phases including defining, identification and prioritization of material topics and development of materiality matrix, and review. In FY 2021, we conducted a novel materiality assessment and the stepwise process is provided.

Phase I: Define Purpose & Scope

This phase is to identify and define the boundaries of the materiality assessment. The purpose of the materiality assessment includes:

1. Providing an opportunity for GAIL to identify key ESG risks and opportunities
2. Positioning business objectives with stakeholder expectations and interests
3. Improving the management practices of stakeholder risks and organizational risks
4. Disclosing relevant outcomes while reporting on ESG aspects
5. Identifying future trends that could impact the business continuity and set targets to improve business and sustainability performance

Phase II: Identify Stakeholders and Potential Material Topics

Once the boundaries are set, stakeholder groups are identified and prioritized using the six parameters of identification and prioritization as mentioned in the previous section.

A total of 65 sustainability aspects are evaluated and categorized into broad themes after conducting the detailed sector guidelines and standards review, energy sector analysis, energy sector investor focus and best practices, peers and competitors review, government missions and initiatives and digital and social media analysis. The material topics are a direct representation of business and stakeholder concerns that are generally redressed through our grievance redressal mechanism periodically.

Phase III: Prioritize Topics

Twenty material aspects are shortlisted based on discussion with different department heads and relevant internal stakeholders. GAIL's corporate strategies, policies, risks and opportunities for the business are taken into consideration during this phase of prioritization.

Phase IV: Stakeholder Engagement & Materiality Survey

Multiple surveys were shared with stakeholder and results were obtained. This includes sharing an update on GAIL's expectations and the current ESG trends in the sector counting a brief about the importance of sustainability in a changing world.

Phase V: Materiality Matrix Development and Reporting

Survey results are quantitatively and qualitatively analyzed during this phase and the materiality matrix is created based on the stakeholder priority. It is further prepared to be reported to the stakeholders through the sustainability report.

Phase VI: Review

Relevant policies and organizational practices are strengthened to balance the triple bottom-lines efficiently.

Creating Purpose-led Value- Prioritization of Material Topics [4]

Identification and prioritization of material topics and development of a materiality matrix are some of the most critical steps towards understanding a company's sustainability approach and performance.

GAIL's strategic focus lies in creating purpose-led value for all the stakeholders and contribute to nation-building, environmental protection, and social empowerment.

We consider materiality as a strategic business tool, with implications beyond corporate responsibility. The material topics are the areas of interest or the aspects that are important to our stakeholders and business. This enables our company to understand how the resources are allocated and utilized. An integrated approach has been used to identify the interdependencies between the functional/operational units of the company.

Selected seventeen material topics are classified into the capitals under the <IR> framework to report on value created by our organization across its value chain. The Material topics are plotted in the matrix under three levels- low, medium and high based on their relative importance as per the survey results. The sub-topics of individual material topics are included under the material topics. Material topics, sub-topics, boundaries and relevant stakeholder groups that hold maximum importance are provided in the upcoming section.

Prioritizing Sustainability Aspects: Materiality Matrix

- » The Material Issues for GAIL are broadly classified under the categories - Economic, Environmental, Social and Governance
- » These 17 topics were ranked in three categories – High, Medium and Low
- » based on two aspects – its importance to GAIL Management and importance to Stakeholders.
- » The six capitals (of the Integrated Reporting Framework), affecting the broad categories, are also mapped.

Materiality Matrix

Economic & Governance		Environment	Social	Materiality Matrix	
Capital Impacted					
				<p>» The Material Issues for GAIL are broadly classified under the categories - Economic, Environmental, Social and Governance</p> <p>» These 17 topics were ranked in three categories - High, Importance to GAIL Management and importance to Stakeholders.</p> <p>» The 6 capitals (of the Integrated Reporting Framework), affecting the broad categories are also mapped.</p>	
High	Business Growth Product & service quality Operational Excellence	Climate Change (Carbon Neutral)	Health and Safety Stakeholder relationship management Human capital management		
Medium	Asset Utilization Risk Management Research and development Ethics, Integrity and Compliance Data privacy and cybersecurity	Resource Optimization Energy Management Natural Capital Utilization			
Low	New Businesses and Geographies Digital Transformation				
				Financial Capital	Human Capital
				Manufacturing Capital	Intellectual Capital
				Natural Capital	Social and Relationship Capital

Management Approach and Stakeholder Group for Material Topic

GRI Category	Material topic	Management Approach	Stakeholder group
Economic	Business Growth and Profitability	GAIL aims to harness economic interests while simultaneously achieving better sustainability performance. Economic performance for GAIL is the economic value added for both shareholders and other stakeholders. The Company ensures to utilise their resources in the most efficient and responsible manner.	Customers, Employees, Suppliers, Contractors, NGOs & Communities
	Product and service quality	Product and Service quality describes complete 'Quality & Quantity' (Q&Q) checks at various stages of the supply chain. GAIL ensures adherence to high Q&Q standards till the product reaches the customer. Having effective quality management systems in place and ensuring strict adherence to quality standards	Customers, Suppliers, Contractors
	Asset Utilization	The oil and gas sector is quite asset intensive, making capacity utilisation one of the most critical aspects. GAIL promotes better asset management, efficient utilisation and reliability of operations can reduce costs and enhance efficiency	Customers, Suppliers
	Operational Excellence	GAIL ensures uninterrupted availability of NG pipeline & supply of quality gas to customers	Customers, Employees, Suppliers, Contractors
	New Businesses and geographies	GAIL identifies the need of leveraging and capitalising on the various opportunities available for achieving accelerated and diversified business growth and foraying into new markets in areas like investments in development/ acquisition of assets, development of renewables and alternate energy sources, promoting the start-up ecosystem for nurturing entrepreneurs in the Oil & Gas sector	Customers, Suppliers
	Digital Transformation	Digital transformation helps in improving precision, process and examine big data sets to draw insights and conclusions about operations, create new value and competitor differentiation, control operations remotely, break operational silos and preempt conditions and failures.	Customers, Suppliers , Contractors

GRI Category	Material topic	Management Approach	Stakeholder group
	Research and Development	New techniques and technologies discovered through research and development (R&D) are vital in enabling the industry to meet global energy demand, and will continue to be vital as the industry overcomes current and future challenges	Customers, Suppliers
Environmental	Climate Change	GAIL believes that it is their responsibility to recognise and manage the impact it has created on the environment due to its business operations, we understand that its time to minimize the impact of climate change and strive to improve performance, energy efficiency and finding more carbon-neutral solutions.	NGOs, Communities, Customers, Suppliers
	Resource optimization	GAIL believes businesses should take charge of and manage the waste generated by their activities; this includes identifying opportunities to reduce, reuse and recycle waste and effluents	NGOs, Communities, Customers, Suppliers
	Energy management	GAIL ensures implementing energy efficiency policies at all the levels of the Company; analysis and modelling of energy efficiency performance, measures, policies, outcomes, and impacts; energy management systems (EMSs) and energy services; and approaches to improve energy. It also includes exploring opportunities to invest in renewable energy to supplement the energy needs with cleaner sources	NGOs, Communities, Customers, Suppliers
	Natural capital utilization	With an increasing demand for energy and the likelihood that oil and gas will be used to meet much of this demand over the next several decades, the risk to biodiversity from energy development projects is expected to increase. GAIL ensures optimally utilising the natural resources minimizing the impact on environment	NGOs, Communities, Customers, Suppliers
	Health and safety	Developing a safe, healthy and ethical work culture by implementing policies & processes for a safe and incident-free workplace.	Employees, Contractors
Governance and risk management	Risk Management	Risk management systems will help GAIL identify the risks and security issues associated with its business and assets. They provide protection against project failures, legal issues, natural disasters, accidents and national emergencies, and security breaches	Employees, Suppliers, Contractors

GRI Category	Material topic	Management Approach	Stakeholder group
	Data Privacy and Security	We focus on assessing the processes and improving on the technology to secure customer data and prevent leaks or data losses.	Customers, Employees, Suppliers, Contractors
	Ethics, Integrity and Compliance	To safeguard the interests of all stakeholders, policies and systems must be implemented to uphold the highest standards of business integrity and prevent corruption and fraud	Employees, Suppliers, Contractors
Social	Human capital management	A workforce that is engaged and satisfied will be invested in the success of the business and demonstrate a high level of commitment and loyalty	Employees
	Stakeholder relationship management	Actively collaborating with partners, suppliers and vendors motivates further quality and encourages them to strive for excellence and sustainability in their products, service levels, and operations. We constantly engage with our partners to strengthen strategic relationships, which fosters strong and productive relationships. Resolving grievances of stakeholders under CPGRAMS	Customers, Suppliers, Contractors NGOs & Communities

GAIL Stakeholder Mapping and Engagement

Sr. No.	Stakeholder Groups	Goals of Engagement	Frequency of Engagement	Mode of Engagement
1	Government and other regulators- External stakeholder	<ul style="list-style-type: none"> » Support government missions to promote sustainable development goals » Support government in transitioning to a clean gas-based economy » Relationship building » Performance appraisal through MoUs » Submission of progress reports » Discussions on major investment plans 	Annual, Monthly and Need-based	<ul style="list-style-type: none"> » MoUs » Quarterly Progress Report » Annual Report
2	Financial Institutions Internal and External stakeholder	<ul style="list-style-type: none"> » Financial performance » Share broad future strategies » Get feedback and address concerns » Seek approval from shareholders on major decisions 	Annual, Quarterly	<ul style="list-style-type: none"> » One on One Meetings with Investors » Attending IR Conferences/ roadshows » Conducting site visits for investment Community » Arranging Conference Calls for Investment Community » Conducting Analyst Meets » Publishing Public disclosures and quarterly results » Conducting Press conferences » Communication with Shareholders and ADR holder
3	Employees Internal stakeholder	<ul style="list-style-type: none"> » Communication on GAIL's business goals, values and principles » Action planning on major projects » Implementation of best practices » Facilitating learning and developing » Track key performance indicators and action plans » Understand and address concerns Idea generation, sharing and learning 	Annual, Quarterly, Monthly, Daily	<ul style="list-style-type: none"> » Satisfaction surveys » Social Media » Grievance Redressal » Suggestion schemes » CMD open house » Various committees » GAIL Day celebration » Emails, Journals, » Meetings with employee associations and unions
4	Suppliers -External stakeholder	<ul style="list-style-type: none"> » Communicate operational decisions » Seek their performance data/ information » Understand and address their concerns » Dispute resolution » Review of Contracts 	Annual, Quarterly, Monthly, Daily	<ul style="list-style-type: none"> » Supplier Meets » Industry Conclave » Access to empowered C&P committee » Vendor development program/ Vendor coaching programs » Hand-holding programs for SC/ ST-owned MSEs » Pre-tender or pre-bid meeting for all tenders » Meets with micro and small enterprises
5	Customers- External stakeholder	<ul style="list-style-type: none"> » To understand their satisfaction levels » To address operational concerns » To get feedback on new product development 	Annual, Quarterly	<ul style="list-style-type: none"> » Annual Customer Meet » Zonal Customer Meet » Customer Interactive Meet » Customer Satisfaction Survey

Sr. No.	Stakeholder Groups	Goals of Engagement	Frequency of Engagement	Mode of Engagement
6	Joint Ventures and Subsidiaries of GAIL (India) Limited -External stakeholder	<ul style="list-style-type: none"> » Discussions on major investment plans' » Sharing of performance data » Facilitate decision-making on major topics 	Need-based	<ul style="list-style-type: none"> » Need-based meetings » Reports and Newsletters
7	Industry Associations -External stakeholder	<ul style="list-style-type: none"> » Share performance data Inform on keys decisions and projects » Participate in conferences and seminars » Engage in public policy advocacy 	Need-based	<ul style="list-style-type: none"> » Seminars » Conferences » Industry Expo » Interviews » Reports and Newsletters
8	Communities- External stakeholder	<ul style="list-style-type: none"> » Engaging with communities for conducting need assessment and executing community development projects » Understanding and addressing their concerns on critical incidents » Community Grievances Redressal 	Need-based	<ul style="list-style-type: none"> » Meetings and direct interaction » Community events » Needs analysis and Impact Assessments » CSR initiatives » Corporate communications Materials
9	Contractors/ Implementing Agencies- External stakeholder	<ul style="list-style-type: none"> » Communicate operational decisions » To align their work with company policies and mandates (Compliance) » Seek their performance data/ information » Understand and address their concerns » Communicate company obligations such as contract renewal, payments etc. » Dispute resolution » Review of Contracts 	Annual, Quarterly, Monthly, Daily	<ul style="list-style-type: none"> » Need-based meetings » Meets » Website
10	Academic and Research Institutions- External stakeholder	<ul style="list-style-type: none"> » Partner and participate in GAIL research and development activities 	Need-based	<ul style="list-style-type: none"> » Project meetings » Periodic reviews » Website » Social media » Press
11	NGOs / Civil Society Organizations- External stakeholder	<ul style="list-style-type: none"> » Executing community development projects » Understanding and addressing their concerns on critical incidents 	Need-based	<ul style="list-style-type: none"> » Project meetings » Annual reviews
12	Public at large-External stakeholder	<ul style="list-style-type: none"> » Participate and support GAIL initiatives for public » Converting passive citizens to an active consumer » Brand awareness and improved brand recall » Understanding and addressing their concerns on critical incidents 	Annual, Quarterly, Monthly, Daily	<ul style="list-style-type: none"> » Social media campaigns/posts etc. » Community events » CSR initiatives » Corporate communications Materials such as website etc. » Press
13	Media- External stakeholder	<ul style="list-style-type: none"> » Relationship building » Promotion of latest initiatives and events » Increase brand recall value » Appraising on performance highlights and low lights » Point-of-view on major sectoral developments » Promote GAIL's advocacy role in the sector 	Monthly, Need-based	<ul style="list-style-type: none"> » Press Meets » Interviews » Corporate communications materials

Boundary and KPI's with Respect to Material Topic

Material topic	Sub Material Topic	GRI Topic	Boundary	KPI
Business Growth and Profitability	Economic Performance Market presence Indirect economic impacts New diversification and seeking new opportunities*	201-Economic performance 202- Market presence	Within GAIL	Total revenue from Operations in INR Crores Total Procurement of Goods & Supplies from Local Suppliers in INR Crores Economic Value Generated and Distributed (INR crore) Economic Value Distributed (INR crore)
Product and service quality	Stakeholder satisfaction		Within & Beyond GAIL	
Asset Utilization			Within GAIL	Gas transmission in MMSCMD
Operational Excellence	Asset Productivity* Environmental investments Grievance mechanism for impact on society Transport Safety Environmental Grievance mechanism		Within GAIL	Percentage of downtime in a year Environmental Expenditure
New Businesses and geographies	Gas-based economy, investments across the product value chain, policy reforms, clean energy market, SPAs and purchase contracts		Within & Beyond GAIL	Activities, brands, products, & services Location of operations Markets served
Digital Transformation	E tendering E payment		Within & Beyond GAIL	
Research and Development	Research and development, diversification and opportunities, technological utilization		Within GAIL	R&D expenditure in INR crore Start-up fund disbursement in INR crore
Climate Change	GHG Emissions Air Emissions other emissions management, Ozone-Depleting Substances (ODS) reduction	305- Emissions	Within & Beyond GAIL	Scope 1,2,3 emissions GHG emissions saved Air emissions (tons/ annum)
Resource optimization	GHG Emissions Energy consumption and Water consumption	301-materials 303- water 306-waste	Within & Beyond GAIL	Implementation of GreenCO rating for resource optimisation at major factories
Energy management	Energy consumption Renewable energy consumption Energy saved	302- energy	Within & Beyond GAIL	Total energy consumption in GJ Energy Savings

Material topic	Sub Material Topic	GRI Topic	Boundary	KPI
Natural capital utilization	Water Management Biodiversity	304- biodiversity	Within & Beyond GAIL	Water consumption in million m ³ Water recycling in million m ³ Trees planted Species saved
Health and safety	Occupation Health and Safety Customer Health and Safety Asset Integrity and process safety	403-Occupational health and safety 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships 416- customer health and safety,	Within & Beyond GAIL	Lost Time Injury Rate Total number of fatalities
Risk Management		102-15, 29,30,31	Within & Beyond GAIL	Disclosure of risk and its mitigation in the Annual Report Key impacts, risks and opportunities
Data Privacy and Security	Data Privacy Cyber security		Within & Beyond GAIL	Data breaches
Ethics, Integrity and Compliance	Anti competitive behaviour Anti corruption Business ethics	102-16 & 17 205-Anti-corruption 206- Anti-competitive behavior 307- Compliance	Within & Beyond GAIL	Employees receiving training on anti-corruption policies and other organizational procedures.
Human capital management	Employment Labour/Management Relations Training & Education Diversity Human Rights Non-discrimination Equal Remuneration for men & women Grievance Mechanism Security Practices	401- employment, 402-labour management, 404- training and education, 407- freedom of collective bargaining, 408-child labour, 409- forced labour, 410-security practices, 412-human rights assessment; 405- Diversity and equal opportunity	Within GAIL	Training hours per FTE Attrition Number of employees
Stakeholder relationship management	Procurement Practices Supplier Environmental Assessment Supplier Human Rights Assessment Indigenous Rights Local community Procurement Practices Community Engagement Customer relationship management	411- rights of indigenous people, 413- local communities, 414- supplier social assessment, 418- customer privacy	Within & Beyond GAIL	Total number of operations with local community engagement, impact assessments and development programs Total number of operations with significant actual and potential negative impacts on local communities

Natural or Man-made Calamity Risk

Various risks are associated with gas transportation and distribution like blowout of pipelines, earthquake, tsunami, terrorist activities, etc. These risks are being mitigated right from the designing stage of these projects. However, such natural or man-made risks are emergent events and cannot be totally eliminated. If such an event occurs, it will incur significant liabilities for the Company.



Peacock
Location: **Vijaipur**



GAIL has registered a gross turnover of INR 56,738 crore and profit of INR 4,890 crore



Credit rating of 'AAA' at the domestic level, and at an international level, 'Baa2' by Moody's



Gol has targeted to increase the gas share from 6.2% to 15% in the Primary Energy (PE) mix of the country



Business Growth

India is among the fastest growing economies in the world. It will contribute to 1/4th of the projected rise in the global energy by 2040. India's energy use has increased compared to the past in 2000; however, per capita energy consumption is still 1/3rd of the global average. Over 230 million Indians do not have access to clean and affordable energy for their use. Energy security is crucial for the country; and hence, GAIL is pushing its targets and strategies towards the goal of achieving energy security while considering the environmental issues, i.e., air pollution, carbon emissions and climate change.

During the Paris climate agreement, India committed to ambitious targets of 40% electricity-generation from non-fossil sources and a 33-35% reduction in emissions intensity by 2030 from 2005 levels. Thus, the Government of India has a broad energy strategy to increase the availability of affordable clean energy to all the consumers leading to the emergence of an alternate energy market with a mission to establish a low carbon economy.

GAIL is a public-sector enterprise with Gol holding the largest share in paid-up equity capital at 51.45%, while FPIs hold 15.52%, Mutual Funds hold 8.46%, ONGC has 4.91%, LIC holds 8.87%, Indian Oil Corporation Limited (IOCL) 2.45%, and others at 8.3% as on 31 March 2021.

The Government of India is focusing on increasing the share of natural gas in the Indian primary energy mix from the present level of Natural Gas to 15% by 2030. Gol has proposed various initiatives such as 'Pradhan Mantri Urja Ganga', 'North East Gas Grid', CGD projects under 9th and 10th round bidding by PNGRB, MoU with Indian Railways for providing clean fuel, etc. This impetus has provided GAIL with the space for expansion.

A Gas-based economic system is India's need, and 'One nation One Gas Grid' is an important project to meet this requirement. As a part of the initiative, GAIL completed laying a INR 2,433-crore Dhobi-Durgapur pipeline that will bring cleaner fuel to the state that is cheaper than LPG and CNG. The 348-kilometer pipeline from Dobhi in Bihar to Durgapur in West Bengal is part of the Pradhan Mantri Urja Ganga project to take environment-friendly natural gas to India's eastern parts, which hereto was left untouched by the benefits of gas-based economy.

The Company manages its capital structure and makes adjustments in light of changes in economic conditions and the requirements of the financial covenants. To maintain or adjust the capital structure, the company may adjust the dividend payment to shareholders, return capital to shareholders, or issue new shares. No changes were made in the objectives, policies or processes during the reporting year. This information is covered under annual report. For reference Please refer to pg 291 of Annual report 2020-21.

Economic Performance of GAIL

GAIL has registered a gross turnover of INR 56,738 crore and Profit of INR 4,890 Crore in FY 21-21. The PAT has shown a decrease of 26% while PBT has registered a decrease of 20% because of lower gas marketing spread. The current market capitalization of the company is INR 60,189 crore as on 31 March, 2021 reflecting strong investor confidence in the Company. No political contribution was made by GAIL during this reporting year. No financial assistance is received from the government in the last financial year.

Table 1: Financial Performance

Sl. No.	Particulars (Unit)	FY 19-20 vs. FY 20-21		
		FY 19-20	FY 20-21	Growth %
I	TRANSMISSION/SALES			
1	Natural gas transmission (MMSCMD)	108.37	104.2	(3.85)
2	LPG transmission (TMT)	3,909	4,163	6.5
3	Natural gas sales (MMSCMD)	96.26	89.2	(7.3)
4	Petrochemicals (TMT)	737	871	18
5	LHC (TMT)	1,263	1,138	(10)
II	PRODUCTION (TMT)			
1	Petrochemicals	788	813	03.17
2	LHC	1,266	1137	(10.19)

Table 2: Economic Value Generated and Distributed* (INR crore)

Economic Value Generated	FY 18-19	FY 19-20	FY 20-21
Total revenue (net of ED)	76,710.60	73,327.30	58,742.25

*Economic value generated, and distributed calculation methodology is different from other reported data

Table 3: Economic Value Distributed* (INR crore)

Economic value distributed	FY 18-19	FY-19-20	FY-20-21
Employee wages and benefits	1,975.10	1,740.40	1,744.20
Operating cost	65,619.00	64,313.50	49,996.60
Payments to providers of capital	1,873.70	3,422.20	2,569.20
Payment to government	3,415.60	1,979.60	1,723.10

*Employee wages and benefits incl. t/f to CWIP+ contribution to PF & Other fund (Prior Period) & Welfare+ Other income from deputation

Key Business Initiatives

GAIL continues to be a preferred supplier for end users and has tied-up a substantial volume of new/renewal contracts with key customers during the financial year. GAIL is also prioritizing the CGD industrial sector, refineries and units using alternate fuels like LPG/furnace oil to supply them natural gas as alternative fuel. Further, GAIL is looking for avenues to supply gas in new segment like LNG trucking, i.e., LNG for long haul transportation.

- » GAIL and Ranchi municipal corporation signed an agreement for setting up a compressed biogas plant
- » GAIL set to kick off asset monetization in the oil sector
- » GAIL India seeks to buy out the entire 26% stake of Greater Calcutta Gas Supply Corporation (GCGSCL) in its joint venture, Bengal Gas company (BGCL) to make it its own 100% subsidiary

- » GAIL (India) Limited has signed a Share Purchase and Shareholders Agreement (SPSHA) with Indian Gas Exchange Limited (IGX) and Indian Energy Exchange Limited (IEX), for acquisition of 5% equity stake in IGX. GAIL is striving for moving India towards a gas-based economy.

Since the commencement of RLNG supply in the country in 2004, GAIL has always spearheaded the development of new RLNG/LNG markets in the country and has been working towards the development of a gas-based economy. The following initiatives being taken by GAIL for promoting gas markets in new cities and new market:

- » Pradhan Mantri Urja Ganga under the execution for connecting the eastern part of the country
- » GAIL was authorized to take up CGD projects in six cities as part of PM URJA Ganga project, namely, Varanasi, Bhubaneswar, Cuttack, Patna, Ranchi and Jamshedpur
- » GAIL Gas is executing and operating CGD (City Gas Distribution) projects in 14 GAs, including Bengaluru
- » GAIL CGD Entities have been authorized for 61 geographical areas in 9th and 10th bidding round for city gas distribution by PNGRB.
- » To promote LNG as a transport fuel in India, GAIL along with other OMCs has been working closely with the Ministry of Petroleum and Natural Gas for setting up LNG/ LCNG stations along golden quadrilateral and other national highways.
- » The gross block in renewable energy (Wind Power and Solar) as on 31 March 2021 is INR 828 crore.

Financial management Initiatives in FY 20-21 at GAIL

- » RPA Digital Initiatives for FICO
- » Centralized TDS/TCS

- » Bank Communication Management Module
- » ANANT Dashboard for Real-Time Monitoring of MoU Parameters and Capex HR
- » Medical Reimbursement App
- » Reimbursement under LTC Lieu Portal
- » Permission for WFH during quarantine module HRD
- » Document Verification System
- » Web based ePMS for E0 to E7
- » ANJANI E-measurement & E-billing Portal
- » G-Board Meeting Solution
- » Vidhi Mobile app for C&P documents
- » CGD DPR Mobile App
- » CGD Meter Reading Mobile App

Financial Management Improvement Initiatives in FY 20-21 at GAIL

Company has taken several initiatives which are as given below:

- » Bharat Bill Pay System (BBPS) implemented in CGD business to enable customers for smooth payment of PNG bill through mobile payment apps.
- » Digitalization of Travel Bill claim reimbursement through Mobile application & PRMS claim through Golden retirement portal.
- » NG trading and transmission Invoice generation through BOT successfully tested for NCR under robotic process automation
- » The Company has managed its liquidity requirement through a prudent mix of borrowings and internal accruals.
- » Fresh borrowing at very competitive and refinancing of old loans at much lower rate leading in bringing down the overall cost of funds.

Business Outlook

Owing to a stable growth over the past few years across all the business segments, GAIL has continued to thrive due to the recognition from various agencies and regulatory bodies during the reporting period.

GAIL also received 'NIL' comments from Comptroller and Auditor General of India (CAG) for its financial statement for FY 2020-21 during the reporting period. The company has secured second position under the category manufacturing in Public Mega in the 17th National awards for excellence in cost management 2019 from the Institute of cost accounts of India. Additionally, the company received the National Award for Excellence in Cost Management-2019 from the Institute of Cost Accountants of India (ICAI). The stable outlook and potential business growth of GAIL during the reporting period resulted in a credit rating of 'AAA' at the domestic level, and at an international level, 'Baa2' by Moody's and 'BBB' by Fitch, tenth year in a row.

Opportunities for GAIL

- » Energy consumption grows by 4.6% per annum in India, which is the highest among all major economies in the world
- » GoI has targeted to increase the gas share from 6.2% to 15% in the Primary Energy (PE) mix of the country
- » Significant investments are being made across the natural gas value chain
 - Gas pipelines: INR 60,000 crore to INR 70,000 crore
 - LNG terminals: INR 25,000 crore
 - Gas-based fertilizer sector: INR 30,000 crore
 - CGDs: INR 70,000 crore to INR 80,000 crore
- » According to the recently recorded data, India's per capita consumption of plastics at just 11 kg vs. the average global per capita consumption of 30 kg, presents tremendous

growth opportunities for petrochemical segments

A detailed overview of each business segment of GAIL is given in subsequent sections of this report.

Natural Gas Marketing

During the FY 20-21, GAIL clocked a sales figure of 89.20 MMSCMD (which included sales within India of 80.28 MMSCMD and overseas sales of 8.92 MMSCMD) as against 96.26 MMSCMD during FY 19-20. Gross revenue of GAIL from Natural Gas Marketing in FY 20-21 was INR 43,846 crore as against INR 59,955 crore in FY 19-20.

Fertilizer sector: We market gas for the majority of the fertilizers produced in our country. During this reporting year, GAIL firmed up gas supply agreement with upcoming fertilizer plants for more than 12 MMSCMD volume.

During this FY, GAIL has commenced gas supply to Hindustan Urvarak & Rasayan Limited (HURL), Gorakhpur w.e.f. November 2020 for pre-commissioning of the plant and Mangalore Chemicals & Fertilizers Limited (MCFL), Mangalore for commissioning of the plant and production of Urea using natural gas as feedstock.

Power sector: GAIL supplies around 55% of the gas consumed by gas-based power plants in the country. Over the past few years, we have successfully partnered with various power producers to operationalize their stranded units. We continue to explore opportunities for supply of natural gas to gas based power generation units at affordable prices and are currently supplying around 2.40 MMSCMD of RLNG to power plants apart from allocated domestic gas. During this FY, GAIL has commenced gas supply to Karnataka Power Corporation Limited (KPCL) w.e.f. September 2020 for commissioning of the plant. Currently, KPCL is under commissioning.

GAIL is committed to increase the length of its natural gas pipeline infrastructure by developing new natural gas pipelines as well as by expansion/extension of its existing natural gas pipelines. We have taken steps to provide Tie-in connections

with its natural gas pipelines to the upcoming new gas sources, including in KG Basin, Cauvery Basin and Coal Bed Methane (CBM) discoveries to enable more and new gas injections into our pipelines. Furthermore, we also provide Inter-Connections (ICs) with the natural gas pipelines of other pipeline entities in the country.

In addition to providing Last Mile Connectivity (LMC) to various industrial consumers so as to enable them consume natural gas and shift from other alternative fuels, GAIL is also providing Hooking-up connectivity (i.e. connectivity from the trunk natural gas pipeline to CGD network) to more than 100 new CGD Networks in various parts of the country. Eight new Last Mile Connectivity and sixteen Hook-ups were completed to supply/transport gas during FY 2020-21.

GAIL has also firmed up modality with the newly established Gas Exchange in the country for smooth transportation of gas traded in the Gas Exchange. Also, GAIL is the only gas pipeline company in the country that is successfully operating an online pipeline open-access portal for easier and transparent booking of Common Carrier Capacity in its natural gas pipeline. More than 3,000 Capacity Tranche (CT) requests have been processed through the portal during FY 20-21, while total CT requisitions processed till 31 March 2021, since the launch of the online portal in 2018 is over 5,900.

LPG Transmission

GAIL owns and operates a 2,038 km LPG pipeline network for LPG transportation, namely, JLPL and VSPL. Jamnagar-Loni and the Vizag-Secunderabad pipeline networks achieved a throughput of 4.16 MMTPA during the year FY 20-21 against 3.91 MMTPA in the previous year FY 19-20.

Petrochemicals

GAIL has a polymer production capacity of 810 Kilo Tons per annum (KTA) at Pata complex. GAIL's subsidiary (70% equity share) Brahmaputra Cracker & Polymer Limited (BCPL) has a capacity of 280 KTA. The marketing rights of the BCPL

plant are with GAIL, taking the total marketing portfolio to 1,090 KTA.

Overall production from the Pata Petrochemicals complex In FY 20-21 was 813 KTA. A combined volume of approx. 1,177 KTA (which includes 871 KTA of GAIL and 306 KTA of BCPL) was marketed by GAIL during the year. GAIL also exported 9 KTA of polymers to various Asian markets. GAIL successfully maintained its market share in the domestic polyethylene market and remained the second largest player in the Indian petrochemical market with a portfolio of over 1,000 KTA of polyethylene. GAIL and BCPL together have a combined production share of 17.4% of the High Density and Liner Low Density Polyethylene (HDPE & LLDPE) market in the country.

GAIL has achieved more than 100% capacity utilization from pata plant in FY 20-21. BCPL has achieved 100% capacity utilization in FY 20-21 also, making it two consecutive years in a row.

LPG and other Liquid Hydrocarbon Production

GAIL has five Gas Processing Plants (GPUs) at four locations in the country having LHC production capacity of 1.137 Million MT. During 2020-21, total liquid hydrocarbon production was about 1.14 Million MT as against 1.26 Million MT in FY 2019-20 of which almost 90% constitutes LPG and Propane.

Exploration and Production

GAIL has participated in 11 E&P blocks, of which nine blocks are in India and two blocks are in Myanmar. Out of these, GAIL is operator in two on land blocks CB-ONN-2010/11 and CB-ONHP-2017/12 in Cambay basin awarded during NELP-IX and OALP-I bidding rounds respectively. These eleven E&P blocks hold an acreage of 2,170 km² as per its Participation Interest (P.I.) in various consortiums.

Revenue from sale of hydrocarbons is being generated from four producing blocks, namely, A-1 and A-3 in Myanmar and CB-ONN-2000/1 and CB-ONN-2003/2 (Cambay onshore blocks) in India. Revenue of INR 838 crore has been generated from E&P activities during FY 20-21 as against

INR 968 crore in FY 19-20. Lower revenue from Myanmar is mainly due to lower gas production (8 % lower i.e. 486 MMSCM vs 528 MMSCM in previous year) and lower gas price (11% lower i.e. US\$6.53/MMBtu vs US\$7.35/MMBtu in previous year).

Field Development activities in Myanmar offshore blocks A1 & A3, including drilling campaigns of eight development wells in Shwe and Shwe Phyu field, are in progress. Simultaneous appraisal of additional gas discovery and further exploration in A-3 block is in progress.

Development activities are in progress in two blocks in India (i) CB-ONN-2010/11 (In Gujarat State) and (ii) AA-ONN-2000/1 (in Tripura State).

Exploratory activities continued in two domestic blocks (i) NELP-IX block AA-ONN-2010 and (ii) OALP block CB-ONHP-2017/12.

City Gas Distribution

GAIL (including group companies) is currently authorized to operate in 61 Geographical Areas throughout India including metro cities of Delhi, Mumbai, Hyderabad, Bengaluru, Kolkata, etc. These CGD networks together cater to around 65% of total 78.20 lakhs domestic PNG connections in the country. Out of the total 3,101 CNG stations in the country, GAIL group operates 1,689 CNG stations representing 54% share. This year, GAIL registered a record addition of 10.10 lakhs household PNG connections and 341 CNG stations.

GAIL was authorized to take up CGD projects in six cities as part of PM URJA Ganga project, namely, Varanasi, Bhubaneswar, Cuttack, Patna, Ranchi and Jamshedpur. Supply of gas has already commenced to CNG, PNG customers in Varanasi, Bhubaneswar, Cuttack, Patna, Ranchi and Jamshedpur. GAIL is executing the CGD project in Kolkata through its JV - Bengal Gas Company Limited.

GAIL is executing and operating CGD (City Gas Distribution) projects in 14 GAs, including

Bengaluru. Currently, GAIL Gas has seven JVCs and they are implementing CGD projects in nine GAs. GAIL Gas along with its JVCs is providing DPNG to 6.51 Lakhs households and catering to clean fuel requirements for vehicles through its 250 CNG stations spread across various GAs.

During FY 20-21, GAIL Gas along with its Joint Venture Companies (JVC) has achieved around 1.87 lakh domestic PNG connections, the highest figure ever achieved by GAIL Gas since its formation. During the same period, GAIL Gas, along with its JV companies, has also set up 84 CNG stations.

Bengaluru remained a major focus for GAIL for CGD expansion. Eleven CNG stations were set up and 44,382 domestic PNG connections were provided in the Bengaluru CGD area during FY 20-21.

Coal Gasification

GAIL is in the process of setting up a coal gasification-based Urea project through a JV-Talcher Fertilizers Limited (TFL), formed with Coal India Limited (CIL), Rashtriya Chemicals and Fertilizers (RCF), each having 31.85% stake and Fertilizer Corporation of India Limited (FCIL) having 4.45% equity. The project, with an estimated cost of around INR 13,277 crore, is envisaged to produce 2,200 MTPD Ammonia and 3,850 MTPD Urea. The coal for the project shall be sourced from a captive mine of North Arkhupal in Talcher region, which has been allotted to TFL by the Ministry of Coal. TFL has already signed the mine allotment agreement with the Coal Ministry. Pet coke, which is the second feedstock, shall be sourced from IOCL Paradip refinery, for which TFL has already executed an MoU with IOCL.

The project has received investment approval from all the JV partners in August 2019 and project activities have already commenced with the award of two major LSTK tenders of coal gasification and ammonia/urea at a cumulative cost of approx. INR 8,000 crore to M/s Wuhuan

Engg. Co. Ltd., China. Further, debt syndication of the project is also completed. Selection of other vendors is in progress along with other pre-project construction activities at site. The overall project progress achieved till March 2021 is 11%. Cabinet Committee on Economic Affairs (CCEA) has approved the exclusive subsidy policy for urea to be produced by TFL on 20th April 2021.

Industry Events and Engagements

Dobhi-Durgapur Pipeline

On 8 February 2021, the Prime Minister dedicated the LPG import terminal to the nation, 348 km Dobhi – Durgapur Natural Gas Pipeline section, which is part of the Pradhan Mantri Urja Ganga project. Dobhi-Durgapur Pipeline stretched 350 km will directly benefit not only West Bengal but also 10 districts of Bihar and Jharkhand. Locals were employed for 11 lakh man days as a result of the construction work. This will also provide clean piped LPG to the kitchens and enable clean CNG vehicles in addition with continuous gas supply to Sindri and Durgapur Fertilizer factories.

Kochi - Mangaluru Natural Gas Pipeline

Prime Minister Shri Narendra Modi on 5 January 2021 dedicated Kochi - Mangaluru Natural Gas Pipeline to the nation through a video conference. The event marks an important milestone towards the creation of 'One Nation One Gas Grid'. Governors and Chief Ministers of Karnataka and Kerala, along with Union Minister for Petroleum and Natural Gas were also present on the occasion.

Trigeneration project

GAIL (India) Limited and Energy Efficiency Services Limited (EESL) have signed a Memorandum of Understanding (MoU) on 3 June 2020 in New Delhi for cooperation in the development of Trigeneration projects in India. The MoU aims at building a closer strategic partnership between the two companies by jointly exploring business opportunities in Trigeneration business segment in India. Under this MOU, GAIL and EESL shall

jointly undertake studies and if found viable, 50:50 joint venture between GAIL & EESL will be incorporated for undertaking Trigeneration projects. Shri Santanu Roy, Executive Director (Business Development & Project Development) signed the MoU on the behalf of GAIL, while Shri Amit Kumar Kaushik, Executive Director (Strategic Growth) (on the behalf of EESL) inked the MoU in the presence of Shri Manoj Jain, C&MD - GAIL and Shri Saurabh Kumar, MD - EESL through video conference.

Opening of India Energy Office in Moscow, Russia

To promote the interests of Indian Oil and Gas PSUs; GAIL along with OVL, IOCL, OIL, and EIL is taking steps to open an India Energy Office in Moscow, Russia. A Summary of Understanding (SOU) in this regard has been signed among the parties on 25 March 2021.

Natural Gas Supply and Distribution Project in New Yangon

GAIL and IGL are jointly pursuing a natural gas supply and distribution project in New Yangon, Myanmar. A Principle of Cooperation between the two parties was signed on 02.06.2020.

Initiatives taken for Engaging with Investors in FY 20-21

The motto of Investor Relations Management in GAIL is to reach maximum number of Investors from both Domestic & Global Markets and to ensure dissemination of financial and non-financial information about the company at regular intervals to the concerns of stakeholders.

Investor Relations (IR) is playing an increasingly important role in today's volatile world in enabling companies to meet investors' expectations. Gone are the days when investor used to take interests in only in financial results of any company. In current times, investors look beyond financial numbers and seek for initiatives taken in Corporate Social Responsibility, Sustainability, and Health Safety Environment (HSE) etc.

With the spirit to interact with investors on regular basis, GAIL organized Analyst Meet for FY 21 through Audio Visual (AV) mode owing to ongoing limitations due to COVID-19 Pandemic. GAIL Senior management also participated in 9 IR events organized by top brokerage houses of the country such as B&K, Emkay Global, ICICI Securities, MOSL, JP Morgan etc. to cover as many Investors through virtual mode. Conference calls for Q1 FY21, Q2 FY21 and Q3 FY21 were organized immediately after quarterly financial results. Besides organizing such meets & conferences, company arranged one to one virtual meetings based on investors requirements.

FY 2021 was a mixed bag of achievements and concerns for GAIL. In spite of severe stress on the profitability during the Q1 of FY 21 due to nationwide lockdown due to COVID-19, the company achieved a PAT of Rs 4,890 crore. Petrochemical production has seen new highs in current financial year. Even during the COVID-19 Pandemic situation, company made its natural gas and LPG transmission pipelines available to meet full customer demand. GAIL is focused towards cost optimization in its operation and processes.



→ Top Management interacting with Investors and Analysts after Annual Result of FY21

GAIL Investor Meet

During FY 20-21, GAIL organized "Analysts' Meet-2020" through Virtual mode from Corporate office, New Delhi in the wake of COVID-19, organized three conference calls to discuss quarterly results and participated in nine investor conferences and conducted multiple one on one meetings for maintaining engagement with the investor community. All these meetings/calls/conferences were attended by Top Management/Senior Executives of the Company. Analysts Presentations and their transcripts are provided in the following link of our website- <https://gailonline.com/IZ-GeneralInformation.html>

All such initiatives by GAIL towards disseminating information to investors and analysts at the right time and from the right people have been recognized and appreciated by the Investor and Analyst Community from time to time. In the recent past, GAIL also took an active role on the ground in sensitizing its employees about handling of the Unpublished Price sensitive Information (UPSI).

GAIL won Investor Relations Award 2020 under ESG disclosures category organised by IR Society in collaboration with BSE & KPMG.

GAIL Strategy 2030 and Advocacy Initiatives

In the year 2019, GAIL framed 'Strategy 2030' to define the journey through the next decade. It aims at building a strong business portfolio and organization structure, which are not only robust enough to respond to the fast-changing business scenario but also unlock long-term growth opportunities of the Company and in turn deliver long term value to stakeholders. GAIL is continuously exploring new business opportunities, which have the potential to offer future growth engine and substantially add value to the portfolio.

- » **Development of National Gas Grid (NGG)**- To develop National Gas Grid, GAIL is executing projects to lay around 6,000 km of gas pipelines across India and another 2,000 km pipelines through its two JVs. Despite hugely challenging times of COVID-19 pandemic, 1000 kms of pipeline has been commissioned in FY 20-21.
- » We shall also continue to grow our gas transmission business by laying important sections of National Gas Grid (NGG), i.e., Jagdishpur - Haldia - Bokaro - Dhamra Pipeline, Kochi - Kootanad - Bengaluru - Mangalore Pipeline Phase-II, Vijaipur Auraiya Pipeline, Barauni Guwahati Pipeline, North East Gas Grid (through Joint Venture company Indradhanush Gas Grid Limited with IOCL, ONGC, OIL, NRL); aligning with Government priorities and by providing last mile connectivity.
- » GAIL is the largest LNG portfolio holder in India having diverse price linkages and shall be looking to offer value and reliable supply to consumers by selling right mix in domestic and international geographies. We are consistently looking for new international geographies to sell LNG volumes.
- » GAIL will be selectively making investment in the Renewable Energy domain, given the future growth potential and to partner with the Government in meeting India's NDC (Nationally Determined Contributions) commitments on climate change. GAIL is exploring the opportunity of acquiring stakes in renewable energy assets of the existing players and looking towards participating in solar park tenders as Solar Power Producer.
- » GAIL is continuously exploring new business opportunities, which have the potential to offer future growth engine and substantially add to the portfolio. To promote new technologies, GAIL has invested in startups focusing on new technologies like Electric Vehicles, digitization, etc.

- » Development of Natural Gas Pipeline- GAIL is executing natural gas pipeline projects to facilitate clean energy access across various parts of India. Supply of natural gas will lead to sustainable development across the country and protect the environment. Some of the natural gas pipelines projects fueling India's sustainable progress include JHBDPL - 2655 km, BGPL- 729 km, IGGL- 1656 km, KKB MPL- 935 km.

» CNG Mobile Refueling

An innovative effort by GAIL group companies to boost consumer convenience, the MRU acts as mobile CNG station and will provide doorstep, round-the-clock delivery of CNG.

- » In petrochemicals, GAIL is setting up a 500 KTA Polypropylene plant, a first of its kind project in India, which would be using Propane Dehydrogenation technology for the production of Propylene integrated with the downstream Polypropylene unit. GAIL has selected Licensors for the PDH and PP units during the Year. We are also taking up feasibility studies to set up specialty chemical plants for select chemicals, which have high import dependency and high future growth potential. Further, In Renewables as well, GAIL has been looking for opportunities to scale up RE portfolio from 130 MW through bidding route and through inorganic route like mergers and acquisitions.
- » Development of Indian gas market is a major focus area of GAIL. To grow the gas market share, GAIL shall be pushing for higher gas usage in the industrial segment, transport segment using CNG and LNG, trigeneration etc., ensuring off take of envisaged additional domestic gas production and increasing pace of activities in the fast growing CGD sector through GAIL Gas and JVs. Further, GAIL is looking for avenues to supply gas in new segment like LNG trucking i.e., LNG for long haul transportation. GAIL is the largest LNG

portfolio holder in India having diverse price linkages and shall be looking to offer value and reliable supply to the consumers by selling right mix in the domestic and international geographies. GAIL is consistently looking for new international geographies to sell LNG volumes.

- » GAIL will be selectively making investment in the Renewable Energy domain, given the future growth potential and also to partner with Government in meeting India's NDC (Nationally Determined Contributions) commitments on climate change. GAIL has been looking for opportunities to scale up RE portfolio from 130 MW through bidding route and also through inorganic route like mergers and acquisitions. On the renewable side, our targets are that we would like to be 1 Gigawatt Solar and Wind both together or any other renewable part in next three to four years.

GAIL is continuously exploring new business opportunities, which have the potential to offer future growth engine and substantially add to the portfolio. GAIL is exploring the possibility of setting up a 500 KLPD Ethanol Plant for ethanol blending Purpose. This is also a steps towards meeting the target of 20% ethanol blending in petrol by 2025. To promote new technologies, GAIL has invested in startups, which focus on new technologies like Electric Vehicles, digitization, etc.

GAIL continues to be a preferred supplier for end users and has tied-up a substantial volume of new/renewal contracts with key customers during the financial year. GAIL is also prioritizing the CGD industrial sector, refineries and units using alternate fuels like LPG/furnace oil to supply them natural gas as an alternate fuel. GAIL group companies are installing over 23 LNG stations along Golden Quadrilateral and other major highways, of which construction activities have commenced for six LNG stations.

Initiatives taken for Advocacy of Natural Gas

GAIL had undertaken a number of studies on the areas of gas advocacy, few of which are as follows:

- » Use of natural gas in power sector through FIPI
- » Potential of natural gas as replacement for solid and liquid polluting fuels consumption in industries
- » Assessment of gas demand in Refinery Sector and Steel Sector
- » Analysis on competitiveness of natural gas with view of GST inclusion for industries
- » Unbundling in Natural Gas sector in India and its impact, study of gas markets hubs and strategic imperatives for GAIL
- » Opportunity Mapping for GAIL in Battery Value Chain
- » Potential of natural gas as replacement for solid and liquid polluting fuels consumption in industries under any CGD Gas and price sensitive demand assessment

More recently, GAIL and Power sector stakeholders are exploring options to include natural gas as a preferred option for blending with Renewable power to meet grid flexibility requirements.

Over the years, GAIL has been a part of industry events organized to propagate gas as a better environmental fuel, market opportunity available for gas in India, support from international bodies for domestic gas market development. GAIL is interacting with various Indian industry associations including FIPI, CII, FICCI, etc. on economic and sectorial reforms required by Indian gas sector post COVID-19 and the need for policy support for clean and sustainable energy. GAIL has been consistently engaged with global associations like International Gas Union on Sustainable energy policy and reforms required in the gas sector.

GAIL also partnered with Interdependence, a global campaign *patronized* by United Nations and organized by Art for the World- an NGO associated with United Nations Department of Public Information (UNDPI), Switzerland.



Harvester Ants
Location: **Usar**

Our Goals



Our Goals



Our Goals





Operational Excellence

We review and reframe our operational systems & procedures to keep abreast with new changes in the world and provide best quality products and services to stay ahead of our competitors. Our business is defined by some major forces which are the uncertainty of the oil markets, increased competition, and climate change. We have well organized our operations and are responsibly becoming more trusted, reliable, flexible, and capable of delivering marvelous results. Our overall strategic intent is to improve quality and maximize the performance through innovation and responsiveness and create a greater value for our customers and other stakeholders.

Our Approach

We constantly attempt to identify and look for new opportunities for improving and taking ahead our operational performance throughout the year. We strive to reduce costs related to operations, decrease lead times and enable long-term business growth through continual improvements by taking necessary efforts in a challenging environment. The aim of our corporate strategy objectives is based on aspects to create competitive advantage for the business of GAIL.

As the Leading Natural gas company in India, GAIL is conscious of its role in tackling the challenge of providing clean and sustainable energy to all parts of the country. To win over this challenge, GAIL has invested in creating a structured approach to pursue efficiency, resilience, and growth while integrating sustainability consideration into its operational footprint. We also strive to follow

a trajectory of decarbonization and inclusive development in our core value delivery chain to ensure high standards of governance and integrity in all our production and transmission activities. We make endeavor and promote a cultural change to integrate sustainability in our operation.

At GAIL, reliable and dependable operation and maintenance philosophy has been adopted which has been devised keeping the most stringent provisions as mandated by national and international standards. Our O&M Philosophy is developed and reviewed through a comprehensive internal consultation and due diligence process. GAIL has certified Subject Matter Experts (SMEs) of international repute on panel and utilizes their services for developing and reviewing the above philosophy. In addition, we have established a 3-level investigation mechanism for carrying out root cause analysis of incidents.

Our Leadership Responsibility

Our commitment and leadership are the main pillars for success and drivers of achieving operational excellence. Our framed strategies and visionary plans are guided by the top management which follows a rigorous approach to consult all internal and external stakeholders with involvement of expert agencies. The implementation of those strategies and plans are led by department heads at all the GAIL sites with due support from corporate office. We aim to provide consistent and smooth experience to all our customers throughout the country and to

fulfil the same our leadership commitment and involvement of stakeholder at various levels help a lot.

Integrated Management System (IMS)

To emphasize and achieve Operational Excellence, our leadership has adopted an integrated approach for the management of our plant & pipeline operations, equipments/assets integrity management and HSE aspects. This integrated approach combines the following aspects:

- » Asset Integrity Management System;
 - » Quality Management System;
 - » Environment Management System;
 - » Energy management system.
- This integrated approach framework is efficient to make our business flawless and uninterrupted and helps achieving operational goals with quality and efficiency.
- ### Asset Integrity Management System
- To extract long life, greater utilization of its assets, achieving operational efficiencies, reducing risks and enhancing safety, GAIL has invested in the establishment of Asset Integrity Management Plan. The key highlights of our asset management program are:
- » Design, Engineering, Construction, Commissioning and Operation & Maintenance of GAIL Installations are being carried out in accordance with National and International Codes and Standards like ASME, API, OISD, PNRB, PESO, NFPA etc. and as per best engineering practices.
 - » HAZOP study and Risk Analysis is carried out during design stage to identify various hazards and implement risk mitigation measures. Further HAZOP study and Risk Analysis is also carried out in regular intervals and suitable risk mitigation measures.
 - » Operations of GAIL Pipelines and Process Plants are monitored at RGMC/NGMC and Plant Control rooms manned round the clock by qualified personnel. Further, Maintenance Activities of equipment and instruments at these installations are carried out through qualified and experienced engineers following proper work permit system and safety procedures.
 - » Centralized Application Software (APPS) system with Leak detection system has been implemented for Trunk Gas Pipeline networks. Further, OFC based pipeline leak & intrusion detection (PLIDS) are also being deployed at vulnerable locations for real time monitoring of any intrusion detection in pipeline ROU.



→ LLDPE-II Control Room visit

- » Integrity Management System is in place and followed for entire Cross Country Pipelines in accordance with PNGRB (Integrity Management System for Natural Gas Pipelines) Regulations 2012 and duly approved by PNGRB.
- » Standard Operating Procedure (SOP) are in place for safe upkeep, operation & maintenance of plant facilities, equipment and instruments. Necessary Safety interlocks are also inbuilt in operational systems for safe shutdown of the equipment/facilities in case of abnormal situation. Standard Operating Procedures (SOPs) reviewed through international reputed agency M/s. British Safety Council, UK for Process Plant and M/s. DNV GL for pipelines. Regular review of SOP's is also undertaken.
- » GAIL's O&M guidelines for equipment, pipeline and assets have been formulated based on various national and international standards incorporating best engineering practices and exceeding statutory requirements. These guidelines are periodically reviewed and updated to incorporate regular technological upgradation and changes in standards.
- » The preventive and predictive maintenance of equipment are carried out as per OEM recommendations, OISD guidelines, PESO, CEA regulations, IBR, PNGRB and other applicable statutory requirements. All these requirements are encapsulated in the form of task lists for the specific equipment. Inspection and maintenance activities on equipment are performed as per the task lists and records are maintained in ISO formats.
- » All equipment of GAIL are mapped in SAP for monitoring their maintenance schedule and all the repair & maintenance activities are also maintained in SAP for historical record keeping for further analysis.
- » Pipeline patrolling is being carried out through line walk by the patrolman with GPS

tracker. Aerial Patrolling is also being carried out. Any abnormality identified during these surveillance practices are promptly reported and suitable measures are taken.

- » A Centralized Integrity Management Group (CIMG) has been established to closely monitor & maintain comprehensive pipeline database and coordinate the integrity management of pipelines across the Company. Within this group, various sub-groups have also been formed to cater to specialized areas such as In-line inspection, Corrosion Control etc. The Regional Integrity Management Group (RIMG) has also been formed in all pipelines Headquarters and working in tandem with the CIMG.
- » Empanelment of Subject matter Experts for expert services with regard to Pipelines Corrosion, Cathodic Protection (CP), in line Inspection (ILI), Coating, metallurgy and welding.
- » CCTVs have been installed at strategic locations in plants, compressor stations, pipeline installations, offices etc. for monitoring of these installations.
- » In main trunk pipelines, majority of valves are remotely operable. Further, Manual valves near urban areas are also converted to Remote operable valves.
- » Auto Closure facility of valves in pipelines near the city area. This will ensure that in case of any leak, burst etc., the valves will close automatically thereby reducing chances of further damage.

Pipeline Integrity Management System

GAIL's pipeline networks comprise predominantly carbon steel pipelines of sizes ranging from 4" up to 48" diameter and steel grades up to API 5LX 80. The integrity of pipeline starts with the design and construction stage. These pipelines are constructed to stringent quality specifications

in accordance with different codes and standards such as PNGRB – Technical Standards & Specifications including Safety Specifications for Natural Gas Pipelines – 2009 and ASME B 31.8 Gas Transmission and Distribution Piping Systems. The pipelines are coated with Three Layer Polyethylene (TLPE) on the external surface backed up with Impressed Current Cathodic Protection (ICCP) system to protect them from external corrosion and are buried.

The pipelines are operated and maintained to the best of industry standards and the operations are monitored round-the-clock through state-of-art communications and telemetry systems from regional control rooms at the headquarter of each network and from a central control room at Noida called National Gas Management Center (NGMC). All GAIL pipelines are having Pipeline Integrity Management Program as per PNGRB Regulations and ASME B31.8S / API 1160. Integrity Management system comprises of 3-tier Governance mechanism with Central Integrity Management Group (CIMG) at Corporate O&M, Regional Integrity Management Groups (RIMG) at all Pipeline headquarters backed with Maintenance bases. The implementation of Operation and Maintenance Policy & Guidelines for Pipelines is strictly monitored with its regular review. Various Pipeline Integrity web applications and databases have been developed for analysis and managing the huge data related to pipelines. Integrity assessment through the tools such as In-line Inspection (ILI), Direct Assessment (DA) and Hydrotest is carried out as per defined frequencies or at more intervals as required and timely mitigation actions are taken accordingly as where required. External Corrosion management by Cathodic protection system monitoring & maintenance, Internal Corrosion management by cleaning pigging, gas source quality monitoring is done along with coupons and probe monitoring.

Initiatives taken for pipeline integrity management system:

- » Organized Pipeline Integrity Management

System as per ASME 31.8 S from 27th to 29th Sept 2020; Organized Gas Transmission & Distribution Piping System as per ASME B31.8 from 09th Feb to 11th Feb 2021.

- » Obsolete non-functional CCVTs of various Pipeline Installations have been disposed and indigenous Gas Engine Generators (GEG) have been installed to improve the availability of power. Which has resulted in reduced downtime of SCADA/RTU.
- » Pitting at PSP measuring cable point on the pipelines have been noted at Agra and Firozabad Terminals and reports of the same has been forwarded to RIMG for further recommendations. Upon review of the same by RIMG and CIMG, the defect has been categorized under Immediate category and purchase order has been placed for the rectification of the same. Other sites of the central region have been asked to check the same at their resp. sites in IMS review meetings and other technical Pipeline forums.
- » GAIL O&M and HSE Executives participated in various Sub Committee Meetings of PNGRB Regulations on Emergency Response and Disaster Management Plan, Retail Outlet Dispensing, Integrity Management System for Natural Gas Pipelines & City Gas Distribution Networks, Gas Processing Plants and Refineries etc. as part of development/ amendment of Technical Codes & Standards.
- » GAIL has also initiated a concept of virtual pipelines in CGD which was approved by MoPNG to allocate domestic gas to geographical areas (GAs). This mode enables the transportation of CNG and PNG to CGD entities through cascades in a compressed form, or through LNG tankers in a liquid form.

Public Awareness Program on Pipeline Safety

GAIL conducted public awareness programmes on pipeline safety under the corporate guidelines

for public awareness on pipeline safety at various sites of GAIL. Below mentioned programmes were conducted during FY 20-21

- » ERDMP Offsite Mock drill successfully carried out on 15th December, 2020 at VSPL Pipeline Chainage 6.30 Km near Narava village, Pendurthi Mandal in Vizag Jurisdiction.
- » Rally, awareness programs conducted in nearby places for spreading awareness regarding gas pipelines and hydrocarbons. - Vaghodia Site
- » Nukkad Natak was conducted at various villages along Pipeline for creating awareness on Safety and Security of Natural Gas Pipelines amongst the villagers. – Dibiyapur Site
- » During the Workshop, CO-O&M/HSE made presentations on amendments in Integrity Management System Regulations for Natural Gas Pipelines and Emergency Response and Disaster Management Plan Regulations.

Total Quality Management

GAIL is committed to enhance customer satisfaction and standardizing business processes through the implementation of a Quality Management System. GAIL endeavours for continual and sustainable improvement through the implementation of effective quality practices, innovation and standardization. In this line, we have implemented Quality Management System and Energy Management System along various Pipelines and Process units at Corporate and Marketing offices. GAIL undertakes Quality Circle Projects with engagement of its employees, resulting in high employee morale and increased productivity.

We capture voice of customers to through Customer Value Management and Customer Satisfaction Index surveys. GAIL is proud to share that Customer Satisfaction Index for FY 2020-21 is 96.

Highlights of TQM Department

The basic aim of TQM department is to inculcate the quality culture in the mind of the employees. A definite set of tools are being implemented across GAIL, and controlled centrally from Corporate TQM department.

Tools like Customer Satisfaction Index, Quality Circles Projects and ISO 9001 are being implemented at all Work Centers.

There are two types of surveys conducted in GAIL to capture the feedback from customers on product quality and services offered by GAIL.

One is the Customer Satisfaction Index (CSI), is an in-house attempt by GAIL to collect the feedback from customers. A link is provided to all active customers of GAIL through their registered email id. Customer are giving feedback on some pre-defined parameters on quality and services. Their feedback is collected through SAP and analyzed. The observation are mitigated appropriately by GAIL, and after mitigation of the observations, customers are being informed to complete the loop.

One of the prime tool to inculcate Quality in the mind of the employees of GAIL is the Quality Circle (QC). It is a cultural and process change attempt in the Company. Employees are encouraged to form a small group of 3-4 person to undertake the improvement / modification project with in their work area only. The modification may be in process, in service, procedure and work system.

The journey of QC is proved successful in GAIL. Number of QC projects taken by employee are increasing per year. Average QC project taken across the GAIL is +200 numbers, however in year 2020-21 due to the pandemic, the QC project registered was 135 nos. and 75 nos. were successfully implemented.

There are motivational scheme associated with QC project in GAIL. The in-house scheme is CMD Trophy award for best QC projects. Quality Circle Forum of India (QCFI) is propagating quality

concepts in India also hold the competition among the Industries towards encouragement. There are three encouragement from QCFL; at

- (i) Regional Level
- (ii) National Level
- (iii) International Level

QC teams first participate in Regional Level Chapter convention held across around 32 nos. Regional Centers of QCFL. GAIL team from specific Work Centre participated in Regional meet. Teams qualified or getting higher marks get qualified for National Chapter. Event is held once in a year at one place in India where all the teams from private and public industries compete with each other.

Team getting higher rank in National Chapter qualify for International Competition held every year in affiliated countries. There are 14 countries apex bodies associating with quality. Teams from India compete with teams from Countries like Japan, China, Indonesia, Malaysia, Bangladesh etc. Best team awarded as Platinum, Gold and Silver. We are proud to announce that teams from GAIL are regularly participating in all the three events. In FY 20-21, the ICQC event was held at Bangladesh wherein 4 teams from GAIL participated in the event and all the four teams got highest award i.e. Platinum award.

TQM department is also undertaking the job of implementation of ISO 9001 (QMS) across Zonal offices and department at Corporate Office.

In addition to above jobs, GAIL undertakes the activities towards observation the Oil and Gas conservation. It is a one-month activity mandated by PCRA /MoPNG under Saksham program. Various activities like conducting Cyclothon, Walkathon and Talk Show etc. are being arranged and monitored by GAIL. In the FY21 Cyclothon was arranged successfully in 12 no. of cities

Environmental Management System (EMS)

GAIL improves operational efficiency by adhering to environmental policy and adherence to governmental regulations. It is achieved with the

help of environmental management systems.

Our environmental management systems serve as guidance in helping us reduce environmental impact and costs related to our operations. Additionally, our EMS, through our “plan-do-check-act” approach helps us in proactively reducing the risk of non-compliance and in holistically improving our operations, thus leading to continuous business improvement. Initiatives to protect biodiversity, waste, water management, etc. are discussed in depth in the chapter on ‘Energy and Environment’.

Additionally, to initiate any projects, the following measures are undertaken and executed

- » EIA (Environment Impact Assessment)
- » SIA (Social Impact Assessment)
- » RRA (Rapid Risk Assessment)
- » CCOE clearance (Chief Controller of Explosives)
- » HAZOP (Hazard & Operability study)
- » Market study
- » Coastal regulatory zone clearance
- » Construction Management Plan (CMP)
- » Adopting the state-of-the-art technology for construction projects requiring minimal resources and minimizing wastages

All EIA/EMP report for Proposed Production Operations are available on <http://environmentclearance.nic.in>.

No fines and non-monetary sanctions for non-compliance with environmental laws and/or regulations were issued against the company.

Energy Management System (EnMS)

GAIL's Energy Management System's (EnMS) objective is to reduce the overall energy consumption by monitoring, analyzing, and setting targets to minimize environmental impacts and directly reducing our company's carbon footprint.

Through effective energy management, operation costs can also be reduced in the long run. Through metering energy consumption, forecasting opportunities for energy conservation, improving efficiency, and recommending cost-efficient and environmentally sustainable alternatives, the EMS helps to conserve energy for a brighter future. All major sites have implemented ISO 50001 Energy Management System (EnMS). Further details about EMS can be found in the chapter of 'Energy and Environment' of this report.

GAIL always strives to look for ways and means to improve the energy efficiency in its operations by adopting the best engineering practices and carrying out periodic servicing and maintenance of all operational systems as per OEM recommendations. In the reporting year 2020-21, GAIL has taken multiple initiatives to increase energy efficiency through effective management processes including the adoption (replacement and retrofitting) of efficient technologies, the best practices, training/ workshops involving energy efficiency, energy management and 'climate change adaptation and mitigation' measures. Our highly efficient Integrated Energy Management System aids us in monitoring energy consumption, conducting energy audits and implementing energy efficiency measures.

All our major installations are ISO 50001 certified for Energy Management System. As an organization, GAIL remains committed to NDC (Nationally determined contribution) set by the Government of India to address climate change and taking possible measures to reduce its environmental footprints.

Compliance Management

We ensure to comply with, and effectively implement and adopt applicable national and international regulations and policy frameworks. This is made possible by our internal Legal Compliance Systems (LCMs). We carry out periodic audits to ensure failsafe compliance with applicable regulations and to ensure proper

implementation of the adopted standards. Internal audit teams and the HSE teams conduct such audits. The process involves inspection of the facilities, employee interviews, review, and status updates of the regulatory frameworks, and its adherence to regional, national, and local regulations. The compliance-level of the projects is assessed by the board-level audit committees while the responsibility lies on the departmental heads. As a result of our extensive efforts, none of our products or services was banned across any market/geography. Also, no monetary or non-monetary sanctions related to non-compliance were incurred by GAIL during FY 20-21.

Business Information System and Digitalization

Information security/cybersecurity risks are formal components of the overall risk management framework.

We have successfully implemented the information security management system (ISO: 27001:2013) on our systems. To disarm any cyber threat, we have established a Security Operations Centre (SOC) with an advanced persistent threat-mitigation system. Besides, we have initiated multiple projects and a private cloud infrastructure to improve network connectivity and information security. We have developed Countering Cyber Attacks and Cyber Terrorism (GAIL/ISMS/CMP: Crisis Management Plan for Countering Cyber Attacks and Cyber Terrorism). We are in the process of implementing a Crisis Management Plan to counter Cyber Attacks and Cyber Terrorism, for which we have created an Incident Handling Team. The disaster handling team will consist of the following teams from the Incident Handling Team to handle and manage any disaster affecting the Data Centre at Sector-1, Noida:

- » Crisis Management Cell (CMC) and
- » Level II Incident Resolution Team

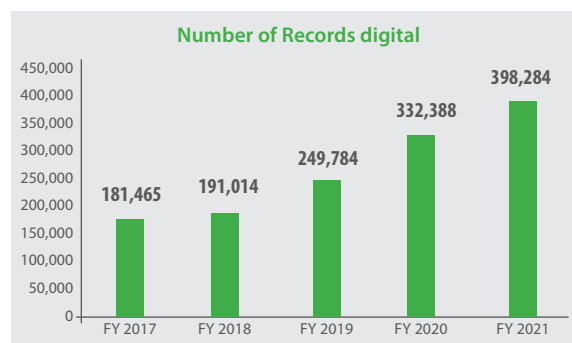
We have the mechanism to review and update information security/cybersecurity strategy on

monthly basis in Apex cybersecurity meeting, based on the inputs discussed in the fortnightly meeting. The board of directors are engaged in the review of information security/cybersecurity strategy.

We have a specific cyber-threat intelligence team (e.g. Cyber Emergency Response Team) in place for necessary actions.

We have implemented the policies and procedures related to information security/cybersecurity for the employees with an access to critical information in order to ensure that they are aware of threat issues and the importance of information security/cybersecurity.

No information security breaches, or other cyber security incidents or IT incidents occurred at GAIL in FY 20-21.



Activities and Initiatives taken for business information system and digitalization:

1. GAIL has always been at the forefront in adoption of new technology solutions for continual enhancement of its business processes. With a vision to be a digitally empowered organization for the operational excellence and stakeholder value creation, GAIL has adopted several path-breaking



→ Operations and Maintenance (O&M) work at GAIL Khera, Madhya Pradesh

- technologies in its technology stack. State-of-the-Art Energy Trading and Risk Management (ETRM) system has been implemented in the Energy Trading vertical, which has given complete visibility of the business segment under one platform. Hyper Convergence Infrastructure based Private Cloud setup with latest software and highest level of reliability, availability and efficiency has been established to cater to the business workload.
2. During the unprecedented COVID-19 pandemic, GAIL could function well with the help of several technological solutions like collaboration and virtual meeting platform, e-Note-sheet, secure access of systems for remote working, online transactions, mobile apps, etc. There have been approximately 156,000 man-hours usage of collaboration and virtual meeting platforms in the last one year.
 3. GAIL has seamlessly integrated its ERP system with several external applications such as (i) Bharat Bill Pay System (BBPS) for receipt of payment from PNG customers, (ii) Government eMarketplace (GeM) portal for exchange of PO, Bill and Payment details, (iii) GSTIN portal for submission of monthly GSTIN returns, (iv) TCS, e-Invoicing and e-Way bill portal for online and end-to-end integration with Statutory System (v) Gas trading platform of IGX for invoicing and payment (vi) Banks for auto-reconciliation, etc. for faster and reliable exchange of information.
 4. GAIL has adopted Robotic Process Automation (RPA) technology for easing out the repetitive tasks in very large volumes. Similarly, GAIL has developed several Mobile Apps for employee claims processing, other Business Transactions as well as Reporting functionalities to facilitate ease of use and access through handheld devices. These implementations have resulted in enhanced productivity, efficiency and accuracy in the workplace.
 5. GAIL has implemented several web-based applications like (i) Risk Management System to monitor key risks and their mitigation plans, (ii) Online verification of documents of candidates, (iii) Jahajrani Web application for tracking various post-award activities of contracts etc. for enhancing the transparency and completeness of business processes.
 6. In the CGD segment, GAIL has implemented CGD DPR Mobile App for monitoring penetration of PNG and CNG facilities by its JVs/ subsidiaries. App based CGD Meter Reading functionality as well as BBPS based payment system has provided lot of convenience to the CGD customers.
- ### GAILTEL (Telecom & Telemetry)
1. GAIL has successfully resolved the AGR issue with DoT and subsequently DoT has withdrawn all the demand notices, amounting of about INR 1.83 lakh crore.
 2. GAIL is in the process of upgrading the Centralized SCADA system with the latest technology for monitoring and controlling of the cross-country NG & LPG pipelines.
- » Other initiatives
1. Regular contact with customers and key decision makers for ensuring customer connect; in the pandemic period when physical visit to customer premises is not possible, Customer interactions taken up through digital mode rigorously
 2. Regular contact with customers through digital medium like phone calls, mails, etc. JZO PC Marketing was able to achieve the highest ever Annual sales in FY 20-21
 3. Finance: RPA Digital Initiatives for FICO
 4. Digitization of logbooks so as to do away with manual logbook hard copies and reducing the paper consumption by going digital.



Eurasian Spoonbill
Location : Pata



8.1 crore saved due to
HRSG project at Vijaipur



All major sites have
implemented ISO 50001
Energy Management System



Energy and Environment

Safeguarding the environment is our priority given that our operations and those in our value chain have impacts on the environment. Through an intense review of our operations and existing controls, we find opportunities to improve and introduce changes to our strategy. We assess our impact across the value chain and implement stringent standards for ourselves while periodically reviewing and identifying areas for improvement. This is the core component of GAIL's environment management agenda.

We believe in taking conscious steps to minimize our environmental footprint and reduce the impact through achieving operational excellence. Our continuous efforts include designing initiatives and mitigation measures that can positively influence the environment around us. To minimize the impact of LHC/polymer production, gas flaring and venting, gas transmission and wastewater production, we have adopted multiple standards and operating practices. We are working to define a reliable and inclusive approach that prevents and manages direct and indirect environmental impacts that arise out of our operations and business activities. It is our constant endeavor to go above and beyond the legal requirements to make this possible.

Biodiversity Management

In line with the legal requirements, GAIL is committed to maintain, enhance, or conserve biodiversity/ecosystems for company's own operational activities & company's supply chain.

GAIL is committed to avoid operational activities in close proximity to World Heritage areas and IUCN Category I-IV protected areas & apply mitigation hierarchy (avoid, minimize, restore & offset) when operating in areas in close proximity to critical biodiversity.

Therefore, GAIL undertakes proactive measures to protect the local biodiversity, and to ensure that local habitat in the regions where GAIL operates are not negatively affected by its operations. GAIL also performs environmental impact assessments before new plants are established. At GAIL, we understand the importance of biodiversity management in maintaining the ecological sustainability of the area. We have a well-defined Environment Management Plan (EMP) that chalks out guidelines and procedures for undertaking various initiatives for green-belt and biodiversity management at GAIL sites. Development of green-belt areas is one such initiative which highlights GAIL's efforts in preserving the biodiversity and maintaining ecological balance of the regions in which it operates. These greenbelt areas comprise of diverse and indigenous species of flora and fauna. There are also huge water reservoirs within these green-belt areas that harbor a variety of aquatic species. A scientific approach is adopted for undertaking maintenance and preservation of these green-belt areas in association with the local management.

We conduct regular surveys as well as studies pertaining to environment and ecology of the area in and around GAIL units to ensure prevention

and timely mitigation of issues. This system has contributed meaningfully to Goal 14 and Goal 15 of the SDG and are positively impacting life, both, under the water and on the land. It also helps to identify the mitigation measures and preventive actions that need to be undertaken. As a part of our efforts to safeguarding biodiversity, we have ensured that there are no protected habitats within 10 km of any operating site of GAIL. The pipelines that are laid in the green cover areas have a lifespan of 25-30 years. A bare minimum area is used for this purpose. Once the pipeline is laid, necessary actions are taken to restore/reclaim the forest area and it is generally untouched until the requirement of maintenance arises. To limit the negative impact of the pipelines on the environment, we utilize less than one-third of the RoU for the pipelines passing through the forest area.

Biodiversity Initiatives at Various Sites

Pata

Roadmap for development of Eco Park for Conservation of Biodiversity at GAIL Gaon (Pond Area in Phase-3) has been approved by the competent authority and an area of ~17Ha has been demarcated as Biologically Conserved Zone. Activities identified under the roadmap for development of Eco Park have been completed under phase -I.

Birdhouse cum feeder at Pata



Enhancement of Biodiversity and Habitat Development in and around Ecological Pond



GAIL Pata has nearly 500-acre land (around 33% of total area) that accounts for Green belt size. A total of ~81460 number of trees were planted at the operational site and a total of ~63685 number of trees were planted in the residential area till FY 20-21.

Vijaipur

GAIL Vijaipur has a total of 321-acre land (> 30% of total area) that accounts for Green belt size. A total of ~74,500 trees were planted at the operational site and a total of ~15,000 trees were planted in the residential area till FY 20-21.

Dibiyapur

GAIL Dibiyapur site has undertaken various green initiatives in the year 2020-21 during

World Environment Day & SAKSHAM-2021, which includes development of Vertical Garden at Dibiyapur Compressor Station. The site has completed the planting of 250 nos. of useful trees at its Compressor Station and also 250 trees were planted at GAIL Vihar colony.

Vaghodia

Vaghodia site has undertaken Dharohar project under GREEN GAIL initiative for distributing native plant sampling/tree to nearby schools, colleges, hospitals, residential areas to enhance the green belt in the surrounding areas.

Energy Management

GAIL always strives to look for ways and means to improve the energy efficiency in its operations by adopting best engineering practices and carrying out periodic servicing & maintenance of all operational systems as per OEM recommendations. In the reporting year 2020-21, GAIL has taken multiple initiatives to increase energy efficiency through effective management processes including the adoption (replacement & retrofitting) of efficient technologies, best practices, training/ workshops involving energy efficiency, energy management and 'climate change adaptation and mitigation' measures. Our highly efficient Integrated Energy Management System aids us in monitoring energy consumption, conducting energy audits and implementing energy efficiency measures.

All our major installations are ISO 50001 certified for Energy Management System. As an organization, GAIL remains committed to NDC (Nationally Determined Contributions) set by the Government of India to address climate change and taking possible measures to reduce its environmental footprints.

a. Installation of flare gas recovery unit (FGRU) at GAIL Vijaipur:

To recover gas flared through dry gas seals of various compressor units in C2C3 recovery Plant at GAIL Vijaipur, Flare Gas Recovery Unit

(FGRU) has been commissioned at a cost of around Rs 8.1 crores during the year. The recovered Natural Gas is being used for low-pressure fuel demand in Utility Boiler and HRSGs in the plant. Around 320 MT of Natural Gas recovery per month is estimated which translates to fuel cost saving of approx. Rs 12 crore annually. Its environmental benefits are also significant with an annual reduction of around 11100 tCO₂ emissions equivalent to CO₂ sequestration by more than 7400 fully grown trees plantation.

b. Installation of 2 Nos of HRSG for DVPL Compressors:

GAIL has commissioned one of the two units of HRSG (Heat Recovery Steam Generation) project being implemented at a cost of approx. Rs 58 crores for utilizing waste heat available from Gas Turbine Exhaust at Dahej Vijaipur Pipeline (DVPL) Gas Compressor Station Vijaipur. The design capacity of each HRSG unit is 17.5 TPH Steam. Utilization of waste heat for each HRSG unit is expected to save around 1171 Kg/hr fuel gas equivalent to around 12 MMSCM Natural Gas saving annually and reduction in 27000 tCO₂ emission equivalent to CO₂ sequestration by 18000 trees annually. The other HRSG unit is also ready and will be commissioned soon. Accordingly, the benefits will multiply.

c. Rich-Lean Gas Corridor Project for integrated HVJ pipeline network:

In order to operate HVJ-DVPL pipelines as an integrated system in optimal & cost-effective manner, implementation of rich-lean gas corridor project by creating interconnection facilities in HVJ, DVPL-I/II pipelines between Vaghodia to Vijaipur was taken up at an estimated project cost of Rs 60 crores. This arrangement will facilitate the transport of approx. 77-78 MMSCMD without the requirement of any intermediate compression between Vaghodia and Vijaipur. The modification will also prove beneficial in efficient utilization of installed compressors on

integrated HVJ pipeline networks. Previously a similar modification was implemented at Jhabua Compressor Station, which facilitated transportation of Natural Gas between Jhabua and Vijaipur without compression at intermediate compressor station at Khera.

With completion of modification work at IP station Vaghodia, rich-lean corridor project is almost complete and is expected to be taken in line very soon thus providing the benefits as enumerated above.

d. Other major initiatives for saving Energy

- » Replacement of two numbers 280 KW old & less efficient electrical motor with new energy efficient motor for cooling water circulation pumps at LPG recovery plant Vijaipur. Total annual saving from this project is approx. 1.47 Lac electricity units as it brings motor efficiency improvement from 91% to 94%. As a result, a monetary saving of Rs 9.58 Lac annually is estimated by this measure.
- » To meet the electrical power requirement at GAIL complex at Vijaipur, the company has contract demand of 13500 KVA for Grid Power supply with MPMKVCL. To contribute for efficient grid operation, GAIL has maintained a power factor above 0.99 throughout the year and has got Rs 3.49 crores Rupees as incentive in electricity bills.
- » Optimization of Molecular Sieve Dryer running cycle has been done at LPG recovery plant Vijaipur from 40 hrs to 60 hrs which has resulted in fuel gas saving during the dryer regeneration.
- » Enhanced capacity utilization of GPU Vijaipur has resulted in reduction in specific energy consumption to the tune of 4.3% over previous year.
- » There is a constant drive at various GAIL installations including pipeline stations to replace conventional Lights with energy efficient LED lights and replacement of old ACs with high star rated energy efficient ACs.

- » Installation of isolation valve to facilitate RLNG Intake from HLPL Hazira into HVJ compressors discharge instead of compressor suction line at Hazira Compressor station has resulted in fuel gas saving on account of no additional compression required for RLNG for mixing in HVJ pipeline network.
- » For maintaining cooling water outlet temperature within desired range, 02 numbers of VFDs have been procured for controlling ID fan operations of cooling tower of C2C3 Recovery Plant, Vijaipur.

Renewable Energy at GAIL sites

- » GAIL has ventured into renewable energy space and has the installed capacity of 12.3 MWp solar power and 118 MWp wind energy through its mega projects. In addition to these mega projects, GAIL has installed smaller capacity solar power plants at its pipeline installations Plants and Townships to reduce the requirement of Grid Power. During the year also, GAIL has taken the following steps for utilization of solar energy further.
- » Successfully commissioned 40 KWp Rooftop Solar Power System each at GAIL Samakhiali and GAIL Kandla with an investment of approx. Rs 33 lacs.
- » GAIL's Mumbai region has also commissioned Roof top solar power plants of combined capacity of approx. 44 KWp at various pipeline installations in the region with an investment of approx. Rs 16.5 Lacs.
- » The company is implementing a 1.8 MW solar power plant at GAIL Vijaipur complex with a project cost of approx. Rs 8.3 crores. The project was expected to be completed during 2020-21. However, due to supply disruption and restriction in movement of man & machinery amid COVID-19 pandemic, the project is slated for completion during FY 2021-22.
- » GAIL has also undertaken to implement roof

top solar power plants at various installations across the country with a combined capacity potential of around 3.2 MW. The project activities were hampered due to COVID-19 pandemic and it is expected that we will start reaping some of the partial project benefits from FY 2021-22 onwards.

Capital investment on energy conservation equipment

The capital investment on energy conservation equipment by the company during the year on the completed projects is approx. Rs 64.9 crores as per the following details:

Project	Capital Investment (INR Lakhs)
Installation of 2Nos of HRSG for DVPL compressors at Vijaipur	5420
Installation of Flare Gas Recovery Unit at GAIL Vijaipur	810
Installation of LED Lighting at Various locations	124.3
Replacement of old inefficient motors	71.3
Procurement of VFDs for CW ID fans	12.0
Solar PV Plants	49.3
Replacement of old ACs/geysers/Fans	3.3

Other Projects and Achievements

- » CO₂ is generated in the Gas Sweetening unit upstream of the C2/C3 recovery unit at GAIL Vijaipur. To reduce carbon footprint, PD department has been working on feasibility of supply of CO₂ from GAIL Vijaipur plant to NFL Vijaipur for Urea production.
- » GAIL Pata achieved lowest yearly average Specific energy Consumption of 88.5 MBG/MT against the IMO Target of 93 MBG/MT

for FY 2020-21. Open Access Power Import started through IEX (Indian Energy Exchange) w.e.f. 01.01.2021. Saving on account of Energy Bill in FY 2020-21 is 2.9 crore. Pata has also implemented the Energy Management System (ISO: 50001:2018) for the first time.

Emission Management

As a responsible corporate striving to augment the Government of India's capacity to meet their commitments in the Nationally Determined Contributions (NDCs) and commitments to the Paris Accords, we understand our role to achieve a low-carbon economy by controlling emissions arising out of our operations. The key impactful areas from an emission point of view within the gas transmission, liquid hydrocarbon, Natural Gas processing and polymer production are primarily air emissions and greenhouse gas emissions.

To ensure effective emission control, we monitor and regulate emissions in line with the Greenhouse Gas Reporting Standards by World Business Council for Sustainable Development (WBCSD), ISO 14064- 2006 and American Petroleum Institute (API), a compendium of GHG emissions methodologies for oil and Natural Gas industry –2009. To further strengthen emission control, we undertake various initiatives to reduce and monitor GHG Emissions.

Our emission management initiatives are categorized into core areas.

Reducing Methane Emissions

Methane, which is one of the components of Natural Gas, has a higher global warming potential and a lower emission rate during burning. During Natural Gas transmission, particularly between the pumping and storage operations and between the storage station and the end-user, some amount of gas escapes into the atmosphere, thus reducing the amount that is sold by operators to the market. For a Natural Gas marketing and distribution company like GAIL, it is prudent to manage emission rates due to environmental and economic impact. We

continuously strive to reduce leakage during transmission with the assistance of our industry peers to establish effective strategies to detect and reduce potential leaks.

Reducing production related GHG Emissions

Our direct emission is primarily from burning of Natural Gas, diesel and LPG. Natural Gas and LPG are also vented out in miniscule quantities in some processes causing methane emissions. Electricity purchased for operational purposes including manufacturing and transmission contributes to indirect emissions. We follow certain practices to reduce the production related GHG emissions such as:

- » Monitoring and tracking our energy consumption
- » Setting internal targets to reduce the consumption
- » Energy generation through renewable sources i.e. Solar, wind etc.

Reducing Other Air Emissions

At GAIL, emission management is carried out through the cloud-based monitoring system connected to our emission analyzers. It is then linked to the Central Pollution Control Board (CPCB) and State Pollution Control Board (SPCB) websites. With consistent efforts, we have significantly managed to reduce our emissions from GAIL plants, offices, pipeline installations, townships, and training centres pan India.

Ozone Depleting Substances (ODS), which are prohibited by our internal policies, are a common component in household electronics such as refrigerators, air conditioning systems, etc. They are characterized by their long atmospheric lifetimes, during which they act as precursors to deplete the stratospheric ozone layer. Additionally, ODSs are also strong greenhouse gases. To reduce scope 3 emissions, we encourage our team to conduct video conferencing rather than business travel.

Water Management

Water scarcity has become a crucial problem across the globe. More and more areas are being covered under water stress. We, at GAIL, believe that water is a lifeline for our society. Hence, over these years, we have set-up systems and explored technological advancements that are having a quantifiable impact on conserving water through innovation. We are monitoring and reporting water consumption at water stress areas. In FY 2020, we have also conducted assessment of water-stress sites to understand the impacts of our operations. There were no negative impacts found on water bodies.

In 2020-21, we consumed 21.3 million m³ of water, out of which, nearly 93% of water is sourced from surface water (having TDS < 1000 mg/l), 6.4% from municipal and only 1.3% of water from ground water. Water consumption at water stress area is around 4% of total water consumption.

We are encouraging innovative approaches to conserve water at our sites through various water conservation initiatives such as rainwater harvesting, fresh-water consumption minimization, monitoring and management of waste-water discharge, wastewater treatment and recycling based on our Environmental policy, national, local, and regional guidelines.

The discharge of water at manufacturing sites is monitored to validate compliance with Central Pollution Control Board (CPCB)/ State Pollution Control Board (SPCB) effluent limit. Wastewater from processes is treated, through effluent treatment plants (ETP). The treatment includes adjusting pH, removing suspended solids and reducing Biological Oxygen Demand (BOD), if any. No water bodies were affected by the discharge. Most GAIL facilities are zero liquid discharge. In 2020-21, total water discharge was 1.46 million m³. GAIL Pata alone contributes 95% in total water discharge which being discharge in Sengar river (having TDS < 1000 mg/L) as per regulatory discharge limits and permissions. We as well as respective regulatory agencies (SPCB/CPCB) monitor effluent water quality at the plant outlet.

and for the final water body.

Water Management Initiatives at GAIL Sites Vijaipur

- » Pure condensate from HVAC system was being drained locally, resulting in loss of water and energy. Hence to conserve the energy and water losses, initiatives were taken and Pure condensate line at MCR & SS11 HVAC were back flushed and condensate pumps were commissioned for exporting the condensate to CPU (DM Plant) for reusing. As per calculation, water saving in tune to amount Rs. 80 lakhs per year (approximately) was realized. In addition to this, leakages from steam traps were also attained to save approx. 2 TPH steam on account of arresting leakages. Initiative also have been taken to stop condensate waste from PRDS (PRU TR-11) by attending control valve operation philosophy.
- » Carrying out feasibility study for reclamation & reuse of treated effluent & DM n-pit effluent for cooling water make-up & treated sewage for horticulture purpose for GAIL-Vijaipur complex (Project Cost: 40.53 lakhs).

Dibiyapur

- » Regular monitoring of water consumption is being done using water meters.
- » Renovation of Sewage Treatment Plant has been completed at GAIL Vihar colony and the same is in operation (Project cost: INR 63.70 Lakhs).
- » Cooling Towers of HVAC System of Admin Building & Control Building have been replaced with new one (Project Cost: INR 6.28 Lakhs).

All of the above efforts have resulted in 11.89% reduction of Ground Water Consumption in FY 2020-21 as compared to FY 2019-20. Apart from the above, work of Rainwater Harvesting is also

under progress at Dibiyapur Compressor Station which is expected to be completed by Sept'2021.

Gandhar

GAIL Gandhar has created a rainwater harvesting pond within the premises for collection of natural run-off and recharging of groundwater. Approximately 2000 m³ Water utilized for MST-B & C inspection was reused for horticulture purposes after appropriate treatment.

Vaghodia

- » Treated wastewater is being recycled to use for make-up of Fire water storage. No wastewater is discharged outside the plant premise.
- » Reject water from the Centralized RO plant installed at Plant is being utilized in FW makeup and horticulture purposes.
- » Installation of additional water flow meters for better water accounting and reconciliation.
- » Regular maintenance of rainwater harvesting reservoirs for capturing more water during rainy season for improving the water table.

Chhainsa

Micro irrigation project for lawns was completed. Sensor based taps have been installed to reduce water wastage in bathrooms and kitchens. There is currently zero water discharge from plant as all water discharged is being used in irrigation

Waste Management

We aim to minimize the generation of waste from our facilities and try to reuse/recycle to the extent possible. The waste generated in our operation can be both hazardous and non-hazardous.

As a part of our waste management process, we aim to minimize both hazardous and non-hazardous waste. We follow the 3R process of Reducing, Re-using, and Recycling of the non-hazardous waste generated at GAIL sites. Our polymer packing is being recycled through the secondary and tertiary markets. No waste related

impacts of business operations or product were found as per the waste audits carried out internally and external agencies (SPCB, third party audits).

Waste Management Initiatives at GAIL Sites

Pata

- » Commissioned a dedicated waste storage facility for collection before dispatch to Common Hazardous Waste Treatment, Storage and Disposal Facility (CHWTSDf) and Recyclers.
- » 88 MT of organic waste processed in Organic Waste Composter (Plant and Township) in FY 2020-21.
- » GAIL's Petrochemical Plant at Pata generates Oily WWTP Sludge, Used Oil, Waste Oil, Tar, Tar Ash, Spent Carbon and Molecular Sieves which are handled and disposed as per rules following environmentally sound procedures as below:
 1. Oily Wastewater Treatment Plant sludge is sent to external Treatment Storage & Disposal Facility (TSDF) for incineration & landfilling.
 2. Waste and Used oil is collected in drums which are kept at demarcated location in yard area and sold to approved recyclers/re-processors registered with MoEFCC / CPCB/SPCB.
 3. Tar, Spent Molecular Sieves and spent carbon are stored in earmarked Storage Yard and sent to external Treatment Storage & Disposal Facility (TSDF) for disposal.

Dibiyapur

- » Disposal action was taken by the unit to sell wastes generated during the year through M/s MSTC. Total 140.605MT of Metal Scrap has been disposed off during FY 2020-21.
- » Separate collection of Biodegradable and Non-Biodegradable household wastes has

been arranged. Organic Waste Decomposing Machine has been procured to convert biodegradable waste to fertilizers.

- » Use of PET bottles has been discouraged at Compressor Station. Instead use of copper/steel/glass water bottles has been encouraged and implemented at Compressor Station.
- » Awareness created among the employees about standard operating procedure for production of Vermicompost.
- » Awareness session on waste segregation imparted to GAIL Vihar residents. Training session provided to sweepers for collection & disposal of segregated waste. Residents of GAIL Vihar segregate biodegradable and non-biodegradable wastes separately and then the sweeper collects the waste for their appropriate disposal.
- » Waste Lube Oil disposal as per Schedule 1 Cat 5.1 of Hazardous and other Waste Rules, 2016.

Gandhar

- » GAIL Gandhar is carrying out timely and suitable disposal of both hazardous and non-hazardous waste i.e. Disposal of O&M Scrap at GAIL Gandhar, Disposal of Slop Oil, Disposal of Biomedical waste, E-waste etc.
- » Separate dustbins have been placed at both township and plant for segregation of dry and wet waste. Employees, family members and contractual workers are being continuously made aware about the importance of segregation of waste during various Swachh Bharat programmes.
- » Awareness to the local community and other stakeholders in various ways was also imparted during the year.

Vaghodia

- » Hazardous wastes are segregated and stored in dedicated storage space. Later they are disposed off through approved recyclers. Plastic waste, bio-medical wastes and e-wastes are segregated and given to third

party recyclers.

- » GAIL Vaghodia has also launched a PAPER RECYCLING PROJECT whereby wastepaper from various departments are being collected, shredded, weighed and exchanged with a local vendor for fresh white paper rim.
- » Used Oil, Waste oil and empty Mercaptan, methanol, etc. drums are the only hazardous waste generated at site.
- » Campaigns for Swachh Bharat Abhiyan were conducted. Various awareness related activities were restricted due to the spread of COVID-19. Although all efforts were made for making the public aware through wall paintings and message boards in nearby places. Awareness on cleanliness for employees with emphasis on segregation of waste (dry and wet) and also regarding maintaining personal hygiene at home and workplace.

Samakhiali

- » Separate dustbins provided for dry and wet waste awareness programs organized at nearby areas.
- » Conversion of food wastes and plant tree leaves to organic fertilizer.

Vijaipur

- » Hazardous waste generated at the site are Asbestos, Glasswool, Ceramic, Empty barrels/Containers/Liners Contaminated with Hazardous Chemicals /Wastes, Used or Spent oil, Waste or Residues Containing oil. These wastes are disposed as per Hazardous Waste Management Rules 2016. All the Hazardous waste disposed of through the TSDF facility.
- » Dry & Wet waste is being segregated at GAIL Township, Vijaipur & being disposed appropriately.
- » Organic Waste composting plant operation was maintained throughout the year except lockdown period.

Chhainsa

- » The scraps, which included Mild steel scraps, plastic, used oil, drums, GI sheets etc. amounting to about Rs. 2.59 lakhs including GST were sold off to M/s TKJ Infrastructure Pvt Ltd, Delhi.
- » Dry waste (eg. Paper, plastic, metal etc) and wet waste (kitchen waste) are segregated at source and disposed of separately. Recyclable dry waste like plastic, metal etc. are sent to recycler

Hazardous Waste Management

- » Hazardous waste is toxic, and it can be potentially harmful to human health and the environment. At GAIL, hazardous waste is treated in compliance with the applicable norms and regulations. Type of hazardous waste generated will vary from site to site. For example, at GAIL Pata site, Tar, oily WWTP sludge, slop oil, molecular sieves, used oil, waste mineral oil, spent carbon, ashes etc. are identified hazardous whereas at Vijaipur asbestos, glasswool, ceramic, empty barrels/containers/liners contaminated with hazardous chemicals /waste, used or spent oil, waste or residues containing oil are considered are identified as hazardous waste. Waste oil is generated at most of the sites. The disposal of such waste is carried out by the State Pollution Control Board (SPCB) authorized recyclers or sent to SPCB authorized Treatment Storage and Disposal Facilities (TSDFs). In this reporting year 2020-21, there was no significant spill.

Research and Development Initiatives

Natural Gas is a critical fuel source for propelling the Indian economy. The share of Natural Gas in the country's energy basket is consistently improving, due to increased use of Natural Gas both as a fuel and feedstock for industry and as a fuel for electric power generation. GAIL, as a pioneer of the Natural Gas economy in India, operates and maintains pan India Natural Gas

transmission pipeline networks, comprising high-strength steel pipes of varying diameters, for supplying Natural Gas to various consumers. In this direction, one of our research thrust areas is on the "Pipeline Asset Monitoring and Integrity Management" for enhancing the reliability, public safety, and operational efficiency of Natural Gas infrastructure. Under this initiative, GAIL in collaboration with IIT-Kanpur have developed a Prototype of "Adoptive Intelligent Pipe Health Monitoring Robot" for Fuel transporting systems. Currently trials incorporating the new sensors, Long range communication and Speed control systems are being carried out with the prototype. Further, for aerial monitoring of pipeline ROU for early identification and prevention of encroachments, GAIL in association with IIT-Kanpur is also developing a "Low Altitude Long Endurance (LALE) Unmanned Aerial System (UAS) for Surveillance, Reconnaissance and Asset Monitoring (SRAM). Vertical take-off and landing, auto navigation system, auto-pilot, beyond visual flight, electrical propulsion, gas leak detection, low weight (11kgs) etc. are the salient features of UAS. A trial run within IIT- Kanpur has been successfully completed with the prototype and now works involving integration of high-resolution gas sensing cameras for identification of leaks are in progress.

Under the thrust areas of "Natural Gas utilization/ Value addition", the following collaborative research works are being pursued at various research institutes.

GAIL in association with IIT-BHU, is developing a 'Membrane Reformer' for the production of fuel cell grade ultra-pure hydrogen by utilizing Natural Gas as a fuel. In addition, a novel heterogeneous catalyst for oxidative coupling of methane to ethylene production is also being pursued with CSIR-IIP, Dehradun. Further, a research work, to investigate the combustion and emission phenomena of dual fuel (CNG & Diesel) light-duty high speed direct injection Compression Ignition engine, and to minimize NO_x, Particulate

Matter (PM) and CO₂ emissions coupled with fuel efficiency improvement, is being pursued with IIT-Bombay.

In addition to the above initiatives, GAIL research efforts are also directed towards "Waste valorisation" aspects towards zero waste discharge. In this direction, GAIL is pursuing collaborative research works with IIT-Madras for "Wastewater Purification and Recycle using Gas Hydrate Process" as the development of optimized hydrate-based processes is supposed to be energy efficient as compared to RO based wastewater purification.

Expenditure for Research and Development activities

GAIL consistently earmarks adequate R&D budget to pursue various collaborative research initiatives with reputed research and academic institutes and to carry out new developmental works, involving Technology upgradation and Modernization works, at various GAIL facilities.

GAIL has incurred a total R&D expenditure of Rs. 20.12 crore in the financial year 2020-21. This includes Rs.10.92 crore on Developmental projects; Rs.9.20 crore on Sponsored Collaborative R&D works with various Research Institutes & Contribution to Centre of Excellence in Oil, Gas & Energy (CoE-OGE) established at IIT-Bombay by Oil & Gas CPSU's.

Developmental works include various Technology upgradation and Modernization works carried out at various Process Plants and Pipeline O&M facilities.

The Collaborative R&D works are carried out in the Thrust areas of Pipeline Asset Monitoring and Integrity Management; Natural Gas Utilization/ Value addition, CO₂ and Waste Valorisation's etc.

GAIL has contributed Rs. 2.18 crore as first instalment to Centre of Excellence in Oil, Gas and Energy (CoE-OGE) set up at IIT-Bombay along with other Oil & Gas PSUs, to carry out Industry relevant R&D works in the area Gas Hydrates, Pipeline management, Wealth from Agricultural

residue, Water and wastewater management etc. in the seed and mission mode.

Initiatives to promote low carbon technology including CO₂ utilization, clean energy etc.

Global CO₂ emissions in 2020 fell by 2.6 billion tonnes due to COVID-19 pandemic lockdowns. During this period India's emissions fell 9.7% to a little more than the world average of 9.6%. Even though, Indian efforts to cut CO₂ emissions, since the Paris Agreement are showing positive results, but still concerted research efforts are required to find feasible solutions for bulk utilization of CO₂. Valorization of CO₂ for chemical synthesis is still very challenging as the CO₂ molecule is very inert and requires immense energy and versatile catalysts for reactions. In this aspect, GAIL is developing novel and cost-effective catalysts for production of carbon dioxide-based poly carbonate diol polymers in association with IISER, Tirupati. This project also aims to find an optimal condition to incorporate a maximum of 45 - 47 wt. % CO₂ in the polymeric product under milder reaction conditions with minimal additional energy input and less by-product formation. Thus, any success in the development of the above versatile catalyst for the conversion of CO₂ to Polycarbonate Polymer can provide immense benefit and mitigation of CO₂ emissions. Further, the research project on development of thermally stable, water tolerant novel heterogeneous catalysts for direct hydrogenation of CO₂ to Methanol and Dimethyl Ether is continued with IIT-Delhi. A pilot project for direct fixation of CO₂ using microalgae in a raceway reactor is also

being implemented at PATA.

Under the clean energy initiative, GAIL is exploring various potential alternatives for energy generation. One option is the use of bio organic waste feedstock for the production of biogas through anaerobic digestion. Food waste, for instance, due to their relatively high starch and protein contents and high biodegradable nature, is a suitable organic source for bio-methanation. In this direction, GAIL in collaboration with CSIR-IICT, Hyderabad, is developing a high rate bio- methanation process for the generation of methane enriched biogas (more than 90%) from food waste. The main emphasis of the project is on development of an anaerobic digester system for generation of enriched Methane.

Start-up Initiatives taken by GAIL

GAIL's Start-Up initiative 'Pankh' was launched to build a strong eco-system for nurturing innovation and the spirit of entrepreneurship. GAIL has created a corpus of Rs. 100 crores for investing in Start-Ups. Investment Proposals from Start-Ups are received on the Start-Up web Portal. GAIL has made investments in 29 Start-Ups operating in various Focus Areas of GAIL. The amount disbursed to various Start-Ups in FY 20-21 is Rs. 17.01 crore. GAIL has signed 5 investment agreements worth INR 15.30 crore with Start-Ups operating in the area of Compressed Bio Gas (CBG) in FY 2020-2021.



Sparrows & Weavers

Location : **Pata**



Committed to support the transition to a **low emission** Future.



Committed to install **1 GW of Renewable energy**



'SATAT' Transformation, CBG projects worth 15.3 crore under progress



Climate Change

“Climate Change is the biggest threat facing humanity over the long term today”

United Nations Framework Convention on Climate Change (UNFCCC) defines climate change as “a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods”. The impact of emissions added into the atmosphere by human activities has led to a gradual trigger for enhanced greenhouse effect. The intentions of development gave rise to an unprecedented alteration in the cycles of Nature. The changes are such that many systems of the nature have undergone drastic alterations and are standing on the verge of tipping points. The most concerning of all changes are the extreme weather events, threat to ecosystem, chronic weather changes; which get aggravated by uneven distribution of impacts, unequal opportunities and adaptation ability. This calls for an urgent mitigation and adaptation plan by every individual so that present and future harm to nature and its ecosystems are reduced, ultimately ensuring betterment of all species on earth.

Climate Change and Sustainable Development

India along with over 190 countries is a part of the Paris Agreement which brings us together to take action against the changing climate so that the temperature rise is limited within 2 degree Celsius

pre industrial level by the end of this Century and attempting to limit it to 1.5 degrees. India submits its Nationally Determined Contributions to the UNFCCC mentioning its goals for the action against climate change. The NDC's bind all the citizens of the country to the responsibility of ensuring that the goals are met. GAIL being a responsible company recognizes the significance of mitigation and adaptation goals set by India in its NDC's.

The Sustainable Development goals (SDG's) comprises of a set of targets building a framework for leading development for the period till 2030. By endorsing the universal 2030 Agenda for Sustainable Development, including its 17 SDGs and 169 Targets, the global community reaffirmed its commitment to sustained and inclusive economic growth, social inclusion, environmental protection, and fostering peaceful, just and inclusive societies through a new global partnership. The prospected 2020 Sustainability pathway could be summarized into three broad categories of reducing transmission of virus, helping the socio-economic conditions recover from pandemic loss and align the development with SDG 2030 framework while addressing climate action.

If the goals of the SDG are to be met and sustainable development is to be fully achieved

then the action against climate change is a key factor and driver to actually meet the SDG targets.

Achieving Sustainability by Action against Climate Change

The 2030 Agenda's Sustainable Development Goals include the SDG 13: "Take urgent action to combat climate change and its impacts" as a stand-alone goal on climate action, but it is key to mention that climate change affects all dimensions of sustainable development. Climate change and climate action are intrinsically connected to all sustainable development goals. The crosscutting areas of the various SDG's with Climate change are :

- » SDG 12: Responsible Consumption and Production: The production of goods and services today not only depletes natural resources and causes environmental degradation including soil, water and air pollution but also generates huge amounts of GHGs, therefore contributing to climate change throughout their life cycle.
- » SDG 7: Affordable and Clean Energy : An immediate increase in renewable energy technologies and increased energy efficiency is an essential part of reaching Paris goals stated under the NDC of India. Cleaner fuels than the conventional high carbon emitting ones will serve as a transition platform to reach complete Carbon neutrality.
- » Climate action on energy efficiency can increase energy access and reduce energy expenditure (SDGs 1, 7), can improve health (SDG 3), can reduce water pollution (SDGs 11, 14), and increase economic productivity (SDGs 8, 9).
- » Reduction in burning dirty fossil fuels like oil and coal means cleaner air in our cities and homes (SDGs 11, 12). This will lead to less people suffering and dying from respiratory diseases, especially children and elderly, and will enhance everyone's well-being and quality of life (SDG 3).

- » Protecting our forests, peat lands and oceans means we and future generations will be able to enjoy nature and their ecosystem services, like a healthy life under water and livelihoods for millions of people, cities and villages that are protected from storm surges or sand storms (SDGs 14, 15).

Vision and Action

The importance of decarbonization has been felt across the globe. We recognize the urgency of climate change and the need to work collaboratively in a scientific and practical manner. Thus, GAIL under the guidance of the Government of India's Principal Scientific Adviser (PSA) will work towards making our operations carbon Neutral or achieve Net Zero GHG Emissions. This can be substantiated by setting ambitious goals, which will be based on the capacity of GAIL while at the same time encouraging innovation and creativity. The sharing of ideas and knowledge will be a continuous and fruitful collaboration, extending to exploring new ways of waste management at GAIL, and mainstreaming more SDGs with the business actions and decisions. Our management is already in action to fulfill our carbon neutral ambitions.

GAIL has set a remarkable target to install 1 GW capacity of Renewable Energy in the coming years, to significantly contribute to India's NDC as well as help in making GAIL Carbon neutral at the earliest along with more explored benchmarking efforts and initiatives. The members of GAIL across all departments' share the following vision for action against climate change which assist us in working in a collaborative and coordinated manner towards achieving Sustainability and Carbon Neutrality:

- » To ensure greater public access to affordable, reliable and modern energy services which are low on carbon footprint through the accelerated cost-effective provision of clean energy, renewable energy and an Effective Carbon Neutral business plan.

- » Exploring potential of decentralized renewable energy incorporation, alternative fuels such as Compressed-Biogas, and innovative technology to reduce emission by applying scientific rationale and testing.
- » Enable and promote cooperation and partnership towards the implementation of Goal 7 by transitioning to net-zero CO₂ emissions by mid-century so as to meet the goals of the Paris Agreement including by introducing carbon pricing.
- » Increase awareness, capacity and knowledge sharing, while also strengthening the ability of the supply chain of the company to take stronger action against climate change.

The action against climate change include Adaptation and Mitigation. The adaptation will increase the resilience against the present or predicted changes of climate while mitigation is aimed at reducing the greenhouse gases such that the source of increasing global average temperature is effectively addressed. GAIL is dedicated to performing both adaptation and mitigation to climate change by taking up various initiatives and actions. With the entire world dedicated to set targets for carbon neutrality in their business boundary of reporting, we have acknowledged the need to carry out a target setting for making GAIL carbon neutral, which will contribute to the NDC's of India, set a benchmark for fossil fuel companies while also opening up various opportunities for the company to become resilient for tomorrow.

Adaptation

The impact of climate change on the availability of crucial natural resources such as water are quite evident. That is why at GAIL, we have implemented water conservation and management systems at all the sites to use water judiciously and incorporate circularity in its use, wherever possible. The plantations and expansion of green belt across several sites of GAIL are aimed to contribute to replenishment of ground water level while acting as carbon sink.

The area of transition in technology, management as well as finance tools for climate change adaptation are evolving every day, a dedicated R&D team at GAIL is motivated to carry out research for bringing out best practice which will contribute to Sustainability and Climate Change action.

The transition to cleaner sources of energy require the proper capacity in terms of financial tools along with accountability being taken for the activities which contribute to emission. The strategy to deal with both these requirements has been believed to be achieved by Carbon Pricing. GAIL is positive to bring internal carbon pricing within its business activities to uncover new areas of climate adaptation and mitigation.

GAIL has assessed the risk potential of various sites to sea storm surges, cyclone, excessive rains & flood and suggested important actions for each department and individual before, during and after such events. Additionally, mitigation measures are also taken into consideration at design stage prior to construction. Currently all the sites located in the coastal parts of India are incorporating flood mitigation measures. GAIL has also setup a Crisis Management Plan -for safe shutdown. As per our assessment, Cost of the plant shutting down one of our major plant in PATA for one day due to climate risks such as flooding would be INR 8 crore. Cost of the response of the risk is estimated around iNR 10 crore for making flood defense system at Pata. Please refer to carbon disclosure project (CDP) report for more details. We are working on building more comprehensive plan to adapt against climate change impact.

Mitigation

In Paris climate agreement, India has pledged to reduce the emissions intensity of its GDP by 33 to 35 percent by 2030 from 2005 level.

- » To achieve about 40 percent cumulative electric power installed capacity from no fossil fuel based energy resources by 2030

with the help of transfer of technology and low cost international finance including from Green Climate Fund (GCF).

- » To create an additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent through additional forest and tree cover by 2030.

Natural gas being the cleanest fossil fuel, when burned, releases 50% less CO₂ than that of coal and 20-30% less than oil. By virtue of inherent characteristics of natural gas, being a cleaner alternative to other polluting fuels. Further, it will help in generating clean power in tandem with renewable energy.

GAIL has been consistently working on accelerating and optimizing the effective and economic use of natural gas and its fractions for the benefit of the national economy. The Indian government is committed to moving toward a gas-based economy by raising the share of natural gas in India's energy basket from the current 6.2% to 15% by 2030 to support the transition to a low-emission future.

Reducing Methane Emissions

Methane that is one of the components of

the Natural gas has a higher global warming potential and a lower emission rate during burning. During natural gas transmission, particularly between the pumping and storage operations and between the storage station and the end-user, some amount of gas escapes into the atmosphere, thus reducing the amount that is sold by operators to the market. For a natural gas marketing and distribution company like GAIL, it is prudent to manage emission rates due to environmental and economic impact. We continuously strive to reduce leakage during transmission with the assistance of our industry peers to establish effective strategies to detect and reduce potential leaks.

Initiatives/Strategies to reduce methane emissions

- » LEL Gas detectors are installed at various locations under Agra region so as to check any gas leakage at the stations. Moreover, 20 number of hand held LEL meters were procured for the line patrollers so as to check any gas leakage in the pipeline section. These detectors will help mitigate direct release of gas, hence mitigating emission.



- Voltaic Solar Power Project at Suvali Gram Panchayat. GAIL Hazira, under its Corporate Social Responsibility initiative successfully completed the Installation of Photo Voltaic Solar Power Project at Suvali Gram Panchayat. A small inaugural function was hosted at Suvali Gram. Shri Satish Geda, CGM (O&M)/OIC of GAIL Hazira Compressor Station, and Suvali Gram Panchayat were present for the ceremony.

Shri Satish Geda inaugurated the function and started with ribbon cutting. Suvali Gram Panchayat expressed their gratitude towards GAIL (INDIA) LIMITED for a gesture as magnanimous as this. They were happy to have a solar panel in their village. The assistance by GAIL for installation of PV grid would assist them in the day-to-day aspects. This assistance not just limited to financial but also included keen involvement of the GAIL officers in ensuring that the project was complete on time. Similarly, GAIL expressed their feeling of satisfaction in being a part of a new initiative that will pave a path of success for Suvali Gram.

- » Leak Detection System (LDS) has been implemented for Kailaras-Malanpur Pipeline.

Reducing Energy consumption:

At our sites number of initiatives are taken to reduce electricity and fuel consumption. These initiatives are covered in detail in Energy and Environment Chapter. In FY 2020-21, we sold 89.2 MMSCMD of natural gas to our customers. It can be considered as energy consumption outside the organisation. However, it should be noted that usage may vary as per customers i.e. fertilizer primarily uses natural gas for feedstock, whereas as sectors are for direct heating and electricity. Our pipelines are reaching upto far remote areas which is reducing cost as well as emission associated with LPG/CNG transportation. Natural gas being the cleanest fossil fuel helping industries to reduce their emission by replacing solid polluting fuel through natural gas.

Renewable energy

In the Paris Agreement, India has committed to Nationally Determined Contributions (NDC) target of reducing India's emissions intensity by 33-35% from 2005 levels by 2030 by achieving 40% of its total electricity generation from non-fossil fuel sources. Accordingly, Government of India (GoI) has set a target of installing 175 GW of RE capacity by the year 2022, which includes 100 GW from solar, 60 GW from wind, 10 GW from bio-power and 5 GW from small hydro-power. GAIL's 'Strategy 2030' also recommended for building new businesses with long term potential and investing in renewables through Mergers and Acquisitions (M&A) and or developing renewable energy plants through bidding route wherever investment would fetch reasonable returns.

GAIL intends to set up solar PV projects in order to reduce carbon footprints and contribute to clean energy mechanism at National level. In line with above, GAIL is exploring various opportunities in solar with an objective to have a sizeable solar portfolio.

For organic growth in solar sector, GAIL is participating through bidding in the forthcoming Solar Tenders floated by various Government

Agencies like SECI, NTPC, etc. for developing green field projects, mainly solar projects as Independent Power Producer (IPP).

GAIL shall Participate in solar tenders with the minimum capacity of 100 MW and continue to participate till the cumulative awarded capacity reaches 500 MW.

GAIL is committed to reduce its carbon footprint and implement renewable projects and it has a total installed capacity of 130.6 MW of alternative energy. Further, we have announced the installation of 1000 MW of renewable energy to meet our carbon neutral efforts by 2035.

Ambitious target for renewable energy

Our target is to add 1 gigawatt of renewable energy through solar and wind both together or any other renewable part. And towards that we are doing both inorganic and organic efforts to achieve the same. We have chalked out around 4000 to 5000 crores to achieve our target, if we get good projects we can even exceed this target.

GAIL needs 800 MW of renewable energy to become carbon neutral. Through 1 GW of renewable energy we can go beyond net zero carbon emissions.

Biodiversity:

Trees are the lowest hanging fruit when it comes to mitigating direct emissions. GAIL recognizes the importance of Nature based solutions to deal with climate change. GAIL is on a path to work with the best knowledge and expertise holders, by signing an Memorandum of Understanding (MoU) with the Principal Scientific Adviser (PSA) to the Government of India. This collaboration will set stones to the journey ahead to establish relevant impactful projects on topics, which will include setting up Afforestation projects following the Miyawaki technique to enhance the carbon sink, preserve biodiversity, mainstream nature based solutions to deal with issues of

Renewable Energy Project In Operation

A. Solar Projects:

1. **5 MW Solar Project at Rajasthan:** GAIL had set up a 5 MW ground mounted Solar PV project at Jaisalmer, Rajasthan under Phase-I, Batch-II of NSM and is successfully running.
2. **Captive 5.76 MW Solar Project at Pata:** 5.76 MW Solar PV plant at rooftops of LLDPE / HDPE warehouses had been set up at GAIL Pata in 2017 and is successfully running.
3. **Captive 1.8 MW Solar Project at Vijaipur:** Investment Approval has been obtained from the Competent Authority for setting up of 1.8 MW ground mounted Solar project at Vijaipur with a project cost of Rs 11.69 cr. for captive consumption in 2019. The Project is under implementation
4. **Captive 2.64 MW Solar Project at Pata:** Investment Approval has been obtained from the Competent Authority for setting up of 2.64 MW roof top solar project for captive consumption at Pata in August, 2020 with a project cost of Rs.12.97 crores. The Project is under implementation.

B. Wind Projects:

1. Captive 19.2 MW Wind Project set up in Gujarat and is successfully running
2. 38.1 MW Wind Project set up in Karnataka and is successfully running
3. 60.65 MW Wind project set up in Tamil Nadu and is successfully running

GAIL is exploring various opportunities in RE with an objective to have a sizeable RE portfolio. For organic growth in RE, GAIL is exploring the opportunity of participation in greenfield solar power tenders. In this regard, in 2019, GAIL executed Memorandum of Understanding (MoU) with M/s Bharat Heavy Electricals Limited (BHEL) for development of solar power projects. For inorganic growth, various M&A opportunities in RE are being evaluated.

Site wise initiatives for renewable energy:

- » Installation of Rooftop Solar panel 190 KWp in Central warehouse at Vaghodia. A total of 2,20,482 units of electricity have been generated through the renewable energy source.
- » Installation of Solar PV System at Aonla Terminal is happening at full pace in this financial year along with Installation of Solar PV System at Jagdishpur Terminal.
- » A 236 kWp Solar Power plant is expected to be commissioned by end of 2021 at Gandhar.
- » Successfully commissioned 40 KWp Rooftop Solar Power System each at GAIL Samakhiali and GAIL Kandla with an investment of approx. Rs 33 lacs.
- » GAIL's Mumbai region has also commissioned Roof top solar power plants of combined capacity of approx. 44 KWp at various pipeline installations in the region with an investment of approx. Rs 16.5 Lacs.

pollution and ultimately address the fight of climate change. In FY20-21, 6,000 trees planted under CSR activities.

Alternative fuels

Compressed biogas (CBG):

To provide sustainable alternative towards affordable transportation as a developmental effort that would benefit everyone; GAIL and its CGD JVs, and GAIL Gas Limited and its JVs have invited expression of interest and issued letters of intent for Sustainable Alternative Towards Affordable Transportation (SATAT) Initiative of GoI. GAIL is part of SATAT' (Sustainable Alternative Towards Affordable Transportation) initiative launched by the Ministry of Petroleum and Natural Gas to promote Compressed Biogas (CBG) as an alternative, green transport fuel.

Biogas is produced naturally through a process of anaerobic decomposition from waste / bio-mass sources like agriculture residue, cattle dung, sugarcane press mud, municipal solid waste, sewage treatment plant waste, etc. After purification, it is compressed and called CBG, which has pure methane content of over 95%.

Compressed Biogas is exactly similar to the commercially available natural gas in its composition and energy potential. With calorific value (~52,000 KJ/kg) and other properties similar to CNG, Compressed Biogas can be used as an alternative, renewable automotive fuel. Given the abundance of biomass in the country, Compressed Biogas has the potential to replace CNG in automotive, industrial and commercial uses in the coming years. The potential for Compressed Bio-Gas production from various sources in India is estimated at about 62 million tonnes per annum.

Understanding the benefits of CNG, GoI announced Sustainable Alternative Towards Affordable Transportation (SATAT) scheme an initiative aimed at setting up of Compressed Bio-Gas production plants and make it available in the market for use in automotive fuels by inviting Expression of Interest from potential entrepreneurs. The initiative was launched in October 2018 by the Ministry of Petroleum & Natural Gas in association with Public Sector Undertaking (PSU) Oil Marketing Companies (OMC).

Supporting SATAT transformation

As an attempt to support the MOEFCC and SATAT vision of setting up 5000 CBG (Compressed Bio-gas) plants, GAIL has worked towards setting up this Carbon friendly technique of energy supply, GAIL's Start-Up initiative 'Pankh' which was launched to build a strong eco-system for nurturing innovation and the spirit of entrepreneurship has signed 5 investment agreements worth INR 15.30 crore with Start-Ups operating in the area of Compressed Bio Gas (CBG) in FY 2020-2021. In the similar direction GAIL is also exploring options for the use of bio organic

waste feedstock for the production of biogas through anaerobic digestion. Food waste, for instance, due to their relatively high starch and protein contents and high biodegradable nature, is a suitable organic source for biomethanation. In this direction, GAIL in collaboration with CSIR-IICT, Hyderabad, is developing high rate bio- methanation process for the generation of methane enriched biogas (more than 90%) from food waste. The main emphasis of the project is on development of an anaerobic digester system for generation of enriched Methane.

GAIL has taken the decision of venturing into CBG business by setting up CBG production plants. GAIL is setting up its first CBG plant of 5 TPD CBG production capacity in Ranchi and has signed concession agreement for 22 years with Ranchi Municipal Corporation for supply of Municipal Solid Waste (MSW) and associated infrastructure for setting up CBG plant at Ranchi. This will enable provision and supply of Compressed Biogas (CBG) from the plants processing biomass/waste to various Retail Outlets of CGD companies across India.

GAIL is also executing the CBG plants where we are arranging the marketing agreement with the manufacturer of the CBG, and these will be the private entrepreneurs, and our City Gas companies will be buying that natural gas from those entrepreneurs. GAIL will be implementing a synchronization scheme of this natural gas which is produced from CBG with City Gas. So, we will be mixing and synchronizing both the gases and supplying to the individual CDG companies.

Potential positive benefits of CBG

- » Stubble/Agro-residues can be utilized for CBG which can reduce stubble burning hence air pollution
- » Additional revenue source for farmers
- » Boost to entrepreneurship, rural economy and employment
- » Responsible waste management, reducing waste related emissions
- » Replacing fossil fuel in vehicles, reducing direct GHG emissions
- » Reduction in import of natural gas and crude oil
- » Support to national commitments in achieving climate change goals

Ethanol Blended Petrol

Government of India (GoI) has resolved to supply Ethanol Blended Petrol (EBP) with the objective

of reducing oil import and has fixed a target of 10% blending by 2022 and 20% by 2025. In line with GoI's vision, GAIL is exploring business opportunity in setting up ~ 500 KLPD 1G (first generation) grain-based Ethanol Plant for Ethanol Blended Petrol (EBP) Programme. Use of this E20 (Ethanol – 80% and Petrol – 80%) fuel is expected to reduce carbon monoxide emission by 30-50%.

Hydrogen as an Alternative Fuel

In India, usage of Hydrogen as an alternative fuel is a relatively new area for which companies from various domains are evaluating the business potential. GAIL is also exploring the possibilities to blending green Hydrogen with natural gas in pipelines at pilot scale, which is a path breaking step in CGD sector. In future, Hydrogen can provide a supplementary role to fossils, renewables and batteries, in a transition towards carbon neutral economy.

R&D for Climate Change

The research and development team of GAIL is working to investigate the combustion and emission phenomena of dual fuel (CNG & Diesel) light-duty high speed direct injection Compression Ignition engine, and to minimize NOx, Particulate Matter (PM) and reduce CO₂ emissions coupled with fuel efficiency improvement, with IIT-Bombay.

To take forward research efforts in the direction of developing feasible solutions for bulk utilization of CO₂, GAIL is developing novel and cost-effective catalyst for production of carbon dioxide-based poly carbonate diol polymers in association with IISER, Tirupati. This project also aims to find an optimal condition to incorporate maximum of - 45 - 47 wt. % CO₂ in the polymeric product under milder reaction conditions with minimal additional energy input and less by-product formation. Thus any success in the development of above versatile catalyst for the conversion of CO₂ to Polycarbonate Polymer can provide immense benefit and mitigation of CO₂ emissions. Another great innovation is being

performed at GAIL Pata Site with A pilot project for direct fixation of CO₂ using microalgae in a raceway reactor is being undertaken to absorb the carbon from the atmosphere and combat climate change.

Clean Energy for Clean Air

As per World Health Organization (WHO) report 2018, 11 of the 12 cities with the highest particulate pollution in the world are in India. Natural gas is one of the cleanest fossil fuels and it is an emerging fuel alternative. According to the National Energy Technology Laboratory (NETL), 'Natural gas emits 50-60% less carbon dioxide (CO₂) when combusted in a new, efficient natural gas power plant compared with emissions from a typical new coal plant'.

GAIL, as nation's flagship organization to deliver accessible and affordable natural gas to citizens pan-India, strives to enable behavioral change through various initiatives. Hawa Badlo campaign is such an initiative that further our efforts in this regard.

Hawa Badlo

In 2016, GAIL launched digital advocacy campaign #Hawabadlo to create awareness among netizens and the public to make informed decisions and induce voluntary behavior changes regarding their energy needs. With the #HawaBadlo initiative, GAIL has succeeded in building a mass movement towards a cleaner energy mix and a better environment, which are in sync with the vision of Hon'ble Prime Minister of India for increasing the share of Natural gas to 15% by 2030, in the energy basket.

#HawaBadlo was launched adopting creative storytelling formats in the form of digital media posts, teasers and videos. The content featured people from all the occupations; from Indian cinema celebrities to people at large, including school and college students. Short videos and clips were carefully planned for multiple platforms and consumer touchpoints including

digital and radio. This was followed by on-ground consumer engagement activities such as tie-ups with resident welfare associations, schools and media groups.

- » # Hawabadlo Campaign is GAIL's sustained advocacy campaign to create awareness among netizens and the public to make informed decisions and induce voluntary behavior changes regarding our energy needs towards cleaner options like Natural Gas
- » Online campaigns #CleanBhiConvenientBhi, #FuelingIndiasGrowth, #NewIndiaNewEnergy were done on GAIL's online properties especially Twitter and Facebook
- » Testimonial Videos, where customers talked about voluntarily shifting to Natural Gas and the benefits thereof, were put on all GAIL's digital platforms

A. #Hawabadlo Anthem

The pinnacle of the campaign was the #HawaBadlo Anthem sung by Javed Ali and Harshdeep Kaur. #HawaBadlo has today become an anthem for unifying people; to come together to fight one of the most dangerous enemies of our times – air pollution, motivating them to adopt natural gas and its variants, PNG and CNG, among other measures, to fuel sustainable lifestyles, and in the process, also become warriors to fight climate change.

B. #HawabadleHassu

Under the overarching #HawaBadlo Campaign, the first of its kind web series is to be sponsored by any corporate, the #HawaBadleHassu web series was aired on SonyLiv in June 2019.

The series heavily hinged on entertainment, conspicuously conveying the messages that the company stands for- crusade against air pollution and environment conservation. An

Hawa Badlo



Hawa Badlo (Change the Air) campaign by GAIL envisions driving behavioural changes in making our cities air pollution-free. The campaign has garnered a reach of over 100 million and enabled people to make a direct link between their energy consumption patterns and the impact on their health and the environment. The campaign aims to encourage people to voluntarily switch to more economic and environmentally friendly 'natural gas'.



Environmental Sci-Fi thriller, the series had actors from mainstream Hindi cinema cast in roles.

C. #Megha'sDivorce

GAIL partnered with Interdependence, a global campaign *patronized* by United Nations and organized by Art for the World- an NGO associated with United Nations Department of Public Information (UNDPI), Switzerland. Among the eleven short films compiled together for raising awareness on environment and climate change, India's entry Megha's Divorce – was made specifically in the Indian context on Delhi's Air Pollution, raising awareness on environment and climate change, both nationally and internationally. The world premiere screening of the Interdependence project was also taken as an opportunity to engage with International stakeholders for showcasing GAIL's commitment towards environmental sustainability. More than 35 present and prospective International customers/partners were invited for world premier screening of "Interdependence" and networking dinner

at Rome, Italy. The film can be viewed on youtube channel of GAIL.

The #Hawabadlo campaign has touched more than 100 million lives (digitally) as of now. It has enabled people to make a direct link between the environment challenges and their daily habits; understand the long-term economic and health benefits of switching to natural gas; and motivated them to voluntarily switch to the economic, socially viable and environmentally friendly natural gas. In the last 6 years about 300 media articles – across Print, TV, radio and digital have been dedicated to it. The movement has brought the conversation on environment, sustainability and climate change to the forefront.

The success of the campaign demonstrates how improving knowledge on the subject and seeking voluntary participation can scale up citizens' interest, influence and actions. The campaign provides a template for custom replication by countries worldwide as one of the means for successful energy transition.



Pink Water Lily
Location: **Gandhar**



HSE Score of 96.98 as
against internal target
of 94.50



Honored with an International Safety
Award 2021 with merit from British
safety Council UK for Petrochemicals
Pata, GPU Vaghodia and GPU Gandhar



Health and Safety

At GAIL, we are highly committed to the health and safety of our workforce, stakeholders and the public at large. We consider health and safety as an integral part of our operations; thus, we always strive to improve our safety performance with utmost importance.

The occupational health and safety of every individual at GAIL are of paramount importance and these attributes are embedded within our core organizational values. Chairman and Managing Director endorses Health, Safety and Environment Policy of GAIL with a commitment to deliver and promote the health and safety agenda, while identifying and mitigating risks, and finding opportunities to improve the operations in aspects of health and safety. The continual improvement in our processes helps us to reduce risks to safety, health and the environment and to achieve the same, strong leadership is inevitable.

A monthly review of the safety performance is undertaken at the level of director. These reviews are considered as inputs for further strategic planning and decisions. As a part of our commitment to continuous improvement, we ensure 100% compliance with the legal and safety procedures. All health and safety aspects are formally recognized by the trade unions and suppliers through formal agreements and terms of contracts. We provide in-depth job specific training and demonstrative workshops to the employees and contractors and other industry partners to re-emphasize safety as our top priority while providing them with globally world-class facilities.

Corporate HSE Policy

GAIL endeavors to generate value through sustainable development by placing commitment to occupational Health, Safety and Environment of its plants, pipelines including CGDs and personnel, and these beliefs are embedded within our core organizational values.

GAIL is Committed to:

- » Be a leader in Safety, Occupational Health and Environment Protection by adopting the latest technology and digitization.
- » Design, construct, operate and maintain its facilities as per national/ international standards to ensure adequate safety of all Stakeholders, Plants, Pipelines, Projects and related surroundings.
- » Comply with applicable statutory rules and regulations of the country where we operate.
- » Optimize the HSE resources and provide structured trainings on HSE Management System including Behaviour Based Safety (BBS) and ensure effective emergency preparedness at all installations.
- » Implement occupational hygiene measures & regular medical surveillance and risk-based monitoring to ensure good health & well-being of GAIL's employees.
- » Make use of effective Waste Management System including e-waste.
- » And bio-medical waste as applicable for a clean & green environment.

- » Share HSE Policy and HSE performance with all interested Stakeholders.

We encourage all employees including contract workmen to adopt safe working habits and behaviour to create a positive HSE culture within the organization. They have the responsibility and authority to notify and stop any unsafe work/act, as deemed fit.

HSE Management System

Health, Safety and Environmental Management System (HSEMS) is an integral aspect of our HSE Policy. It is the guiding principles for managing HSE-related risks across all our operational locations. Our HSEMS covers areas including Leadership & Commitment, Operational & Maintenance Procedures, Work Permit Systems, Third party services, Training, Incident Reporting, Investigation and Analysis, Occupational Health, Environmental Management etc. We continually work towards the effective implementation of our HSE Management System to improve operational safety standards and performance. Our Management is committed to provide adequate resources and deploying skilled manpower to abide by our HSE Policy and HSEMS requirements.

Site level Safety Committees comprises of both management and non-management representatives, lead overall responsibility of safety at our operational sites. Site level Safety Committees review matter pertaining to health and safety performance of respective sites at least quarterly and decides the corrective and preventive actions. GAIL has continually excelled in health and safety performance as a result of robust HSE framework. To develop an efficient HSE framework spanning across our operational sites, we carefully identify focus areas that hold the potential for performance improvement and lay out interventions for continuous improvement.

Our detailed approach to HSE Planning and identifying priority areas for action is showcased below:

- » HSE Management System was formulated in GAIL, in-line with Oil Industry Safety Directorate Standard on "Safety Management

System in Petroleum Industry". It is an integrated system for managing workplace safety covering all aspects of plant and facilities to minimize the losses with respect to personnel, equipment, material and environment. Accordingly, the HSE Management System of GAIL has incorporated 18 elements, which are applicable to all activities of GAIL. The HSE document provides a set of requirements against each element and guidelines for implementation across the GAIL installations.

- » For constant monitoring and ensuring implementation of HSE Management system, it is necessary that the performance of sites w.r.t implementation of HSE Management System and Safety compliances is measured periodically. To measure HSE performances a "HSE Score" has been formulated. HSE Score System is further strengthened by incorporating management governance on compliance of OISD/PNGRB Audits, Incident Reporting System (IRS) and accreditation of Emergency Response and Disaster Management Plans (ERDMPs) for timely submission to OISD/Other Statutory Authorities etc.
- » This system helps in effectively monitoring the implementation of elements like Leadership & Commitment, Employees Participations, Work Permit System, Risk Analysis, Maintenance & Inspection of Critical Safety Appliances/Equipment, Occupational Health, Emergency Preparedness, Compliance Audit etc. which gets reflected in the form of increased productivity and morale of all those associated with the business activities. These benefits reflect a reduction in workplace accidents, injuries and illness.

HSE Score Implementation in GAIL

- » "Safety Day" is observed on the 10th of every month at each O&M site of GAIL. On this day, the Officers In-Charge (OIC)/ Work In-Charge

(WIC) of all installations review all the safety-related aspects of their installations under their jurisdiction.

- » All applicable GAIL sites submit their Annual HSE Plan and Annual Training Calendar duly approved by site OIC/ WIC. Based on the annual plan, Fire & Safety In-Charge and O&M In-Charges of respective sites shall perform.
- » Entry of Site HSE Performance by Nominated Executive preferably by HOD (Fire & Safety) in GAIL Intranet HSE Score Entry System.
- » Approval of Site HSE Performance Report by Respective OIC/WIC.
- » Computation of HSE Score by Corporate HSE Department is being done on monthly basis. Based on the Score earned by Sites in accordance with the prescribed guidelines, monthly. HSE Score achieved by site are discussed in Monthly Safety Day at every sites and necessary action are taken for the improvement of the same.
- » The exceptions report on Monthly Safety Day Observations along with HSE Performance is reviewed at the level of Director.
- » Sites having high HSE Score achieved are also physically verified for their HSE Performances by Corporate HSE official at sites.

Health, Safety and Environment Performance

The Health, Safety and Environmental Management Performance of GAIL's Operation & Maintenance Installations is measured through the "HSE Score", which is evaluated every month, considering the key elements of the HSE Management System. GAIL achieved an "HSE Score" of 96.98 average achieved for the FY 2020-21 against the internal target of 94.50 in the FY 2020-21.

NIL Major Incident Reported at GAIL Installations during the year 2020-21, in accordance with Incident Categorization of PNGRB, OISD & MOPNG. However, 24 Nos. of Minor Incidents reported

during the year, which is summarized below. Investigation of all incidents are conducted by a multi-disciplinary committee to find out the root causes and mitigation actions, to prevent reoccurrence.

Year	Natural Gas Pipelines	LPG Pipelines	Gas Processing Plants/ Petrochemicals	CGDs	Total
2020-21	6	1	4	13	24

Transport Safety

We are involved in business of transportation of Natural Gas and LPG through our Cross Country Pipeline System, which is considered as one of the Safest Mode of Transportation. In addition with above, transportation of hydrocarbons like LPG, Propane, Pentane, Propylene etc. also being carried out by Rail/Road mode by Oil Marketing Companies like IOCL, BPCL, HPCL and GAIL. Transport safety assessment enables us to identify possible hazards, risks, injury or harm with its categorization of severity that can potentially arise during the transportation and distribution of gas. Standard operating procedures and processes are followed to eliminate and reduce the risk to as low a level as reasonably practicable and for further continual improvement.

Additionally, we also provide support/assistance required for the recovery/cover of inflammable liquid hydrocarbon products due to in-transit accidents in the vicinity of GAIL's supply plant(s) which is always rendered by GAIL's fire and safety department.

Transportation Safety Initiatives Undertaken at GAIL Sites

Cross Country Pipelines

- » Risk Assessment of Cross Country Pipelines are being carried out to determine the Individual Risk Per Annum (IRPA) and mitigation measures taken to minimize risk as low as reasonably practicable.
- » Public awareness through FM Radio Jingle started by GAIL to bring awareness about the

gas pipelines and safety of pipeline. Safety awareness campaign for nearby inhabitants along the pipelines on a regular basis for propagating information regarding pipeline location, informing them about Do's & Don'ts in the ROU area, potential consequences of damage, company contact information for reporting leakage and informing before carrying out any excavation etc.

- » Guidelines for Public awareness issued for Incentives to Farmers / Land owners and GAIL Sahayogi for the protection of Markers & Test Stations are being finalized.
- » Nukkad Natak on Pipeline Safety is being organized at villages passing by Cross Country Pipelines.
- » Safety Pamphlets on do's and don'ts are being distributed among the villages to make them aware on pipeline hazards and action in case of any emergency.
- » In order to have faster communication during any emergency, All India Toll-Free short key no.15101 has been started apart from existing 1800118430.
- » National Gas Management System at Noida has been declared as Nodal Centre for Emergency Management.
- » Daily foot patrolling in populated/ urban centers and monthly foot patrolling of Lines at other locations are carried out to identify encroachments / suspicious activities, if any.
- » GPS based online tracking system for foot patrolling implemented across the organization.
- » Integrity Management System is in place and followed for entire Cross Country Pipelines in accordance with PNGRB (Integrity Management System for Natural Gas Pipelines) Regulations 2012 and duly approved by PNGRB.

Road Transportation

- » Trucks are allowed inside the plant for loading only after proper documentation and visual inspection. The trucks are inspected by CISF before entering the plants.
- » Online SAP based 'Dangerous Goods Authorization' is place to ensure healthiness of hydrocarbon tankers by reviewing the safety aspects, prior to loading.
- » Physical checking of hydrocarbon tankers by regular Fire & Safety Personnel are carried out.
- » Training is provided to the workers involved in the loading of hydrocarbon products periodically to make them aware about the hazards associated with operation and its mitigation measures.
- » Road Safety/Personal Hygiene training provided to LHC tanker and truck driver on a regular interval
- » Transport Emergency Card (TREM) has been issued to all Hydrocarbon Drivers to provide them information of Emergency Management and Communication.

SAP-based Environment, Health and Safety Management (EHSM)

SAP-based EHSM is in place having functionalities i.e. Incident Management System (Safety Observation, Never Miss and Incident/Accident), Risk Assessment and Job Safety Analysis, Management of Change and Safety Audit/Activity Monitoring has been implemented across the GAIL.

Impacts and benefits of the EHSM SAP include the following:

- » Establishing uniform procedures across GAIL for the incident management, job safety analysis, risk assessment and management of change
- » Improving clarity and accountability by introducing workflow transformed compliance approach

- » Generation of incident reports for institutions/ statutory bodies like PNGRB, OISD, PESO, Factory Directorate and GAIL specific through a single portal
- » Strengthening the Work Permit System at GAIL by linking Job Safety Analysis
- » Increasing the efficiency of monitoring and analytical reporting by introducing a user-friendly dashboard to OICs / WICs / coordinators

Safety Audits

Safety Audits are periodically conducted to ensure the implementation of the HSE Management System Guidelines and Emergency Preparedness and its performance. These audits are performed by PNGRB approved Third Party Inspection Agencies, other external agencies and our experienced in-house team, in accordance with the applicable National Codes and Standards. Suggestions and recommendations given during various audits are being compiled within a specific time-bound manner.

Internal Safety Audit (Proactive Audit & Internal Audit-CO) is being conducted by an in-house team to identify the improvement areas with respect to PNGRB and other regulations, OISD Standards, Management Governance etc. Besides, a specific Internal Audit on Occupational Health and Environment Management is also being conducted periodically to determine specific potential improvements considering various health and safety standards.

Employee Safety: Occupational Health, Training, and Emergency Preparedness

GAIL has implemented Health and Safety Practices for employees including contract workers that are primarily driven by Health, Safety and Environment Management System.

Occupational Health

The Corporate Occupational Health Committee

meets on a quarterly basis to monitor the occupational health program in and the effectiveness is evaluated based on the outcome of the Occupational Health Audit undertaken through in-house multi-disciplinary teams.

The guidelines on occupational health have been formulated to give thrust on occupational health. The guidelines thoroughly include various aspects including requirements of occupational health infrastructure at sites, occupational health committees, medical surveillance programs, documentation and analysis of health data and bio-medical waste management, etc. Medical surveillance is carried out periodically to assess the health of employees. Permanent employees are assessed annually for their well-being by conducting occupational health check-ups. Awareness programs are also periodically organized with demonstrations to ensure improvement in lifestyle-related habits. The health scores of each employee are calculated and recorded based on the predefined parameters and further those are made aware and motivated for improving the health score. Every site calculates their cumulative health index based on the health score of individual employees for the analysis and improvement of employees' wellbeing.

In the current scenario of COVID-19 pandemic, awareness sessions and multiple motivational programs were conducted with proper protocols for employees and their family members at GAIL different sites in FY 20-21 which mainly includes related to COVID-19. Initiatives covered subjects such as general awareness and preventive measures of COVID-19, psychological effects and disturbance due to pandemic, mental wellbeing, etc. Also, medical surveillance is carried out to assess the health of employees for this year. Medical facilities and service provided at GAIL sites to ensure the emergencies in the pandemic situations.

Occupational Health and Safety at GAIL Installations i.e Petrochemicals, Gas Processing

Plants, Natural Gas Compressor Stations and associated pipelines, LPG Pumping Station and associated pipelines and CGDs are primarily driven through Occupier and Factor Management. Site specific HSE Policy is in place in accordance with Corporate HSE Policy. Some of key Occupational and Health Practices undertaken for permanent employees are as follows

- » Safety Committee Meetings chaired by Occupier/Factory Manager are organized once in three months to discuss Occupational Health and Safety Issues of employees including contract workers.
- » Work Permit System is in place to carry out non-routine jobs in safe manner. Job Safety Analysis of all non-routine critical activities are carried out ensure safety to employees.
- » Standard Operating Procedures have been developed for all routine works and it is being adhere to. System is in place to ensure compliance of following Standard Operating Procedures.
- » Illumination, Noise and Toxic releases monitoring are done periodically to provide safe place to work.
- » Material Safety Data Sheet (MSDS) of all chemicals handled at various GAIL installation has been prepared as per PNGRB (Codes of Practices for Emergency Response and Disaster Management Plan (ERDMP) Amendment Regulations, 2020 and displayed at prominent locations to understand the hazards and their mitigation methodologies.
- » Hazard Control Hierarchy at workplace adopted in accordance with Codes and Standards. Mandatory Personal Protective Equipment is being issued to all employees. Personal Protective Equipment Matrix has been displayed at workplace. Sufficient number of identified Personal Protective Equipment is made available and its use is ensured.
- » 'Behaviour Based Safety Advance' has been implemented to reinforce positive behavior of employees including contract workers.
- » Online Reporting System for Safety Observation has been established to provide platform for employees to report Unsafe Act/ Condition for necessary and time bound action.
- » Medical Surveillance is carried out to assess the health of employees every year.
- » Case studies on Worldwide Industrial Incidents (occurred in the past) are circulated to employees every Month to GAIL employees, and Key Learning from case studies are being discussed at GAIL Installation during Monthly safety Day meeting on every 10th day of the month.
- » Structured HSE Training System is in place. Well-equipped training grounds have been developed for live demonstration of various scenarios expected to arise within the complex for training of employees.
- » Awareness sessions were held at various installation for GAIL Employees for the prevention of spread of COVID-19 as per CO-HR Guidelines.
- » Animated Learning case study videos on various incidents occurred in GAIL has been prepared by corporate HSE and it has been kept in HSE Webpage in GAILNet which is easily accessible for all employees.
- » Short film on HSE Management system has been prepared to enhance awareness among GAIL Employees about HSE Management system implemented in GAIL.

Contractor Safety

Contractors are bound with the health and safety policies of GAIL. Every contractor needs to follow health and safety practices, rules and guidelines provided by GAIL. All contractor's. are required to submit a health check-up certificate of a new employee at the time of joining work.

Under Occupational health check-up of contract employees including canteen workers is carried out periodically. First aid centers are providing facilities and Outpatient department (OPD) treatment to contract employees. Sensitization on health aspects in daily activities of life is executed for contract employees by conducting lectures on important health topics.

The structured HSE training matrix includes GAIL employees as well as contract workers. The internal safety training system is in place at O&M installations, where training chapters including behaviour-based safety, etc. are imparted to employees and contract workers to upgrade their skills, knowledge and competence, to perform their HSE functions effectively and develop an effective safety culture. Safety training is regularly provided to the contract employees as per the training calendar utilizing various safety training modules. Tool box talk is conducted for contract workers before the start of any activity of work. Contract employees are covered under the behaviour-based safety initiative of GAIL. We ensure that 100% of contract workers participated in health and safety awareness workshops and training and it resulted the same during this reporting year.

Health-related Initiatives at GAIL Pata

1. Pre-employment and bi-annual health checkup of all contract employees as per U.P Factory Act.
2. Health education and promotion by conducting various health awareness programs like:
3. Prevention of ergonomic hazards in desktop workers.
4. Role of good sanitization & personal hygiene in control of infectious disease like today's pandemic scenario.
5. Prevention of various occupational health hazards in petrochemical plants.
6. Prevention of lifestyle disease and its management.
7. Counselling and advice on dietary management, weight management, regular exercise, stress management & follow up for optimal health.
8. Assessment of work-related illness and injuries for workplace safety.
9. Industrial hygiene survey every 5 years by 3rd party RLI/CLI in the plant as per OISD guidelines.
10. Periodic workplace environment monitoring and industrial hygiene survey by measuring noise, illumination and indoor air quality.
11. Compliance of all legal statutory requirements like Bio-medical waste disposal.

COVID-19 related health initiatives:

1. COVID-19 health risk assessment to all contract employees and vendors coming from outside due to ongoing COVID-19 pandemic.
2. Awareness on PPE, Social distancing and frequent hand washing to all contract workers and vendors.
3. Maintaining the highest degree of hygiene at OHC with all precautionary safety measures for prevention of COVID-19.
4. Maintaining Contact tracing, Testings and Quarantine.
5. Developing Isolation facility in JP Kunj and Dhanwantri Hospital and Apollo Hospital kit arrangement.
6. Introduction of e-prescription and telemedicine.
7. Mass fogging and sanitization and Thermal scanning at entry points.
8. Distribution of Masks, sanitizers and PPE kits.
9. In-house preparation of Sanitizers and No-Touch Sanitizer Dispenser.
10. Mass sampling camps with District administration coordination.
11. Visitors permitted after RAT, RT-PCR test & health risk assessment.
12. Considering Covid-19 Safety, Thermal Scanning is done by all the employees on a

daily basis. Apart from Temperature Scanning every day, employees may check their Oxygen level by a Pulse Oximeter, which has been kept in the OHC/ HR department.

13. Sanitization of offices and vehicles has also been done regularly, considering the pandemic situations of Covid-19 at the community level.
14. Allowing work from home to the employees in order to maintain social distancing at the workplace.
15. To avoid crowding office time is made flexible.
16. Introduction for quarantine leave and special casual leave for covid-19
17. Treatment of the period away from the workplace of posting as work -from home during the nationwide lockdown.
18. Tie-up with leading hospitals for providing treatment to isolation cases.

Health and Safety Practices and Initiatives being undertaken at GAIL, Pata for Contract Employees and Suppliers

- » It is being ensured that skill and qualified contract personnel are being engaged as per the job requirement.
- » It is being ensured that all the contract personnel undergo occupational health check-up once in a six month as per Factory Act.
- » Initial fire & safety awareness training is being given to all the contract personnel. Thereafter job specific training is also being given to the personnel.
- » Toolbox meeting / talk is a mandatory requirement for carrying out any job inside the plant on a daily basis.
- » Mandatory PPEs & job specific PPEs are being ensured for all contract personnel.
- » All the work is being carried out through the work permit system.
- » Pamphlets of Do's and Don'ts inside the plant have been especially prepared for contract workers and employees to spread safety awareness. Do's & Don't have been displayed at various locations for contract personnel.
- » Contract personnel participation is being ensured in reporting of incidents / unsafe act / unsafe conditions in SAP.
- » Initiative taken to motivate workers to work safely during shutdown where large numbers of contract workers were involved through a reward scheme. Reward given to workers who perform their job with utmost safety.
- » Mandatory firefighting training is imparted after each job specific training module in the F & S department.
- » Scheme for Best safe worker started at GAIL Pata for contract workers to develop safety culture through encouragement and motivation.
- » Introduction of Training kiosk system at GAIL Pata for imparting initial F&S training to contract workers.
- » Safety awareness programs (incident / accident sharing, unsafe Act / condition) are being shared to contract personnel through pictorials / visual display. Initiatives are also being taken to inculcate safety through Behaviour Based Safety.
- » Behaviour Based Safety system has been introduced for all the contract employees to identify the safe behaviour, at risk behaviour and on the spot correction.
- » To motivate contract employees and contractors, they are encouraged to participate in various competitions like safety quiz, safety slogan etc. and suitably rewarded also.
- » Token reward given for reporting of near miss to each employee as part of employee engagement initiative. Also, three Best near misses of the year are rewarded in safety week.
- » Basic fire and safety training given to LPG tanker drivers to spread awareness about safety during transportation and firefighting.

- » Visitors are given initial fire and safety instruction/awareness through Visitors' Safety film before entry into the plant.

General Safety Regulations

1. Smoking is not allowed inside the plant.
2. Contract as well as GAIL employees are not allowed to enter into the plant under the influence of alcohol.
3. Polyester (Terene / terylene) or nylon or any other synthetic fiber clothing shall not be worn while on duty. There are chances of static charge in these clothing. Only Cotton dangri shall be used while working inside the plant.
4. It is mandatory to follow traffic rules inside the plant and drive below 20 km/Hour Speed limit. It is mandatory to wear Safety helmet while driving a two-wheeler.
5. Necessary permit to work is to be obtained before starting any job.
6. When any dangerous /unsafe condition is observed it should be immediately reported to the supervisor and F/S Department.
7. Use of Personal Protective Equipment according to job requirement is mandatory during execution of job.
8. Employees should be careful to clean the job areas as soon as the job is completed. Good housekeeping will eliminate many unnecessary hazards, causing accidents.
9. Walkways should be used instead of shortcuts.
10. All stairways, platforms and walkways must be kept clean at all times.
11. Making shift arrangements of any kind are strictly prohibited.
12. Walking on pipelines is prohibited.
13. It is prohibited to work without authority or S. W. permit.
14. It is mandatory to prepare a close fire booth with a good quality fire blanket to carry out any hot job inside the plant.
15. Compressed air must not be used for blowing dust out of clothing.
16. Never look directly into the arc produced while welding without proper eye protection.
17. Sufficient distance shall be maintained from suspended loads at all times.
18. Firefighting equipment shall be kept free of obstruction as these are required to be used in emergency.
19. If any gas leak occurs, information shall be given to the supervisor and Fire Station. It is to be ensured that all sources of ignition are kept away from the contaminated area.
20. In case of flammable/ toxic gas leak, wind direction shall be observed with the help of windsocks installed at various locations inside the plant and evacuate the area by following the opposite direction of wind.
21. Operators must always stand on the downwind side while taking samples or draining lines or equipment.
22. It is strictly prohibited to enter any vessel without obtaining a valid permit to work inside the vessel/ Confined space permit.
23. When a person is working in any vessel, one person must be stationed at the opening of the vessel as a watcher/buddy.
24. Vehicles of all types must be equipped with a good exhaust and muffler systems before entering the plant area.
25. Protective valve caps must always be placed on all gas cylinders when not in use (Oxygen, LPG etc.) Gas cylinders should never be dropped, especially from trucks or platforms. Always use a special carrier for carrying the gas cylinders.
26. All bolts, couplings and moving parts of a machine must be securely guarded at all times (as covered under Factory Act.)
27. It is strictly prohibited to use gasoline or any other highly inflammable liquids or corrosive chemicals such as caustic soda or acid for cleaning purposes.

28. For maintenance work inside vessels or tanks which are gas free, low voltage lamps not exceeding 24 volts must be used.
29. All storage containers such as tanks, drums etc. containing corrosive chemicals must be clearly marked indicating the nature of the content.
30. It is mandatory to use a double lanyard safety harness while working at height.
31. Even while working with a valid permit to work if any Hazardous condition is noticed, the job shall be immediately stopped, and information shall be given to the control room/supervisor.
32. Wearing a safety helmet is a must for all the employees working in the battery limit area, in shut down and in the areas declared as hard hat area.

Health and safety related Initiatives at GAIL Vaghodia (OG13)

GAIL Vaghodia has a well laid out HSE policy in line with the corporate HSE guidelines.

- » SAFETY KIOSK installed at plant CISF gate for awareness of all persons entering plant premises.
- » Ensuring PPEs and safety training with live demonstration for all.
- » Various events related to health and safety like Fire Service Week, National Safety week, Oil & Gas conservation Month are celebrated. These events are being well organized, and competitions held to spread awareness to all.
- » Toolbox talks given before commencing any work.
- » Medical records of all employees, contract and cooperative labours are being maintained through a Medical officer in a well-equipped Occupational Health Centre.
- » Safety training being imparted to all as per the HSE safety calendar and also through GTI nominated training programmes.
- » Conducting Off-site and On-site mock drill to check emergency preparedness and response to the situation.
- » Surprise checking and SOP compliance to ensure safety during all works.
- » Augmentation of fire water network and a new fire water pump house to maintain resources for handling major fires inside the plant.
- » Rally awareness programs conducted in nearby places for spreading awareness regarding gas pipelines and hydrocarbons.
- » Residual life assessment (RLA) and Fitness for Service (FFS) and LRUT being conducted at Vaghodia for asset integrity assessment.
- » Periodic overhaul and inspection of engines, storages being done.
- » HRSG Boiler system integrity assessment carried out.
- » Installation of lightning isolation transformer to enhance safety of GREP.
- » Replacement of Mercaptan dosing system and associated pipings with SS material to improve integrity.

Health and safety related Initiatives at GAIL Dibiyapur and GPU Gandhar (OG13)

- » Air quality monitoring report, Hazardous Wastes authorization details are displayed at Compressor Station main gate.
- » Occupational Health Check-up is conducted for contract employees who are working in plant areas.
- » Regular fire & safety training is imparted to bring awareness among contract employees.
- » Personal Protective Equipment are ensured with all contract employees who are working in the plant area.
- » Mechanism has been established for timely reporting of near Miss and safety observations.
- » Behavior Based Safety training has been imparted to contract employees.

- » Potable /RO water, toilet, canteen facilities are provided to Contract Employees.
- » Workmen Compensation Policy is taken for the Contract Employees.
- » Plant safety related information is shared/ awareness is imparted to the visitors at the entrance gate itself.
- » Medical test of contract employees is carried out before employing or assigning any job at our Occupational Health Centre.

HSE Trainings and initiatives FY 20-21

- » Nine (09) Nos. of Behaviour Based Safety with COVID-19 Webinar have been conducted, in association with GAIL Training Institute. Employees participated in a drive for reinforcing Positive Behaviour enthusiastically.
- » EHSM SAP Familiarization Programs were conducted on Incident Management System, Management of Change, Risk Assessment & Safety Audit organized through Team Meeting for Operation, Maintenance and Fire Safety personnel across the GAIL.
- » GAIL's O&M and HSE Executives participated in various Sub Committee Meetings of PNGRB Regulations on Emergency Response and Disaster Management Plan, Retail Outlet Dispensing, Integrity Management System for Natural Gas Pipelines & City Gas Distribution Networks, Gas Processing Plants and Refineries etc. as part of development/ amendment of Technical Codes & Standards.
- » 6th Capability Building Workshop organized by PNGRB on 28th January 2020. During the Workshop, CO-O&M/HSE made presentations on amendments in Integrity Management System Regulations for Natural Gas Pipelines and Emergency Response and Disaster Management Plan Regulations.

Awards and Appreciations

GAIL has won the following safety awards in 2020-21 from the National Safety Council, India and British Safety Council for excellent occupational safety and health (OSH) performance and commitment to reduce hazards, workplace incidents and injuries, implementations of the best OSH practices and encourage continual improvements.

- » "International Safety Award 2021" with Merit from British Safety Council, UK for Petrochemicals Pata, GPU Vaghodia and GPU Gandhar.
- » "Safety Innovation Award 2020" by The Institution of Engineers (India) for GPU Vijaipur for implementing Innovative Safety Management Systems
- » Safety Awards 2020 from National Safety Council, India for various installations for displaying exemplary Occupational Safety & Health (OSH) performance, commitment to reduce workplace injuries, implementations of the best OSH practices and encourage continual improvements: -
 - SURAKSHA PURASKAR (BRONZE TROPHY) for GPU, Gandhar under Category Group A (Petroleum Refineries, Gas Processing Units and Petro-Chemical Complexes).
 - PRASHANSA PATRA for GPU, Vijaipur under Category Group A (Petroleum Refineries, Gas Processing Units and Petro-Chemical Complexes).
 - PRASHANSA PATRA for GPU, Vaghodia under Category Group A (Petroleum Refineries, Gas Processing Units and Petro-Chemical Complexes).



Butterfly
Location: **Gandhar**



Featured in the Forbes
World Best Employers 2020 and
Ranked 5th among Indians PSE



Achieved 90.84% coverage
of employees training program
with a training efficacy score of >85%



240 participants in
GAILs strategy 2030
initiative training



Our People

At GAIL, we believe that a committed and technically sound workforce forms the bedrock of any successful organization. At the core of our success lies a hardworking pool of dedicated employees and associates. Employees play a significant role in strengthening our competitive edge and help us in growing a strong and versatile business. It is our constant endeavor to attract and retain the best talent through comprehensive training and development opportunities and good long-term career prospects. We seek to enhance professional development of high potential and managerial staff through our systematic career management. This enables us to fill the key positions at all our locations with qualified specialists.

Human Capital management at GAIL is geared to enable our employees to realize their full potential while contributing to the company to generate value. Our Human capital incorporates the health, knowledge, skills, intellectual outputs, motivation and capacity for relationships of the individual. In an organizational context, it includes the elements needed for people to engage in productive work and the creation of wealth, thereby achieving a better quality of life. We are dedicated to enable a culture that encourages our people to advocate and champion our vision. We put our best foot forward in providing equal opportunities to everyone. We invest in our employee's career development, learning and promotions and reward their hard work throughout the year. We are committed to:

- » Provide employees with training, development and life-long learning

and maintain an enabling environment for learning, innovation and sharing of knowledge

- » Retain, nurture and develop employees and plan for succession in critical roles. Respect human rights in all operations
- » Maintain diversity, access variety of human talent and eliminate discrimination. Ensure the health and safety of all employees
- » Provide fair remuneration for employees and business partners and adopt fair labor standards, including avoidance of forced or child labor

Going beyond compliance:

At GAIL, we have taken several progressive HR initiatives including proactive review of HR policies on continuous basis to align the Corporate HR Strategy with the Organizational Strategy in Company's endeavor to meet the evolving business requirements and to maintain competitive advantage. GAIL's policy broadly covers Human Resource Acquisition (General terms and Conditions of Service, Recruitment Policy and Procedure etc.), Employee Compensation (Pay Scales, DA, Transfer Benefits etc.), Employee Benefits (Leave Rules, Medical Attendance, House Building Advance Rules etc.), Motivation and Development (Performance Management System, Incentive for acquiring Higher Education etc.), General (Grievance Redressal Procedure, CDA Rules), Other Schemes (Sports Promotion Policy, Whistle Blower Policy, etc.).

Effective policies to tackle the pandemic

During the year, review of various HR Policies on Employee Compensation, Welfare, Social Security and General Terms and Condition of Service was undertaken. Being an unprecedented year amid challenges on account of COVID-19 Pandemic, several preventive measures including but not limited to are undertaken:

- (i) Allowing Work From Home (WFH) arrangement at various Work Centers/ Offices in order to maintain social distancing protocols at the workplace
- (ii) Review of several policy provisions related to leave, claims procedures, travel, etc.
- (iii) Special dispensation in the form of extra leave and issuance of appreciation letters to the employees, who performed continuous duty at plants/installations
- (iv) Facilitating the employees in procuring sanitizers, masks, face shields and preventive medical equipment, etc. was also undertaken during the financial year for ensuring safety, well-being, and business continuity of GAIL.

GAIL introduces many employee benefits that go above and beyond compliance requirements like GAIL Employees, e.g., Children Higher Education Advance Scheme, GAIL Medical Attendance Rules, Relief Measures for dependent family members of deceased employees.

Talent Acquisition

As part of our human resources (HR) planning, on a yearly basis, we assess and determine skill sets needed with regard to our corporate and locational strategies. We then align our young talent, training programs and hiring plans accordingly. Providing a favorable environment for our workforce to realize their full potential and grow in their career paths is of paramount importance for us. In this regard, GAIL hiring and the recruiting team plays an integral part in implementing the industry best practices for workforce management. We aim to build a cohort of development-oriented, productive and motivated employees, who are willing to grow with us together. Opportunities for career growth are based purely on individual excellence. For effective management of the workforce, we focus our efforts in the following key areas:

Diversity & Inclusion (D&I) has been on the radar of GAIL for a few years now and in the recent months, the impetus has grown significantly to work on various initiatives in this space across all its sites. A diverse workforce is an essential driver to deliver better results. Our transparent and sound recruitment policies empower us to hire candidates from diverse backgrounds so that we provide equal opportunities to everyone regardless of their gender, caste or their physical abilities. We follow the principle of diversity and inclusion during our recruitment process and all candidates are assessed objectively during the hiring process. To have a more multi-cultural and inclusive workforce, we invest time and effort to scout talent from the local communities, where we operate.

Recruitment policy as approved by GAIL Board is continuously updated for keeping it in sync with the changing times. Recruitments of executives are primarily carried out at the entry-level, i.e., at the level of Executive Trainee and Sr. Officer/Sr. Engineer level as we believe in providing ample career growth opportunities to our employees. Recruitment of executives at entry-level is carried

out through both the campus selection process and open recruitment exercise. Recruitment process through various modes viz. Open recruitment, GATE, Campus for executives and Non-Executives completed/under process. We give equal preference to candidates apply from various states in India.

A total of 156 new employees (including CVO) joined GAIL during the FY 2020-21. Total manpower of the Company as on 31 March 2021 stood at 4,705 (including Whole-time Directors & CVO), out of which 4,401 were male and 304 were female employees. Out of the total employees, 16% of its employees belong to the Scheduled Caste (SCs) category, 7% to the Scheduled Tribes (STs) category, 23% to the Other Backward Castes (OBCs) category, 8% to the Minorities and 2.1% to the Persons with Disabilities (PWDs) category.

Our workforce also includes a total of 12,997 male and 382 female contractual workers working across various operational sites. There are 1,878 male and four female security staff employed across our units. During this year, the total number of Apprentice in GAIL reached 545, in which 444 are male and 101 are female apprentices. Significant portion of temporary workers are involved in the non-core activities of the organisation such as housekeeping, security, etc.

To build strong motivating environment and to create effort towards ethical workforce management, along with suitable compensation, GAIL provides employee benefits. We also contribute to Superannuation Benefit Fund Trust and Provident Fund Trust apart from the aforementioned perquisites. This practice is in complete compliance with the Equal Remuneration Act, 1976 and there is no discrimination in wages based on gender.

The organization's pension benefits cover 100% of the employees at GAIL and fulfil all the applicable requirements. GAIL ensures that all the facilities located in different states across India comply to minimum wage requirements as per

The Minimum Wages Act, 1948. Actual payment is much higher than the minimum wages requirement and it varies from state to state. GAIL demonstrates its commitments towards human rights and labor practices including the provision of the minimum wage by regular interaction with employee collectives, coordination with labor authorities, settlement of industrial disputes, recording and analysis of work center level issues and long-term settlement with Unions. Other provisions related to employee remuneration and benefits are as follows:

- » The Performance Related Payment (PRP) Incentive Scheme is one such that is in line with DPE guidelines and ranges from 40-200% of basic pay of an executive during a financial year.
- » PF, gratuity, pension and PRMS - As per the DPE guidelines, O.M. No. W-02/0028/2017-DPE (WC)-GL-XIII/17 dated 3 September 2017, a ceiling of 30% of the basic and DA has been put towards contribution to these superannuation benefits.
- » Most of our practices and initiatives are aimed at providing our workforce with a workplace conducive to productivity. We also provide two-year childcare paid leave to female employees. Additionally, we provide incentives to our employees for attaining higher qualification to improve their expertise and efficiency in their field of work.
- » We have also leveraged IT to a great extent for improving workforce management strategies. All the information related to the workforce is monitored and captured through SAP ERP system and is systematically analyzed to improve our workforce strategies.

Details of employee benefits have been provided in page 169 of annual report 2020-21.

Employee Engagement

Employee engagement is a prerequisite for us to achieve our goal of industry leadership and long-term profitable and sustainable growth. The key

to creating a vibrant and sustainable company is to find ways to get all the employees—from top executives to assembly line workers—personally engaged in day-to-day corporate sustainability efforts.

At GAIL, employee engagement initiates at the beginning of the employee lifecycle, from the recruitment process, continuing through onboarding, learning and career planning till the exit from the organization. To make our workforce's experience and journey better, all GAIL facilities are equipped with sports, gyms and other recreational facilities. We promote an active lifestyle through sports. Hence, we have introduced the Sports Promotion Policy for our employees. Some of the key initiatives taken for employee engagement at GAIL sites are:

G Konduru: Badminton and volleyball court facility have been provided for recreation for GAIL and contract employees.

Samakhiali: Motivation talks, arrangement of Yoga & Morning walk, cricket match on holidays.

Vaghodia : Employees are encouraged to take-up "Delta" projects like reducing BMI, regular workouts, brisk walking, etc., along with various sports activities. Gym equipment for office premises along with a control room are being procured centrally to encourage employees to devote more time towards health.

Kailaras: We have procured TT table to motivate the employees in Agra region towards health and sports. Instructions and suggestions for improvement in physical and mental health of employees are shared during various HSE trainings conducted by F&S Dept. A cricket tournament between Agra region and Kailaras region has also been organized.

Cherlappally: We organize a number of sports competitions at GAIL. Yoga and meditation classes are also conducted on a regular basis. All employees are encouraged to make a habit of regular walking / utilizing the recreation facilities available at RT Cherlappally as a part of their daily

routine to maintain good health. Further, we arrange for social gatherings on special occasions for all the employees by maintaining social distance.

To keep the spirit going, we host celebrations, rejoice festivals and occasions as a family. During this reporting year, we have celebrated GAIL Foundation Day, Indian festivals, Republic Day, etc. Apart from that, various competitions in vigilance awareness week observation, hindi fortnight celebration, world environment day celebration, fire week, etc. were also organized.

Capability Building

We believe that capability building and enhancing competency of employees is the key to successful execution of GAIL's strategic plans. In GAIL, we have established processes for effective capacity building of the existing resource base and its consequent development. The capacity building of our employees is primarily aimed at their holistic development. We encourage our workforce to improve their leadership potentials and technical skills. This is enabled by providing our workforce with a wide range of engaging training programs, skill development programs, performance appraisal and feedback sessions to further the career growth of our people.

A few capability initiatives undertaken by GAIL (India) Ltd include:

1. Organizing Master Class for Directors

Under this initiative, senior level officials of GAIL are nominated to attend the program titled Master Class for Directors with a view of grooming the future leaders of GAIL, which includes Board Room Development and organization wise transformation as a whole.

2. Trainings relating to Strategy-2030 Initiative

In line with global business environment and India's future growth trajectory, GAIL has formulated a Strategy-2030 to capture emerging opportunities in different fields, relevant for GAIL. Some of these areas are

- a) Renewable and Alternate energy
- b) Water Value Chain
- c) Specialty Chemicals segment
- d) Mobility Future,
- e) Industry 4.0 & Automation

Around 240 GAIL executives have been trained in the upcoming business areas.

3. Senior Management Development Centre (SMDC) Exercise

Senior Management Development Centre (SMDC) Exercise is carried out by HRD Department with an objective to assess the potential and developmental needs for senior executive (Chief Manager and above grades). In SMDC exercise the potential of executives are evaluated based on seven competencies namely Managing Relationship, Analytical Problem solving, Building Capability (Developing self and others), Achievement Orientation, Execution Excellence, Planning, Organizing & Foresightedness and Communication. Through the above exercise, key development areas on the above-mentioned seven competencies are identified for all the participants and Individual Development Plan (IDP) is formed for all such executives. Under Individual Development Plan the Executives are then provided with E- Learning modules under the above competencies.

Training and Development

At GAIL, we facilitate personal and professional development opportunities of our employees through a plethora of training programs conducted periodically. The focus of such training is to assist our employees to develop new skills and to create awareness about the recent developments in the oil and gas industry. This ongoing and continuous process, which involves learning and development on the part of both the employees and the management, will contribute in improving their performance and competencies while keeping them up to date with current industry scenarios.

GAIL Training Institutes are located at Noida and Jaipur. Annual Training Need Assessments (TNA) are carried out to learn and understand the training needs of the employees across various domains and functions. Based on this assessment analysis, an annual training schedule is rolled out by the GAIL Training Institutes (GTI). All the employees are allotted at least one of the Functional / Cross functional / Behavioral training based on their Annual Training Schedule.

During this reporting year, GAIL has incurred an expenditure of INR 7.9 crore on all these training programs. The total training hours of Permanent and Contractual employees are 1,11,964. In FY 20-21, 38.3 average hours or 4.8 days per Full-Time Employee (FTE) of training and development were given. Additionally, an average of INR 17,552 was spent on each FTE on training and development. The training hours and training costs include activities related to the development of employee skills.

It is vital that all newly hired employees receive training suitable for their role, specifically in adapting to technological advancements and to align them with GAIL's vision. Our strategy of developing the skillsets at the initial period of employment of the recruits has been proven effective in developing a highly competent workforce. Our proven training framework provides our workforce with the expertise that is required for efficient management of GAIL's business. The training program for recruits is comprised of technical, functional, managerial as well as behavioral learning at major work centers. During this reporting period, a comprehensive induction, orientation and on-the-job training program was undertaken for 156 recruits.

A comprehensive list of all the major initiatives undertaken by GTI Noida during the reporting period is given below:

- » A Role based Training (RBT) was conducted in the second fortnight of February 2021 for the junior level executives (E2-E4) of Operations

Department of Pata in the Petrochemicals Job Family. The program is aimed at Unique Roles (URs) of Executives in Gas Processing Unit (GPU), Gas Cracker Unit (GCU), High Density Polyethylene (HDPE) plant, Linear Low Density Polyethylene (LLDPE), IOPS (Integrated Offsite Plant & Storage) and Boiler.

- » Organized the MDP program from 29 June to 3 July 2020 and 14 to 16 September 2020 and specialized MDP from Manushuo Uthan (A Society for Sustainable Human Development), Delhi, for the development of women executives (E4 and above) during 7 to 11 December 2020.
- » Organized lectures of persons of eminence on topics such as – “Leading with emotional intelligence” by Dr. R D Mohan on 6th June 2020, “Importance of Cyber Security” by Shri Vinit Goenka on 29th Oct 2020 and – Green Energy: The Search of an Equilibrium” by Prof. Vinayshil Gautam on 10 February 2021.
- » Leadership talks by eminent women leaders- “Mythology Principles and Management Mantras” by Ms Mona Verma on 25 February 2021, Ms Sunita Bhuyan on International Women Day ie on 8 March 2021.
- » Gender Sensitization Workshops were conducted by M/s BCM Training Academy, Surat (Two batches) and M/s Linking Tree, Delhi (Two batches) during December 20 – January 21 for employees of Eastern, Southern, Western Region and Vijaipur Work Centres. A Total of 94 employees were covered.
- » On-Line quiz on “World Day of the Fight Against Sexual Exploitation” – 4 March and Online quiz on “International Women Day” – 8 March 2021.
- » Shiv Nadar University supported GAIL in its proposed external training programs on Petrochemicals by providing its faculty.

Training for Strategy 2030

A total of 240 participants attended the following programs, which were conducted under Strategy 2030 initiatives

- » Lecture on Water Value Chain was conducted through virtual online mode during 27 to 29 July 2020. The Program was conducted by Indian Institute of Technology (IIT) Bombay, where the sessions were delivered by the faculty from Education for Sustainable Energy Development (ESED), IIT Bombay, NEERI Nagpur, EIL and other Industrial Experts from organizations like L&T and SMS Envocare Limited, Nagpur.
- » Lecture on Solar PV Systems was conducted through virtual online mode during 22 to 24 June 2020 by Delhi Institute of Solar Energy and Technology, New Delhi
- » Lecture on Wind Energy Technology & Business was conducted by National Institute of Wind Energy (NIWE), Chennai during 7-9 October 2020
- » Lecture on Renewable Energy (RE) Growth opportunities for GAIL was organized by GTI, Noida under the aegis of Business Development Directorate. Further a 5-day comprehensive module was also launched from 18 to 22 January 2021 in association with Centre of Excellence, Oil Gas and Energy, IIT Bombay
- » Lecture on Electric Vehicles and Battery Technology was conducted during 6th and 7th January 2021 in association with domain experts of Electric Vehicles and Battery Technology M/s Esmite Solutions Pvt Ltd., Chennai in association with IIT Madras
- » Compressed Biogas (CBG) – City Gas Distribution (CGD) synchronization: The 1st program of the series on the topic Synchronization of CBG into CGD Networks was delivered on 23.02.2021

Apart from the training programs mentioned above, GAIL has a specific Mentorship Program for

its Executive Trainees. In this program, Executive Trainees are assigned with senior officials for getting necessary guidance and mentorship for their career growth at GAIL

During the reporting period:

- » GAIL trained 3.23% of the employees in the anti-corruption policies and procedure including senior management.
- » To provide continued support to increase the employability of retired employees, we conducted 72 programmes skills management and lifelong learning programs.
- » 1.9% of employees participated in human rights training
- » About 4.3% employees received training on sustainability
- » Multiple in-house sustainability training was conducted during this reporting year. INR 6.55 lakhs was spent on environment-related training and education
- » GAIL Received 16 complaints from the employees and 100% of the complaints are resolved successfully
- » No employee engagement/ satisfaction survey was conducted during this reporting year

Table 1: Average hours of training

Average hours of Training Per Year Per Employee	FY 20-21
Management - Male	19.79
Management - Female	25.81
Non-Management - Male	14.43
Non-Management - Female	15.39
Permanent Employees - Total	18.85

Learning Management System

Learning is a continuous and on-going exercise. In today's highly competitive business environment, training and re-training of our human resource become necessary. Through well-conceived

training and development programs, we can achieve the important objective of employees' development, which is so vital in today's environment.

GAIL Training Institute is consistently serving as a platform, providing opportunities to train our valuable human resources by imparting necessary knowledge and expertise in different fields. We also sponsor our employees for attending training programs, conference and seminars within India and abroad on contemporary subjects to provide them opportunity of learning and interaction with the experts of various technical and management fields. For having a systematic approach for selecting the individuals to attend training program, the need for a sound policy on training has been felt for quite some time. GAIL's e-learning Management System (LMS) enables all the GAIL officials to have access to relevant standards and updates while providing them with the latest updates about the oil and gas sector. The objective of introducing the LMS is to improve the reach and flexibility of learning across GAIL. The Learning Management System (LMS) platform manages the overall training and skill development. While selecting the employees to undergo training and skill development, there is strict adherence to our policy of non-discrimination.

LMS has a vast repository of e-learning contents such as ASME/API standards, OSID standards, PNGRB regulations, SOPs, etc., which are essential for GAIL operations. The learning materials are designed to cater to the reader's requirements; hence, it should be reader friendly. To facilitate an interactive eLearning experience, learning materials are provided as presentations, animations, audio-visuals, etc.

Value Added per Employee

Value Added per Employee reflects its emphasis to make the optimal and productive use of the available resources and business opportunities. For the year under review, Value Added per Employee was INR 2.15 crore.

Innovative methods to improve learning

» To make the learning process more inclusive and efficient, and inculcate a culture of self-learning, GAIL's maiden in-house publication of four e-books has been collated and compiled with employee's inputs under various categories. The initiative was launched on 10 April 2020 till 03 May 2020. Total 403 entries have been shortlisted for publication and the book was published under four categories in eBook format

and launched on GAIL Foundation Day:

- मधुस्मृतियां : collection of Short Stories
 - GAIL ke Ghalib: collection of Poems
 - Dawat-e-GAIL collection of Cooking Recipes
 - झरोखा : Articles related to General Management and Operations
- » 13th Knowledge and Experience Sharing Seminar conducted in December 2020. Also, a total of 100 Papers were received under 5 different categories.

Table 2: Value added per employee

Subject	2018-19	2019-20	2020-21
No. of employees	4529	4682	4705
Value-added in crore	13058	11567	10115.75
Value add per employees in crore	2.88	2.47	2.15

Performance Management

We provide our employees with the opportunities to develop their performance, recognize their work, and reward their accomplishments. Periodically, we conduct performance and career development evaluation and feedback of the employees through 360-degree feedback exercise. This enables them to receive feedback and comments from their co-workers, superiors and subordinates.

Leadership and Succession Planning

At GAIL, we consider all our employees as valuable assets of our organization. We operate with a vision of becoming a workplace that provides a platform for all the employees to develop their professional skillsets through engaging in training programs and career planning systems.

We aim to meet our personnel requirements for our positions of responsibilities through our existing workforce spread across various functions within the company. This is achieved through the GAIL guidelines on promotions and transfers. These guidelines assist the internal team to ensure that personnel suitable experience, capability and qualifications are handed over the management responsibilities of GAIL.

As part of our preparedness for future challenges, GAIL has put in place Integrated Leadership Development Framework and Succession Planning Framework for facilitating leadership development and career planning.

GAIL Succession Planning Framework is an Executive Development oriented initiative. It is aimed to put in place a structured framework to ensure the adequacy of talent pool/ skill set availability, both in terms of quantity and quality of potential successors, in line with Company's business plan.

The Development strategy comprises multi-pronged Talent Development Interventions, which include:

- » 360 Degree Feedback Exercise,
- » Senior Management Development Centre (SMDC) Exercise,
- » Focused development programs

Master Class of Directors & Boardroom Effectiveness



360 Degree Feedback is aimed to provide an effective feedback to concerned executive (s) via his/her peers, subordinates and seniors. Senior Management Development Centre (SMDC) exercise has been undertaken for senior executives in E-5 Grade and above. SMDC is an aid to ensure better and inspiring leadership in the organization. Post SMDC, the executives are provided with books, e-learning modules and competency specific training in premier B-schools. Customized Management Development Programs on Leadership have also been conducted for E-5 and above Women executives. Additionally, a structured Management Development Program is also imparted to all the newly promoted E7 and E8 Executives.

GAIL is grooming the senior level executives of GAIL at the level of Executive Director and Chief General Manager for the Board Position through capability building programs like Master Class for Directors and Board Room Effectiveness, wherein Directors of GAIL Board also conducted sessions. In line with the global business environment and India's future growth trajectory, Capability building programs on the emerging areas such as Renewable and Alternate energy (Solar and Wind Energy), Water Value Chain, Specialty Chemicals Segment and other upcoming areas such as Mobility Future, Industry 4.0 and Automation are being conducted regularly for meeting the objectives of GAIL's Strategy-2030.

GAIL gives priority to develop its Leadership capability. As part of the Leadership Development

Program, we continued to undertake SMDC exercise with great emphasis on the developmental aspects of individual executive. As on date, almost all the senior executives in E-6 Grade and above have been covered under the program. To percolate the benefit of the SMDC Program, our Company has extended the same to executives in E-5 grades as well. In an initial spell during the year, over 300 executives were covered.

Labor Practices

As part of our commitment to become a true socially responsible organization, we are committed to advancing fundamental human rights and responsible labor practices throughout our operations. We comply with local laws as well as international frameworks (including ILO convention) for human rights and labor practices related matters. Additionally, we also work towards the abolishment of the unacceptable practices of child labor and forced or compulsory labor.

At GAIL, we believe that our people have the right to have their voices heard while raising concerns, either openly or anonymously, without any negative consequence. We provide our workforce the freedom to join employees or workers associations and form labor unions within the ambit of statutory provisions and code of conduct. Our organizational values ensure equitability and non-discrimination in the remuneration, which is grounded on performance-based and competency-based principles. All the workers are covered under collective bargaining.

Human Rights

We strictly adhere to our policy of having no child labor and forced labor. All the security personnel have been trained to ensure no underage worker enter the plant/office premises and even our contractors prohibited from employing underage workers. For any operation, the only exceptions to the 18 years age bar are those, who are part of the government approved apprenticeship schemes and internships. We conduct training on human rights periodically for all the employees and security personnel.

GAIL upholds a zero-tolerance policy towards any act that leads to the violation of human rights. We also have ratified a zero-tolerance policy for the prevention of child and forced labor and ensure that no such employment occurs at any of our operation. During this reporting year, no incident of engagement of child or forced or compulsory labor has been recorded.

We comply with the Presidential Directives and other instructions and guidelines issued by the Government of India for providing reservation, relaxations, concessions, etc. for Scheduled Castes (SCs), Scheduled Tribes (STs), Other Backward Classes (OBCs) and Persons with Disabilities (PWDs) in Direct Recruitment.

We recognize the rights of the workers to join, form or not to join trade unions of their choice without any fear of reprisal or harassment. We uphold our workforce Rights to Freedom of Association and Collective Bargaining by recognizing and supporting various employee associations such as Workers' Unions, Women's Forums, SC/ ST Employees Association, etc. Presently, there are two employee associations operational in GAIL, i.e., GAIL Employees Association (GEA) and GAIL Karamchari Sangh (GKS).

GEA is a representative body of Non-Executives posted at various offices, plants and installations across the country except for Non-Executives posted at Corporate Office in Delhi. GKS is a representative body of Non-Executives posted at

Corporate Office in Delhi. As on 31 March 2021, 881 regular employees, i.e., 18.77% of GAIL's total employee strength are the members of GEA and GKS.

Periodic meetings with both the employees' unions are held at Unit level and Corporate level to address the genuine employees' related issues. We adhere to Section 9A of the Industrial Dispute Act 1947 w.r.t notice of change. The contractors are also required to ensure all the applicable statutory social security benefits including provident fund in respect of the contract workers engaged by them. The contract workers are covered under the Employee's Compensation Act, 1923 and an Insurance Policy is obtained by the Contractor regularly for the grant of Death/Disablement Benefits wherever Employees' State Insurance Act (ESI), 1948 is not applicable; and wherever ESI Act, 1948 is applicable, the contract workers are ensured benefits under ESI Act, 1948 through the contractor. Further, the contract workers are covered under Occupational Health Check-Up at major work centers. Additionally, we ensure coverage of all of the applicable health and safety compliance for permanent employees at all its operational sites.

We believe that decent work underpins peace and security in communities and societies. We have put our best foot forward to ensure decent work condition including accommodation facilities for all of our employees. Entire GAIL operations are subjected to regular human right reviews and impact assessment. Additionally, no employee was laid-off and received no discriminatory employment complaint during this financial year.

Company's Industrial Relations climate remained congenial and constructive. There was no Man Day or Man Hour lost on account of any sort of Industrial conflict/unrest. Discussions with employee collectives are being held both at Work Centre and Corporate levels. In Company's endeavor to keep pace with the rapidly changing business requirements, employees' aspirations and to maintain sustainable competitive

advantage, we review the HR policies at regular intervals to align the Corporate HR Strategy with the Organizational Strategy.

Some of the industry best practices being followed by GAIL when it comes to respecting Human rights or ILO convention are as under:

» Collective Bargaining:

GAIL upholds the Freedom of Association and Collective Bargaining by recognizing and supporting the Workers' Unions, Officers' Associations, Women's Forums, SC/ST Employees Association, etc. There are two unions that have been recognized by the management, namely, GAIL Employees Association (GEA), representative body of non-executives posted at various field offices/plants/installations across India except the corporate office; and GAIL Karamchhari Sangh (GKS), representing the non-executives posted at Corporate Office.

» Grievance Redressal System:

In GAIL, Employees Grievance Redressal Mechanism is ensured through an online Grievance Redressal portal. The portal follows a three-tier process and ensures speedy disposal of grievance and aids in prompt monitoring of the system. An aggrieved employee can register one's grievance with the concerned HR in Charge, who is expected to settle the same within a period of 10 days from the date of registration of the grievance. If not satisfied, the employee may raise the matter again through the same portal/system to the Corporate HR Department, which is required to respond to the employee concerned within a period of 15 days. If the issue remains still unresolved, the employee may appeal to the Director (HR), who will respond to the employee concerned within a period of 15 days. Settlement of grievance by Director (HR) is final and binding to all the concerned.

» No unfair labour practices

Internal control procedures such as policies and/or regulations, which the company and its

employees, are expected to abide include the following:

- Code of Conduct
- CDA Rules
- Standing Orders
- Fraud Prevention Policy
- Whistle Blower Policy

Further, employees are expected to abide several instructions/directions issued in this regard by the company from time to time.

We create awareness and sensitization programs towards this issue by conducting several training programs on labor laws and human rights. This is generally organized at GAIL Training Institutes as a part of our annual training plan for our executives, non-executives and contractual employees.

In FY 20-21, 1.9% of employees availed 5,000 hours training on policies and procedures concerning human rights. Additionally, 100% of security personnel have also been trained on specific procedures on human rights related to security services. As a part of our commitment towards creating a safe workplace to all the employees, we take necessary steps to ensure that our employees are not subjected to any form of harassment. Hence, we have a defined policy in place for the prevention of sexual harassment at the workplace.

In terms of GAIL's policy for prevention, prohibition and redressal of sexual harassment of women at the workplace, the Internal Committee in terms of the sexual harassment of women at workplace (Prevention, Prohibition and Redressal) Act, 2013, prepares an annual report submitted to the Company Secretary.

- » Number of complaints of sexual harassment received during the year
- » Number of complaints disposed of during the year
- » Number of cases pending for more than ninety days

Awareness Program on subject 'Sexual Harassment of Women at Workplace' at NCR (O&M) Noida

On-Line quiz on "World Day of the Fight Against Sexual Exploitation" – 4 March. Inspired by Prime Minister's vision of promoting #NariShakti and as a tribute to its women employees of the organization, GAIL (India) Ltd. celebrated International Women's Day at corporate office, Delhi.

A video was launched by GAIL on its social media platforms with the hash tag #EveryDayHerDay showcasing how women are an important part of our lives every day. The event saw a high turnout and engagement activities, where GAIL employees enthusiastically participated

to gift "Doll" badges handcrafted by fisher women from coastal villages of India to their colleagues.



- » Number of workshops or awareness programme against sexual harassment carried out
- » Nature of action taken by the employer
- » During the FY 20-21, only one complaint of Sexual harassment was filed and the same has been disposed of as after the inquiry conducted by the Internal Committee, where the charge of sexual harassment was not proved against the respondent. Presently, no complaint of Sexual harassment is pending in GAIL.

Employee Wellbeing

Physical and mental well-being of employees is non-negotiable at GAIL. We believe, maintaining the health of our workforce and community is fundamental to business longevity.

We are committed to providing a full health checkup menu for both the permanent and contractual employees. We have a 100% representation of our workforce at formal joint management health and safety committees.

This committee is important in creating awareness about the health and safety issues. To ensure safety and efficiency at the workplace, we provide 15 days' notice period to our workforce in the event of any operational change. Our Corporate Medical Cell (CMC) conducts regular health checkup for our employees and tracks individual employee health. A doctor is always available within the reach of any GAIL employee, both at the corporate base and at operational sites. Annual occupational health checkup is being done for the employee health. Ergonomic survey is conducted for employee welfare.

Health awareness sessions such as fitness, yoga, stress management, lifestyle management and nutrition sessions for our employee and carry out various events such as Sporting events such as slow cycling, badminton and rangoli competitions were organized at colony Special precaution and special awareness lectures at both plant and colony were organized for prevention and spread of COVID-19.

Awards:

GAIL (India) Limited, the country's Natural Gas leader, has featured in the Forbes list of World's Best Employers 2020. There are only 31 Indian companies in the list, out of the total feature of 750 companies from 45 countries, with just nine Indian Public Sector Entities making the cut. Out of 750 Companies across the Globe in Forbes Best Employers 2020 list, GAIL's ranking is 403. It is ranked 5th among Indian PSEs.

Employee care during COVID-19

- » As part of SPARSH, a team of 55 Executives from HR Directorate tele-called 4614 active employees spread across 200+ locations Pan India and USA/Singapore and 600 + superannuated employees during COVID-19 Lockdown. The Initiative was launched on 30 March 2020 and completed on 3 April 2020 wherein we could contact 5,200 + employees (regular/superannuated). A video message from the Director (HR) was also shared with the employees to drive home the message of togetherness and solidarity in this situation.
- » During the early weeks of Lockdown last year, the Corporate Communications team in collaboration of employees of other departments across various locations, came up with two music videos to boost the morale of all employees and enhance the feeling of togetherness during those tough times.
- » Corporate Communications team also came up with a series of informative videos as part of #HumKadam campaign. These videos had interviews from COVID-19 recovered employees and many other COVID-19 prevention measures as well as tips to engage positively and productively to mitigate stress, increase immunity, pursue hobbies that could be taken up by the employees.





Peela Gulmohar
Location: **Pata**



GAILs FY 20-21 CSR
Expenditure was
INR 147.67 Crore



Zero operational activities with
negative impacts on local
communities



Our Community

For an organization to truly flourish, its community must also progress. Inclusive development has never been an afterthought in our philanthropy, but rather a core component of our business strategy. Our vision and strategic objective are to be a leader in natural gas while transforming thousand lives.

Our close interactions with local communities have equipped us to identify the most pressing needs, understand lives of underprivileged people and provide suitable remedies. We have pioneered various CSR initiatives to empower weaker, less privileged and marginalized sections of the society recognizing the diversity of each community in terms of ideology, expectations, concerns, and demands.

Regularly engaging with the local communities through various channels helps us to be aware about the progress of the intervention and obtain feedback for them. The active participation of the community plays a critical role in the formulation, execution of various CSR projects, facilitates us in building trust and lays the foundation for positive socio-economic outcomes for both the company and the communities.

Social Commitments

GAIL acknowledges the positive and negative impact caused by its business operations on the local communities and strives to minimize it. During the reporting period, no incident of significant negative impacts of our operations on local communities were reported.

Building mutual trust and respect for the indigenous people in the areas where we operate is part of our commitment. Stakeholder viewpoints are important to us in project planning, design, execution, and operational planning. While beginning any project, we consider addressing the concerns and issues of the local communities and this is one of our top priorities. There was no case of substantial disagreement with local communities or violation of indigenous people's rights documented during this reporting year.

CSR Policy

GAIL aims to enhance value creation in the community, in which it operates, through its services, conduct & initiatives. The operating guidelines to CSR policy allow us to undertake CSR projects specifically focusing on targets groups recognized in the clause including BPL, SCs, STs, OBCs, PwDs, and communities around work centres of GAIL etc.

Our community engagements initiatives are designed and implemented under the corporate social responsibility (CSR) initiative "Hriday". Our team strives to socioeconomically empower people from all disadvantaged groups and create a positive impact in the society. A list of activities carried out under the 'Hriday' program is provided in the following section.

At GAIL, the CSR activities are effectively designed and implemented by our internal CSR committee. The committee was formed in compliance with the provisions of Section 135(1) of the Companies Act, 2013. It provides guidance and leads the CSR initiatives with utmost care.

As on 31st March 2021, the CSR Committee comprises of the following members:

- » Mr. Manoj Jain, Chairman of the Committee – C&MD
- » Mr. P K Gupta – Director (HR), Member
- » Mrs. Banto Devi Kataria- Independent Director, Member

In the financial year 2020-21, the Corporate Social Responsibility department has taken up a total of 231 projects. GAIL has spent INR 147.67 crore, which is nearly 2.05% of average net profit of preceding 3 years. All the projects taken up under the GAIL Hriday umbrella are in line with the activities detailed in Schedule VII of Companies Act, 2013 and its amendments. Additionally, GAIL has spent INR 70.16 lakh on internal administrative activities such as capacity building activities for the employees.

Need Analysis and Impact Assessment

We are taking conscious efforts for community development by creating various opportunities through focused and proactive projects. The projects are based on extensive need assessment and focus on providing sustainable solutions.

Our social impact projects are thoroughly assessed and monitored to gauge their impact and collect feedback. We also undertake third-party impact assessments of our major projects and identify interventions to ensure that the projects achieve sustainability.

Our CSR activities are in line with our expertise and competencies. As a result, we have made a positive difference in the lives of the recipients. We recognize that no amount of secondary data on a community can confirm the community's requirements as well as they can. As a pre-requisite, for initiating any CSR project, a mandatory preliminary baseline survey/need assessment report is generally conducted. GAIL CSR policy can be accessed at http://gailonline.com/pdf/CSR/final_policy2010.pdf

Need Analysis:

GAIL CSR Committee reviews and approves the implementation of CSR projects based on the requirements and requests of the local communities. The need analysis is conducted through the following steps:

- » Needs identified by the local CSR team through field assessment
- » Requests received from villages, local authorities and district administration
- » Third-party need assessment studies
- » Reports or publication or surveys published by the international organizations and ministries
- » Requests received from people representatives for their respective constituencies

Impact Assessment:

To achieve maximum impact in a sustainable and participatory way, monetary provisions are made available to conduct impact assessments. The value ranges from INR 50 lakh to INR 2 crore. The impact assessments are carried out by GAIL's CSR department and site coordinators in association with various agencies and academic institutes

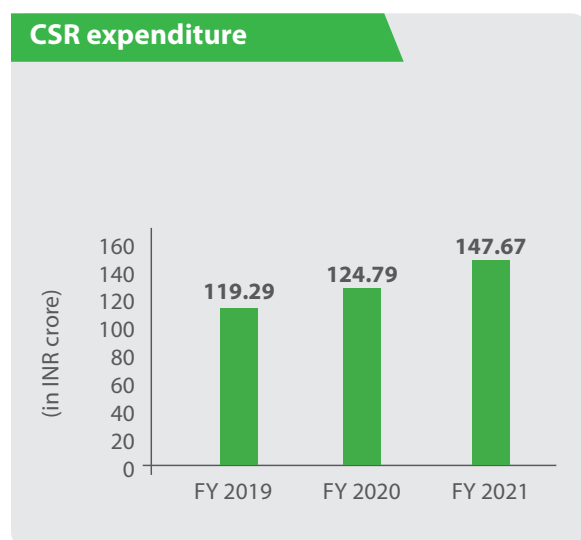
The impact assessment includes a SWOT (Strengths, Weaknesses, Opportunities of improvement/ augmentation/ modification and Threats) analysis that enables the CSR team to identify the viability, sustainability and improvement areas of the projects. This is assessed by an external agency. During this process of impact assessment, case studies, success stories and feedback from concerned stakeholders are also collected. This helps in recognizing the project impact on the concerned site.

- » Total number of operations with local community engagement, impact assessments and development programs were 100%
- » Total number of operations with significant actual and potential negative impacts on local communities were zero

Stakeholder perspectives are important to us in project planning, design, execution, and operational planning. While beginning any project, we consider addressing the concerns and issues of the local communities to be one of our top priorities.

GAIL Hriday

We strive to enrich the lives of thousands of underprivileged people by creating social capital across our seven CSR focus areas of education, healthcare, skill development, women empowerment, environment protection, etc., which are identified by understanding the needs and requirements of the local communities. These programs are executed through partnerships with communities and NGOs, staff volunteerism, and direct corporate donation. Driven by passion and propelled by commitment; these focused, value-driven developmental CSR projects will help us reach out and transform many lives.



Details about the initiatives undertaken within these seven focus areas of the Hriday initiative are provided below.

Hriday as an umbrella concept has 7 major focus areas. They are:

GAIL Arogya

GAIL Arogya Initiatives are:

- » To improve the health and sanitation facilities of the local communities

- » To undertake water conservation and community nutrition-related initiatives
- » To support and advocate the Government's efforts in developing infrastructure for health and sanitation
- » To operate Mobile Medical Units (MMUs) across multiple states including Madhya Pradesh, Uttar Pradesh, Gujarat, Haryana, Uttarakhand, Andhra Pradesh and Punjab
- » To improve accessibility and increase the availability of potable water in the selected regions

Events under GAIL Arogya initiative in 2020-21

Initiatives to fight COVID-19

- » GAIL delivered 732 personal protective equipment (PPE) kits to the Gautam Buddha Nagar Government Hospital in Noida.
- » GAIL has partnered with Sudhaaya Dance Foundation and traditional artists from indigenous and tribal groups, utilizing the narrative power of art forms like Gond and Warli. To reinforce information about the pandemic, aged 8 to 12 in Government schools across Delhi NCR as part of the project.
- » GAIL CSR has pledged to assist in the provision of COVID-19 vaccine cold chain equipment. Madhya Pradesh has received 23 deep freezers (small) and one refrigerator truck, while Tripura has received 16 ice lined refrigerators (small).
- » GAIL Karaikal procured 220 Pulse Oximeters for the benefit of the public in Karaikal District, in response to the District Collector's request to bolster the District's Public Health Emergency Response.

Support towards STI & HIV Prevention, testing and treatment for truckers

The project's goal is to help GAIL Vijapur's truckers and cleaners live a healthy lifestyle by providing

high-quality healthcare services with a focus on preventing sexually transmitted infections and HIV. Awareness activities/sessions, interpersonal discussions with beneficiaries, street plays, mobile exhibitions, counselling services, and free food were all used to achieve the goal.

Support for Distribution of Aids & Assistive Devices to Divyangjans

The implementing agency, Artificial Limbs Manufacturing Corporation of India, provides prosthetic limbs, wheelchairs, tricycles, hearing aids, and other items to identified and selected recipients under this flagship project of GAIL CSR (ALIMCO). The process begins with a district-wide assessment camp to determine the number of beneficiaries and the appropriate assistive aids that will be necessary. The Assessment camp is followed by a Distribution camp where the aids are distributed to the identified beneficiaries.

Combating pollution caused by floral disposal from temples in water bodies in and around Noida

The project began with the goal of improving health and well-being indices by minimizing pollution caused by floral waste disposal from temples and other places of worship through recycling. Floral recycling is accomplished by teaching people with disabilities (PwD) on how to make items such as dried petals (for Holi colour), hand rolled Agarbatti, seed bombs, compost, and seed poop. The project involves:

- » Sourcing and Collection with the aid of Noida Authority from 12 Temples and other places of worship in and around Noida.
- » Collaboration with the NGOs working with persons with disability (PwD) in Noida for involving PwDs in recycling the flowers into green products.
- » Providing skill training to 130 PwDs, women and NGOs in recycling of approx. 700 kg of floral waste.
- » Development/creation of consumer-friendly

quality products at two centers in Noida from the waste flowers.

- » Campaigning/Marketing of the initiative and sale for the end products through various platforms-digital/exhibition, etc.

GAIL Ujjwal

GAIL Ujjwal Initiatives are:

- » To facilitate infrastructure development for the education of children from underprivileged and marginalized sections of the society
- » To renovate various government school facilities and assist in improving IT facilities, science labs, provision for the supply of equipment and stationeries
- » To encourage and facilitate the education of meritorious students from marginalized sections of society through scholarships, specialized residential coaching and mentoring for competitive examinations such as IIT JEE, etc.; this is achieved through the Project Utkarsh under the GAIL Ujjwal initiative.

Events under GAIL Ujjwal initiative in 20-21

GAIL Rajahmundry launches 2nd phase of quality education program in Anganwadi Centres under ICDS program

The first phase of this CSR initiative began in January 2020 and ended in March 2020. Shri K P Ramesh, CGM (O&M) & OIC, GAIL Rajahmundry, formally began the second phase operations on 29 December 2020 at the CDPO office in Rajahmundry. GAIL is covering 60 Anganwadi (ICDS) Centers in Rajahmundry as part of the initiative, where special sessions on Yoga will be held with special focus on pregnant and lactating women.

Classes in craft creation, dancing, and music, among other things, are taught to Anganwadi children using specially devised "play-way" methods. Furniture was also provided based on

the needs of Anganwadi Centers to improve basic amenities and the ambiance of ICDS Centers. GAIL officials, as well as Anganwadi teachers from the 60 ICDS centres that are part of the project, were in attendance.

Support towards renovation work in Primary and Upper Primary Schools in Salhupur Village, Auraiya

Hon'ble Agricultural State Minister Shri Lakhan Singh Rajput inaugurated the project on 29 August 2020, in the presence of Shri Ajay Tripathi, ED (PC-O&M) & OIC. Officials from GAIL, the Executive Engineer, UPSCIDCL workers, and members of the public were also present. Renovation of an old building, construction of two classrooms and toilets at a government primary school, and renovation of an existing structure are all part of this project.

Support for construction of Indoor stadium at Balangir

GAIL is financing the construction of an indoor stadium at P R High School in Balangir, Odisha, as part of its CSR effort. The stadium will feature a large hall with four badminton courts, one table tennis practice room, gallery space, players' dressing rooms, and other amenities. This infrastructure will play a vital role in identifying, fostering, and promoting rural sports talent from the remote rural areas of the country and have limited access to sports equipment and infrastructure. It is being constructed utilizing pre-engineered construction techniques to ensure speed and quality.

The stadium will incorporate rainwater collection capabilities and solar-powered outdoor lighting in order to promote and encourage the protection of natural resources. Every year, the project is expected to benefit more than 10,000 students and others with a sporting bent as the infrastructure built, as part of the project will service the appropriate population.

GAIL Kaushal

GAIL Kaushal initiative focuses on the skill development and livelihood generation of the poor and marginalized communities in the society. Other objectives of the initiatives are given below:

It provided opportunities to the women and youth to improve their income through skill development. This is achieved through GAIL Institute of Skills, which is located at Guna (MP), and Nagaram (Andhra Pradesh). These institutes provide skills training in auto CAD, web designing, domestic BPV/BPO, welding, industrial electrician, CNC operator, instrument technician, retail associate, masonry to youth from the remote and backward districts.

Events under GAIL Kaushal initiative in 2020-21

Support of Atal Innovation Mission

Through Atal Tinkering Labs in GAIL's Aspirational Districts, GAIL CSR has teamed with UNISED, a startup founded by IIT graduates, to foster innovation and entrepreneurship in the country. Through the ATL programme, GAIL takes great delight in nurturing the next generation of innovators.

The project collaborates with ten schools in Assam (4 in Barpeta and 1 in Mangaldoi) and Madhya Pradesh (District Guna) on the initiative.

In the ATLs of all schools, a full tracking exercise of all activities was completed. Regular teacher training workshops are held to guarantee that the spirit of ATL is preserved and that it does not devolve into a rehash of classroom lectures.

GAIL Institute of Skills, Guna

GAIL Institute of Skills is one of the renowned initiatives implemented as part of GAIL Guna's CSR projects. The goal of this effort is to discover needed candidates, who have been unable to find work owing to a lack of education, skills, or direction, and to train them in their areas of

interest and market jobs as well as to connect them with paid employment.

Since its inception in 2010, the program has benefited 5,433 candidates from over ten Madhya Pradesh districts. On the Agra-Bombay National Highway, the Institute is located on a 2-acre site. The training infrastructure comprises five high-end technical workshops for practical training and a 120-bed dormitory facility to accommodate candidates from outlying areas, and it is capable of training candidates from all over the world.

The institute offers counselling programs at the Panchayat level, Industrial Training Institutes, Polytechnics, and Employment Offices to bring awareness and benefit to as many individuals as possible. In addition, a 'Rozgar Rath' travels across the GAIL Vijaipur catchment region to reach the district's interior communities. The National Skill Development Corporation is linked with and accredits the institute, as are all its programs.

GAIL Unnati

The objective of GAIL Unnati initiative is to implement initiatives to contribute to the overall rural development.

During this reporting year, GAIL has spent INR 455.68 lakh on developing/supporting infrastructure for communities and public good under the Unnati Initiative.

GAIL Sashakt

The objective of GAIL Sashakt initiative is to empower women from economically weak and marginalized sections

All interventions undertaken are in alignment with the guidelines of the Department of Public Enterprise (DPE) and the rules of the Companies Act, 2013.

Women empowerment- Training program in Stitching and Sewing

As part of its CSR initiatives, GAIL, Rajahmundry, launched a 45-day stitching/sewing training

program for impoverished women in Andhra Pradesh's East and West Godavari districts. As part of the CSR program, 110 women were chosen and given training in how to sew school uniforms and women's clothing. In the presence of Women-Internal, certificates of training completion were handed to women beneficiaries.

GAIL Saksham

GAIL Saksham initiatives are:

- » To recognize and address the need for attention and care for differently abled persons and elderly
- » To provide the provision of hearing aids and other assisted aids for students with special needs

GAIL Harit

GAIL Harit Initiatives are:

- » To contribute towards restoring the planet by protecting the environment
- » To mitigate the negative impact of GAIL's operations

During this reporting year, GAIL has spent INR 50 lakh on tree plantation and afforestation initiatives.

Events under GAIL Harit initiative in 2020-21

Conversion of diesel boats to CNG in River Ganges, Varanasi

As many as 1,700 small and large boats with diesel engines will be replaced with CNG engines under this initiative to considerably reduce water, air, and noise pollution in the Ganges while also improving scenic attractiveness. In addition, 51 boats will be equipped with CNG engines in the first phase.

On 27 March 2021, Shri Dharmendra Pradhan, Minister of Petroleum, Natural Gas and Steel, observed the development of GAIL's CNG boat conversion project at Khidkiya ghat in Varanasi. During the evaluation, Varanasi Nagar Nigam

signed the project implementation agreement in his presence.

Distribution of Solar Home Lights to Beneficiaries

The project's goal is to bring lights to distant villages in Uttar Pradesh's Auraiya district. A total of 1,000 Solar Home Lights are being installed as part of this project.

Community Grievance Redressal

We feel that strengthening community links contributes to greater transparency and accountability among us. We make it a point to

engage with our communities on regular intervals in order to understand their distress and give them a means to voice their concerns, address their complaints, and find solutions to the issues addressed. We have set up a grievance cell at each of our offices for this purpose. All the complaints are collected and stored in a central system and investigated individually with equal importance. Further, necessary actions are taken in this regard as quickly as possible. During this reporting year, GAIL received 152 complaints from the public at large and 100% of the complaints were resolved promptly.





Queen's flower
Location: **Gandhar**



GAIL is proud to share that Customer Satisfaction Index for FY 2020-21 is 96



100 % satisfactory resolution was achieved for registered complaint at various zonal offices within the FY 2021

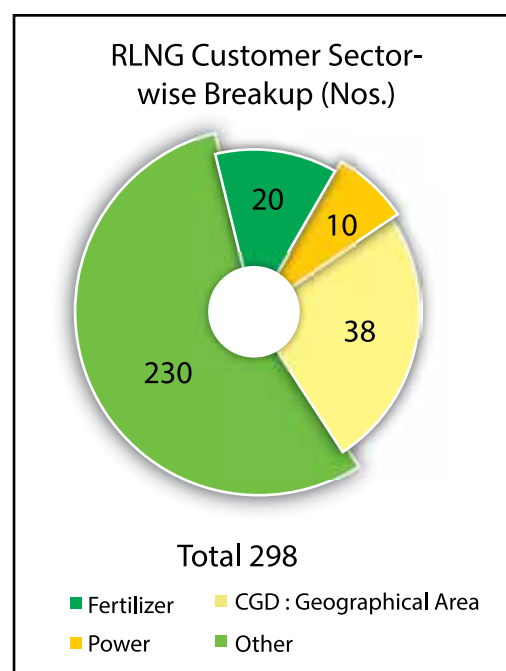
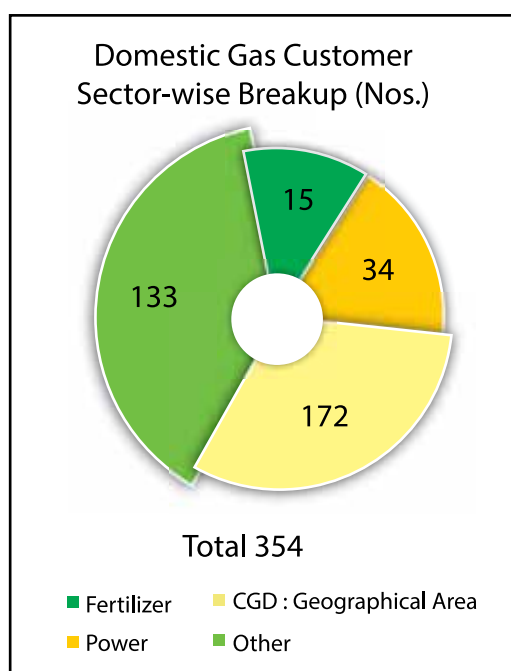
Our Customers

At GAIL, we have set up systems to communicate with our customers about our operation, our products, and handling their grievances in the most effective way. Customer experience is at the core of our business. We strive to improve the customer satisfaction level by promptly grasping customer needs through better business delivery, market research and customer engagement initiatives. To evaluate customer experience, we conduct customer feedback survey periodically through various modes. This enables us to improve our products, services and approach, thereby ensuring customer satisfaction and building a long-term relationship that positively influence our business growth.

GAIL's Customers

Currently, GAIL has a domestic gas customer number of 354 and RLNG customer number of 298. Sector-wise breakup is provided below:

Sectors	Domestic	RLNG
Fertilizer	15	20
Power	34	10
CGD	172	38
Others	133	230
Total	354	298



Customer Privacy

All stakeholders, from peers to investors thus, we have dedicated Document preservation policy to assure that their business records are being created, captured, stored and disposed in a secure and trusted manner.

Customer privacy is integral part of our agreements, which include matters such as the protection of data, the use of information or data for their original intended purpose, the obligation to observe confidentiality and the protection of information or data from misuse or theft. Customers are understood to include end-customers (consumers) as well as business-to-business customers. No complaints received concerning the breaches of customer privacy during the last financial year.

RLNG: The agreements with the customers, i.e., GSAs / GSPAs contain Confidentiality clause wherein both the sellers and the buyers are obligated to keep the information i.r.o. transactions/business pursuant to the said agreements confidential except for the purposes as allowed by the law.

Domestic Gas: GAIL has a very vast and diverse customer base and is supplying gas to various entities across the natural gas value chain. Considering the significance/ importance of unique selling propositions (USP) of customers, the contractual provisions/ financial agreements /clauses are kept confidential with all customers including end-customers (consumers) as well as business-to-business customers. Several measures concerning the protection of information or data from misuse or theft are taken in consultation with domain experts on the subject matter.

Product labeling

Product labelling provides information about products to a prospective customer. It is an efficient medium for consumers to access accurate information about the social, economic

and environmental impact of the products they consume. We have taken adequate measures to address this issue appropriately so that our customers can make an informed decision about their purchase.

GAIL's approach to providing product information are provided below:

In the case of Polymers, the following product information is displayed on 25 kg strong bags made of woven fabric:

- » Grade Name
- » Batch Nos
- » Manufacturer details
- » Made in India
- » Symbols for storage,
- » Recyclable,
- » Handling of bags
- » Net Weight
- » BIS Logo
- » Contact e-mail for customer support

No incidence of non-compliance with regulations and/or voluntary codes concerning the health and safety impacts of products and services within the reporting period.

Customer Grievance Redressal

We believe in providing great customer service while recognizing the importance of accessible and effective grievance mechanisms in addressing our impacts. Any dissatisfaction or concerns our customers have can be resolved through our Grievance Redressal process. Upon receiving the feedback from all GAIL business units, we develop action plans to address the issue and resolve it immediately.

During this reporting year, 107 complaints were received at various zonal offices, all the which were resolved satisfactorily. Further, all the technical complaints received at GPTC were satisfactorily resolved to customer satisfaction. We have also taken necessary actions to resolve

physical complaints.

Total 1,981 customer complaints are received in CGD segment, of which 85% of these complaints were resolved satisfactorily by the management.

Customer Satisfaction

We believe that customer satisfaction and customer loyalty are imperative for long-term business growth. Hence, we review and redefine the strategies to provide better service through our business initiatives. GAIL's zonal offices are constantly in touch with the customers of their respective regions to gather information related to their natural gas requirements, any existing issue pertaining to supply, Gas Supply Agreement (GSA), etc. In order to retain these customers, GAIL offers contractual flexibilities and tries to increase overall customer responsiveness. In case any existing contract/GSA is expiring, the Zonal offices, reach out to the customers for contract renewal, and based their then prevailing requirement, enter new contract after internal deliberation with GAIL Corporate Marketing.

GAIL Polymer Technology Centre (GPTC) in Noida (Delhi NCR) is one of our endeavors for our petrochemical business segment. Through this service, GPTC provides technical assistance to resolve product-related concerns of consumers on polymer grades. This customer service and feedback interface carry below-mentioned activities:

- » Consumer/customer complaint redressal
- » Assistance on the proper selection of GAIL grades
- » Entrepreneurial guidance
- » Development and modification of GAIL petrochemical grades to meet market needs
- » To actively participate and represent GAIL in technical forums and business association for awareness and policy advocacy purposes
- » Application development and promotion for customer benefits

Some of the complaints received at GPTC:

- » GAIL polymer grades: In technical quality, the customers mainly raised the issue of flow lines in B52A003/B63A003, roughness in inner surface/low strength in P52A003, low strength/elongation in W50A009 and low MI in R36A050U.
- » BCPL polymer grades: In technical quality, the customers mainly raised the issue of gels/unmelted particles in F20S010I.

In-house tests, additive analysis, customer visits and virtual meetings were undertaken to address the customer quality concerns. Based on the trials conducted at customer premises and supported by in house studies carried out at GPTC, a feedback was given to the Pata plant to produce modified trial lots suiting the end-product requirements of the customers, especially in GAIL grades, namely, P52A003A, B52A003, W50A009 and in BCPL namely F20S010I.

Complaints received in CVM offline survey FY 20-21

- » Product quantity needs consistency, stability and Impurities-Dust / Water in APM Natural Gas Supply.
- » LNG is odorless and its leakages cannot be identified
- » Pressure fluctuation in APM & RLNG gas supply
- » Due date for the payment of invoices need to be increased, where GAIL needs to reduce gas prices

Marketing departments have provided mitigations against these observations / feedbacks of CVM-Survey. Accordingly, customers have also been informed.

CSI online survey 2020-21

We have received a total of 39 customer observations in NG segment through online CSI-Survey in FY 20-21, out of which the major ones are:

- » Product Quality: Variation in Calorific Value, Liquid Condensate and Impurities-Dust / Water in APM Natural Gas Supply
- » Delivery of Products: Availability of desired quantity, pressure fluctuation in APM & RLNG gas supply
- » Technical support: GAIL Representative Visits need to increase for Technical Support

Marketing and Corporate O&M departments have provided mitigations against these observations / feedbacks of CSI-Survey.

Due to ongoing pandemic, we emphasize strongly on virtual meetings. We have held virtual meetings with major and new customers for technical support, product feedback and new product development.

Our consistent efforts towards achieving customer satisfaction have helped us in achieving the overall, Customer Satisfaction Index of 96 for the FY 20-21:

- » Effective management and retainment of customers through increased customer loyalty
- » Improving GAIL's brand value and customer preference
- » Tapping into previously untapped markets
- » Expanding our customer base
- » Recognizing critical customer concerns
- » Timely resolution of customer Identifying areas of customer dissatisfaction and their timely mitigation

Customer Engagement

Throughout the year, our team engages with our customers through various platforms while building trust and support. We focus on delivering the best end-to-end customer experience. We have multiple focused initiatives under our customer engagement programs. It provides them with solutions to their queries about products and product portfolios and attempts to create awareness about our services. In the long run, such initiatives help GAIL to enhance brand

credibility while reaching out to more potential customers.

Customer Meets and Other Events

Customer meets are generally a platform for our customer raised concerns about product quality, process, etc. During the reporting year, GAIL team has attended multiple customer meets and other relevant events to interact with our customer base.

Petrochemical Customer Interactive Meet on 12.03.2021 at Indore

Bhopal Zonal Office organized an initiative for engaging with polymer customers in FY 20-21. The meet was chaired by ZCGM and other officials from Bhopal ZO, Vijaipur and GPTC, Noida were present during the occasion. A total of 165 participants attended the customer interactive meet with great fervor, which includes 145 Petrochemical customers from Indore and nearby industrial areas of Dewas, Ujjain, Ratlam, Khargone, Burhanpur, Khandwa, Bhopal and Vidisha. The interactive session was organized with a view to elucidate the customers about future demand in the polymer industry, discuss about GAIL supply mechanism to the polymer industry and to receive feedback from customers regarding our services and quality of products. This customer interactive meet helped GAIL in understanding customer requirement and expectations, thus contributing to increase in customer satisfaction. This will aid in the retention of existing customers and help GAIL in increasing customer base by adding new customers to our portfolio.

Gas Customers interactive meet at Indore, Vijaypur and Gwalior

Bhopal Zonal Office successfully organized 3 Gas Customer Interactive Meets at Indore, Vijaypur and Gwalior on 19, 22 and 24 March 2021 respectively. ED (O&M-CR) and OIC-Vijaypur graced the occasion at Indore and Vijaypur as Chief Guest. The interactive sessions were

organized with a view to elucidate the customers about the current development in the gas industry, discuss about various portfolios of gas sourced and offered by GAIL and advantages of continuing with GAIL. The occasion was also used to receive feedback from customers regarding the services and other issues. GAIL Team addressed the queries regarding different types of contracts, mitigation of various contractual issues and addressed other apprehensions of the customers. Our main strategic intent was to address their concerns and continue to improve the services from GAIL Side so as to improve the customer satisfaction. This, in turn, would help GAIL in customer retention, especially when majority of the customers already fall under GAs of existing authorized CGD entities.

Saksham 2021

A virtual technical meet was organized under Saksham 2020 for all the three marketing segments, i.e., NG, PC and LHS under (Jaipur Zonal Office) JZO on 5 February 2021. The customers were informed about the marketing initiatives taken by JZO, supply started to new CGD entities, past one-year performance of JZO, tie up of new customers, the introduction of a new grade in the PC segment etc. Further, virtual meetings were also organized with different CGD entities to expedite the Business opportunities and extend GAIL support for expanding their network in the authorized GA. Similar events under Saksham 2021 were held by other zones also.



→ BHZO Customer Meet March 2021



White-throated Kingfishers
Location: **Vijaipur**



94% sourcing from local goods & services achieved in FY 2021



E-tendering threshold value reduced to INR 2 lakh from INR 7 lakh



Fifteen Vendor Development Program across various work centres was conducted in FY 2021



Our Suppliers

Our suppliers are an indispensable element of our success story by equipping us with the essential materials and services to carry on our business operations. They play a vital role in ensuring business continuity through the supply of goods and services related to both our core and non-core operations.

We enable an environment of shared prosperity and long-term stability by constantly engaging with our stakeholders through fair and transparent interactions. By doing so, we work towards garnering long-term partnerships for the benefit of our business as well as our suppliers.

Procurement Practices

The value of ethical procurement lies in both tangible and intangible gains for a company. It eliminates uncertainties, enables security and brings transparency into our business. To promote sustainable development, we ensure that our procurement practices are conducted in an ethically and morally responsible manner while reducing impacts and focusing on environmental and societal benefits. Through risk-free supplier selection, we ensure that all our suppliers comply with all the applicable regulations and standards set by GAIL. More information/procedures about the supplier selection are described in the upcoming sections.

General Conditions of Contract

We qualify our vendors and suppliers through the tender bidding process, to identify and eliminate conflict of interests and other violations of our procurement policies and ethical standards

aligning with the law of land. The General Conditions of Contract (GCC) form an integral part of the tender document and once awarded with a contract, vendors and suppliers are mandated to comply with the conditions covered in GCC.

According to the GCC provisions, GAIL expects the suppliers and vendors to follow the guidelines explicitly. For initial screening, we have inserted the human rights clause for all the investment agreements and contract with suppliers. This financial year, none of our suppliers created any significant social or environmental impact.

No Child Labour

We do not endorse or promote child labour within our premises or supply chain as a responsible organization. To ensure the same, we have developed strict guidelines to guide us in engaging with our suppliers. Our agreements with contractors have mandatory clauses binding contractors against the use of child labour. The labour supply contractors are required to obtain labour permission from the GAIL authority. We work in accordance with the government's rules while considering the age limit for employment across all our units. As per the government's rules, the minimum age limit for the employment of contract labour is 18 years.

Supply chain Management

Green Procurement

We recognize our suppliers as our business partners. They play a crucial role in our ability to deliver high-quality products and services.

We actively engage with suppliers to improve the quality of our products and improve our sustainability performance. We ask our suppliers to live up to strict requirements, preferably having certifications on their quality, environmental, and work environment management systems in place.

All the bidders are required to confirm acceptance to our General Conditions of Contracts wherein they confirm abiding to all provisions relating to impact on society environment, labor practice and human rights aspects. In order to procure energy efficient and sustainable products, GAIL has introduced the following provisions:

- » Loading criteria in tenders for procurements of compressors or turbines or generators etc. for fuel consumption.
- » Star rating of electrical equipment.
- » Green building concept in all new building projects.
- » Compulsory Buy Back of Old PCs, laptops, Cartridges etc. by Supplier supplying such new items.
- » Procurement of new lighting and lighting fixture of LED only.
- » Automatic switching off the light in utility area to avoid extra consumption of power.
- » Buy back of batteries by approved suppliers only.

Minimum 3 star rating in the specification while procuring electrical items and ACs more than 10 years old to be replaced after doing a cost benefit analysis.

Promoting local procurement

Most of the requirements are met locally. Approx. 94% goods are sourced from the local suppliers 'Local supplier' here means products/services from India, equal preference is given to all the states. GAIL has adopted various measures as a part of Atma-Nirbhar Bharat (Self Reliant India) to promote the participation of the local domestic bidders. Some of the measures are highlighted as below:

No ICB tenders below Rs 200 crores

Tenders on International Competitive Bidding (ICB) basis not invited for tenders up to Rs. 200 crores (except OEM / Proprietary/Emergency cases). In exceptional cases where there are special reasons for inviting International Competitive Bidding (ICB) tender upto Rs. 200 crores, prior approval of competent authority is obtained while recording detailed justification for resorting to ICB Tender. Secretary (Coordination), Cabinet Secretariat shall be the Competent Authority to accord the approval for processing tenders on ICB basis upto Rs. 200 crores in exceptional cases mentioned above.

Implementation of Purchase Preference Policy

Various purchase preference policies have been implemented in GAIL in order to promote the local vendors:

- a) Public Procurement Policy 2021 for MSEs.
- b) Policy for Purchase Preference (linked with Local Content) (PP-LC).
- c) Policy to provide Purchase Preference to Domestically Manufactured Electronic Products in Furtherance to Public Procurement Policy (Preference To Make In India), Order 2017.
- d) Policy to Provide Purchase Preference to Domestically Manufactured Products of Petroleum and Natural Gas Sector in Furtherance to Public Procurement Policy (Preference To Make In India), Order 2017.
- e) Policy for Preference to Domestically Manufactured Products, Services or works Relating to Telecom in Furtherance to Public Procurement Policy (Preference to Make In India), Order 2017 .
- f) Policy for Providing Preference to Domestically Manufactured Iron & Steel Products.

GAIL has implemented Public Procurement Policy for Micro and Small Enterprises (MSEs).

The policy targets 25% of procurement from MSEs with a sub target of 4% from MSEs owned by the Scheduled Caste or the Scheduled Tribe and 3% from Women entrepreneurs for the Goods and Services rendered by such organizations.

In addition, GAIL implements all government policies which contributes sustainable sourcing such as domestically manufactured iron & steel product, purchase preference (Link with local content) (PP-LC), policy for preference to domestically manufactured products, services or works relating to Telecom, domestically manufactured electronic products (DMEP)- preferential market access policy, preference under PP-LC policy of MoPNG etc. Apart from this GAIL has also introduced the startup policy wherein registered Startups are exempted from mandatory requirement of meeting the technical BEC.

Uploading of Annual Procurement Plan for next five years

GAIL regularly uploads the Annual Procurement Plan for MSEs on its GAIL tender website.

In addition to above, Procurement plan for next five years has been uploaded on the GAIL's website to help domestic manufacturers to set up production. Details of link has been shared with all domestic vendors.

Qualification of Indian Bidder Based on Experience of Foreign Supporting Company

In order to boost Make in India & Atmanirbar Bharat and enhance the participation by Indian bidders, policy has been introduced in GAIL to consider qualification of Indian bidders based on experience of foreign supporting bidders.

INDEG Group constituted for development of Import substitution

INDEG Groups at Apex level and Site level have been constituted in GAIL. Meetings of Apex level and Site level committee are being held regularly.

The objective of INDEG Groups is to take initiative to develop indigenous source of materials/ services, import substitution and reserving materials/ services to be supplied by domestic vendors only.

Ministry of petroleum and natural gas (MoPNG) has constituted a technical group consisting of representative (s) of EIL, ONGC, IOCL, GAIL, BPCL, HPCL & OIL for development of Make in India- Exhaustive portal. GAIL actively participating in development of "Make in India - Exhaustive portal" covering the opportunities in Oil & Gas sector for Indian Manufacturers & Foreign Manufacturers interested in setting up manufacturing base in India.

Initiatives taken for Engaging with Suppliers

In this difficult time of COVID-19, GAIL has taken following extraordinary initiatives to ease and facilitate the business with our vendor and suppliers:

- » Payment of labour charges to contractors for lockdown period.
- » Faster Payment to Contractor to provide liquidity.
- » Consideration of COVID-19 as Force Majeure and extension of contract period by 3 to 6 months.
- » Reduction of CPBG to 3% from existing 10% in ongoing and new contract.
- » Relaxation of timelines for submission of CPBG.

GAIL endeavors to procure material or services following transparent procedure and guidelines & policies of the company and Govt. of India. In all tenders pre-tender or pre-bid meeting is conducted to ensure wider participation and to educate vendors on the tendering process. In addition to above, vendor meets, MSEs meets, representing GAIL in Industry Conclave are few other initiatives taken by GAIL to effectively engage with the suppliers.

GAIL has also conducted various meets with Micro and Small Enterprises including SC or ST entrepreneurs across India. In this financial year, GAIL has conducted fifteen (15) Vendor Development Programs across various work centres.

In order to develop GAIL vendors and coach them for long term association, Vendor Coaching Program are being held with aim to eliminate the gaps in understanding by coaching vendors on the common lapses in tender process and contract execution.

C&P Department annually conducts the Vendor Interactive Meet, the last such meet was conducted on 01.11.2019 and attended by approx. 150 vendors.

Ease of Doing Business

Digital Transformation

GAIL has introduced e-tendering which is based on the principle of competitiveness and such procurement practices are executed in a manner that is transparent, fair, competitive and cost effective. The threshold value of e-tendering has been reduced to Rs. 2 Lakhs from existing Rs. 7 Lakhs. This process also contributes towards saving of paper and is a green initiative of the organization. Further, in order to ease the process of submission of CPBG, GAIL has introduced the option of submitting the same through online banking.

All our tenders are hosted on our website which is available in public domain and whosoever is interested can participate in those tenders without even visiting the tender issuing site. GAIL has also done away with the requirement of publishing the same in the newspapers.

In order to reduce the size / volume of a tender document and reduction in the use of paper, a standard document GCC is already available on GAIL's tender website, as a part of Digital initiative and ease of doing business. GCC is no longer being made part of tender documents.

GAIL has introduced the Document Transmittal

System for signing and countersigning of the bulky contract documents in Projects. In which the bulky documents are signed by the GAIL official via digital means without taking out the printout of the documents. This digitally signed contract document is transmitted online to the contractor, who in-turn countersigned the document and send it back to GAIL.

Further, following initiatives were taken towards ease of doing business at different stages of a project:

A. Pre –Award Stage

Pre-Tender Meeting: For better understanding of technical & financial qualification criteria, specifications / scope of work, etc. of tender. Feedback from prospective bidders to Avoid complexity during evaluation stage. Pre-tender meetings details are uploaded on GAIL's website for wide publication.

Uploading of Tenders on GAIL's and Govt. Website: All tenders uploaded on GAIL's tender website, Govt. website and GeM for wider circulation. Any bidder who meets the Bid Evaluation Criteria (BEC) can download and participate. Ensures transparency and equal opportunity to all the eligible bidder.

Uploading of General Conditions of Contract on Website of GAIL and Non Inclusion in Tender Documents: To minimize the consumption of paper in terms of the size/volume of tenders/bids, GCC will be available on GAIL's tender website.

E-Tendering : Secure platform for sending & receiving tenders by electronic means. The threshold value of E-Tendering has been lowered to INR 2 Lakhs

Implementation of SAP: SAP allows all transactions & reviews of various business activities on one platform.

Model Instructions to Bidders (ITB) for all Tenders : Bring uniformity in tendering across all work centers of GAIL and also facilitate bidders in submitting their bid.

Document Transmittal System: For signing and countersigning of the bulky contract documents in Projects. Submission of Security Deposit/ Contract Performance Security & EMD through Online Bank transaction to facilitate bidders.

Qualification of Indian Bidder based on Experience of Foreign Supporting Company: To boost Make in India & enhance participation of Indian bidders, policy to qualify the Indian bidder based on experience of foreign supporting company introduced.

Verification & Certification of Documents About the Bid Evaluation Criteria: Provision of authentication of BEC documents by empanelled third party agency has been introduced.

Relaxation Norms for Startup : Prior turnover & experience criteria relaxed for all Startups in the procurement of goods/works/services.

Bid Capacity of Pipeline Projects & CGD Projects
To avoid over booking of contractors and timely execution of projects of national importance. Bidder whose available bid capacity is not optimum to take up the GAIL's work shall be rejected.

Procurement through GeM : All the items/ services available on GeM are being procured through GeM only. Efforts are being made to bring all the items/ services of GAIL on GeM. Till date GAIL has procured more than Rs. 130 crores through GeM.

B. Post –Award Stage

Kick Off Meeting: After award of contract, EIC organises a kickoff meeting with the Contractor. Aspects covered during the Kick off meeting includes signing of agreement, submission of CPS, Schedule for submission / approval of drawing/ document, work schedule and sub-milestones, etc.

Bill Watch System: Helps in tracking Vendors bills and ensuring timely payment to them. Vendors can keep watch on their bill & know the status.

Review of CPBG in Work Contracts & Time Period for Submission of CPBG

CPBG in work contracts modified as 5% initially & deduction of remaining 5% from Running Bills. Time period of submission of CPBG has rationalized.

Measures taken in Pipeline Laying Contracts

Mobilization advance in two instalments of 5% each. Rate of interest reduced to MCLR for one year charged by SBI plus 2.0% p.a. on reducing balance basis. Release of 70% Running bill payment within a period of 07 days. Extended stay compensation to the contractor.

Methodology for Transaction on Trade Receivable Discounting System (TReDS)

TReDS addresses challenges faced by MSMEs to maintain their working capital due to delayed payments from buyers. TReDS is an online electronic institutional mechanism for financing of trade receivables of MSMEs. GAIL is already registered on all the three TReDS platforms.

Vendor Feedback Portal: For any organization to grow, feedback from stakeholders is important. To capture the feedback of suppliers and contractors in an effective way, a Vendor Feedback portal launched.

Vendor Grievance Portal: To capture the grievances of suppliers and contractors have been developed which is known as 'Samadhan'.

Health Monitoring of Contracts: Monthly Health monitoring of contracts implemented to ensure contracts managed and executed with the satisfaction of stakeholders. It includes various contract management aspects including claims, deviations, amendments, and issues/disputes etc. Reports in prescribed format are to be submitted on a monthly basis to management.

Quarterly Closure of Contracts: GAIL implemented quarterly closing of contracts to ensure that contracts are managed and executed

with satisfaction of all the stakeholders & resulting in ease in contract closure.

Pre-Dispute Resolution (Samadhan) Mechanism: During execution of contracts, disputes arise with Contractors due to lack of clarity in contracts, different interpretations etc. Samadhan Mechanism was developed so the no. of disputes turning into arbitrations / legal disputes can be minimized.

Settlement Advisory Committee (SAC): The issues/disputes are mutually resolved within a reasonable time, through SAC. SAC consist of Conciliators who are persons of unquestionable integrity and good public standing. Settlement Advisory Committee facilitate voluntary resolution of the dispute(s) and communicate the view of each party to the other(s).

Revised Dispute Resolution Mechanism Clause
GAIL simplified its Dispute Resolution Mechanism provisions. The party invoking the Arbitration have the option to either opt for Ad-hoc Arbitration or Institutionalized Arbitration. Dispute(s)/issue(s) involving claims below Rs 25 lakhs and above Rs 25 crores. To strengthen the relations suppliers, procedure for vendor performance evaluation for suppliers was reviewed and concept of issuance of yellow card (watch list) has been introduced instead of Red Card (Holiday) provision.

Contract Management Document (COMAND):
For better contract management, COMAND was launched for EICs containing the various aspects and procedures for a better contract execution.





- Shri A.K. Tiwari, Director (Finance) visited GAIL-Varanasi on 6th & 7th March, 2020. He was welcomed by CGM (Construction) Varanasi, Shri S.N. Yadav along with other Senior Officials.

On 6th March 2020 he inaugurated the Finance Executive Meet and addressed to Finance-HODs participated from various sites. Director (Finance) expressed his views on the financial, taxation and accounting related issues and also informed about the latest development in the company. He also stressed upon cost optimization and ideas to improve the profitability of the company with “Cost Optimization Culture”. He also advised to be vigilant about the developments in their surroundings, maintain good relations with their juniors, peers and brainstorm on important issues at site level, before seeking Corporate Office intervention.

Director (Finance) also visited GAIL Varanasi office for review of CGD & JHBDPL activities. CGM (Const.) Varanasi briefed about the progress of CGD and JHBDPL Sector. A presentation on the various activities of CGD business was given in the meeting. He advised to implement efficient billing and collection system for CGD.

During his review, Director (Finance) appreciated the team Varanasi CGD for their dedication and hard work under challenging circumstances. Director (Finance) also inaugurated GAIL's 8th CNG Station at Pandeypur Varanasi.



Indian Robin
Location: **Vijaipur**



Appreciation letter given to
identified 575 COVID Warriors



Introduction of e prescription
and telemedicine



In-House preparation
of Sanitizers



Our Efforts Towards Tackling COVID-19 Pandemic

As the COVID-19 pandemic wears on, its impact is obviously felt in every region, every industry, and indeed every aspect of life. We at GAIL are looking at potential scenarios for the future, analyzing its impact on our business and finding ways to mitigate such risks in future.

Despite the above challenges, GAIL O&M has maintained uninterrupted operations of its pipelines, plants and other facilities and delivery of essential products such as Natural Gas (NG), PNG, CNG, LPG & Other Hydrocarbons and Polymers (for PPE kits manufacturing) to the customers. To ensure the above, various measures and efforts were undertaken to combat and tackle COVID-19 situation at O&M sites, which were:

1. Strict Implementation of access control to operational facilities and restriction of entry to only authorized personnel.
2. Strict visitor management with compulsory and contactless scanning of all the visitors to GAIL premises.
3. Periodic sanitization of plant premises and office complexes including residential townships.
4. Allowing work from home for personnel as per requirement.
5. Extensive usage of digital technologies and conducting meeting through virtual platforms.
6. Extensive usage of e-note sheet system for

approvals and release of payments to vendors/ service providers utilizing electronics means for receipt of invoices/bills and other relevant details, etc.

7. Arrangement of COVID-19 testing and vaccination camps for all the employees including outsourced staff.
8. Establishment of COVID-19 control room for employees and their family residing in NCR to facilitate and expedite logistic support for their treatment including tie up with hospitals for beds, procurement and distribution of oxygen concentrators, oxygen cylinders and their fillings.
9. Support through CSR means local administration for combating COVID-19 spread among the communities in the vicinity of GAIL's operational areas.
10. Strict implementation of various guidelines issued from time to time by the Government of India, State governments, district and local administration on COVID-19 pandemic.

Prioritizing health of GAIL employees, we implemented the following actions:

1. Tied up with Apollo Group of Hospitals for the Stay I @Home services under Project Kavach for GAIL employees to combat COVID-19 in GAIL.
2. A dedicated Task Force in GAIL has been formed at Corporate Office to coordinate all

the matters relating to the management of the pandemic across GAIL.

3. Implemented a weekly roster for employees at offices/plants on 50% rotational attendance based on work exigencies; Work From Home was granted to employees on a rotational basis.
4. To keep employees motivated to adhere to COVID-19 rules, appreciation letters for around 575 COVID-19 warriors identified across GAIL, were prepared and sent to concerned work centers duly signed by the concerned Functional Director/CMD.
5. Conducted nine COVID-19 webinars with behaviour based safety training in association with GAIL training institute, where employees participated in a drive for reinforcing positive behavior enthusiastically. In association with GAIL Training Institute, where employees participated in a drive for reinforcing positive behavior enthusiastically.

Our Contribution to the Society in 2020-21

Support for providing PPE kits at Government Hospital, Noida

On 2 February 2021, GAIL delivered 732 personal protective equipment (PPE) kits to the Gautam Buddh Nagar Government Hospital in Noida. All the essential sanitization and social distancing standards were followed while providing the PPE kits. The event was graced by Sh. Surendar Singh Nagar, Hon'ble MP & Panel of Vice-Chairman (Rajya Sabha). Dr Deepak Ohri Ji, CMO (Noida), Dr Sanjeev Manglik Ji, ACOMO, staff of District hospital and media were also present.

Fighting COVID-19 indigenously

In the fight against COVID-19, GAIL has partnered with Sudhaaya Dance Foundation and traditional artists from indigenous and tribal groups, utilizing the narrative power of art forms such as Gond and Warli. To reinforce information about the pandemic, Khushiyon Ka Pitara, a child-friendly

kit that educates youngsters on COVID-19 and other infectious diseases, was created as part of the initiative.

All the components of the kits are designed with a storytelling element to both educate and reinforce knowledge through entertainment. A total of 1,000 kits would be distributed to youngsters aged 8 to 12 in Government schools across Delhi NCR as part of the project.

GAIL's part in the Nation's COVID-19 Vaccination drive

GAIL CSR has pledged to assist in the provision of COVID-19 vaccine cold chain equipment. Madhya Pradesh has received 23 deep freezers (small) and one refrigerator truck, while Tripura has received 16 ice lined refrigerators (small). In the presence of Dr. Siddharth Shiv Jaiswal, IAS-MD, GAIL handed over 16 units of ice coated refrigerators to the Tripura Government on 4 February 2021.

GAIL handed over the cold chain refrigerator truck to authorities from the National health mission in Bhopal on 8 March 2021. Dr. Prabhu Ram Chaudhary, MP government's hon'ble minister of health, flagged off the vehicle. In his remarks, the minister thanked GAIL and stated that this truck will be essential in progressing the COVID-19 Vaccination campaign.

Distribution of Pulse-Oximeters in Karaikal district

GAIL Karaikal procured 220 Pulse Oximeters for the benefit of the public in Karaikal District, in response to the District Collector's request to bolster the District's Public Health Emergency Response. On 30 September 2020, Shri. N Selvaraju, General Manager (O&M) and OIC, Carvery Basin, presented the Pulse-Oximeters to the District Collector. Karaikal's District Collector has expressed his dissatisfaction with the current situation.

In the current scenario of COVID-19 pandemic, awareness sessions and multiple motivational

programs were conducted with proper protocols for the employees and their family members at different GAIL sites in FY20-21. Initiatives covered subjects such as general awareness and preventive measures of COVID-19 mainly along with psychological effects and disturbance due to the pandemic, mental wellbeing, etc. Also, medical surveillance is carried out to assess the health of the employees for this year. We offer medical facilities and service at the GAIL sites to handle the emergencies in the pandemic situation.

COVID-19 related health initiatives at various sites of GAIL:

1. COVID-19 health risk assessment to all contract employees and vendors coming from outside.
2. Awareness on PPE, social distancing and frequent hand washing to all the contract workers and vendors.
3. Maintaining the highest degree of hygiene at OHC with all precautionary safety measures for prevention of COVID-19.
4. Maintaining contact tracing, testing and quarantine.
5. Developing isolation facility in JP Kunj and Dhanwantri Hospital and Apollo Hospital kit arrangement.
6. Introduction of e-prescription and telemedicine.
7. Mass fogging and sanitization and Thermal scanning at all the entry points.
8. Distribution of masks, sanitizers and PPE kits.
9. In-house preparation of sanitizers and No-Touch Sanitizer Dispenser.
10. Mass sampling camps with District administration coordination.
11. Visitors permitted after RAT, RT-PCR test and health risk assessment.
12. Considering COVID-19 safety, thermal scanning is done by all the employees on a daily basis. Apart from temperature scanning every day, employees may check their oxygen level by a pulse oximeter, which has been kept in the OHC/ HR department.
13. Sanitization of offices and vehicles has also been done regularly, considering the pandemic situations of COVID-19 at community level.
14. Allowing work from home to the employees in order to maintain social distancing at workplace.
15. Allowing staggered timings to avoid crowding.
16. Introduction of quarantine leave and special casual leave for COVID-19.
17. Treatment of the period away from the place of posting as work from home during nationwide lockdown.
18. Tie-ups with leading hospitals for providing treatment.



Elephant Creeper
Location: Usar

GRI

In accordance with
the “**GRI Standards:
Comprehensive Option**”

ipieca

In accordance with IPIECA
Sustainability Reporting
Guidance



Assured by Independent
External assurance agency

Performance Snapshot

Material Consumption	Unit	2018-19	2019-20	2020-21
NG Processed	MMSCM	24,408	19,647.82	17,499
NG to Product	MMSCM	1,769	1,855.87	1,807
Lean NG to Pipeline	MMSCM	21,383	16,577	14,533

Material Consumption	Unit	2018-19	2019-20	2020-21
Alum	MT	413.42	418.28	497.66
Chlorine	MT	2.81	2.17	3.12
Lube oil and grease	MT	389.14	207.39	175.66
Mercaptan	MT	21.37	17.91	20.9
Methanol	MT	111.84	171.01	308.84
Other chemicals and catalysts	MT	6533.64	7456.55	7929.89
Sulphuric Acid	MT	202.77	364.96	249.56
Water treatment chemicals	MT	9034.72	9552.65	10993.32
Packaging Material	MT	4038	4100	4231
Total Associated Material	MT	16709.89	18190.92	20178.95
Recycled Material	MT	16.8	17.16	12.1

Energy Consumption* (GJ)	2018-19	2019-20	2020-21
Direct Energy	5,29,56,206	5,31,72,066	48,652,359
Indirect Energy	17,41,141	17,00,595	1,929,828

Energy Consumption* (GJ)	2018-19	2019-20	2020-21
Renewable Energy	1,28,738	95,903	81,049
Energy from NG Flaring	8,43,620	8,83,787	9,24,846
Energy from LPG Flaring	5,987	16,064	18,201
Energy from NG Venting	5,74,962	18,57,622	4,22,113
Energy from LPG Venting	2,740	2,430	659
Total Energy Consumption	5,62,53,394	5,77,28,467	5,20,29,055

*Energy calculation as per fuel quantity reported from various sites . Indirect energy is from grid electricity only. No other form of energy is purchased.

Energy Savings (GJ)	2018-19	2019-20	2020-21
Diesel saved	24.63	329.74	281.02
Electricity saved (GJ)	649.06	21139.11	8148.54
NG saved (GJ)	96311.17	215184.17	381738.0
Total energy saving	110227.45	236478.80	390167.56

Electricity Sold* (GJ)	2018-19	2019-20	2020-21
Electricity sold	12498.96	29847.79	18775.97

*No other form of energy is sold.

Direct Energy Consumption Sources (GJ)	2018-19	2019-20	2020-21
Diesel	15,090	17,042	13,368
Natural Gas	3,93,21,635	3,86,17,623	33,787,609
Residual Fuel	1,36,16,537	1,45,37,400	14,851,382
Total Direct Energy	5,29,56,206	5,31,72,066	48,652,359
Total Energy Intensity (Total Energy Consumption of production plants/ total production of LHC+PC)	20	22	16.6

Renewable Energy Generation (GJ)	2018-19	2019-20	2020-21
Wind	6,58,924	5,98,938	513,559

Renewable Energy Generation (GJ)	2018-19	2019-20	2020-21
Solar	52,080	30,348	31,318
Total Renewable Energy	7,11,004	6,29,286	544,877

Air Emissions* (Tons/Annum)	2018-19	2019-20	2020-21
SPM	391	314	291
NOx	1,800	1,350	1,367
CO	1,810	1,639	241
SOx	276	294	201
VOC	63	72	70
R-134a	278	451	507

*Data Source: Exhaust Monitoring Report, Environment test report monthly data, SPCB reports. All the relevant air emissions are disclosed per process emissions and SPCB/CPCB regulatory requirements.

ODS Gas Consumption	2018-19	2019-20	2020-21
R22 (Kg/Annum)	3,481	2,727	2,846

GHG Emission* (tCO ₂ e)	2018-19	2019-20	2020-21
Scope 1 Emissions	34,24,266	39,56,930	32,81,058
Scope 2 Emissions	3,96,616	3,87,358	419,125
Scope 3 Emissions	989	1070	1,479
Total GHG Emissions	38,20,883	43,45,358	37,01,662
GHG Intensity (GHG Emissions (Scope 1 & Scope 2) in tCO ₂ e/ turnover in INR crore)	51	60	65.2

*We have used the Emission Factors of Central Electricity Authority (CEA), India and IPCC Guidelines for National Greenhouse Gas Inventories, 2006 Greenhouse Gas Inventories for the estimation of direct and indirect emissions from scope 1 and scope 2. Methane emissions are included in Scope-1 emissions. Scope 3 emission includes CO₂ emission related to business travels. Scope 3 emissions are reported by following sites: Manasrampura, Vijaiapur, Vizag, Pata, Jamnagar, Bengaluru, Khrea, Cherallapally.

GHG savings (tCO ₂ Equivalent)	2018-19	2019-20	2020-21
Diesel	73.37	24.43	20.84
Electricity	2,813.64	4,862.08	1,788.11
NG savings	5,427.64	12,071.83	21,415.00
Total GHG savings	8,314.65	16,958.34	23,224.62

Water Performance (million m ³)	2018-19	2019-20	2020-21
Total water consumption	25.3	26.2	23.1
Total waste water generated	1.7	2.34	2.2
Total waste water discharged	1.2	1.6	1.5
Water recycled /reused	0.5	0.8	0.88

Water Consumption by Sources (Parameter) million m ³	2018-19	2019-20	2020-21
Municipal water supplies (or from other water utilities)	0.88	0.47	1.5
Fresh surface water (lake, rivers, etc.)	24.16	25.40	21.3
Fresh groundwater	0.28	0.34	0.3

Total water withdrawal from all areas with water stress (Gandhar, Jamnagar, Jhabua, (million m ³)	2018-19	2019-20	2020-21
Groundwater	0.02	0.03	0.02
Municipal water supply	0.00	0.00	1.06
Surface water (river, sea, lake, stream)	1.06	1.33	0.00
Total water consumption	1.08	1.36	1.08

*At these sites all the waste water generated is recycled . No waste water is discharged outside plant boundary.

Waste Generation	2018-19	2019-20	2020-21
Hazardous			
Basket filter waste (MT)	499.88	214.7	2.57
Bio-medical waste (MT)	1.00969	0.57	0.25
Empty drums (MT)	9343	6855	7557
ETP Sludge (MT)	0	0	0
E-waste (MT)	20.927	94.48	13.44
Oily sludge (Ltr)	3114.67	1906	3670

Waste Generation	2018-19	2019-20	2020-21
Slop Oil (Ltr)	943486.6667	590170.4	2526144
Tar (MT)	17.361	12.2	14.8
Used batteries (Nos.)	3365	1853	1585
Used lube oil (Ltr)	125328	90776.5	78148
Used oil (Ltr)	75241.12284	86643	95340
Non Hazardous			
Cables (MT)	11.85	46.47	21.64
Canteen waste (MT)	18.77	532.60985	16.058
Ceramic Material (MT)	0.05	6.21	0
Metal scrap (MT)	1220.78	1248.87	667.18
Misc Waste (MT)	11.43	55.81179	193.4
Molecular Seive (MT)	5.025	189.7	115.91
Paper Consumption (MT)	44950.4	23093.14	19832.69
Plastic scrap (MT)	5.44	40.2	134.73
Silica Gel (MT)	16.51	75.5	51.27
Spent Alumina (MT)	1367.33	1135	1237.3
Tyre (Nos)	228.23	0	466
Used bag filters (Nos)	3896.15	3349	4087
Used consumables (MT)	1.03	1.14	0.39
Wooden scrap (MT)	416.04	568.55	263.88

Type of waste disposal	2018-19		2019-20		2020-21	
	Liquid (Litres)	Solid (MT)	Liquid (Litres)	Solid (MT)	Liquid (Litres)	Solid (MT)
Incineration	0.00	3488.00	0.00	2157.48	0.00	4003.28
Landfill	0.00	2.86	0.00	127.10	0.00	216.05
Onsite Storage	7077.00	129.00	7860.00	22.60	2360.00	105.67

Type of waste disposal	2018-19		2019-20		2020-21	
	Liquid (Litres)	Solid (MT)	Liquid (Litres)	Solid (MT)	Liquid (Litres)	Solid (MT)
Recycle	6597657.50	10718.00	759689.40	3169.81	2697272.00	6191.89

Disposal (FY 20-21)	Hazardous	Non-hazardous
Incineration (MT)	3685.01	318.27
Landfill (MT)	0.05	216
Onsite Storage		
Liquid (Litres)	2360	0
Solid (MT)	51.65	54.02
Recycling		
Liquid (litres)	2697272	0
Solid (MT)	2706.95	3484.94

Applicable State/Central regulations are followed for onsite storage and disposal of waste. Some of the wastes (battery, tyres etc) are monitored in numbers at site/offices and converted in MT by average weight of the material.

Environmental Expenditure (INR million)	2018-19	2019-20	2020-21
Treatment and disposal of waste	43	21.54	69.79
Depreciation and maintenance cost of equipment used in pollution control	60	31.7	37.68
External services for environmental management	13	18.57	7.33
External Certification of management system	2	3.07	1.05
Personnel for general environmental management activities	56	72.6	71.94
Extra expenditure for installing cleaner technologies	18	14.85	101.72
Insurance for environmental liability	53	53.55	41.93
Other Environmental Costs	28	32.5	33.64
Total Environmental Expenditure	273	248.38	365.07
Environmental Fines	0	0	0

Cost of Total Energy (Particulars) (INR crore)	2018-19	2019-20	2020-21
Power Charges	356.34	367.92	412.49

Cost of Total Energy (Particulars) (INR crore)	2018-19	2019-20	2020-21
Gas used as fuel	2283.19	2107.63	1,280.84
Water Charges	14.80	19.68	17.69
Total Cost	2663.33	2495.23	1711.02

Health & Safety of Permanent Employees	Unit	2018-19	2019-20	2020-21
Management representatives in safety committees	Numbers	330	293	264
Non-Management representatives in safety committees	Numbers	223	215	190
Near miss cases-Male	Numbers	1,458	1,399	1,050
Near miss cases-Female	Numbers	8	16	3
Minor injuries - Male	Numbers	2	0	0
Minor injuries - Female	Numbers	0	0	0
Reportable injuries - Male	Numbers	0	0	0
Reportable injuries - Female	Numbers	0	0	0
Lost days due to reportable injuries - Male	Numbers	0	0	0
Lost days due to reportable injuries - Female	Numbers	0	0	0
Fatalities – Male	Numbers	0	0	0
Fatalities – Female	Numbers	0	0	0
First aid cases - Male	Numbers	9	42	17
First aid cases - Female	Numbers	0	0	0
Man-Hours worked -Male	Million-man-hours	6.4	6.09	5.7
Man-Hours worked -Female	Million-man-hours	0.3	0.28	0.3
Occupational diseases–employee - Male	Numbers	0	0	0
Occupational diseases – employee - Female	Numbers	0	0	0

Health & Safety of Permanent Employees	Unit	2018-19	2019-20	2020-21
LTIFR – Male	Reportable injuries per million-man-hours worked	0	0	0
LTIFR – Female	Reportable injuries per million-man-hours worked	0	0	0
Severity Rate – Total	Lost Days per million- man-worked	0	0	0
Fatality Rate – Male	Fatalities per million- man-hours worked	0	0	0
Fatality – Female	Fatalities per million- man-hours worked	0	0	0

Health & Safety of Contract Employees	Unit	2018-19	2019-20	2020-21
Near miss cases – Male	Numbers	531	312	215
Near miss cases – Female	Numbers	0	4	4
Minor injuries – Male	Numbers	15	0	0
Minor injuries – Female	Numbers	0	0	0
Reportable injuries – Male	Numbers	1	1	1
Reportable injuries – Female	Numbers	0	0	0
Lost days due to reportable injuries – Male	Numbers	18	11	16
Lost days due to reportable injuries – Female	Numbers	0	0	0
Fatalities – Male	Numbers	0	0	0
Fatalities – Female	Numbers	0	0	0
First aid cases – Male	Numbers	56	212	187
First aid cases – Female	Numbers	0	0	11

Health & Safety of Contract Employees	Unit	2018-19	2019-20	2020-21
Man-hours worked – Male	Million-man-hours	23	24.2	24.3
Man-hours worked – Female	Million-man-hours	0.44	0.41	0.35
Occupational Diseases – contract employees - Male	Numbers	0	0	0
Occupational Diseases – contract employees - Female	Numbers	0	0	0
LTIFR – Male	Reportable injuries per million-man-hours worked	0.04	0.04	0.04
LTIFR – Female	Reportable injuries per million-man-hours worked	0	0	0
Severity Rate – Total	Lost days per million-man-hours worked	0.7	0.45	0.7
Fatality Rate - Male	Fatalities per million-man- hours worked	0	0	0
Fatality Rate - Female	Fatalities per million-man-hours worked	0	0	0

Permanent Employee Distribution (Numbers)	2018-19	2019-20	2020-21
Senior Management (E7-E9) - Male	279	303	322
Senior Management (E7-E9) - Female	7	7	8

Permanent Employee Distribution (Numbers)	2018-19	2019-20	2020-21
Middle Management (E4-E6) - Male	1,621	1680	1,707
Middle Management (E4-E6) - Female	80	85	94
Junior Management (E0-E3) - Male	1,480	1485	1,511
Junior Management (E0-E3) - Female	158	171	163
Non – Management (S0-S7) - Male	860	905	856
Non – Management (S0-S7) - Female	38	40	38
Senior Management (E7-E9) - <30 years age	0	0	0
Senior Management (E7-E9) - 30 to 50 years age	41	56	66
Senior Management (E7-E9) - > 50 years age	245	254	264
Middle Management (E4-E6) - <30 years age	1	0	1
Middle Management (E4-E6) - 30 to 50 years age	1,112	1199	1,193
Middle Management (E4-E6) - > 50 years age	588	566	607
Junior Management (E0-E3) - <30 years age	334	444	496
Junior Management (E0-E3) - 30 to 50 years age	873	781	713
Junior Management (E0-E3) - > 50 years age	431	431	465
Non – Management (S0-S7) - <30 years age	187	239	186
Non – Management (S0-S7) - 30 to 50 years age	582	580	587
Non – Management (S0-S7) - > 50 years age	129	126	121
New Employee hired during FY: Male	134	242	146
New Employee hired during FY: Female	20	33	10

*Above table includes employee data up-to senior management i.e. Head of the department or Officer-in-charge of respective department, it does not include our executives directors. GAIL does not have part-time employees.

Region-wise and Gender wise (Permanent Employee) FY 20-21	Management		Non Management	
	Male	Female	Male	Female
North	2082	189	467	26
South	217	20	73	4
West	951	40	319	15
East	244	7	33	3

Region-wise and Gender wise (Permanent Employee) FY 20-21	Management		Non Management	
	Male	Female	Male	Female
Outside India	15			

Contract Employee Distribution (Numbers)	2018-19	2019-20	2020-21
Security staff male	3,733	1,872	1,878
Security staff female	4	4	4
Regular Contract Worker - Male	10,367	11,842	12,997
Regular Contract Worker - Female	376	382	382
Total number of Apprentice - Male	1003	912	444
Total number of Apprentice - Female	165	161	101

Permanent Employee Turnover (Numbers)	2018-19	2019-20	2020-21
Employee turnover – Age <30 – Male	17	12	10
Employee turnover – Age < 30 – Female	0	1	2
Employee turnover – Age 30 to 50 years age – Male	13	19	10
Employee turnover – Age 30 to 50 years age – Female	2	1	1
Employee turnover – Age > 50 years age – Male	70	76	104
Employee turnover – Age > 50 years age – Female	5	11	8
Employee turnover – Management	88	109	104
Employee turnover – Non- Management	19	11	31
Total employee turnover rate	2.36	2.67	2.87
Voluntary employee turnover rate	0.64	0.62	0.45

Training (Hours)	2018-19	2019-20	2020-21
Management Employees (Direct) –Male	1,50,844	1,38,976	97,963
Management Employees (Direct) –Female	9,696	11,600	8,997
Non-Management Employees (Direct) –Male	35,152	33,280	34,214
Non-Management Employees (Direct) –Female	1,328	1,752	680
Contractual Labour (Operations) –Male	51,334	69,031	57,360
Contractual Labour (Operations) –Female	1,469	1,534	1,270
Permanent Employee – Physically Disabled	3,512	3,296	1,630
Total training hours GTI Noida and Jaipur (Permanent and Contractual employee)	2,046,24	1,88,832	1,11,964

Employees Returned Work After Parental Leave	Gender	2018-19	2019-20	2020-21
Number of employees entitle to parental leave	Male	4,245	4,710	4,401
	Female	271	307	304
Number of employees that took parental leave	Male	138	136	153
	Female	20	10	15
Number of employees who returned to work after parental leave ended	Male	138	133	149
	Female	20	15	9
Employee returned to work after parental leave ended who were still employed 12 months after their return	Male	138	136	132
	Female	20	14	9
Retention rates of employees who returned to work after parental leave	Male	100%	98.5%	99.24%
	Female	100%	70%	60.0%

Procurement Highlights	2018-19	2019-20	2020-21
Total Procurement of Goods & Supplies in INR Million	86,305	50,970	72,016
Total Procurement of Goods & Supplies from Local Suppliers in INR Million	79,220	47,882	67,692
% of new suppliers that has been screened through Environmental Criteria	100	100	100
% of new suppliers that has been screened through Labour Practice Criteria	100	100	100
% of new suppliers that has been screened through Human Rights Criteria	100	100	100
% of new suppliers that has been screened through Criteria for impacts on Society	100	100	100
% of suppliers identified having significant actual & potential negative impacts on society.	0	0	0
% of suppliers identified having significant actual & potential negative impacts on society with which relationship has been terminated	0	0	0



Independent Assurance Statement

Introduction

GAIL (India) Limited {"GAIL"} engaged Emergent Ventures India Pvt. Ltd. ("EVI") for carrying out an independent assurance of their Sustainability Report ("Report") for the reporting period from 1st April 2020 to 31st March 2021. The assurance has been conducted in accordance with the requirements of Assurance Standard AA1000AS v3 and GRI Standards including the Oil and Gas Sector Disclosures (OGSD).

The facilities covered for this assurance are GAIL's Gas Processing units at five locations (Pata, Vijaipur, Vaghodia, Gandhar, Usar), one Petrochemical Plant at Pata, Natural Gas Compressor stations (Hazira, Vaghodia, Jhabua, Khera, Vijaipur, Dibiyapur, Kailaras & Chainsa), LPG pumping / receiving stations (Loni, Mansharampora, Nasirabad, Abu Road, Samakhiali, Jamnagar, Kandla, Vizag, G Konduru and Cherlappali), Regional pipeline offices at NCR, Baroda, Mumbai, Puducherry, Rajahmundry, Agartala and DBPL, office buildings at Corporate office New Delhi, GAIL Training Institute (GTI) at Noida & Jaipur and Offices at Jubilee Tower, Info-Hub at Noida, Zonal Marketing offices.

Limitations

Assurance is subject to no physical verification of inventory of material consumed, waste generated, emissions and effluents etc. Assurance relied solely on the documentation maintained and provided by the company. The scope of assurance does not cover the statements in the Report that describe company's approach, strategy, aim, expectation, aspiration or beliefs or intentions.

Independence

The verification has been carried out by experts from environment & energy management, climate change and sustainability areas. No member of the verifier team is involved in the preparation of the Report for the reporting period under this assurance.

GAIL's responsibility

GAIL is responsible for preparing the Report in accordance with GRI Standards and for maintaining effective internal controls over the data and information disclosed.

Verifier's responsibility

In performing the assurance activities, verifier's responsibility is to the management of GAIL only in accordance with the terms of reference agreed between EVI and GAIL. EVI do not therefore accept or assume any responsibility for any other purpose or to any other person or organization. The assurance statement should not be taken as a basis for interpreting the GAIL's overall performance.

Scope and level of assurance

EVI has been engaged to provide Moderate Level Type 2 Assurance for the following:

- » Adherence to the principles of inclusivity, materiality, responsiveness and impact laid out in AA1000AS v3
- » Adherence to the principles of accuracy, balance, clarity, comparability, reliability and timelines laid out in the "In Accordance- Comprehensive" reporting requirements of GRI standards.
- » Adherence to General disclosures and Topic specific disclosures for "In Accordance- Comprehensive" reporting requirements of GRI standards.



Activities undertaken

A number of activities have been undertaken for this assurance:

- a. Review of the Report to check alignment of reported data under respective economic, environment & social topics mentioned in GRI Standards.
- b. Review (sample check) of the data provided in the Report and related worksheets;
- c. Review (sample check) of data monitoring, recording and reporting process including other internal processes and controls;
- d. Site visits / Video conferencing with Gas Processing unit and Petrochemical Plant at Pata, Gas Processing unit and Compressor station at Vijaipur and Vaghodia, Gas Processing unit at Gandhar, Natural Gas Compressor station at Chainsa, LPG pumping / receiving station at G Konduru, Corporate office New Delhi, Jubilee Tower & Info-Hub at Noida, and Chandigarh Zonal Marketing office.
- e. Identify gaps on data monitoring, recording and reporting process and review of responses.

Conclusion

Based on the Moderate Level Type 2 Assurance procedures conducted and evidence obtained, nothing has come to our attention that causes us to believe that, in all material aspects the GAIL's Sustainability Report is not in conformance with the reporting requirements of GRI Standards and AA1000AS v3. The report meets the requirement of reporting as specified by GRI Standards "In Accordance – Comprehensive" Option.

Observations and Recommendations

- » **Principle of Inclusivity:** GAIL has applied the principle of inclusivity in engaging with its stakeholders. Different departments engage regularly with their relevant stakeholders through multiple engagement channels.
- » **Principle of Materiality:** GAIL has followed a structured process of materiality determination to report key material issues.
- » **Principle of Responsiveness:** GAIL has applied the principle of responsiveness with respect to its stakeholders. Company has well defined system for responding to any concern raised by key stakeholders.
- » **Principle of Impact:** GAIL has identified, measured and disclosed the impact related with some of the key environmental, social and governance topics.

Without affecting the overall conclusions on the Report, the following recommendations are made:

- » GAIL may set site specific targets on sustainability topics like water, waste etc. and develop roadmaps for achieving long term goals identified.
- » GAIL may also plan on setting Science based targets (SBT) for emission reduction.
- » GAIL may plan on taking up initiatives to evaluate its internal carbon price. Putting a price on carbon will help in channelizing investments towards low carbon technology.



- » GAIL may consider undertaking climate scenario analysis and risk assessment as per leading protocols such as IPCC, TCFD etc. which can further help in the identification and mitigation of climate related risks.
- » GAIL may develop software for detailed analytics on critical risks monitoring and for prediction of possible risk actualization in advance.
- » GAIL may develop a matrix to identify and monitor key suppliers with critical environment and social risks.
- » Energy efficiency study of the data centers may be conducted to understand the amount of energy used by the center and scope for improvements.
- » GAIL may carry out third party studies on biodiversity and related aspects including the review of IUCN List species and national conservation list species present in its area of operations.
- » GAIL may conduct life cycle assessment of its products which will help in identifying critical products at risk and its related environmental impacts.
- » GAIL may plan on incorporating a process to keep a track on the growth and survival rate of trees planted at site. Geo tagging of trees may be implemented.
- » GAIL may take initiatives to conduct awareness and knowledge sessions on sustainability related aspects like energy, emissions etc. across its supply chain.
- » GAIL may develop guidelines to standardize the process of calculation for sustainability parameters like energy savings, rainwater harvesting, etc. This includes selection of valid assumptions and base line for reporting.
- » Data categorization and reporting may be standardized across GAIL. It may be ensured that there is clarity in reporting data under each indicator.
- » Training may be conducted for employees on base lines and calculation methodology so that sustainability data is consistent across all sites. Awareness level of onsite personnel towards updated GRI standard reporting requirements may be further enhanced through regular training.

For Emergent Ventures India Private Ltd.

A handwritten signature in black ink, appearing to read 'Atul Sanghal'.

Atul Sanghal
Business Head – Sustainability & Climate Change

Emergent Ventures India Private Ltd.

Magnum Tower-1, 8th Floor
Sector – 58, Golf Course Extension Road,
Gurugram – 122001, Haryana, India
Date: 01/09/2021



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Annexures

List of policies and websitelinks

GAIL Policy	Weblink
Environment	
Health, Safety and Environment Policy	https://www.gailonline.com/pdf/others/CorporateHSEPolicy.pdf
Sustainability Policy	https://www.gailonline.com/pdf/Sustainability/Sustainability%20Policy10-02-2020.pdf
Social	
CSR Policy	https://gailonline.com/pdf/CSR/final_policy2010.pdf
Policy for Prevention, Prohibition and Redressal of sexual harassment of Women at workplace	https://www.gailonline.com/pdf/others/Sexual%20Harassment%20of%20Women%20at%20Work%20Place_Circular_5.2.2018-new.pdf
Governance	
Whistle Blower Policy	https://www.gailonline.com/pdf/others/Circular_Whistle%20Blower%20Policy_12.02.2019-english.pdf
Fraud Prevention Policy	https://www.gailonline.com/pdf/others/Fraud%20Prevention%20Policy-%20Gail.pdf
Procedure For Evaluation of Performance of Vendors / Suppliers / Contractors / Consultants	https://www.gailonline.com/pdf/others/Annexure-I.pdf
Procedure For Action In Case Corrupt Fraudulent Collusive Coercive Practices	https://www.gailonline.com/pdf/others/Annexure-II-updated.pdf
Dividend Distribution Policy	https://www.gailonline.com/pdf/InvestorsZone/GAIL%20Dividend%20Distribution%20Policy.pdf
Policy on Diversity of Board	https://www.gailonline.com/pdf/InvestorsZone/Policy%20on%20Diversity%20of%20Board.pdf
GAIL Material Subsidiary Policy	https://www.gailonline.com/pdf/InvestorsZone/GAIL%20Material%20Subsidiary%20policy%20%20Final%202019.pdf
GAIL Related Party Transaction Policy	https://www.gailonline.com/pdf/InvestorsZone/Revised%20RPT%20Policy.pdf
GAIL Policy for Determination of Materiality and Disclosure	https://www.gailonline.com/pdf/InvestorsZone/GAIL%20Policy%20for%20Determination%20of%20Materiality%20and%20Disclosure%20-Amended%20as.pdf

GAIL Policy	Weblink
Principles of fair disclosure	https://gailonline.com/pdf/InvestorsZone/GAIL-Principles-of-Fair-Disclosures.pdf
Code of conduct to regulate, monitor and report, monitor and report trading by insiders-Insider Trading code	https://gailonline.com/pdf/InvestorsZone/GAIL-Insider%20Trading%20Code%202018-10.04.2019.pdf
Quality Policy	https://www.gailonline.com/pdf/others/QUALITY%20POLICY.PDF
ISO Quality Policy 9001:2015	https://www.gailonline.com/pdf/others/CO_O&M_ISO_2019.pdf
Risk Management Policy	https://www.gailonline.com/pdf/others/RiskManagementPolicyRev4.0.pdf
Information Security Policy	https://www.gailonline.com/pdf/others/Information-Security-Policy-Statement-12-feb-21.pdf
Document Preservation Policy	https://www.gailonline.com/pdf/others/Document%20Preservation%20%20Policy.pdf

Grievance redressal mechanism and website links

Stakeholders	Content	Website Link
Vendor/Suppliers	Vendor Grievance	https://gailebank.gail.co.in/grievance/welcome.aspx
Vendors/Suppliers	Vendor/Contractor Feedback Form	https://gailebank.gail.co.in/vendorfeedback/Login.aspx
Customers	CRM: Customer Relationship Management:	https://ecrm.gail.co.in/icss_b2b/init.do?configuration.xcm=gail_lhc
All (Public/Community)	Vigilance Complaint	https://gailebank.gail.co.in/vigilance/login.asp
All (Public/Community)	RTI	https://www.gailonline.com/RTI.html
All (Public/Community)	Centralized Public Grievance Redressal and Monitoring System (CPGRAMS)	https://pgportal.gov.in/



CONTENT INDEX SERVICE

2021

For the GRI Content Index Service, GRI Services reviewed that the GRI content index is clearly presented and the references for all disclosures included align with the appropriate sections in the body of the report

GRI Standard	Disclosure	Report Section	Page No	Omission	
				Reason	Explanation
GRI 101: Foundation 2016					
GRI 102: General Disclosures 2016	102-1	Name of the organization	32		
	102-2	Activities, brands, products, & services	37		
	102-3	Location of headquarters	36		
	102-4	Location of operations	37		
	102-5	Ownership and legal form	36		
	102-6	Markets served	8		
	102-7	Scale of the organization	37, 64, 80, 140		
	102-8	Information on employees and other workers	32, 33, 140, 187		
	102-9	Supply chain	24, 25, 80		
	102-10	Significant changes to the organization and its supply chain	37, 40, 41, 79, 80, 165		
	102-11	Precautionary Principle or approach	54		
	102-12	External Initiatives	59, 81, 82, 87, 88, 90, 103, 104, 107		
	102-13	Membership of associations	59		
	102-14	Statement from senior decision-maker	2, 3		
	102-15	Key impacts, risks, and opportunities	54-59		
	102-16	Values, principles, standards, and norms of behaviour	47-50		
	102-17	Mechanisms for advice and concerns about ethics	47-50		

GRI Standard	Disclosure	Report Section	Page No	Omission	
				Reason	Explanation
	102-18	Governance structure	44, 45, 62		
	102-19	Delegating authority	44, 45		
	102-20	Executive-level responsibility for economic, environmental and social topics	44, 62		
	102-21	Consulting stakeholders on economic, environmental and social topics	44, 68-71		
	102-22	Composition of the highest governance body and its committees	44, 45		
	102-23	Chair of the highest governance body	44		
	102-24	Nominating and selecting the highest governance body	44		
	102-25	Conflicts of interest	46		
	102-26	Role of highest governance body in setting purpose, values, and strategy	45, 64, 67		
	102-27	Collective knowledge of highest governance body	44		
	102-28	Evaluating the highest governance body's performance	45		
	102-29	Identifying and managing economic, environmental, and social impacts	62, 71		
	102-30	Effectiveness of risk management processes	34, 54-56, 62		
	102-31	Review of economic, environmental, and social topics	34, 55, 56, 62		
	102-32	Highest governance body's role in sustainability reporting	34, 62		
	102-33	Communicating critical concerns	53, 54, 55		
	102-34	Nature and total number of critical concerns	53, 54		
	102-35	Remuneration policies	44, 45, 140		
	102-36	Process for determining remuneration	45		
	102-37	Stakeholders Involvement in remuneration	45		
	102-38	Annual total compensation ratio	46		

GRI Standard	Disclosure	Report Section	Page No	Omission	
				Reason	Explanation
	102-39	Percentage increase in annual total compensation ratio	46		
	102-40	List of stakeholder groups	72-74		
	102-41	Collective bargaining agreements	147		
	102-42	Identifying and selecting stakeholders	72-74		
	102-43	Approach to stakeholder engagement	75-76		
	102-44	Key topics and concerns raised	75-76, 68, 126, 138, 152, 160, 166		
	102-45	Entities included in the consolidated financial statements	32,34		
	102-46	Defining report content and topic boundaries	32,34		
	102-47	List of material topics	71		
	102-48	Restatements of information	32		
	102-49	Changes in reporting	32		
	102-50	Reporting period	32		
	102-51	Date of most recent report	32		
	102-52	Reporting cycle	32		
	102-53	Contact point for questions regarding the report	34		
	102-54	Claims of reporting in accordance with the GRI Standards	32		
	102-55	GRI content index	195-203		
	102-56	External assurance	190		
Material Topics					
The material topics include Health and Safety, Operational Excellence, Stakeholder Relationship Management, Climate Change, Digital Transformation, Business growth, Asset utilization, Product and service quality, Risk management, R&D, Resource optimization, Natural capital utilization, Ethics, integrity and compliance, Data privacy and cybersecurity, Human capital management, New businesses and geographies, Energy management					
GRI 103: Management Approach 2016	103-1	Explanation of the material topic and its boundary	71, 77, 78		

GRI Standard	Disclosure	Report Section	Page No	Omission	
				Reason	Explanation
	103-2	Health and Safety	29, 30, 53, 54, 62, 80, 92, 102, 114, 126, 138, 152, 160, 166		
		Operational Excellence			
		Business Growth			
		Stakeholder Engagement and Materiality Assessment			
		Climate Change			
		Stakeholder relationship management - (our people, customers, suppliers, community)			
	103-3	Health and Safety	55, 115		
		Operational Excellence			
		Business Growth			
		Stakeholder Engagement and Materiality Assessment			
		Climate Change			
		Stakeholder relationship management - (our people, customers, suppliers, community)			
GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	17, 32, 81		
	201-2	Financial implications and other risks and opportunities due to climate change	54-56, 116		
	201-3	Defined benefit plan obligations and other retirement plans	140		
	201-4	Financial assistance received from government	80-87		
GRI 202: Market Presence 2016	202-1	Ratios of standard entry-level wage by gender compared to local minimum wage	140		
	202-2	Proportion of senior management hired from the local community	32		
GRI 204: Procurement Practices 2016	204-1	Proportion of spending on local suppliers	32, 167, 188, 189		

GRI Standard	Disclosure	Report Section	Page No	Omission	
				Reason	Explanation
GRI 205: Anti-corruption 2016	205-1	Operations assessed for risks related to corruption	48		
	205-2	Communication and training about anti-corruption policies and procedures	47, 48, 50, 144		
	205-3	Confirmed incidents of corruption and actions taken	47-48		
GRI 206: Anti-competitive Behavior 2016	206-1	Legal actions for anti-competitive behaviour, anti-trust, and monopoly practices	47-48		
GRI 301: Materials 2016	301-1	Materials used by weight or volume	178		
	301-2	Recycled input materials used	178		
	301-3	Reclaimed products and their packaging materials	32, 109		
GRI 302: Energy 2016	302-1	Energy consumption within the organization	32, 178, 179		
	302-2	Energy consumption outside of the organization	32, 34, 179		
	302-3	Energy intensity	104		
	302-4	Reduction of energy consumption	119		
	302-5	Reductions in energy requirements of products and services	119		
GRI 303: Water 2016	303-1	Water withdrawal by source	181		
	303-2	Water sources significantly affected by the withdrawal of water	181		
	303-3	Water recycled	181		
GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	107-109		
	303-2	Management of water discharge-related impacts	107-109		
	303-3	Water withdrawal	181		
	303-4	Water discharge	181		
	303-5	Water consumption	181		
GRI 304: Biodiversity 2016	304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	102-104		

GRI Standard	Disclosure	Report Section	Page No	Omission	
				Reason	Explanation
	304-2	Significant impacts of activities, products, and services on biodiversity	102-104		
	304-3	Habitats protected or restored		Not Applicable	Not within 10km of GAIL site
	304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations		Not Applicable	Not within 10km of GAIL site
GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	180		
	305-2	Energy indirect (Scope 2) GHG emissions	180		
	305-3	Other indirect (Scope 3) GHG emissions	180		
	305-4	GHG emissions intensity	180		
	305-5	Reduction of GHG emissions	180		
	305-6	Emissions of ozone- depleting substances (ODS)	180		
	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	180		
GRI 306: Waste 2020	306-1	Waste generation and significant waste-related impacts	109, 181		
	306-2	Management of significant waste-related impacts	109, 181		
	306-3	Waste generated	181		
	306-4	Waste diverted from disposal	181, 182		
	306-5	Waste directed to disposal	181, 182		
GRI 307: Environmental Compliance 2016	307-1	Non-compliance with environmental laws and regulations	97		
GRI 308: Supplier Environmental Assessment 2016	308-1	New suppliers that were screened using environmental criteria	189		
	308-2	Negative environmental impacts in the supply chain and actions taken	189		
GRI 401: Employment 2016	401-1	New employee hires and employee turnover	187		

GRI Standard	Disclosure	Report Section	Page No	Omission	
				Reason	Explanation
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	132, 140, 147, 188		
	401-3	Parental leave	188		
GRI 402: Labor/ Management Relations 2016	402-1	Minimum notice periods regarding operational changes	147, 149		
GRI 403: Occupational Health and Safety 2018	403-1	Occupational health and safety management system	127, 183-185		
	403-2	Hazard identification, risk assessment, and incident investigation	54, 127, 128, 130, 131, 132, 146, 183-185		
	403-3	Occupational health services	127, 128, 183-185		
	403-4	Worker participation, consultation, and communication on occupational health and safety	128-132, 183-185		
	403-5	Worker training on occupational health and safety	132-135, 188, 183-185		
	403-6	Promotion of worker health	132-135, 183-185		
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	126, 127, 132-135, 183-185		
	403-8	Workers covered by an occupational health and safety management system	127, 131, 132, 183-185		
	403-9	Work-related injuries	183-185		
	403-10	Work-related ill health	183-185		
GRI 404: Training and Education 2016	404-1	Average hours of training per year per employee	144, 188		
	404-2	Programs for upgrading employee skills and transition assistance programs	142-144		

GRI Standard	Disclosure	Report Section	Page No	Omission	
				Reason	Explanation
	404-3	Percentage of employees receiving regular performance and career development reviews	142-144		
GRI 405: Diversity and Equal Opportunity 2016	405-1	Diversity of governance bodies and employees	44, 139, 186, 187		
	405-2	Ratio of basic salary and remuneration of women to men	32, 46		
GRI 406: Non-Discrimination 2016	406-1	Incidents of discrimination and corrective actions taken	139, 140, 147		
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	146-148		
GRI 408: Child Labor 2016	408-1	Operations and suppliers at significant risk for incidents of child labor	146, 166		
GRI 409: Forced or Compulsory Labor 2016	409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	146		
GRI 410: Security Practices 2016	410-1	Security personnel trained in human rights policies or procedures	146		
GRI 411: Rights of Indigenous Peoples 2016	411-1	Incidents of violations involving rights of indigenous peoples	152, 154		
GRI 412: Human Rights Assessment 2016	412-1	Operations that have been subject to human rights reviews or impact assessments	188		
	412-2	Employee training on human rights policies or procedures	148		
	412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	188		

GRI Standard	Disclosure	Report Section	Page No	Omission	
				Reason	Explanation
GRI 413: Local Communities 2016	413-1	Operations with local community engagement, impact assessments, and development programs	75, 76, 97, 152, 153, 158		
	413-2	Operations with significant actual and potential negative impacts on local communities	153		
GRI 414 :Supplier Social Assessment 2016	414-1	New suppliers that were screened using social criteria	189		
	414-2	Negative social impacts in the supply chain and actions taken	189		
GRI 415: Public Policy 2016	415-1	Political contributions	80		
GRI 416: Customer Health and Safety 2016	416-1	Assessment of the health and safety impacts of product and service categories	94, 95, 96, 126		
	416-2	Incidents of noncompliance concerning the health and safety impacts of products and services	161, 126		
GRI 417: Marketing and Labelling 2016	417-1	Requirements for product and service information and labelling	161		
	417-2	Incidents of noncompliance concerning product and service information and labelling	161		
	417-3	Incidents of noncompliance concerning marketing communications	161		
GRI 418: Customer Privacy 2016	418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	161		
GRI 419: Socioeconomic Compliance 2016	419-1	Non-compliance with laws and regulations in the social and economic area	97		

Linkages to Sustainability Accounting Standard Board (2018)

Topic	Code	Accounting Metric	Report Section/ Chapters	Page
Greenhouse Gas Emissions	EM-MD-110a.1.	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Climate change	119
	EM-MD-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Climate change	119
Air Quality	EM-MD-120a.1	Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O), (2) SO _x , (3) volatile organic compounds (VOCs), and (4) particulate matter (PM)	Performance Snapshot	180
Ecological Impacts	EM-MD-160a.1	Description of environmental management policies and practices for active operations	Energy and Environment -Biodiversity	103
	EM-MD-160a.2.	Percentage of land owned, leased, and/or operated within areas of protected conservation status or endangered species habitat	Energy and Environment -Biodiversity	103
	EM-MD-160a.3.	Terrestrial acreage disturbed, percentage of impacted area restored	Energy and Environment -Biodiversity	103
	EM-MD-160a.4.	Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume in Unusually Sensitive Areas (USAs), and volume recovered	Energy and Environment	111
Competitive Behaviour	EM-MD-520a.1.	Total amount of monetary losses as a result of legal proceedings associated with federal pipeline and storage regulations	Operational Excellence	98

Topic	Code	Accounting Metric	Report Section/ Chapters	Page
Operational Safety, Emergency Preparedness & Response	EM-MD-540a.1	Number of reportable pipeline incidents, percentage significant	Operational Excellence	128
	EM-MD-540a.2.	Percentage of (1) natural gas and (2) hazardous liquid pipelines inspected	Operational Excellence	94
	EM-MD-540a.3.	Number of (1) accident releases and (2) non-accident releases (NARs) from rail transportation	Operational Excellence	94
	EM-MD-540a.4.	Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout project lifecycles	Operational Excellence	93
Water Management	EM-MD-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Water sourcing, Performance snapshot	181
	EM-MD-140a.3	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Operational Excellence	97
Hazardous materials management	EM-RM-150a.1	Amount of hazardous waste generated; percentage recycled	Waste Management	181
	EM-RM-150a.2.	(1) Number of underground storage tanks (USTs), (2) number of UST releases requiring cleanup, and (3) percentage in states with UST financial assurance funds	Operational Excellence	93
Workforce Health & Safety	EM-RM-320a.1.	(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR) for (a) full-time employees and (b) contract employees	Health and Safety	184, 185

Topic	Code	Accounting Metric	Report Section/ Chapters	Page
	EM-RM-320a.2.	Discussion of management systems used to integrate a culture of safety	Health and Safety	126
Product Specifications & Clean Fuel Blends	EM-RM-410a.1.	Percentage of Renewable Volume Obligation (RVO) met through: (1) production of renewable fuels, (2) purchase of “separated” renewable identification numbers (RIN)	Performance Snapshot	180-181
	EM-RM-410a.2.	Total addressable market and share of market for advanced biofuels and associated infrastructure	Climate change	120
Pricing Integrity & Transparency	EM-RM-520a.1.	Total amount of monetary losses as a result of legal proceedings associated with price fixing or price manipulation	Operational Excellence	98
Management of the Legal & Regulatory Environment	EM-RM-530a.1.	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Governance and risk management	57
Critical Incident Risk Management	EM-RM-540a.1.	Process Safety Event (PSE) rates for Loss of Primary Containment (LOPC) of greater consequence (Tier 1) and lesser consequence (Tier 2)	Operational Excellence	95
	EM-RM-540a.2.	Challenges to Safety Systems indicator rate	Operational Excellence	93
	EM-RM-540a.3.	Discussion of measurement of Operating Discipline and Management System Performance through Tier 4 Indicators	Operational Excellence	92

Linkages with NVG SEE Principles

Principle No.	NVG-SEE	FY 2020-21 Sections
1	Businesses should conduct and govern themselves with Ethics, Transparency, and Accountability	Corporate Governance; Risk Management
2	Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle	Our Customers; Suppliers
3	Businesses should promote the wellbeing of all employees	Our People
4	Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.	Our Community
5	Businesses should respect and promote human rights	Our People
6	Business should respect, protect, and make efforts to restore the environment	Operational Excellence; Energy and Environment
7	Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner	Business Growth
8	Businesses should support inclusive growth & equitable development	Business Growth
9	Businesses should engage with and provide value to their customers and consumers in a responsible manner	Our Customers; Suppliers

Linkages to API/IPIECA, UNGC, ISO 26000 Principles

Section	API/IPIECA Guidelines	UNGC Principles	ISO 26000:2010 Clause
Governance	SE 11, SE 12	Principle 10 Principle 7	4.3, 4.4, 6.2, 6.3.5, 6.3.6, 6.6.1, 6.6.3, 6.6.5, 6.6.6, 7.4.3, 7.7.5
Risk Management	SE11, SE12	Principle 10 Principle 7	4.3, 6.2.3, 6.3.5, 6.3.4
Stakeholder Engagement and Materiality	SE1, SE2, SE4, SE14, SE16, HS1, HS2, HS4, HS14	Principle 1 Principle 6 Principle 7	4.2, 4.5, 5.2, 5.3, 6.3.6-6.3.7, 6.3.10, 6.7.1-6.7.6, 6.8.1-6.8.3, 7.3.2- 7.3.4, 7.5.3, 7.8
Business Growth	SE4, SE5, SE7, SE13	Principle 9	6.6.1-6.6.2, 6.6.4, 6.6.6, 6.8.1-6.8.3, 6.8.1-6.8.9
Operational Excellence	E1, E2, E3, E4, E5, E6, E7, E8	Principle 8 Principle 9	4.6, 6.5.3-6.5.6, 6.6.6
Energy and Environment	E1, E2, E3, E4, E5, E6, E7, E8, E9, E10, E11	Principle 7 Principle 8 Principle 9	6.5.1, 6.5.2, 6.5.3, 6.5.4, 6.5.5, 6.5.6
Climate Change	E1, E2, E3, E4, E5	Principle 7 Principle 8 Principle 9	6.5.5
Health and Safety	HS1, HS2, HS3, HS5	Principle 6	6.4.5, 6.4.6, 6.5.3, 6.8.8
Our People	SE6, SE8, SE10, SE15, SE16, SE17, SE18	Principle 1 Principle 2 Principle 3 Principle 4 Principle 5 Principle 6	4.5, 4.8, 5.2, 5.3, 6.3.1-6.3.8, 6.3.10, 6.4.1, 6.4.7, 6.5.1-6.5.2, 6.7.8 – 6.7.9, 6.8.1-6.8.9
Our Community	SE1, SE2, SE3, SE4, SE5, SE6, SE7	Principle 1 Principle 2	5.2.1, 5.2.2, 5.2.3, 6.8.1 – 6.8.9, 6.6.7
Our Customers	HS4, SE8, SE10	Principle 1 Principle 2	6.7.1 – 6.7.9
Suppliers	SE8, SE9, SE10	Principle 1 Principle 2 Principle 7 Principle 10	4.4, 4.5, 4.6, 4.7, 6.3.1-6.3.8, 6.3.10, 6.6, 6.7.3, 6.7.4, 6.7.6, 6.7.9, 6.7.1-6.7.2, 7.3.1
Performance Snapshot	E1, E2, E3, E4, E6, E7, E8, E10, HS3	Principle 7 Principle 8 Principle 9	4.6, 6.4.3, 6.4.4, 6.4.6, 6.5.3-6.5.5, 6.5.8

Linkages to Sustainable Development Goals

Sustainable Development Goals	(SDGs) Description	GAIL Initiatives	SR Coverage (Chapters)
SDG 01. No poverty	End poverty in all its forms, everywhere	GAIL Kaushal, Unnati and Sashakt initiatives under GAIL Hriday	Our Community
SDG 02. Zero hunger	End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	» GAIL Kaushal, Unnati and Sashakt initiatives under GAIL Hriday	Our Community
SDG 03. Good health and well-being	Ensure healthy lives and promote well-being for all at all ages	<ul style="list-style-type: none"> » Employee engagement activities » Behaviour-based safety » HSE Management System » COVID-19 Precautionary measures » GAIL Arogya initiative under Hriday Program » Corporate medical Cell for Regular health check-ups 	Operational Excellence, Health and Safety, Our Community, Our people, Our Efforts to tackle COVID-19
SDG 04. Quality education	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	GAIL Ujjawal, Kaushal, and Sashakt initiatives under GAIL Hriday	Our Community
SDG 05. Gender equality	Achieve gender equality and empower all women and girls	<ul style="list-style-type: none"> » Diversity inclusion for the hiring process » GAIL Shashakt initiative under Hriday Program 	Our Community, Our People
SDG 06. Clean water and sanitation	_ Ensure available and sustainable management of water and sanitation for all	<ul style="list-style-type: none"> » Water Management » Waste Management » GAIL Arogya initiative under Hriday Program 	Energy and Environment, Our Community
SDG 07. Affordable and clean energy	_ Ensure access to affordable, reliable, sustainable and modern energy for all	<ul style="list-style-type: none"> » Partnership with BHEL for Solar based power project » Energy Management System » Solar Power System commissioned at » Mumbai Pipeline Network » Development of National Gas Grid » Compressed biogas 	Energy and Environment, Climate Change

Sustainable Development Goals	(SDGs) Description	GAIL Initiatives	SR Coverage (Chapters)
SDG 08. Decent work and economic growth	Promote sustained, inclusive and sustainable economic growth, full and productive employment, and decent work for all	<ul style="list-style-type: none"> » GAIL's contribution to Start-Up India » Transparency in Doing Business » Grievance Redressal Mechanism » Workforce Management » GAIL Kaushal » Management Development Program » Learning Management System 	Energy and Environment, Our People, Our Customers, Our Suppliers, Business Growth
SDG 09. Industry, innovation, and infrastructure	Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation	<ul style="list-style-type: none"> » GAIL's contribution to Start-Up India » Digital Transformation » Marketplace (GeM) and Trade » Receivable Discounting System (TReDS) for » Procurement » Workforce Management » GAIL Ujjwal initiative under Hriday Program » GreenCo Assessment of the sites » Construction Management Plan (CMP) 	GAIL Highlights, Energy and Environment, Our people,
SDG 10. Reduced inequalities	Reduce inequality within and among countries	<ul style="list-style-type: none"> » GAIL Shashakt initiative under Hriday » Program » GAIL Saksham initiative under Hriday » Program » General Conditions of Contract » Public Procurement Policy at GAIL » GAIL Indigenization (INDEG) Group Meets » Local procurement 	Our Community, Our people, Our Suppliers, Governance and Risk management
SDG 11. Sustainable cities and communities	Make cities and human settlements inclusive, safe, resilient and sustainable	<ul style="list-style-type: none"> » SIA (Social Impact Assessment) » GAIL CSR Initiatives to tackle COVID-19 » Impacts » GAIL's contribution to Start-Up India » GAIL Arogya » GAIL Unnati » Hawa Badlo Campaign 	Operational Excellence

Sustainable Development Goals	(SDGs) Description	GAIL Initiatives	SR Coverage (Chapters)
SDG 12. Responsible consumption and production	_ Ensure sustainable consumption and production patterns	<ul style="list-style-type: none"> » Implementation of the rich lean corridor » Energy Management System » Energy-saving initiatives at GAIL sites and townships » Water Management » Waste Management » Contribution to Start-Up India » Total Quality Management (TQM) » Integrated Management System (IMS) 	Operational Excellence, Energy and Environment, Climate Change
SDG 13. Climate action	Take urgent action to combat climate change and its impacts	<ul style="list-style-type: none"> » Sustainability Policy » Implementation of the rich lean corridor » Environment Management System » Energy Management System » Biodiversity Management » Emission Management » GAIL's contribution to Start-Up India » Combating Climate Change Risk » Green Procurement » Local Procurement » State-of-art Digital Technology to measure the Carbon footprint » CNG Mobile Refueling » Afforestation projects following the Miyawaki technique » State-of-art Digital Technology to measure the Carbon footprint » Target of 1 gigawatt of renewable energy » Coastal regulatory zone clearance 	Operational Excellence, Energy and Environment, Climate Change
SDG 14. Life below water	_ Conserve and sustainably use the oceans, seas and marine resources for sustainable development	<ul style="list-style-type: none"> » Functional excellence Framework » Biodiversity Management » Water Management » GAIL Harit initiative under Hriday Program » EIA (Environment Impact Assessment) 	Operational Excellence, Energy and Environment, Climate Change, Our community

Sustainable Development Goals	(SDGs) Description	GAIL Initiatives	SR Coverage (Chapters)
SDG 15. Life on land	Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation, and halt biodiversity loss	<ul style="list-style-type: none"> » Environment Management System » Biodiversity Management » Waste Management » GAIL Harit initiative under Hriday Program » Green Procurement » Local Procurement » Hawa Badlo Campaign 	Operational Excellence, Energy and Environment, Climate Change, Our Community, Our suppliers
SDG 16. Peace, justice and strong institutions	Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable and inclusive institutions at all levels	<ul style="list-style-type: none"> » Ethics and Integrity » Transparency in Doing Business » Labour Practices » General Conditions of Contract » Stakeholder engagement » Customer satisfaction survey 	Operational Excellence, Our community, Our people, Our suppliers, Governance and Risk management
SDG 17. Partnerships for the goals	_ Strengthen the means of implementation and revitalize the global partnership for sustainable development	<ul style="list-style-type: none"> » GAIL's contribution to Start-Up India » Partnership with TERI » GAIL's support to Sustainable Alternative Towards Affordable Transportation (SATAT) initiative of GoI » GAIL's Start-Up Initiative 'Pankh' » Founding member of the Global Reporting Initiative (GRI) Focal Point » India's Sustainability & Transparency Consortium 	Stakeholder Engagement and Materiality, Climate, Climate, Governance and Risk management

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