



Sustainability Report 2022-23



GAIL's **NET-ZERO** Mission

will be the **NET-GAIN** for India

GAIL is well-placed to play an important role in promoting use of natural gas with an existing LNG (liquefied natural gas) portfolio of more than 14 million tonnes per annum, diversity in supply sources and price indices as well as a wide pipeline network. In line with India's vision to achieve net-zero by 2070, it has completed a comprehensive study on science-based net-zero ambition and intends to achieve 100 percent reduction in Scope 1 and 2 emissions and a 35 percent reduction in scope 3 emissions by 2040. To cut its carbon footprints, it is venturing into green hydrogen production and aims to set up 3 gigawatts of renewable energy capacity by 2030.

Towards **NET ZERO**

VISION

Be the leader in the natural gas value chain and beyond, with a global presence.

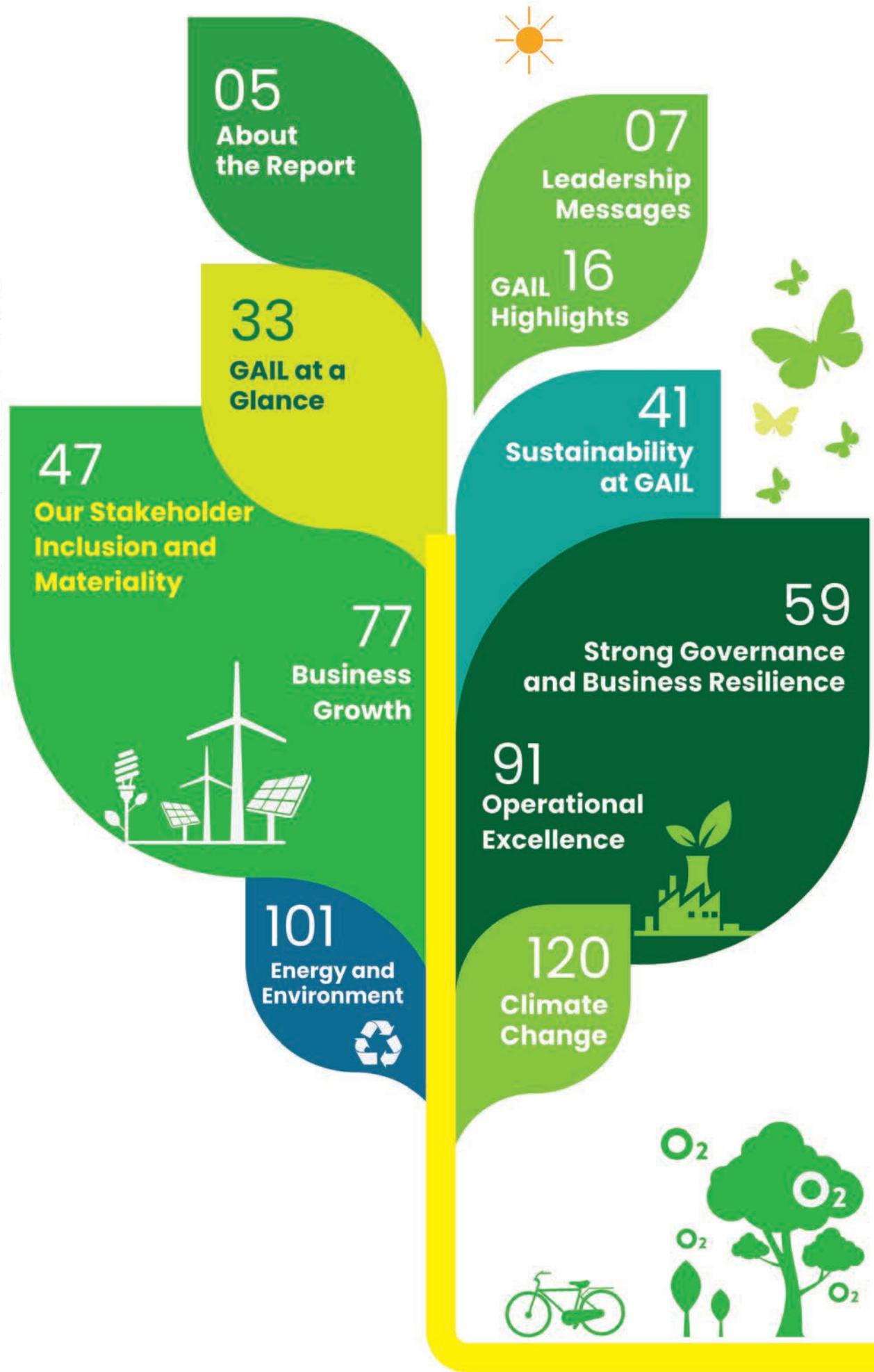
Creating value for stakeholders with environmental responsibility.

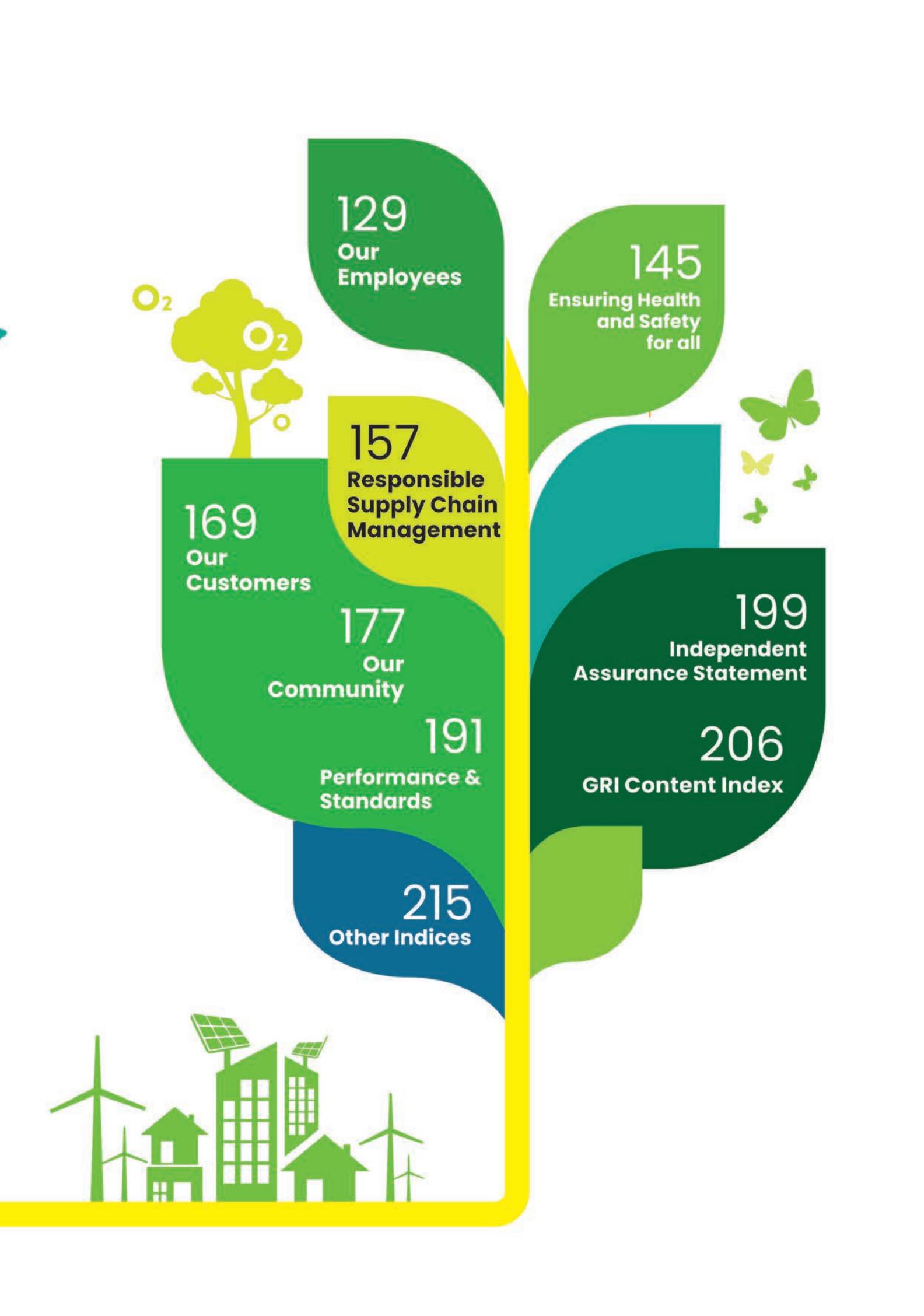
MISSION

Enhancing quality of life through clean energy and beyond



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ABOUT THE REPORT

(GRI 2-2)

GAIL (India) Limited publishes annual sustainability reports since 2011, that detail the Company's environmental, economic and social performance. GAIL strives to disclose information about its strategy, goals, targets and performance through sustainability reporting. This will eventually allow GAIL to develop a sustainable business model that generates long-term value for the Company's stakeholders.

This Sustainability Report outlines GAIL's engagements with stakeholders, as well as the programs and initiatives implemented to achieve those engagements. This report also includes information on the material topics that are important to GAIL's business and stakeholders.

1.1 Reporting Year & Cycle

(GRI 2-3 a, b, c)

This is GAIL's 13th sustainability report, highlighting the company's environmental, economic and social performance in the fiscal year 2022-23. The reporting period for GAIL's financial accounting and performance data as well as sustainability performance, spans from April 1st, 2022, to March 31st, 2023. The electronic version of the report can be found on our website. (<https://gailonline.com/SbSustainability.html>).

1.2 Reporting Standards

GAIL reports in accordance with the most recent version of the International Petroleum Industry Environmental Conservation Association (IPIECA) guidelines, which is a global oil and gas industry association that focuses on environmental and social issues.

This report has been prepared in compliance with the GRI Sustainability Reporting Standards; Sustainability Accounting Standards Board (SASB); National Guidelines on Responsible Business Conduct (NGRBC) principles, the American Petroleum Institute (API) guidelines,

ISO 26000:2010 and the United Nations Global Compact (UNGC) & SEBI's Business Responsibility and Sustainability Reporting (BRSR) requirements, Task Force on Climate-Related Financial Disclosures (TCFD).

GAIL has reported its performance for all the key indicators corresponding to the identified material aspects along with the management approach for the identified material topics.

1.3 Reporting Scope

(GRI 204-1 b, c)

The scope of reporting includes GAIL's performance across all locations on various environmental, economic, social and governance parameters. Until otherwise mentioned, India is our significant location of operations. The word "local" refers to India, wherever applicable. Company-joint ventures, subsidiaries, leased facilities, outsourced operations and other entities have been excluded from the scope.

1.4 Reporting Boundary

(GRI 2-1d, GRI 2-2a, b, c.)

GAIL Sustainability Report data is collected with help of Sustainability Softwares namely e-Sustainability Module and Business Responsibility and Sustainability Reporting (BRSR) Module. The locations listed software are clubbed at regional level

GAIL's reporting boundary includes following, until otherwise mentioned:

- GAIL's Manufacturing and Processing Plants at Pata, Vijaipur, Vaghodia, Gandhar
- Natural gas compressor stations (Hazira, Vaghodia, Jhabua, Khera, Vijaipur, Dibiyapur, Kailaras and Chhainsa)
- Liquified Petroleum Gas (LPG) pumping/receiving stations (Loni, Mansarampura, Nasirabad, Abu Road, Samakhiali, Jamnagar, Kandla, Vizag, G Konduru and Cherlapalli)



- Regional pipeline offices at NCR, Baroda, Ranchi, Mumbai, Puducherry, Rajahmundry, Agartala and Dhabol Bengaluru Pipeline (DBPL)
- E&P business
- Office buildings at the Corporate Office in New Delhi
- GAIL Training Institute at Noida and Jaipur
- Info-Hub and Jubilee Tower offices at Noida
- Zonal marketing offices at Mumbai, Noida, Chandigarh, Jaipur, Lucknow, Bhopal, Hyderabad, Bengaluru, Chennai, Bhubaneshwar, Kolkata, Guwahati, Ahmedabad

1.5 Data Management

This report has been prepared in accordance with the 'GRI standards 2021'. Our sustainability coordinators at all plants/offices are responsible for implementing various initiatives and collecting data for reporting. We have a robust governance mechanism to track sustainability data. The coordinators leverage our internal sustainability portals to track and report the data which is further verified by respective departmental heads for accuracy.

1.6 Data Validation and Assurance

(GRI 2-5a, b, 2-3d)

This report has been assured by an external assurance agency. This sustainability report is a type 2 moderate-level assured report following the AA1000AS V3 standard. The assurance process includes physical assurance at multiple factories and offices, corporate departments and virtual assurance at multiple locations to validate the data provided. The data of material topics is compiled by each of the process owners from functional departments and the report is developed by the Sustainability Department, which is approved by the Sustainable Development Committee of the Board.

The Sustainability Report is both a communication tool for 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. Mukesh Kumar Tiwari CGM (SD) (mktiwari@gail.co.in) & Mr. Sameer Virmani GM (SD) (s.virmani@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.

Disclaimer:

Statements in the GAIL's Sustainability Report FY 2022-23 may be "forward looking statements", identified by words such as '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.

Message from CMD

“ To fulfill our Net Zero Commitments, GAIL has started rolling out decarbonization initiatives, with an impetus towards energy transition. ”



Dear Stakeholders,

I am happy to share the 13th edition of GAIL's Sustainability Report- Towards Net Zero. This report stands as a testimony of our efforts in this domain while measuring our progress in sustainable development.

As we embark on the implementation of our Net Zero roadmap, the Sustainability Report for FY 2022-23 shares the initiatives and future outlook with the stakeholders as our strong commitment to Environmental, Social, and Governance (ESG) practices in the business value chain of the company.

The year 2022 has been a year of volatility for global energy markets. GAIL too had to bear the brunt of it and through its sustained efforts could sail through it with the support of all stakeholders.

I am glad to share that with the true spirit of resilience, strength and perseverance GAIL has recorded sustained performance in key physical and financial parameters during the financial year. For FY 2023, GAIL achieved the highest-ever Gross turnover and for the first time,

the turnover has surpassed the INR 1,00,000 Cr. mark in its history while upholding world-class standards to ensure operational safety, performance, and growth.

As the country's flagship natural gas Maharatna Company, GAIL has given impetus to energy transition and decarbonization. Your Company while furthering the Government's vision of low-carbon energy access and security at the pan-India level in the form of natural gas, is operating around 15600 km of natural gas pipeline and plans to add another 4200 km of natural gas pipelines by the end of next year. Several initiatives are being taken to promote gas markets in new cities and create new market opportunities. We have also acquired 26% equity in the LNG Japonica vessel of Mitsui OSK Lines, Japan. Furthermore, at our petrochemical plant, we have commissioned a pilot-scale project on "CO2 capture through the Microbial route" and are also setting up India's first Small Scale LNG plant at Vijaipur, MP.

To fulfil its net zero commitments, your Company has started rolling out its decarbonization initiatives, while also exploring energy transition

and green financing options. Given the framework for a decarbonised company, the key drivers for energy transition have been the penetration of renewable energy into the energy supply mix, adoption of electrification measures and new energy forms- hydrogen, CBG, and Biofuels, while also deep diving for the development of CO₂ valorisation and energy storage. The ESG governance structure stands at the core of our commitments to future growth strategies, catering as a responsible business entity to all.

Sustainability is deeply ingrained in our operations and continuing on this path, in FY 2022-23, GAIL made significant progress in adopting Sustainable Factory GreenCo Rating. Six GAIL sites have achieved the feat of GreenCo silver rating. With these firm actions in place, we aim at creating a better world for the next generations and a valuable asset for investors. As part of the circular economy and value creation from waste, GAIL is also actively involved in installing Compressed Bio Gas (CBG) plants at Ranchi recently awarded Bengaluru and facilitating the CBG Scheme in total through Synchro & SATAT Schemes. Further, GAIL's pilot project of hydrogen blending in CGD Network is now blending 5% v/v hydrogen in AGL's PNG network and we are also setting up a 10 MW electrolyzer for green hydrogen production in Vijaipur, Madhya Pradesh, as we march towards establishing a hydrogen economy in India.

GAIL as Part of its societal responsibilities for social and economic parameters is committed to the upliftment of the social and economic conditions of designated Aspirational districts. We have gone over and beyond by implementing strategic CSR projects in 20 aspirational districts with an amount spent of INR 12.54 Cr. while incurring an expenditure of INR 99.10 Cr. as part of CSR.

Digitization today has emerged as a tool for leapfrogging businesses and improving efficiencies while reducing carbon footprints. GAIL takes pride in being at the forefront of the adoption of the latest technological advancements and has inaugurated first state-of-the-art centre for Vendor Invoice Management (VIM) - Shared Service Centre (SSC) called SARATHI, which centralizes and automates the payment processes.

I take pride in sharing with you all that your Company has been the recipient of prestigious awards and accolades on the basis of its sustainable business practices. GAIL was accorded 'Green Ribbon Champions' by CNBC, Network18 Media & Investments Limited for the decarbonization initiatives taken by the organisation, stands first among other PSUs (Public Sector Undertakings) to achieve "A" grade rating, India's Most Sustainable Companies 2022 by Business world Magazine and ranks 1st among PSUs in the Climate Leadership Report-2022 by Futurescape and Economic Times (ET) Edge. GAIL has again been included in FTSE4Good Index Series for affirming its strong commitment towards Environmental, Social and Governance (ESG) practices in the Oil & Gas Sector.

We at GAIL, as responsible corporate remain committed towards climate change mitigations as ever to secure the country's present & future energy needs in a sustainable way. We are sure of your support in GAIL's energy transition journey towards its Net Zero endeavours.



Sandeep Kumar Gupta
Chairman & Managing Director





Message from Director (Business Development)

GAIL is cognizant of the fact that embedding ESG is imperative to business growth. It helps assess and mitigate risks and maximize opportunities that fuel business growth. Our business strategy and growth plans consider sustainability aspects to ensure that we operate in an environmentally responsible manner and create value for all stakeholders.

We are committed to provide uninterrupted service across the length and breadth of the country to achieve accessible and affordable energy for all. We have achieved a turnover of over One lakh crore for the first time, which shows our resilience to turbulent market conditions. At the same time our growth is now aligning with goals of greener and sustainable future.

GAIL is in the process of setting up a 500 KTA Propane Dehydrogenation and polypropylene (PDH-PP) Plant at Usar, Maharashtra, which is expected to be commissioned in 2025. This would be the first plant in India to use Propane Dehydrogenation technology for the production of Propylene. GAIL is also setting up a 60 KTA Polypropylene (PP) plant at Pata, Uttar Pradesh. Various project related activities are going on in full swing.

GAIL is also setting up its first speciality chemical project of 50 KTA Isopropanol (IPA) unit at Usar.

As per BP's outlook on World Energy 2023, the future of global energy will be dominated by four major trends: a declining role for hydrocarbons, rapid expansion in renewables, increasing electrification and growing use of low-carbon hydrogen. In line with the ambitious journey

of GAIL to become Net Zero for Scope 1 and Scope 2 emissions by 2040, GAIL is expediting its investment in the key levers identified such as Electrification, Renewable energy projects, Green Hydrogen, CBG, Efficiency improvement initiatives etc.

In line with Strategy 2030, GAIL has explored various opportunities for increasing its renewable portfolio through organic as well as inorganic routes. Towards shaping a Net Zero future, GAIL is exploring various business opportunities in the Production of Compressed Biogas (CBG). In line with the Government of India's 'National Hydrogen Energy Mission', GAIL is currently in the process of building one of India's largest PEM electrolyser based Green Hydrogen plant, with a capacity of 4.3 Tonnes per day, at Vijaipur (M.P.). GAIL has successfully commissioned India's first project for blending of Hydrogen in City Gas Station, Indore. GAIL is also in the process of implementing CBG projects in Ranchi & Bengaluru. GAIL plans to invest in Solar and Wind Power plants to meet its ambitious target of 3 GW by 2030. We are committed to collaborate with other agencies and institutes to contribute in tackling the complex climate change issue.

We look forward to our continued business growth and contribution towards nation development with the support from our valued and trusted stakeholders.

A handwritten signature in blue ink that reads "M V Iyer".

M V Iyer
Director (Business Development)



Message from Director (Finance)

The Financial Year 2022-23 remained tumultuous for the company, as the energy market faced multiple constraint owing to recovery phase from Covid-19, the geopolitical conflict along with other supply chain restriction. These factors caused uncertainties around energy supply, price volatility and also triggered significant peaks in energy prices. On account of various measures taken to overcome the situation, GAIL has been able to protect its profitability to a significant level during FY 2022-23. GAIL achieved highest ever gross turnover of INR 1,43,976 crores in FY 2022-23, an increase of 57% over previous year. Profit before Tax (PBT) & Profit after Tax (PAT) stood at INR 6,584 crores and INR 5,302 crores respectively during FY 2022-23.

GAIL has always been in forefront in rewarding to its shareholders. In FY 2022-23, GAIL paid Final dividend for FY 2021-22 @10% (INR 438.34 crores) of paid-up capital and Interim Dividend for FY 2022-23 @40% (INR 2630.04 crores) of paid-up capital. Besides this, Company has issued bonus shares of 1 for every 2 held (1:2). GAIL has also made buy back of 5.69 Crores full paid up equity shares of INR 10 each at a price of INR 190 per equity share.

Today, Digitization and Digital technologies have taken over the conventional way of doing business and are playing crucial role in sustainable growth

and maintaining business continuity. Keeping pace with digital era and adopting state of art technologies, to benefit stakeholders, GAIL has launched "SARATHI" Centre and "SPARSH" Portal for Vendor Invoice Management and also e-BG and SBLC through Swift Platform to smooth the process and to enable transparent business.

GAIL has also Credit Ratings Domestic 'AAA', International 'Baa3' with Stable outlook (Moody's), BBB- with a stable outlook (Fitch) Equivalent to sovereign rating of India. The ratings are indicators of Company's strong performance and future outlook.

GAIL has set a target to achieve Net-Zero (scope 1 and scope 2) status by 2040 while reducing scope 1 scope 2 emissions by 100% and scope 3 emissions by 35% (from the baseline year of 2020-21) by 2040. This will intensify our investment and commitment towards the greener future to help our business address climate related challenges.

Further, I am confident that moving onwards we will be able to outperform the current margins and grow sustainably.

A handwritten signature in blue ink, appearing to read "Rakesh Kumar Jain".

Rakesh Kumar Jain
Director (Finance)





Message from Director (Projects)

At GAIL, the sustainability is at the heart of our strategy covering all its aspects viz. environmental, social and governance. As a responsible energy company, we are diligently working towards ensuring energy security of nation and constantly building assets for shouldering responsibility towards the reduction in carbon emissions and better climate resilience.

To achieve this, GAIL is executing various projects among which the following are the major highlights of FY 2022-23. GAIL has commissioned 1074 Km of pipeline during last FY i.e 2022-23 to enhance the reach of the natural gas being cleaner fuel to so far untouched area. Hon'ble Prime Minister dedicated the Bokaro-Angul Pipeline (533 km) to the nation and also laid the foundation stone for Srikakulam-Angul Pipeline (744 km). Your Company commissioned Dhamra-Angul Mainline with spur lines to Jamshedpur, Ranchi, Cuttack & Bhubaneshwar enabling RLNG supply from Dhamra LNG terminal. GAIL has also completed Sultanpur-Jhajjar-Hisar and Haridwar-Rishikesh-Dehradun Pipeline 2 Tie-in connectivity, 5 nos. of Last Mile Connectivity & 30 Nos. of CGD Hookup commissioned for Gas supply.

With ~15,600 Km of pipelines under operation and 4200 Km of pipelines under construction, GAIL will supply environment-friendly Natural Gas to domestic households, industries, commercial units and automobile sectors in various regions usher socio-economic growth in the region.

GAIL is committed to reduce its carbon emissions with focus on Decarbonization measures by implementing renewable energy projects. It has a total installed capacity of 132 MW of alternative

energy; out of which 117.95 MW is wind energy projects and 14.05 MW are solar energy projects, including small solar units. Renewable energy projects are not only a revenue generation stream for the organization but we are also utilizing the renewable energy generated from these assets to reduce our carbon footprints.

For FY 2022-23, we have increased the renewable energy generation from 581 TJ in FY 2021-22 to 810 TJ . While we continue to best utilize the available space for solar power generation for captive use, our focus is to rope in projects to minimize fugitive emissions, conversion of compressor drives from gas turbines to electric motors, blending of bio-methane and hydrogen in our fuel gas system and improving process efficiency through digitalization and adopting industry 4.0 practices. We are taking measures to adopt green products and making supply chain greener with capacity building of our stakeholders. We are hopeful that with our continuous and committed efforts, GAIL will be able to reduce emissions through operational excellence and achieve Net Zero Target by 2040.

We are committed to align with country's goal and global efforts towards promoting sustainable & environment friendly way of life, leading to a better future for the society and planet. I am confident that GAIL will continue to outperform with Sustainability at the core of its growth story.

A handwritten signature in blue ink, appearing to read "Deepak Gupta".

Deepak Gupta
Director (Projects)





Message from Director (HR)

The recurring challenge organizations encounter is staying relevant in the face of fast changing market, industry demands and ESG concerns, more so in case of organizations in the Oil and Gas industry. While Sustainability has always been a key consideration for GAIL, with focus on adherence to health, safety and environmental regulations and contribution to the communities in which we operate, the growing momentum for a transition to low carbon fuels and renewables is creating new imperatives for sustainability strategies.

GAIL being a responsible organization, sustainability is integrated in our strategic framework. GAIL has set its target for achieving Net Zero by 2040, hence, it is now imperative for us to mobilize our value chain partners to support our vision of sustainable future.

The social, political and technological environment is changing around us and HR practices are expected to be more proactive than ever. The next generation of workers are craving to work for meaningful organisations that offer more than just a steady income and progression opportunities. At GAIL, we constantly focus our endeavours on building capabilities, nurturing a learning environment, implementing the best HR practices in line with global standards, Digitalization of HR process and helping leaders prepare in the face of business volatility. Our aim is to nurture a positive culture through pay equity, workforce inclusion, diversity and gender sensitivity.

GAIL has been keenly interested in developing Human Capital of the employees through job training and coaching. In alignment with GAIL's philosophy of attaching high priority to continuous learning, focus areas have been identified in consultation with respective process owners, for strengthening our capabilities in existing areas and for developing capabilities in new business areas.

GAIL Training Institute (GTI) is also contributing a member of various Skill Development Societies in running Skill Development Institutes at Bhubaneswar, Vishakhapatnam, Kochi, Ahmedabad, Guwahati and Rae Bareli. To support National Skill Development Mission, GTI is providing skill-based training to create a pool of skilled manpower for City Gas Distribution network and mid-stream hydrocarbon industry. As part of our skill development efforts, GAIL is focused towards engagement and training of apprentices to satisfy the growing need for skilled manpower to contribute to the socio-economic growth of the nation.

Through our various CSR programmes, GAIL has been successful in creating a positive impact in the communities at large. To name a few, GAIL Arogya is helping to bridge gaps in existing health infrastructure, GAIL Kaushal is focused on providing skill training in trades related to hydrocarbon sector, plastic product manufacturing, vocational training to visually impaired etc., GAIL Saksham provide aids and assistance devices along with capacity building and skill development support to persons with disabilities (PwDs). To sum up, CSR initiatives of GAIL have been benefitted more than 14,50,000 people in various geographies of the nation in the FY 2022-23.

I strongly believe that a culture of Sustainability helps in creating a competitive advantage by encouraging and maintaining a collective sense of the social environment in the organization. Sustainable business and commercial success need to support one and other. By harnessing the unique energy and capability of our organisation, the sustainability strategy can create value for society and the company.

A handwritten signature in blue ink, appearing to read "Ayush Gupta".

Ayush Gupta
Director (Human Resources)





Message from Director (Marketing)

GAIL is seen as a thought leader in the Natural Gas sector which lends added responsibility on us to deal with our stakeholders and lead the industry in a responsible manner. While we need to maintain our dominant market leader position in our core business areas, it is also important to align our future goals with sustainable growth. This will not only benefit our customers and the communities we serve, but it will also help us to differentiate ourselves in a highly competitive marketplace.

In the past four decades since GAIL was established, our company has achieved appreciable growth even though there have been few turbulent phases. Covid-19, the geo-political crisis of the Russia-Ukraine war followed by marked shifts in the Oil and Gas industry in recent years has impacted all companies like ours.

In the year 2022-23, GAIL transmitted 107 MMSCMD of natural gas against 111 MMSCMD in FY 2021-22, During the same time period a volume of 95 MMSCMD was marketed against 96 MMSCMD in the previous FY 2021-22. The sale of liquid Hydrocarbons went down from 0.936 MMT to 0.827 MMT in 2022-23. The LPG transmission segment however performed better.

A major challenge during the last Financial Year was the degrowth in marketing of the petrochemicals which was 399 KTA against 790 KTA in 2021-22. However, with 500 KTA PDH-PP plant at Usar and 60 KTA PP plant at Pata coming up

in near future, acquisition of JBF petrochemicals by GAIL of 1.25 MMTPA capacity and plans to set up a 50 KTA IPA Unit at Usar, I have high hopes for the petrochemicals/chemicals business segment in the near future. Wider product spectrum will help us in mitigating the petrochemicals market volatility.

GAIL is committed towards developing decarbonization capabilities in line with Government of India's vision and GAIL family is working to achieve our Net-Zero ambition by 2040. GAIL has adopted modern technologies and initiates to reduce its direct inhouse GHG emissions by improving the efficiency of its operations.

GAIL is exploring various opportunities in solar segment so as to have substantial solar portfolio. GAIL is committed to reduce its carbon footprint through implementation of renewable projects and it has a total installed capacity of 132.05 MW of alternative energy. GAIL has set a target to add 1 GW of renewable energy through solar, wind, CBG, green hydrogen etc. by 2025.

I am confident that with continued diligence of our team, we can achieve these goals and continue to grow our business.

A handwritten signature in black ink, appearing to read "Sanjay Kumar".

Sanjay Kumar
Director (Marketing)





GAIL (India) Limited



Existing Gas Pipeline Network of **15,600 km** and additional **4,200 km** under construction

Total **42%** shares of CNG station operated by GAIL

Total **66%** of domestic PNG connection in India supplied by GAIL with 10 lakhs new connections in FY 2022

2nd largest player in polyethylene portfolio

Authorized to operate in **67** geographical areas throughout India

15% domestic market share in Petrochemicals

VALUE CREATION MODEL



GAIL's target to support 400 CBG plants

GAIL share in country's Natural Gas Transmission is 65%

Supplies gas for about 43% of India's gas-based power

Setting up the largest PEM Electrolyser for producing 4.3 TPD Green Hydrogen.

GAIL Supplied around 67% of the gas consumed in the Fertilizer Sector in the country in FY 2023.

GAIL Highlights



Shri Sandeep Kumar, CMD, GAIL watering the sapling planted at GAIL Pata
Tree Plantation Drives & other related events are organized and celebrated at GAIL locations



Sapling Planted by Shri Deepak Gupta, Director Projects, GAIL during visit at Vizag with
Shri Sandeep Kumar Gupta, CMD, GAIL



GAIL Greening Efforts



On the occasion of World Environment Day Shri R K Jain Director (Finance), GAIL (on right side) promoting tree plantation



GAIL employees undertook a nationwide cleanliness drive and tree plantation across GAIL locations during Swacchta Pakhwada



Glimpses of Tree plantation at GAIL, Vizag, VSPL site on the occasion of World Environment Day



GAIL Committed towards Renewable Energy



Initiatives like Rooftop Solar Installation at various locations have been taken by GAIL as per its Renewable Energy Vision

Carbon Utilisation Pilot Project Snapshot



CO₂ fixation using Microalgae : GAIL implemented a pilot project for fixing CO₂ (1TPD) using Microalgae in an Open Raceway Ponds at the Pata petrochemical complex in association with CIMFER, Dhanbad.



Deepening efforts towards Energy Security and Decarbonisation



Shri Sandeep Kumar Gupta, Chairman and Managing Director, GAIL (India) Limited and Ms Fatema Al Nuaimi, CEO ADNOC LNG exchanged Memorandum of Understanding in the presence of Shri Hardeep Singh Puri, Hon'ble Minister of Petroleum & Natural Gas and Minister of Housing & Urban Affairs, India and His Excellency Dr. Sultan Ahmed Al Jaber, Hon'ble Minister of Industry and Advanced Technology, UAE Special Envoy for Climate Change and ADNOC Managing Director and Group CEO at ADIPEC

National Award for Excellence in Cost Management from ICAI



GAIL wins National Award for Excellence in Cost Management from ICAI





Shri Sandeep Kumar Gupta, CMD, GAIL received India's 'Best CEO' award for Oil and Gas Sector from Shri Jyotiraditya Scindia, Hon'ble Union Minister of Civil Aviation and Steel, Government of India at the BT Mindrush programme organised by India Today group on the basis of company's performance for the FY 2022-23



CMD, GAIL and Chairman GAIL Gas Limited, Shri Sandeep Kumar Gupta inaugurated the Industrial PNG supply for Fuel Cell installed at Data Centre of Nxtra Data Limited (a subsidiary of Bharti Airtel) by Bloom Energy in Whitefield, Bengaluru





GAIL has been awarded the prestigious 'Best Natural Gas Pipeline Transportation Company of the Year Award' and 'Best Managed Project of the Year Award' for the Vijaipur-Auraia Pipeline Project at the Oil & Gas Awards 2022, by the Federation of Indian Petroleum Industry (FPI). The award was received by Shri Sandeep Kumar Gupta, CMD, GAIL along with Shri M V Iyer, Director (Business Development), GAIL, and Shri Deepak Gupta, Director (Projects), GAIL from Shri Hardeep Singh Puri, Hon'ble Minister of Petroleum & Natural Gas and Housing and Urban Affairs, and Shri Rameswar Teli, Hon'ble State Minister of Petroleum and Natural Gas & Labour and Employment, in the presence of Shri Pankaj Jain, Secretary, Ministry of Petroleum and Natural Gas.



GAIL Management felicitating Quality Circle Project Winners to promote culture of excellence in operations and maintenance

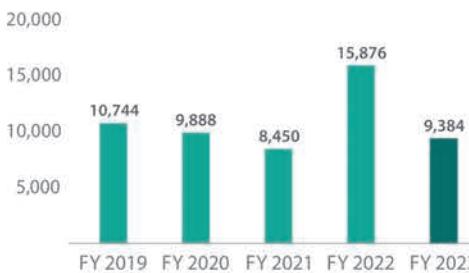


Performance Highlights Financial Performance - Standalone

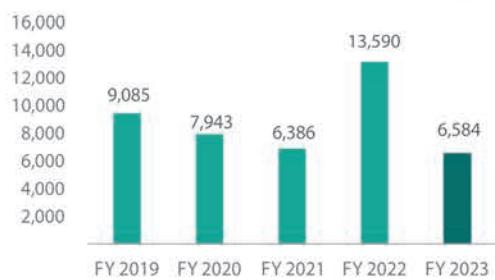
Turnover (Gross) (INR crore)



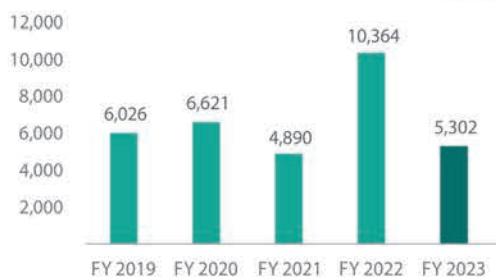
Gross Margin EBIDTA (INR Crore)



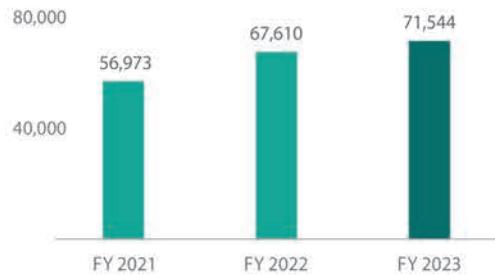
Profit Before Tax (PBT) (INR crore)



Profit After Tax (PAT) (INR crore)



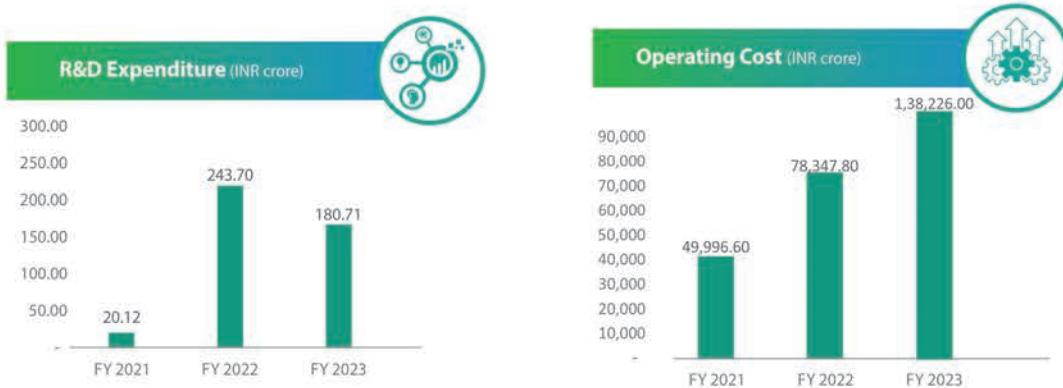
Capital Employed (INR crore)



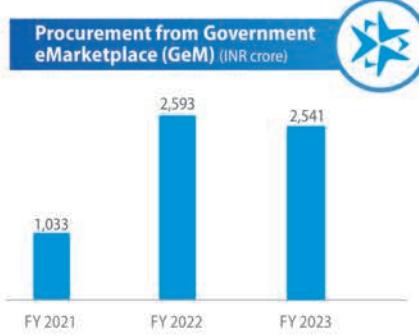
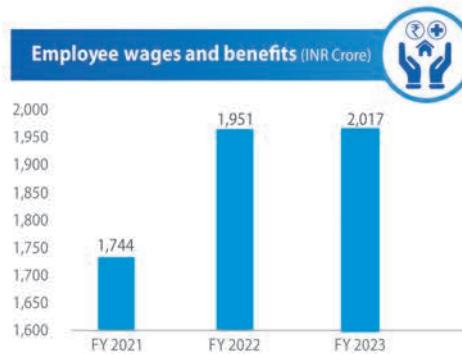
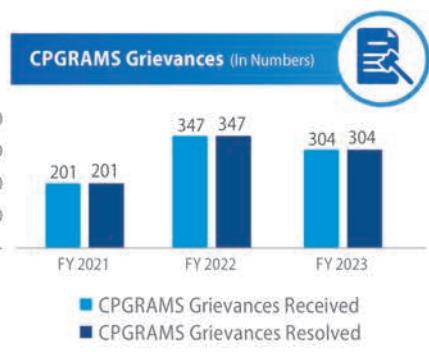
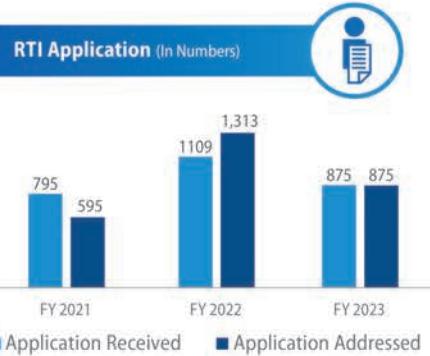
Net Worth (INR crore)



Economics, Social & Environmental Performance



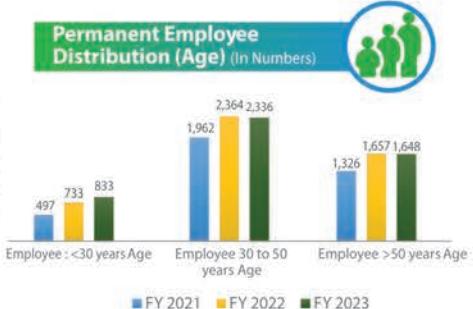
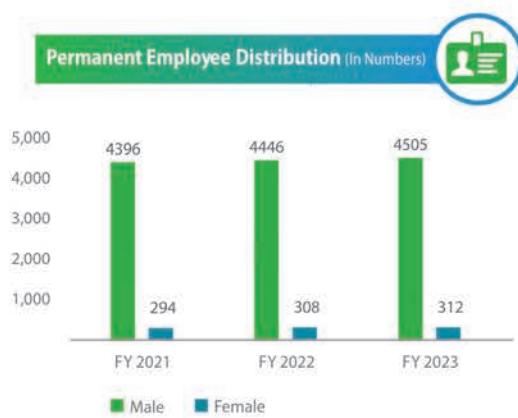
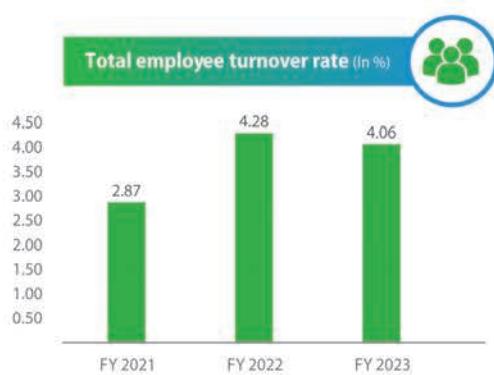
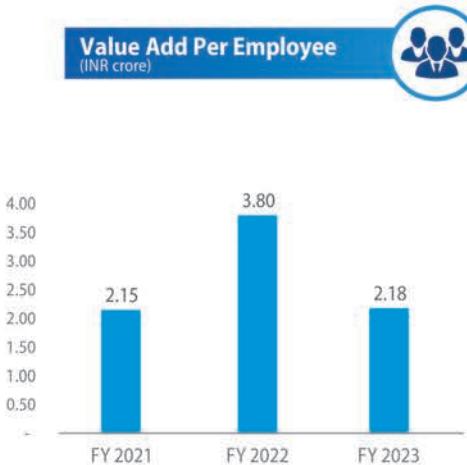
Economics, Social & Environmental Performance



*Excluding lease liability



Economics, Social & Environmental Performance



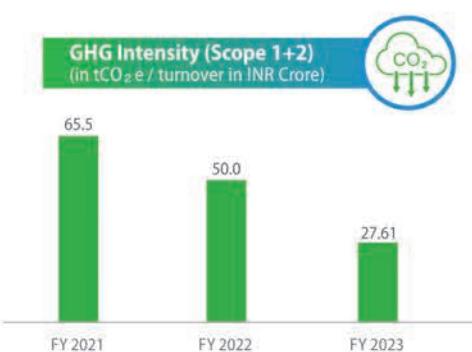
Economics, Social & Environmental Performance



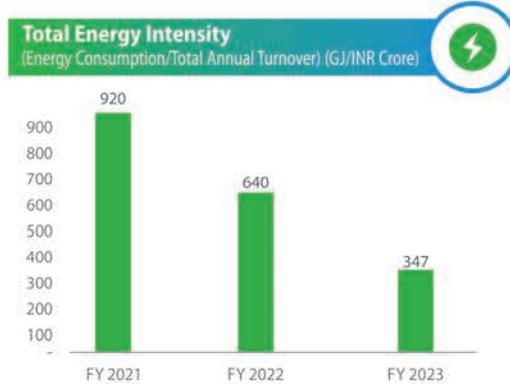
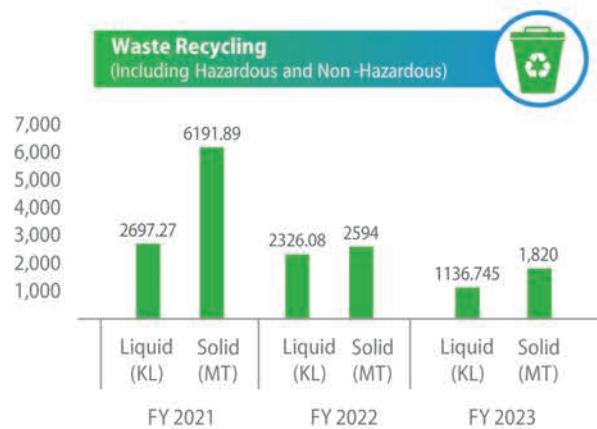
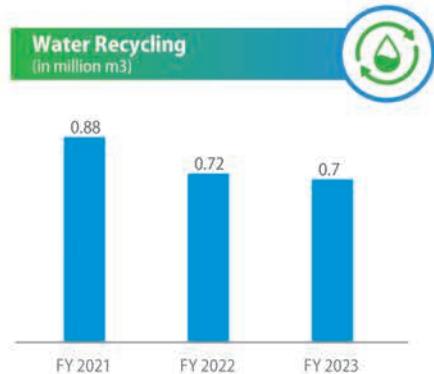
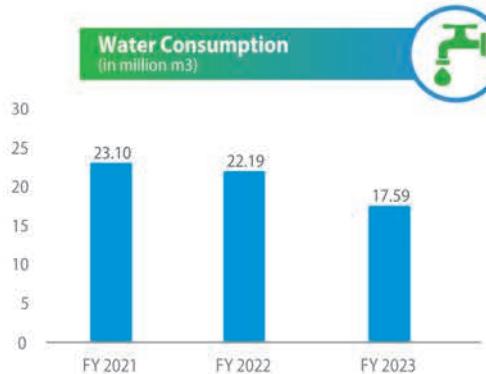
Savings are reported based on energy saving initiatives implemented as sites/offices.



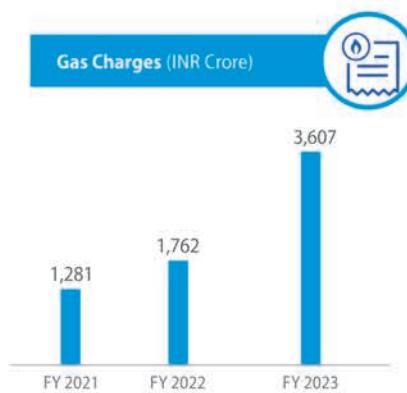
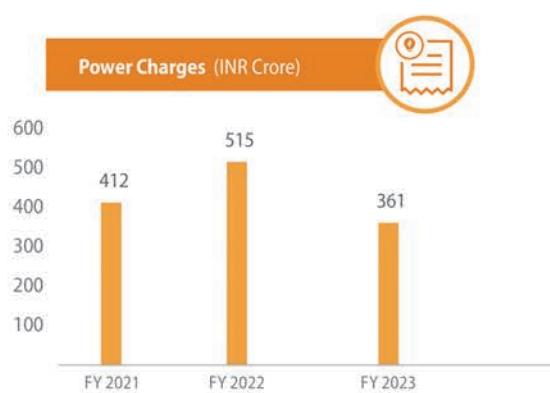
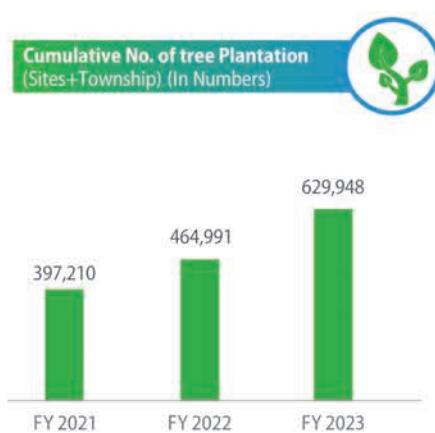
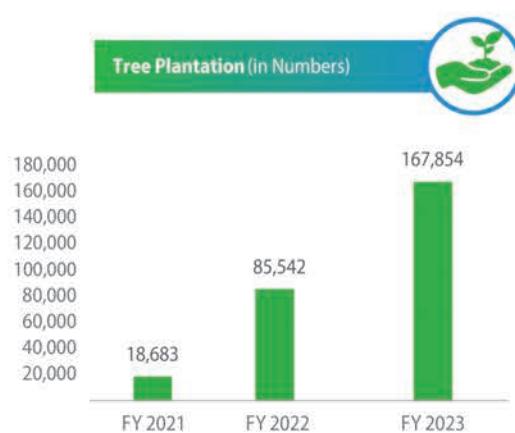
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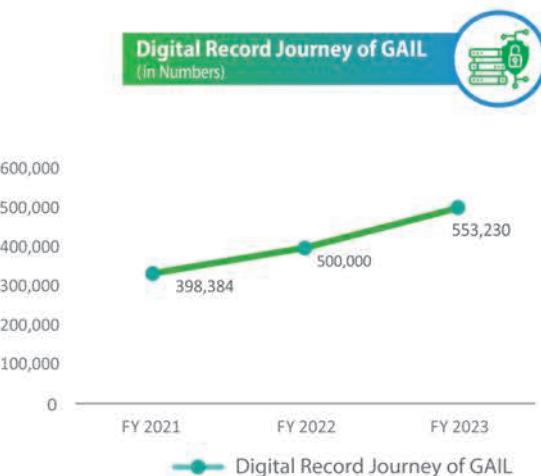
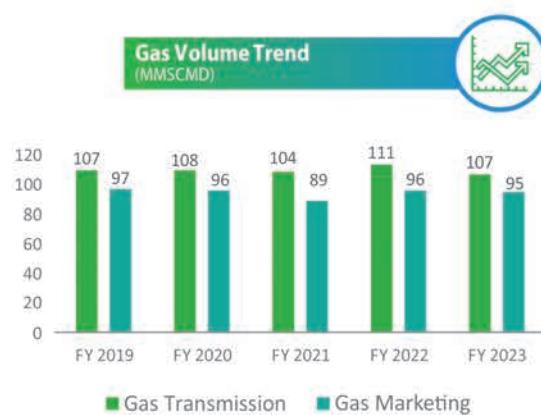
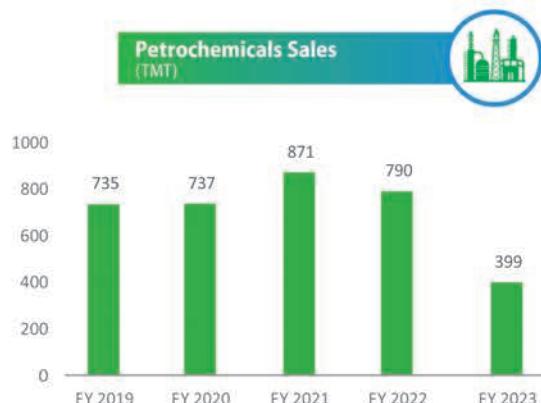
Economics, Social & Environmental Performance



Economics, Social & Environmental Performance



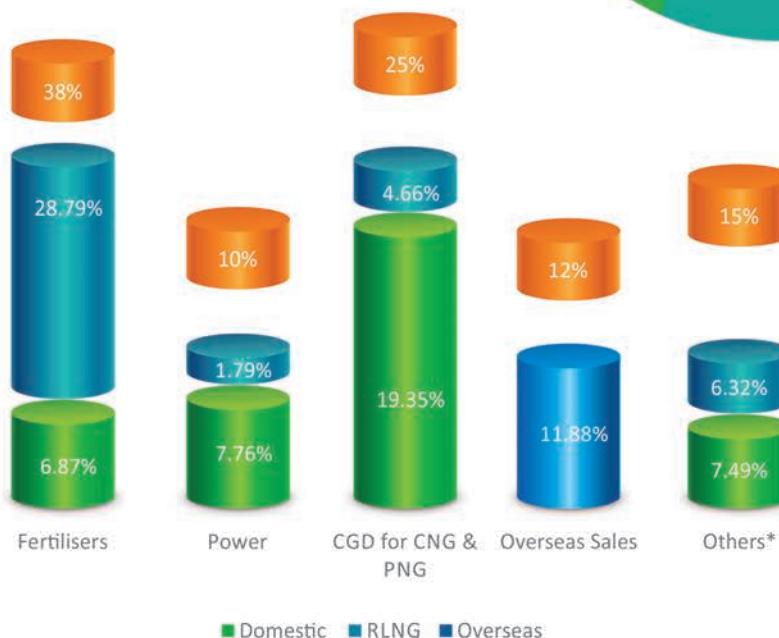
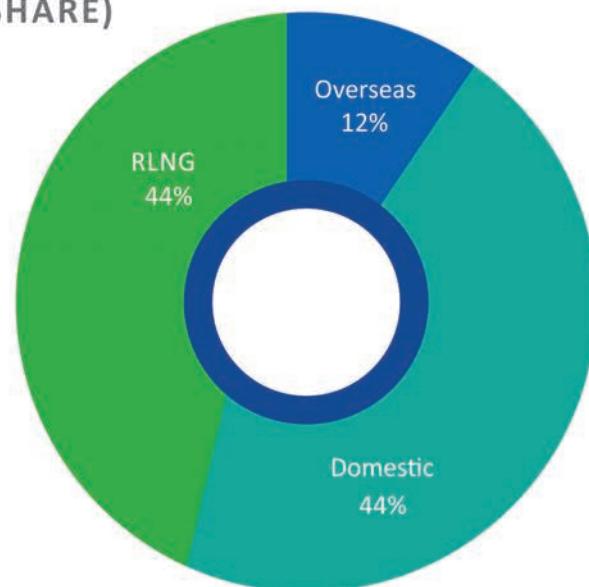
Operational Performance



Gas Sourcing & Sector Wise Supply (FY 2022-23)

(TOTAL 94.91 MMSCMD, % SHARE)

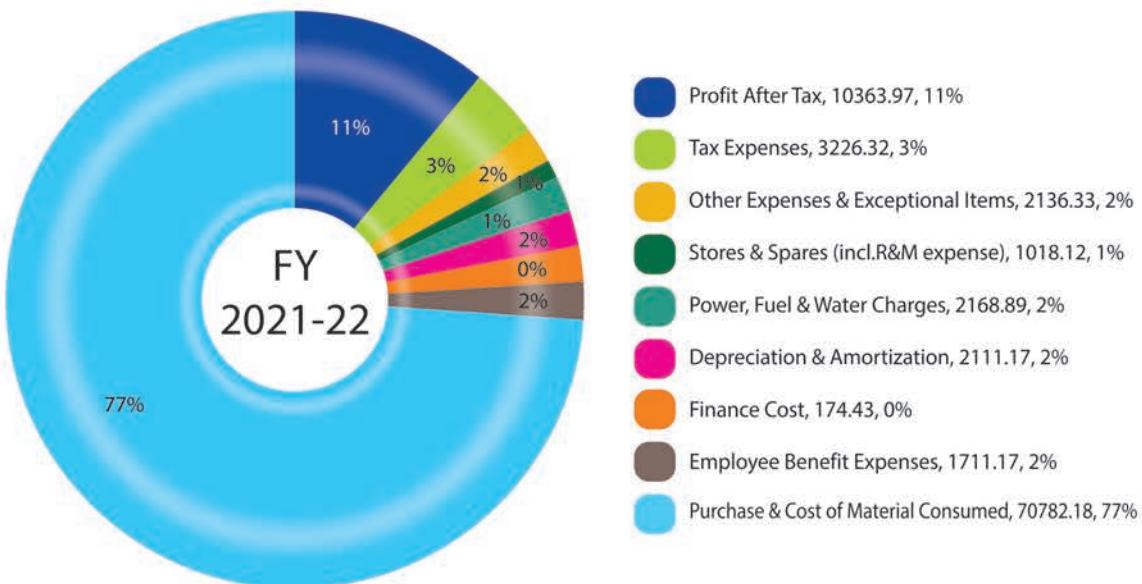
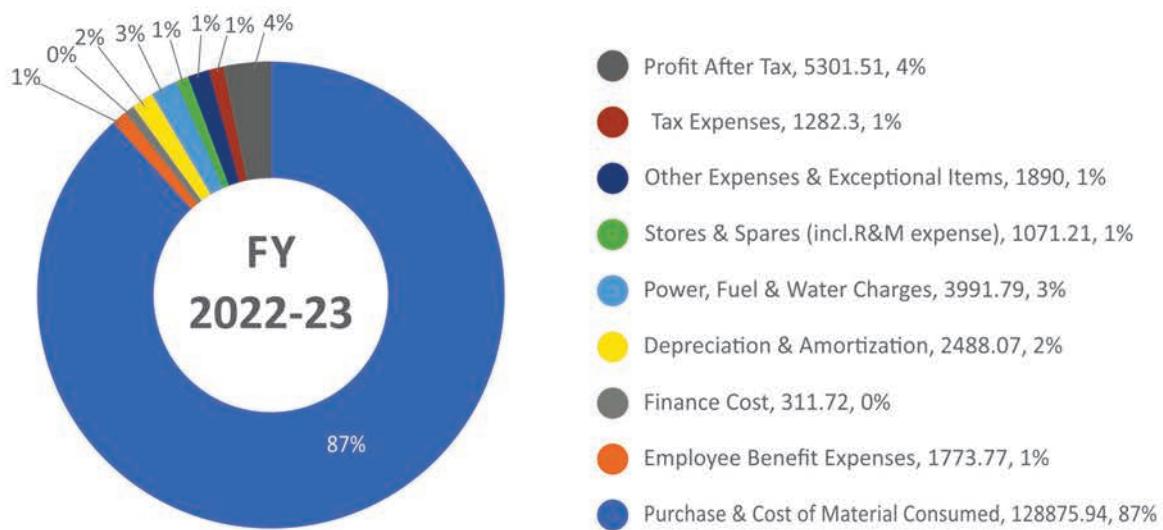
Overseas: 11.88 MMSCMD	Overseas
Domestic Gas: 41.47 MMSCMD	Domestic Gas
RLNG: 41.56 MMSCMD	RLNG



- Imported Gas primarily consists of Long Term RLNG and Spot
- Major sources for domestic gas are ONGC (APM & MDP), Ravva, Ravva satellite, CBM etc.
- Highest demand of Natural Gas from Fertilizer, Power & CGD companies

* Others include Steel, Refineries, Sponge Iron, Petrochemicals, GAIL Internal consumption etc.

Cost & Profit as a Percentage of Total Income (INR Crore, %)





GAIL operates a network of **15600 km** of natural gas pipelines and **2040 km** of LPG pipelines.



GAIL market share in
FY 2022-23- **65%** in gas transmission and
50% in gas trading



GAIL at a Glance

3.1 About GAIL

(GRI 2-1-a,b,c,d, GRI 2-6-a,b,c,d)

GAIL (India) Limited began its distinguished 39-year history in August 1984 and it now proudly serves as the nation's leading distributor of natural gas. The Government of India (GOI) honoured the central Public Sector Undertaking (PSU) under the Ministry of Petroleum and Natural Gas (MoPNG) in 2013 by granting it the prestigious Maharatna status. Our goal is to create value for our stakeholders while being conscious of environmental stewardship, with a mission to be a leader in the natural gas value chain. GAIL, being the leading gas company in the country with diversified operations across the natural gas value chain, including the exploration and production, processing, transportation, distribution and marketing of natural gas, has played a crucial role in the growth of the country's energy industry.

GAIL is an Indian public-sector company with its headquarters in New Delhi. As of March 31, 2023, the Government of India (GoI) held 51.52% of the company's paid-up equity capital, followed by FPIs (16.28%), Mutual Funds/UTI (8.38%), ONGC (4.97%), LIC (7.86%), Indian Oil Corporation Limited (IOCL) (2.48%), Financial Institutions/Banks (0.01%) and Others 8.50%. Both the Bombay Stock Exchange (BSE) and the National Stock Exchange (NSE) have the company listed and allow public trading.

GAIL operates a network of 15600 km of natural gas pipelines and 2040 km of LPG pipelines that span the country.

The Indian energy sector has witnessed several changes over the last few decades including increasing demand for energy, technological advancements, geopolitical developments and environmental conditions. As a business, it is critical that we adapt to this ever-changing scenario. We have created and initiated a long-term strategic action plan called "Strategy 2030" to help us navigate the difficulties and

explore chances for growth and development in a turbulent market. This plan focuses on lowering risks, seizing new opportunities in the energy sector, venturing into renewable energy, expansion of natural gas pipelines and supporting start-ups in the electric vehicles market. Innovation and digitization are central to our plan, increasing our agility as a company operating in a dynamic environment.

In India, GAIL controls a market share of 65% in gas transmission and 50% in gas trading. Additionally, GAIL and its affiliates/joint ventures hold a sizable market share in the City Gas Distribution. Considering the effects on the environment, we are extending our footprint in the renewable energy sector with an emphasis on solar, wind and biofuel. We have established a strategic action plan in accordance with regional, national and international obligations to reduce carbon emissions in order to reinforce our position as an environmentally conscious and responsible corporation. We have a substantial portfolio in the LNG market. By defining business models, leveraging market positions and strengthening areas for value creation, we seek to maximize the potential of each of these portfolio companies.

Through R&D, partnerships, acquisitions and expansion, we work to provide the country with energy in the most sustainable way. Our renewable energy portfolio, which now has 132.05 MW and is slated to reach 1 GW in the next two to three years, is integrated into all aspects of our operations. In addition, new commercial ventures are still being explored. Some of the projects are: construction of an ethanol plant for ethanol blending, the installation of mobile CNG stations and the construction of LNG stations along important routes including 6,000 km-long golden quadrilateral highways, a move that would encourage thousands of truckers to switch to the cleaner fuel from polluting diesel.



3.3 GAIL Network

Gas infrastructure in India - "One Nation-One Grid"



Natural gas, as an environment friendly clean fuel, has the potential to play a significant role in providing sustainable solutions to environmental challenges as well as meet ever-increasing energy needs. As a result, the Government of India has focused on promoting the application of natural gas as a fuel/feedstock across the country in order to increase the share of natural gas in the primary energy mix from 6.3% to 15%.

A gas-based economy is critical for India and efforts are being made to achieve the goal of "One Nation, One Gas Grid." The term "One Nation, One Gas Grid" refers to the integration of several regional networks that have resulted in the creation of a National Grid for supplying natural gas-generated energy to various stakeholders such as the central

government, state governments, the public and commercial sectors.

3.3.1 National Gas Grid:

In line with the objective of the Government of India, GAIL is attempting to establish a gas-based economy by expanding the natural gas infrastructure. By connecting gas supplies to important demand centres and addressing regional imbalances in natural gas availability, GAIL is enhancing our nation's gas infrastructure. GAIL along with its JVs is executing projects to lay ~ 7,880 km of Natural Gas pipelines across India and another 2,047 km of pipelines through its JVs/JVs of GAIL Gas (which includes 1,656 km by Indradhanush Gas Grid Ltd. and 391 km by Andhra Pradesh Gas Distribution Company Ltd.). The status of ongoing projects is as follows:

GAIL Major Gas Pipelines (Under Construction)

S.No.	Pipeline Project	Under execution	State through which it passes
1	Jagdishpur-Haldia & Bokaro-Dhamra Pipeline (JHBDPL) Phase 2 & 3	470 km	Odisha and West Bengal
2	Barauni-Guwahati Pipeline (BGPL)	447 km	West Bengal and Assam
3	Dhamra-Haldia Pipeline (DHPL)	253 km	Odisha and West Bengal
4	Coimbatore to Krishnagiri Pipeline(part of Kochi- Koottanad-Bangalore-Mangalore Pipeline (KKBMPPL) Phase II)	322 km	Tamil Nadu
5	Mumbai-Nagpur-Jharsuguda Pipeline (MNJPL)	1,755 km	Maharashtra, Madhya Pradesh, Chhattisgarh & Odisha
6	Srikakulam-Angul Pipeline	744 km	Andhra Pradesh & Odisha
7	Haridwar-Rishikesh-Dehradun Pipeline	50 km	Uttarakhand
8	Sultanpur-Jhajjar-Hissar Pipeline (SJHPL)	135 km	Haryana

GAIL is also extending Pradhan Mantri Urja Ganga Pipeline Project, also known as Jagdishpur Haldia and Bokaro Dhamra pipeline (JHBDPL) project to the North-eastern region of India up to Guwahati in Assam with construction of 729 km Barauni-Guwahati Pipeline. Bihar section of Barauni-Guwahati Pipeline have been commissioned on 31.03.2023.

Further, GAIL is committed to increase reach of Natural Gas in the country by way of providing Last Mile Connectivity to Industrial customers and to City Gas Distribution (CGD) entities for supply of natural gas as CNG and PNG to various cities. During the year, the Company has completed 30 nos. of hook-up connections to CGD Geographic Areas (GAs), 5 nos. Last Mile Connections to Industrial customers and 02 nos. of Tie-in connectivities from Natural Gas Sources during the year. Further, work is under progress to provide connectivity to another 6 Industrial customers & 40 CGD Geographic Areas (GAs)

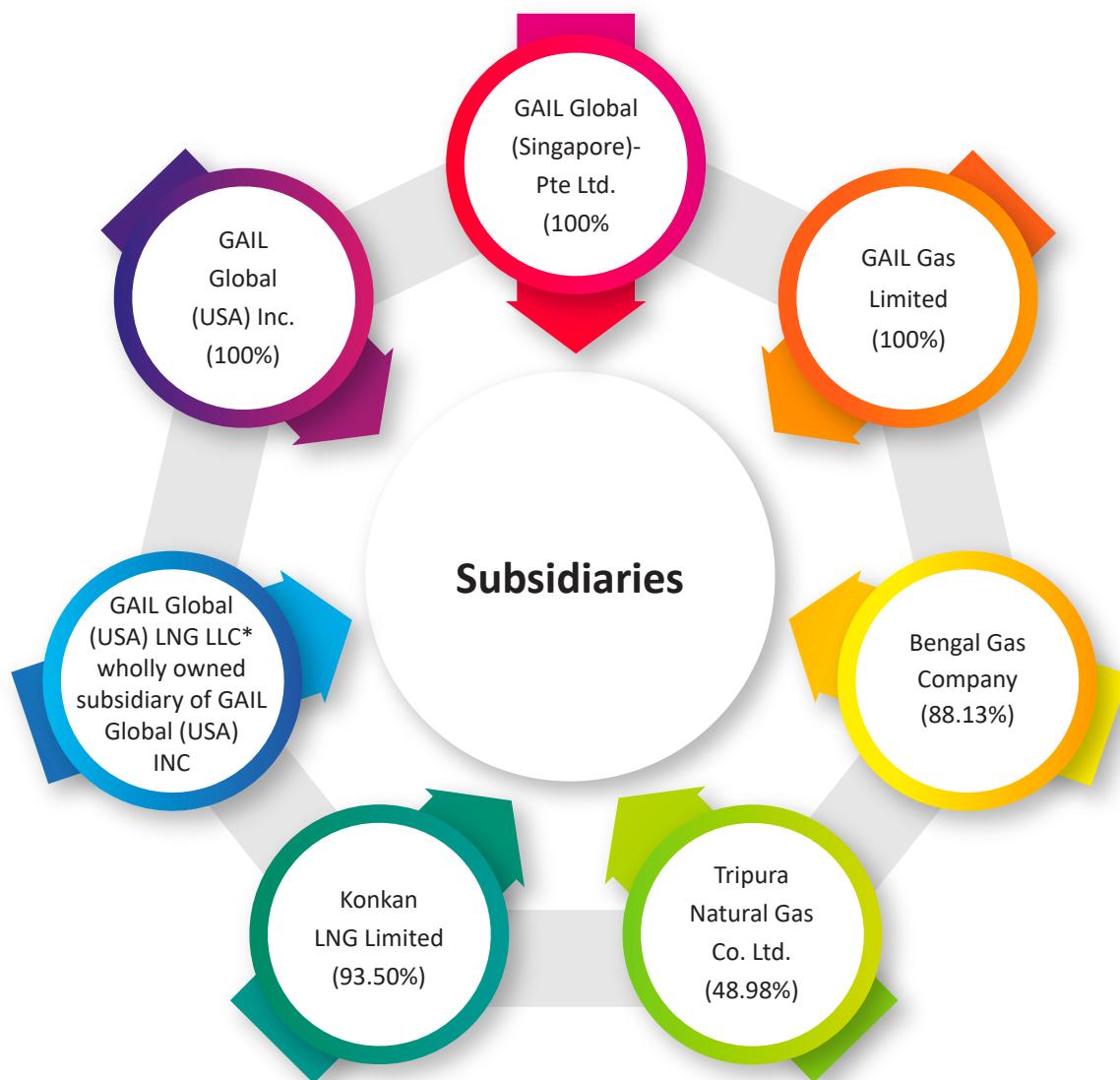


The Hon'ble Minister of Energy, Tanzania, His Excellency Mr. January Makamba had a meeting with Sh. Sandeep Kumar Gupta, CMD, GAIL and Sh. M.V. Iyer, Director (BD). The Hon'ble Minister showed keen interest in the Natural Gas and LNG distribution network developed by GAIL to reach the last mile. The Hon'ble Minister along with the Tanzanian delegation also visited the GAIL pavilion at IEW, BIEC, Bengaluru.



GAIL Subsidiaries & JVs

GAIL has established Subsidiaries and Joint Ventures for City Gas Distribution and Petrochemicals. GAIL is one of the pioneers in introducing City Gas Projects in India for gas supplies to households, commercial users and the transportation sector through its Subsidiaries/ Joint Venture Companies.



S. No.	Name of the holding / subsidiary/ Associate companies/ joint ventures (A)	Indicate whether holding/ Subsidiary/ Associate/ Joint Venture	% Of shares held by listed entity
1	GAIL Gas Limited	Subsidiary	100.00
2	Tripura Natural Gas Company Limited	Subsidiary	48.98
3	Konkan LNG Limited	Subsidiary	93.50
4	GAIL Global (USA) Inc.	Subsidiary	100.00
5	GAIL Global (Singapore)- Pte Ltd.	Subsidiary	100.00
6	GAIL Global (USA) LNG LLC	Subsidiary	100.00
7	Bengal Gas Company	Subsidiary	88.13
8	Aavantika Gas Limited	Joint Venture	49.99
9	Bhagyanagar Gas Limited	Joint Venture	48.73
10	Central UP Gas Limited	Joint Venture	25.00

S. No.	Name of the holding / subsidiary/ Associate companies/ joint ventures (A)	Indicate whether holding/ Subsidiary/ Associate/ Joint Venture	% Of shares held by listed entity
11	Green Gas Limited	Joint Venture	49.98
12	Indraprastha Gas Limited	Associate	22.50
13	Indradhanush Gas Grid Limited	Joint Venture	20.00
14	LLC Bharat Energy Office	Associate	20.00
15	LNG Japonica Shipping Corporation Limited	Associate	26.00
16	Mahanagar Gas Limited	Associate	32.50
17	Maharashtra Natural Gas Limited	Joint Venture	22.50
18	ONGC Petro Additions Limited (OPaL)	Joint Venture	49.21
19	ONGC Tripura Power Company (OTPC)	Associate	26.00
20	Talcher Fertilizers Limited	Joint Venture	33.33
21	Vadodara Gas Limited (VGL)	Joint Venture	50.00
22	Petronet LNG Limited	Associate	12.50
23	Fayum Gas Company	Associate	19.00
24	China Gas Holding Limited	Associate	2.76
25	TAPI Pipeline Company	Joint Venture	5.00
26	Ramagundam Fertilizers and Chemicals Limited	Associate	14.72
27	Brahmaputra Cracker and Polymer Limited (BCPL)	Associate	70.00
28	GAIL Mangalore Petrochemicals Limited	Subsidiary	100.00

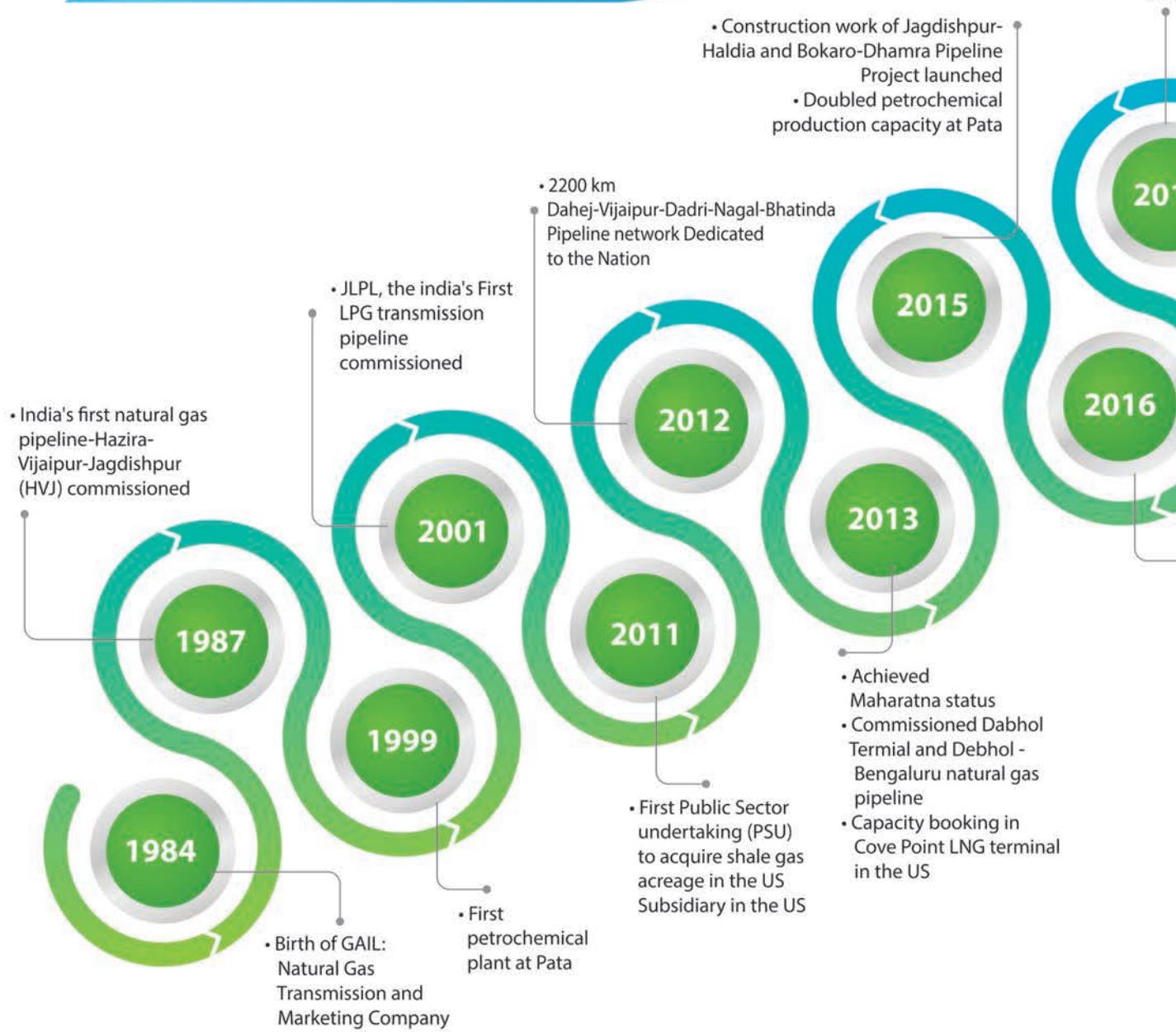
3.4 GAIL Social Outreach

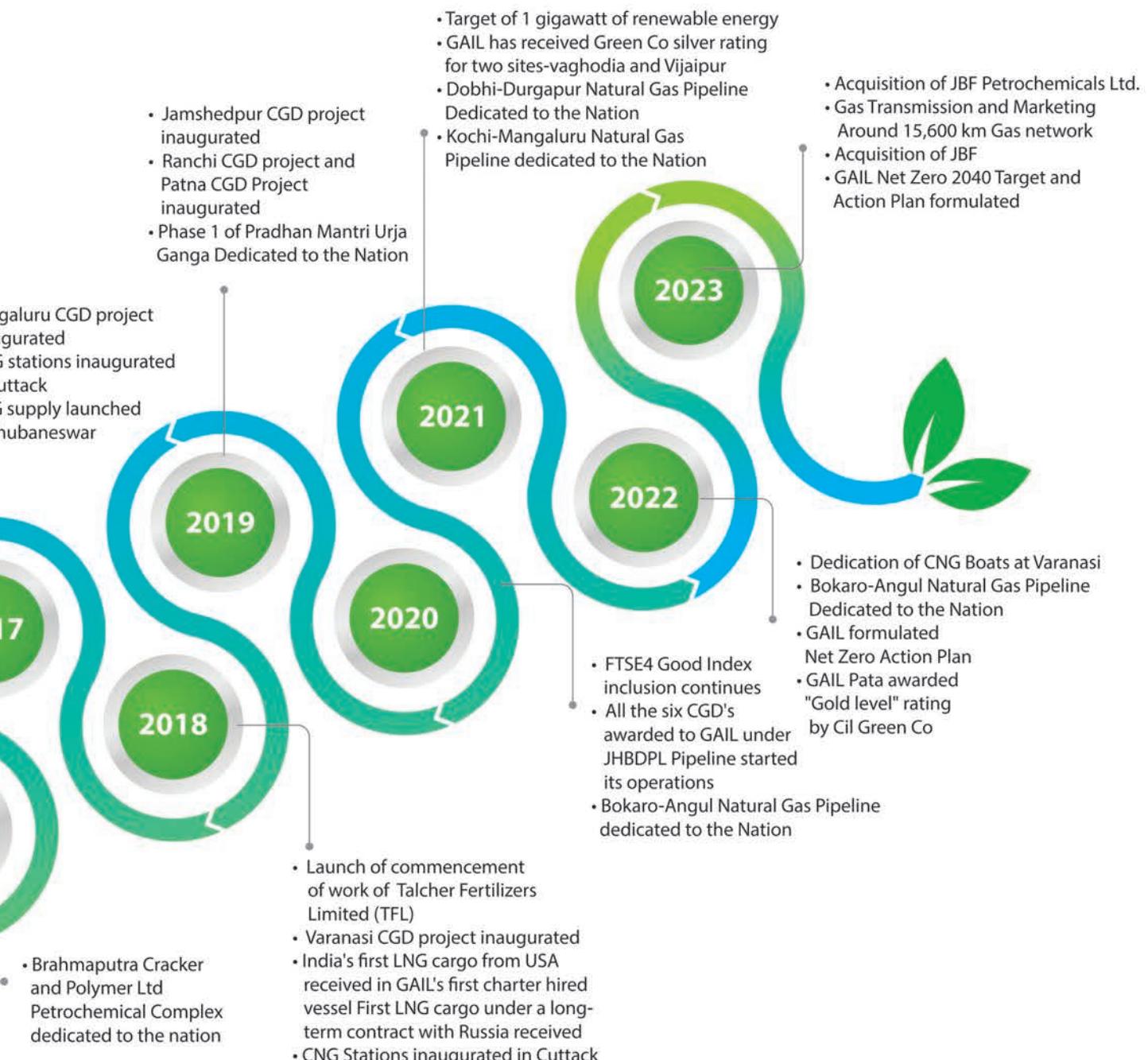
GAIL is committed to the development of society. In FY 2022-23, GAIL has spent INR 99.1 crore (Mandated Target- INR 165.05 Crores out of which INR 74.27 Crores was set off against the excess expenditure of previous years. Therefore, Net Target of INR 90.78 Crores) which is more than net target.

GAIL has taken up a number of projects during this financial year to fulfil its societal commitments and more than 15.4 lakh people benefitted through CSR projects in FY 2022-23, including GAIL AROGYA, GAIL KAUSHAL, GAIL UJJWAL, GAIL SAKSHAM, GAIL SASHAKT, GAIL HARIT, GAIL UNNATI and Others.



39 Years of Energizing Possibilities





Sustainability at GAIL

04



GAIL achieved FTSE ESG Rating as a part of the London Stock Exchange Group Sustainability Index for the year **2023**



GAIL targets to achieve a **100%** reduction in Scope **1** and Scope **2** emissions and a **35%** reduction in Scope **3** emissions by **2040**



In FY 2022-23, **6** GAIL sites have achieved GreenCo rating



Sustainability at GAIL

4.1 GAIL's Approach to Sustainability

GAIL is committed to leading the gas industry's sustainable growth in the country's energy sector by integrating sustainability into its operations and decision-making processes. GAIL has set an ambitious target to achieve Net Zero operational emissions by 2040. It is supporting the Prime Minister's concept of the mass movement for 'LIFE'— 'Lifestyle for Environment' as a key to combat climate change which is a step towards achieving India's long-term goal of reaching net zero by 2070.

The Organization's business plan is designed to accelerate its progress toward this goal by transforming into a holistic & integrated energy company. GAIL believes in creating long-term value for all its stakeholders and to ensure the long-term viability of its operations and maintain its leadership position, the Company has created a sustainability roadmap that aims to make a lasting positive impact on the environment and society. GAIL has adopted proactive and transparent sustainability strategies that align with the country's decarbonization goals.

GAIL regularly reviews its material sustainability topics to ensure that they remain relevant to the organization's business and stakeholders. Details of materiality assessment and a list of identified material topics are provided in this report. With many initiatives and programs in place (such as the GAIL ABHA employee initiative and SPARSH digital initiative), GAIL constantly strives to do its part by building a transparent, traceable, sustainable and responsible supply chain. As the Company expands its business, we will continue to engage with our suppliers to align with the Company's sustainability policy and help them along their sustainability journey. Hence, GAIL has developed a roadmap for achieving its Net-Zero goal by 2040. This roadmap will

accelerate our sustainability journey by driving transformative changes in the oil and gas sector. The Company has a strong governance body that is responsible for driving its sustainable growth. This body guides and implements GAIL's sustainability strategy by embedding the Company's core values into its operations, driving key transformative initiatives, making crucial investment and divestment decisions and managing business risks.

4.2 Sustainability Policy

(GRI 2-23a, b, c, d, e, f)

GAIL's Sustainability policy is an overarching policy that provides an approach toward sustainability, enabling it to uphold commitments for short and long-term goals and sustainable business. GAIL prioritizes environmental responsibility and advancing a comprehensive sustainability agenda in the operations and strives to promote sustainable practices throughout the value chain. The policy allows organizations to disclose targets taken to combat climate-related risks and advancements made in this regard. The policy empowers the company to establish and implement diverse schemes and undertakings pertaining to environmental, social and governance factors. The policy is available and can be accessed on the GAIL's website, [Link: Sustainability Policy GAIL](#)

GAIL's ESG policies guide its sustainability initiatives. The list of key ESG policies is as below:

1. Code of Conduct, Discipline and Appeal (CDA) - <https://www.gailonline.com/> (09.04.2019)
2. GAIL CSR Policy <https://gailonline.com/CSRFriday.html> (2010) Re-Constitution of internal complaints committee in terms of Sexual Harassment of Women at Workplace (25.04.2023)



- <https://gailonline.com/pdf/others/PolicyforPreventionProhibitionAndRedressalOFSexualHarassmentOfWomenAtWorkplace25042023PDF>
3. GAIL Policy for determination of Materiality and Disclosure -<https://gailonline.com/pdf/InvestorsZone/GAIL-Policy-for-Determination-of-Materiality-and-Disclosure-Amended.pdf> (06.10.2022)
 4. Whistle Blower Policy https://www.gailonline.com/pdf/others/Circular_Whistle%20 Blower%20Policy_12.02.2019-english.pdf (12.02.2019)

4.3 Sustainability Governance

(GRI 2-9a, b)

GAIL's commitment to sustainability governance is guided by its core values of integrity, ethics, respect, customer focus, safety, excellence, technology and innovation. To ensure accountability throughout the organization, GAIL has established a robust ESG governance structure and framework that includes a dedicated three-member Sustainable Development Committee (SDC) on its Board of Directors. The Board of Directors, which includes 6 independent directors, along with the GAIL's Chairman & Managing Director (CMD) and other members, is responsible for supervising SDC, which creates a shared-value strategy. The role and responsibilities of the Sustainable Development Committee (SDC) are:

- To discuss & review the Organization's sustainability agenda and performance
- To review the emergency response plan
- To assess health, safety and environmental performance
- To implement its sustainability strategy across the business

- To manage goal-setting and reporting processes
- To strengthen relations with external stakeholders
- To ensure overall accountability across the Organization

In FY 2022-23, the SDC held 03 meetings. The SDC is informed by the Sustainable Development Steering Committee (SDSC), which backs up the Sustainability Policy directives and is responsible for executing the company's sustainability goals as well as risk and performance management.

4.4 Sustainable Development Steering Committee

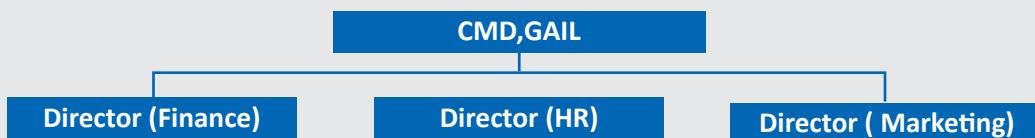
(GRI 2-12, 2-9 a, 2-13)

At GAIL, the Sustainable Development Steering Committee (SDSC) is a management-level committee that comprises departmental heads (HoDs) from various departments such as Marketing, Finance, C&P, SD, Risk, CC, CSR, HR, Projects, BD and Company Secretary. This multi-disciplinary committee aids the board-level committee in fulfilling its oversight responsibilities related to sustainability, which include forming the strategy, operational model and reporting frameworks concerning sustainability and climate change. The SDSC also supports the Sustainable Development Policy directives and is responsible for executing the Company's sustainability initiatives and management of relevant risks and performance.

GAIL's foremost priority is to manage and minimize the environmental impact of its operations. Therefore, it is deeply committed towards reducing and off-setting the impact of greenhouse gas emissions and achieving zero waste disposal. GAIL evaluates these risks thoroughly, using both qualitative and quantitative methods and has developed effective plans to mitigate its environmental impact.



Sustainable Development Committee (SDC)



Sustainable Development Steering Committee (SDSC)



- Mktg HODS** - Mktg-PC, Mktg-Gas, Mktg-IGS & RLNG, Mktg-RLNG Mktg Development;
- Finance HOD** - F&A, CO;
- Projects HODs** - O&M-CO, O&M-CR, O&M-SR, C&P, Projects
- BO HODs** - BO, Pata, RM, HSE, TQM, SD (Coordinator)
- HR HODs** - CC&CSR, HR, HR & HRD, Training;
- Company Secretary**

4.5 Sustainability Activities

(GRI 2-24)

GAIL firmly believes in integrating Environmental, Social and Governance (ESG) in its value chain and aims at contributing to creating a better world for the next generation. The company, being India's top gas distributor, is dedicated to advancing the country's energy sector in a sustainable way, by incorporating sustainability in its operations and decision-making. Sustainability is a method of creating long-term value by examining a company's operations in terms of the environment's ecological, economic and social elements. The Company's sustainability roadmap has been carefully crafted based on stakeholder requirements, the nation's strategy for clean and accessible energy and the rising demand for natural gas in the country.

It is an achievement for GAIL to be included in the FTSE4 Good Index Series (FTSE ESG Rating) as a part of the London Stock Exchange Group Sustainability Index for the year 2022 affirming the strength in demonstrating environmental, social and governance practices of international standards. The Company has been awarded by PCRA for 'Significant contribution towards

energy conservation & fuel efficiency' during Sakasham-2023 and a Green Ribbon award for its Sustainability and Decarbonization initiatives by CNBC Network 18. These awards are a recognition of the Company's continued sustainability efforts.

During FY 2022-23, GAIL has implemented multiple initiatives, as a part of its Annual Sustainability Workplan at various locations under the following sustainability goals/targets:

During FY 2022-23, GAIL has implemented multiple initiatives, as a part of its Annual Sustainability Workplan at various locations under the following sustainability goals/targets:

- GAIL has developed a Net-Zero strategy and clear organization-vide carbon roadmap to achieve a 100% reduction in Scope 1 and Scope 2 emissions and a 35% reduction in Scope 3 emissions by 2040. The action plan has been developed after conducting a detailed study on science-based Net-Zero ambition and action plan for GAIL.
- The Company has entered into MoU with the Centre of Excellence in Oil, Gas and Energy (CoEOGE) under the aegis of IIT Bombay for





Shri Sandeep Kumar Gupta, Chairman and Managing Director, GAIL (India) Limited and Dr. Jennifer Holmgren, LanzaTech's CEO and Board Member of the US-India Strategic Partnership signed MoU of Strategic Partnership to Explore Biorecycling Carbon Waste into Fuels and Chemicals

conducting a study titled 'Decarbonization of Petrochemical, Gas Processing and Petroleum Refineries: Technology Evaluation and Life Cycle Assessment' in line with its Net Zero 2040 Vision. It has undertaken a Techno Commercial Study on Carbon Capture Utilisation and Sequestration (CCUS) with a leading technology provider for reducing the carbon footprint at its installations.

- To assess the Carbon Credit potential of CBG plants being set up at India under LOI issued by GAIL and its CGD JVs, the Company has undertaken a model study in 03 CBG plants across India.
- As per the directives of NITI Aayog, GAIL is committed to raising the social and economic conditions of designated Aspirational districts. GAIL has gone over and beyond by implementing strategic CSR projects in 20 aspirational districts with an amount spent of INR 12.54 crores.

4.6 Monitoring of Sustainability Projects

1. Dashboards

To gain a real-time view of GAIL's diversified operation units across its sites and the efficiency of each production line, the organization has used various internal resources to create a variety of dashboards. These dashboards provide real-time monitoring of a variety of significant energy users (SEUs), including extruder units, heavy-duty

steam turbines, centrifugal compressors, gas-cracking furnaces, boilers and heat recovery steam generators (HRSGs). Being able to monitor energy data in real time provides an understanding of energy consumption and performance across separate operations units. GAIL monitors shared value created and sustainability performance against key performance indicators using an internal dashboard.

2. 1. GreenCo Assessment of the Sites

The Green Company Rating System endorses an approach that is based on performance. The rating system evaluates the ecological aspects of companies based on criteria such as energy efficiency, renewable energy, GHG mitigation, materiality conservation, etc.

GAIL has implemented a GreenCo rating across its operational sites which provides leadership and guidance on how to make products, services and operations more sustainable. The Company's internal and external stakeholders are trained on the latest Green concepts so that they can implement better systems and global best practices in their operations.

In FY 2022-23, six (06) GAIL sites i.e. Jhabua, Vaghodia, Vijaipur, Gandhar, Pata and VSPL Pipeline have attained the GreenCo rating which indicates that sustainability is deeply ingrained in our operations.





GAIL Jhabua has been certified CII-GreenCo SILVER rating at "GreenCo Summit -2023" organised by CII at Westin, Pune b/w 12 to 13th July 2023 for the financial year 2022-23.

The GreenCo Silver Rating is valid Upto 24.04.2026.

This is the first standalone compressor station to achieve "Silver" rating in its first attempt and a significant step towards net zero achievement of GAIL on its way to Net Zero-2040.



Our Stakeholder Inclusion and Materiality

05



Internal & External
Stakeholder identification



Robust five step materiality assessment process to identify key material issues



In FY 2022-23, we have analysed the identified material issues using a double materiality concept



Our Stakeholder Inclusion and Materiality

GRI (3-3)

As a responsible entity, we believe that meeting the expectations of stakeholders can promote holistic and long-term growth. To accomplish this, we advocated for a comprehensive evaluation to identify the critical issues that may affect both stakeholders and the company. As a result, we conducted a materiality assessment using a structured method during the reporting year.

5.1 Our Approach to Stakeholder Engagement

GRI (2-29, 2-30)

Identifying stakeholders

Stakeholder engagement is central to our sustainability strategy. For us, stakeholder engagement is a multi-stage process of identifying stakeholder groups, prioritising the stakeholder groups based on their relative importance to our business and their impact on our business. Once the stakeholder groups are prioritised, we devise engagement mechanisms to connect with the individual group regularly and take their valuable inputs. The inputs received from such stakeholder interactions are used in defining sustainability priority for the organisation and planning ESG programs. Based on the importance of our stakeholders to our business and their level of influence, as well as the impact that our business has on them, we classified stakeholder groups into internal and external stakeholders which are listed below.

Stakeholders	
Internal Stakeholders	1. Employees
External Stakeholders	1. Government & Other Regulators 2. Investors 3. Suppliers 4. Customers 5. Joint Ventures and Subsidiaries 6. Industry Associations 7. Community 8. Contractors/Implementing Agencies 9. Academic and research institutions 10. NGOs/Civil Society Organisations 11. Media 12. Public at large

5.1.1 Stakeholder Engagement Framework

Our company is committed to engaging with stakeholders throughout the entire value chain and resolving any issues they may have. We aim to strengthen our engagement with our stakeholders and thus, we constantly strive to accomplish this by establishing structured communication channels that are embedded in our business processes, including individual meetings, annual general meetings, training sessions, group discussions, surveys and methods for addressing grievances. Meeting our stakeholder expectation is extremely important to us and following stakeholder engagement framework explains how we connect with our stakeholders and meet their expectations.



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Stakeholder Group	Objective of Engagement	Frequency of engagement	Mode of Communication
Government and other regulators - External stakeholder	<p>Support government missions to promote sustainable development goals</p> <ul style="list-style-type: none"> • 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
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
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

Stakeholder Group	Objective of Engagement	Frequency of engagement	Mode of Communication
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
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
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
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
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

Stakeholder Group	Objective of Engagement	Frequency of engagement	Mode of Communication
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
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
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
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

5.2 Our Approach to materiality

(GRI 3-1a, b)

We believe that it is important to identify how our operations impact environment, society, people including human rights and the expectations of our stakeholder groups. Creating long-term value for our stakeholders has been our prime focus. Towards this end, identifying material topics is an important step. This enables us to prioritise ESG issues and align our sustainability and business objective with societal needs and expectations.

We carried out materiality exercise following GRI 2021 standard. We also referred standards specific to the Oil & Gas sector such as International Petroleum Industry Environmental Conservation Association (IPIECA) and International Finance Corporation (IFC) standards for offshore exploration and SASB industry-specific standards for materiality assessment. This ensures that our materiality assessment process aligns to globally recognised standards. The materiality assessment consisted of five phases which are explained in detail.



5.2.1 Understanding the context

As a first step, we conducted a high-level overview of our operations, business relationships, stakeholders and all entities controlled by GAIL such as subsidiaries, joint ventures and affiliates. Furthermore, we thoroughly examined sector-specific ESG frameworks such as GRI 11, sectoral regulations and industry trends to better understand the impact of our operations on various stakeholders involved in the entire value chain. Subsequently, we identified the topics that may be relevant to our entity and pinpointed the stakeholders that could be considerably impacted by our actions.

5.2.2 Understanding Our Impact

During this process, our objective was to comprehend the actual and potential impacts of the identified topics on the environment, society and economy. Actual impacts denote those effects that have already taken place, while potential impacts signify those that may happen in the future. To identify these impacts, we referred various sources such as sector-specific standards, financial and non-financial audits, industry forums, legal reviews and research papers.

5.2.3 Understanding the Significance of Our Impact

Based on our research and to gather further inputs, we consulted with our stakeholders on the identified topics through a survey which allowed them to rate the importance of the topics on a level of high, medium and low priority. The responses of the stakeholders were analysed to determine the significance of the impact of the identified material issues. The intensity of the impact was categorised into positive and negative impacts. In addition, we also considered the severity and likelihood of these impacts on the organisation. The scale, coverage and character were used to evaluate the intensity of the actual and potential negative impacts.

5.2.4 Prioritising Key Material Issues

The outcome of the feedback of stakeholders was incorporated to develop key material topics for the Company. This involved arranging the material issues from most to least significant and defining the threshold to understand which impacts of the material issues will be focussed in the reporting process.

5.3 Review of Material Issues

(GRI 3-2a, b)

After the material topics were decided, the senior leadership team examined the procedure and findings of the materiality assessment and contributed their feedback. The input given by the senior leadership was considered and the material issues were categorised into three groups: High, Medium and Low based on their importance.

Sr. No	Material Topic	Rationale for Importance	Subject (Environment/Social/Governance)	Level of Importance
1	Health and Safety (customers, employees and suppliers)	Being a company involved in supply of natural gas which includes laying pipelines, ensuring health and safety is of extreme importance	Social	High
2	Towards Decarbonization & Net-zero (GHG Emissions)	In view of the heightened focus on combating the effects of climate change, GAIL considers reducing its environmental footprint as a matter of high importance	Environment	High

Sr. No	Material Topic	Rationale for Importance	Subject (Environment/Social/Governance)	Level of Importance
3	Economic Performance	For any company to sustain, maintaining a positive economic performance is important	Governance	High
4	Access and Affordable Clean energy for all	As a company supplying natural gas, it endeavours to reach every household and supply clean fuel for all	Environment	High
5	Customer Relationship, Experience and Satisfaction	Ensuring long-term and sustainable growth, maintaining a strong customer relationship is of extreme importance for GAIL	Governance	High
6	Human Capital Management (employee wellbeing, employee engagement, diversity, non- discrimination and equal opportunity)	The success of GAIL is the result of the hard work of its talented workforce. Hence, their development and wellbeing is of high importance	Social	High
7	ESG in governance and transparency in reporting (Board oversight, management role, leadership & policy advocacy, payments to government	A robust governance is the key for a company to achieve its goals towards environment and sustainability	Governance	High
8	Protection of Human Rights	Respecting human rights and compliance with the human rights laws is a matter of extreme importance to GAIL	Social	High
9	Community Development (rights of Indigenous people, land and resource rights)	As part of the Oil & Gas sector and having plants located in various parts of the country, continuous community engagement and development is of high importance for GAIL to ensure its license to operate	Social	High
10	Business Ethics, Integrity and Compliance (Including anti- corruption, anti-competitive behaviour, tax transparency and strategy)	Ethical business conduct is a paramount for GAIL to achieve long term growth	Governance	High
11	Digital Transformation	In the world of growing digitalisation, GAIL places digital transformation a significant material issue	Governance	High
12	Resource Optimization (Management of energy, water, waste and materials)	As GAIL endeavours to become net-zero, resource optimisation is important to GAIL	Environment	Medium

Sr. No	Material Topic	Rationale for Importance	Subject (Environment/Social/Governance)	Level of Importance
13	Data Privacy (employee, supplier, customer and sensitive data) and Cyber Security	Protecting the privacy and implementing robust measures is important to GAIL	Governance	Medium
14	Risk and Crisis Management (Closure and Rehabilitation, Asset integrity and critical incident management)	Constant changes in market can affect the supply and demand of the products and services. Hence, an effective risk management is of prime importance to GAIL	Governance	Medium
15	Sustainable Sourcing (consideration of human rights, wages, work conditions, procurement practices, no child/ forced labour in supply chain)	Responsible sourcing that prevents negative impact on the environment and the society is important to GAIL	Social	Medium
16	Product Service and Quality	Ensuring long-term growth and a strong customer base, the quality of the services of GAIL is very important	Governance	Medium
17	Protection of Biodiversity and ecology	GAIL endeavours to operate in a responsible way that ensures no harm to the biodiversity, flora and fauna	Environment	Medium
18	Business Growth and Profitability (energy security, business model resilience, market presence)	To ensure a sustainable growth, a business model that focusses on resilience and continuity is important to GAIL	Governance	Medium
19	Supply Chain Management (supplier social assessment and capacity building)	To ensure sustainability is integrated across the value chain, it is very important for GAIL to boost the capacity of its supplier network	Governance	Medium
20	Air Emissions	With the aim to combat climate change and become net zero, monitoring and reducing air emissions is important to GAIL	Environment	Medium
21	Climate Change adaptation and mitigation	GAIL aims to become net-zero hence taking initiatives to mitigate the effects of climate change is important to GAIL	Environment	Medium
22	Product design and Life Cycle management	Assessing the impact of the product's life cycle is a matter of significance to GAIL	Environment	Low
23	Innovation, Patents and Technology Transfer	Enhancing research capabilities that ensures support to the business growth is a priority	Governance	Low



Sr. No	Material Topic	Rationale for Importance	Subject (Environment/Social/Governance)	Level of Importance
24	Marketing and Labelling Practices	In view of the nature of business GAIL is into, marketing and labelling for safe handling of products is of prime importance to GAIL	Governance	Low

5.4 Boundary and KPI's with Respect to Material Topic

(GRI 3-3a, b,c,d,e,f)

Material Topic	GRI Topic	Boundary	KPI
Health and Safety (customers, employees and suppliers)	403-Occupational health and safety, 416- Customer health and safety, Topic 13.9, 13.10	Within & Beyond GAIL	HSE score, Number of minor incidents, Number of safety observations reported Near miss, LTIFR,
Towards Decarbonization & Net-zero (GHG Emissions)	302 Energy, 305- Emissions, Topic 12.1	Within & Beyond GAIL	Operational decarbonization, Energy transition, Carbon Capture Utilization & Storage, Offsetting
Economic Performance	201-Economic performance, Topic 11.21	Within GAIL	Total revenue from Operations, Economic Value Generated and Distributed, Economic Value Distributed, Gas transmission in MMSCMD
Access and Affordable Clean energy for all	302 Energy, 305- Emissions	Within & Beyond GAIL	Kilometers of gas pipeline networks, percentage of CNG operated by GAIL, Percentage supply of natural gas to different sectors
Customer Relationship, Experience and Satisfaction	418 – Customer Privacy,	Within & Beyond GAIL	Customer Satisfaction Index
Human Capital Management (employee wellbeing, employee engagement, diversity, non- discrimination and equal opportunity)	401- Employment, 402-Labour Management, 404- Training and education, 405- Diversity and Equal Opportunity, 406- Non-discrimination 407- Freedom of Collective Bargaining, 408-Child Labour, 409- Forced Labour, 410-Security Practices, 412-Human Rights Assessment, Topic 11.10, 11.11, 11.12, 11.13	Within GAIL	Average Training hours, Attrition rate, Number of employees, Training on Human Rights, training efficacy score, Training expenditure

Material Topic	GRI Topic	Boundary	KPI
ESG in governance and transparency in reporting (Board oversight, management role, leadership & policy advocacy, payments to government)	201-Economic performance, 202- Market presence, Topic 11.21	Within & Beyond GAIL	Board structure (number of committees, number of members), ESG specific trainings hours of directors
Protection of Human Rights	411- Rights of Indigenous People, Topic 11.17	Within & Beyond GAIL	Total number of operations with significant actual and potential negative impacts on local communities, Number of complaints through grievances and redressal mechanism,
Community Development (rights of Indigenous people, land and resource rights)	413- Local Communities, Topic 12.9	Within & Beyond GAIL	Total number of operations with local community engagement, Total CSR expenditure in aspirational districts,
Business Ethics, Integrity and Compliance (Including anti- corruption, anti-competitive behaviour, tax transparency and strategy)	205 Anti-Corruption, 206 Anti-competitive Behaviour 207- Tax Topic 12.20, 13.25	Within & Beyond GAIL	Percentage of employees receiving training on anti corruption policies and other organizational procedures, Number of bribery and corruption cases
Digital Transformation	201-Economic performance Topic 11.21	Within & Beyond GAIL	Percentage of procurement through GeM portal
Resource Optimization (Management of energy, water, waste and materials)	301-Materials, 302- Energy, 303- Water and Effluents, Topic 11.6 306- Waste Topic 11.6	Within & Beyond GAIL	Energy consumption, Energy savings, Energy sold, Renewable energy generated, water recycling, Implementation of GreenCo rating for resource optimization at major factories, Capacity utilization percentage, financial saving through QC projects, Environmental Expenditure
Data Privacy (employee, supplier, customer and sensitive data) and Cyber Security	201-Economic performance Topic 11.21	Within & Beyond GAIL	Number of data breaches incidents
Risk and Crisis Management (Closure and Rehabilitation, Asset integrity and critical incident management)	413- Local communities 403- Occupational Health and Safety Topic 11.15, 12.14	Within & Beyond GAIL	Key Risks and Mitigation measures

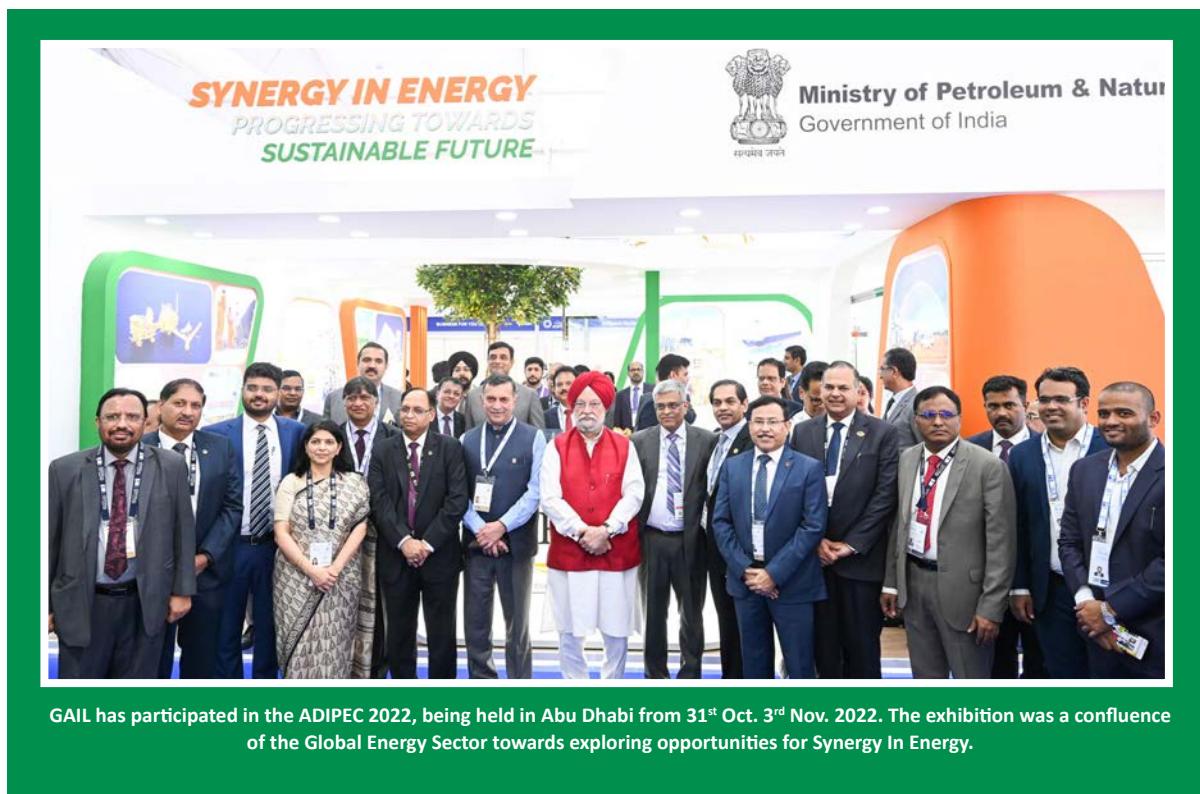
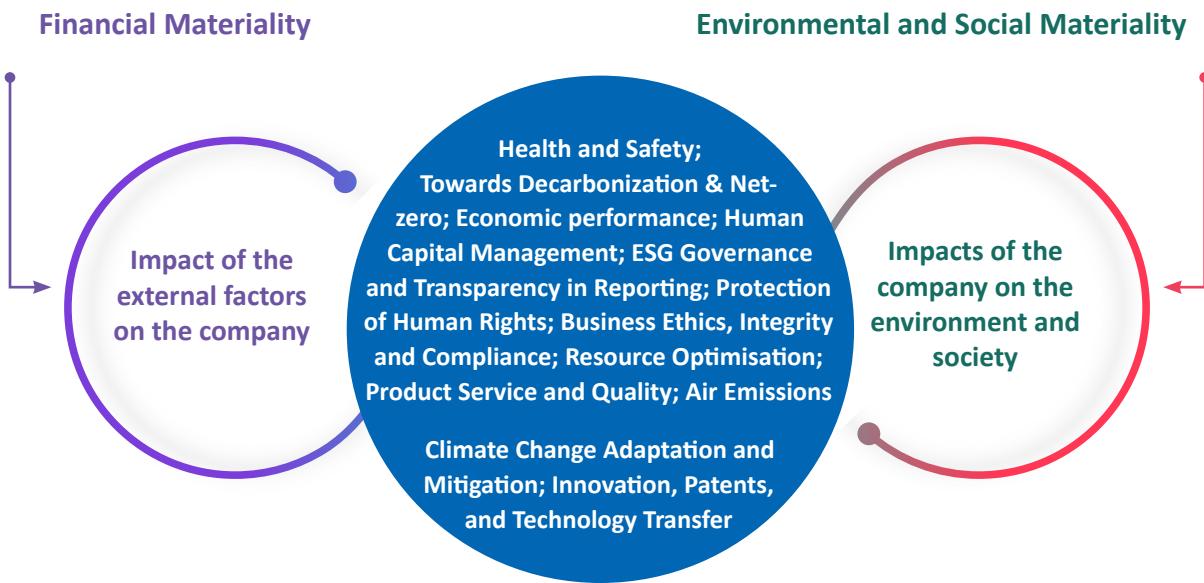


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Material Topic	GRI Topic	Boundary	KPI
Sustainable Sourcing (consideration of human rights, wages, work conditions, procurement practices, no child/ forced labour in supply chain)	204 Procurement Practices, 308 Supplier Environment Assessment, 414- Supplier Social Assessment Topic 13.23, 11.14, 12.15	Within & Beyond GAIL	Percentage procurement from MSEs, Percentage of suppliers belonging from vulnerable and marginalized communities
Product Service and Quality	301-Materials	Within & Beyond GAIL	Customer Satisfaction Index
Protection of Biodiversity and ecology	304- Biodiversity Topic 13.3	Within & Beyond GAIL	Biodiversity Initiative at various sites, Green Belt area, Number of Trees planted
Business Growth and Profitability (energy security, business model resilience, market presence)	201-Economic performance, 202- Market presence 203- Indirect Economic Impacts Topic 11.21, 13.22	Within & Beyond GAIL	Total revenue from Operations, Economic Value Generated and Distributed, Economic Value Distributed, Gas transmission in MMSCMD
Supply Chain Management (supplier social assessment and capacity building)	204-Procurement Practices, 308-Supplier Environment Assessment, 414- Supplier Social Assessment Topic 13.23, 11.14, 12.15	Within & Beyond GAIL	Order value through GeM portal, Number of new suppliers assessed
Air Emissions	305-7 Nitrogen oxides (NOX), sulphur oxides (SOX) and other significant air emissions Topic 11.3	Within GAIL	Monitoring and reducing air emissions
Climate Change adaptation and mitigation	302 Energy, 305- Emission	Within & Beyond GAIL	Operational decarbonization, Energy transition, Carbon Capture Utilization & Storage, Offsetting
Product design and Life Cycle management	301-Materials,	Within & Beyond GAIL	Conducting Life Cycle Assessment
Innovation, Patents and Technology Transfer	201-Economic performance Topic 11.21	Within GAIL	Expenditure for Research and Development
Marketing and Labelling Practices	202- Market presence	Within GAIL	Compliance with voluntary codes concerning the health and safety impacts of products and services

5.5 Double Materiality

We are committed to identify and disclose our impact on environment and society transparently. As an organisation that believes in integrating the key concerns of its stakeholders and business needs in its overall business strategy, we analysed the identified material issues using a double materiality lens. Following diagram lists down all the issues that are material from financial materiality and impact materiality.



Strong Governance and Business Resilience

06



GAIL has received NIL comments from Comptroller and Auditor General (CAG) in FY 2022-23



GAIL's Corporate RTI Cell has a **100%** disposal rate with respect to RTI Applications received in FY 2022-23



In FY 2022-23, GAIL was a member of **21** national and international institutions



Strong Governance and Business Resilience

6.1 Governance and Board Oversight at GAIL (GRI 3-3)

6.1.1 Governance and Risk Management

GAIL is a responsible Public Sector Undertaking and sets the bar high for ethical corporate behaviour by placing a high priority on the creation and execution of a strong corporate governance system. A solid corporate governance system is essential to foster and uphold a strong, ethical business culture. To integrate the Management's duties with the Board's oversight of the organization, GAIL has created a corporate governance framework to recognize assess and manage the Company's risks as well as provide constructive feedback. Company policies and procedures are continually reviewed and updated to control risk exposures, which are essential to the efficient operations of our business.

6.1.2 Governance Structure

(GRI 2-9, GRI 2-10, GRI 2-11, GRI 2-12, GRI 2-13, GRI 405-1 a, 2-17 a)

The apex of the governance structure is the Board of Directors and different Board committees. A formal Board Charter that describes the Board's makeup, duties and member selection process governs the unified Board structure of GAIL.

The Board has 12 members as of March 31, 2023, including the Chairman and Managing Director, as well as 04 functional directors and 07 non-executive directors, which include 01 government nominee director and 06 independent directors. One (01) woman director is also a member of our board. A board member typically serves for three to four years. The diversity policy for our board of directors' states that the board should have an ideal balance of executive and non-executive directors, with at least one-woman Independent Director. The directors are nominated and appointed by the Government of India.

Our Executives prioritize sustainability and ESG and have extensive experience in the fields of

marketing, project management, operations, finance and governance. The capacity-building sessions we regularly hold on the evolving ESG landscape, including climate change, are described in more depth in the next parts of this report.

Refer to the Performance and Standard Chapter tables to analyze the representation of individuals in the organization's governance bodies across different diversity categories, including gender and age groups categorized as under 30 years old, 30-50 years old and over 50 years old.

Details regarding the composition of the Board and member biographies are available on our website. <https://www.gailonline.com/ABLeadership.html>

The Board of Directors looks after organizational management and provides timely resolution of all stakeholder's needs. By appropriately addressing the concerns of stakeholders in our value chain, the Board of Directors and senior management team work closely to identify and understand the long-term interests of various stakeholders. The intentionally created orientation and induction courses aid newly appointed Directors in understanding the organizational structure and making contributions to the firm's overall expansion. They receive a welcome kit that outlines their duties and responsibilities, as well as any laws or regulations they must abide by, during the induction time. In accordance with our training philosophy, we offer the Board members the necessary training to update and improve their skills.

In accordance with this policy, the Board, including the Directors, nominates members of the Board on a regular basis to speak at industry conferences organized by groups like the Department of Public Enterprise (DPE), the



TOWARDS NET ZERO

Standing Conference of Public Enterprises (SCOPE) and other international organizations like the World Economic Forum (WEF), the International Energy Agency (IEA), the International Gas Union (IGU) and Bloomberg.

Training for Board of Directors in FY 2022-23

Sr. No.	Trainings	Number of Directors Attended
1	Orientation on the 1st Board Meeting	05
2	One-day orientation programme for capacity building of newly appointed Non-Official Directors of CPSE's	06
3	Nomination from GAIL for participation in - "Role of Chairman and Independent Directors of the Board"	06
4	Awareness Program Conducted on City Gas Distribution and Compressed Natural Gas	01

Familiarization Programmes imparted to Independent Directors

Sr. No.	Name of the Director	No. of programmes attended during the FY 2022-23	No. of hours spent in such programmes during the FY 2022-23	No. of programmes attended from appointment till date	No. of hours spent in such programmes till date
1	Shri Akhilesh Jain	1	6	4	22
2	Shri Sher Singh	1	6	5	27.5
3	Smt. Kangabam Inaocha Devi	1	6	3	13.5
4	Prof. Dr. Ravikant Kolhe	1	6	5	40.75
5	Dr. Nandhagopal Narayanasamy	1	6	5	27.5
6	Shri Sanjay Kashyap	1	6	6	35.5

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6.1.3 Committees of the Board

(GRI 2-18)

As of 31st March 2023, GAIL's governance structure comprises the Board of Directors including five statutory committees namely Audit Committee, Corporate Social Responsibility Committee, Nomination and Remuneration Committee, Stakeholders Relationship Committee and Risk

Management Committee. Since each committee performs specific tasks, the well-specified Terms-of-Reference help each committee work effectively, including the quick settlement of issues. The numerous Board-level committees are listed in the table below:

Sr. No.	Committees of the board	Number of meetings held in FY 2022-23
1	Audit Committee	10
2	Business Development and Marketing Committee	11
3	Corporate Social Responsibility Committee	3
4	Empowered Contracts & Procurement Committee – ECPC	29
5	Empowered Committee (Natural Gas, LNG & Polymer)	9
6	Finance Committee	4
7	HR Committee	3
8	Nomination and Remuneration Committee	1
9	Project Appraisal Committee	3



Sr. No.	Committees of the board	Number of meetings held in FY 2022-23
10	Stakeholders Relationship Committee	2
11	Sustainable Development Committee	3
12	Stakeholders Grievance Redressal Committee	1
13	Risk Management Committee	2

Each committee's composition includes both independent and non-independent directors in order for the Board to be diverse, fair and impartial. The Board is committed to establishing performance targets, including ESG-specific and climate change-related goals for the whole year, while it works on its predetermined strategic priority areas. The Board of Directors regularly assesses and tracks the committees' performance as well as the Company's objectives. Details on the membership of our statutory Board committees and GAIL's corporate governance practices are included in our annual report for the financial years 2022-23. GAIL corporate governance report link for FY 2022-23 is available at [CGRason31032023.pdf \(gailonline.com\)](http://CGRason31032023.pdf (gailonline.com))

6.1.4 Performance Evaluation, Remuneration and Incentives

(GRI 2-19, GRI 2-20, GRI 202-1, 405-2)

We are a public sector company and the Government of India, which also serves as an appointing authority and conducts the performance review, appoints, or nominates our Directors. According to the SEBI (LODR) Regulations, 2015, the Companies Act, 2013 and the Department of Public Enterprises (DPE) Guidelines on Corporate Governance for Central Public Sector Enterprises, 2010, as amended from time to time, the Nomination and Remuneration Committee's responsibilities are outlined in these laws. As of March 31, 2023, Dr. Nandhagopal Narayanasamy served as chair of the company's Nomination and Remuneration Committee, along with Dr. Navneet Mohan Kothari and Shri Sher Singh as members (s). The Nomination and Remuneration Committee also charge of deciding Performance Related Payment (PRP) pool and Policy of distribution of PRP to employees.

As stated in the Memorandum of Understanding between GAIL and the Ministry of Petroleum &

Natural Gas (MoPNG), the performance of the company and board members is assessed using both financial and non-financial factors. The MoU outlines the goals, weightage and vision for spending on R&D/innovation activities, sourcing from MSMEs (marginalized groups and women), observing company law and other economic factors like revenue, market cap, capex, EBITA, etc. The senior management performance review, which is based on the individual's parametric scoring based on the GAIL's business, financial, CSR, human resource and R&D performance during the reporting period, includes the CMD, Directors, EDs and GMs. This includes both monetary and non-monetary objectives designed to enhance the company's overall ESG performance. More details about the performance target and its corresponding remuneration are provided in the Annual Report and the MOU signed with the government. The performance evaluation score and the composite score are used to determine performance-related compensation.

Our female employees in management and non-management roles earned an average monthly compensation of INR 142,366 and INR 65,728 during FY 2022-23, compared to INR 169,550 and INR 72,688 for their male counterparts in management and non-management positions. The management and non-management levels have ratios of 0.83 and 0.90 (average female salary to average male salary). The compensation for GAIL's employees was paid on time throughout the reporting year without any issues. The pay cycle that has been defined is followed while making payments.

From FY 2021-22 to FY 2022-23, the highest-paid employee's total yearly compensation changed by 74.86%. Between FY 2021-22 and FY 2022-23, the average yearly total remuneration for all employees (apart from the highest-paid worker)

increased by 7.17%. The median percentage increase (from FY 2021-22 to FY 2022-23) in annual total compensation for all employees (excluding the highest-paid individual) was 6.96%.

6.1.5 Highlights of Remuneration and Incentives at GAIL

(GRI 2-21, GRI 202-1, GRI 405-2)

1. The CEO/CMD received a total compensation of INR 1,69,80,314 in FY 2022-23.
2. The median remuneration of all employees (except CEO/CMD) was INR 17,84,146 in FY 2022-23.
3. The mean remuneration of all employees (except CEO/CMD) was INR 17,77,202 in FY 2022-23
4. The ratio between the CEO/CMD annual remuneration and the median of all employees' remuneration is 9.52 in FY 2022-23.
5. The ratio between the CEO/CMD annual remuneration and the mean of all employees' remuneration is 9.55 in FY 2022-23.

Avoidance of Conflict of Interest

(GRI 2-15 a, b)

Our goal is to promote an ethical and trustworthy culture by putting in place the appropriate leadership. We encourage openness and accountability among all of our stakeholders in order to prevent conflicts of interest in workforce operations. We promote a trustworthy work environment in which staff members aren't afraid to bring up and disclose potential conflicts of interest. To effectively address such challenges and issues, a board-level discussion is also held. The following are GAIL's conflict of interest policies in this regard:

- Whenever any director has a direct or indirect stake in an agenda/matter, they would refrain from participating in the discussion. 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.

- GAIL's Related Party Transaction Policy enables us to address any related party transaction-related challenges and concerns. The SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 and the Companies Act, 2013, govern the parameters for this policy. It also includes materiality threshold and recommendations for handling transactions involving related parties.

Additional details about each Director's attendance, number of additional directorships, chairmanship/membership of committees, and stock ownership are included in our annual report.

Additional details about each Director's attendance, number of additional directorships, chairmanship/membership of committees and stock ownership are included in our annual report.

6.1.6 Internal Control System and their Adequacy

(GRI 2-14 a)

To increase operational and financial integrity, we have created encouraging principles, frameworks and rules as a component of our internal control system. Enhancing financial reporting controls makes audits more thorough and contributes to the creation of financial statements that are more accurate and reliable. GAIL's updated formal, centralized and controlled internal financial control paperwork can be created with the help of its Internal Financial Control System (IFC). Following the IFC compliance investigation, a Risk Control Matrix (RCM) was created in consultation with external consultants.

Internal control oversight is a crucial responsibility of audit committees. In addition to potential economies and improvements to the business and processes, our internal audit team offers guidance and recommendations on the potential flaws and hazards. Members of the audit team who are professionally qualified have academic and professional backgrounds in accounting, IT and engineering. This team evaluates the risk management system and informs the audit committee of its findings.



GAIL has received no comments from Comptroller and Auditor General (CAG) in FY 2022-23.

The Board's audit committee oversees authorizing the annual audit programme and reviewing the CAG audit's and audit team's conclusions. The internal audit team also performs audits of promoters' subsidiaries, joint ventures and E&P blocks.

6.1.7 Ethics and Integrity

(GRI 3-3, GRI 205-2 a, b, c, d, e, GRI 205-1 a, b, GRI 205-3 a, b, c, d)

We are dedicated to conducting business in accordance with the strictest moral principles. The purpose of GAIL's Code of Conduct is to support our dedication to operating with the highest ethical standards. Our business policies and procedures are designed to achieve excellence while addressing a variety of issues, including those related to the environment, human rights, health and safety.

The GAIL's Code of Conduct and accompanying circulars outline the ideals, tenets and guidelines that guide our actions. We create and support sustainable growth, cultivate trustworthy relationships with our customers, staff and business partners. This code of conduct guideline must be adhered to by all employees, including senior management, board members, contractors and all corporate representatives. We abide by anti-corruption, anti-boycott, export control and trade sanctions laws in all of our locations since we're a responsible business. During FY 2022-23, trainings conducted related to anti-corruption policies and procedures are mentioned below:

1. All employees of the organization - anti-corruption policies and procedures have been communicated
2. All business partners of the organization - anti-corruption policies and procedures have been communicated
3. All governance body members have received training on anti-corruption in FY 2022-23
4. 466 number (and 9.81%) of employees have

received training on anti-corruption in FY 2022-23.

Our solid policy frameworks deter employees from dishonest and other unethical behaviour.

The following is a list of our organization's ethics and integrity policies.

- 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 regularly hold awareness workshops to guarantee that our employees and vendors are committed to preventing corruption and making sure we are totally autonomous from it. We also periodically examine the risk to find any potential corruption problems in our operational units. We experienced one (01) corruption-related incident in FY 2022-23; no other significant corruption risk was identified or reported.

Under the Right to Information, Whistle Blower Policy, Fraud Prevention Policy and Integrity Pact, employees are urged to report any suspicious, illegal, unethical, or improper conduct in the company. It improves the vigilance system and supports the organization's anti-corruption operations.

GAIL Core Values:

Integrity and Ethics: We are honest, fair and dependable in all of our interactions. We demand truthfulness, reliability and dependability in all of our operations and we strive to uphold the greatest standards of institutional and individual integrity.

Respect: We have faith in people. We appreciate the employees' individual contributions, collaboration, dignity, rights and privacy and are aware of our obligations to them.

TOWARDS NET ZERO

Customer: We work tirelessly to produce exceptional products and services, build lasting value and go beyond our client's expectations in order to earn their first selection. We firmly believe that managing customer relationships effectively is essential for a company's long-term success. Our objective is to interact with customers, comprehend their needs and enhance customer experience by enhancing value. We also make sure that all of our businesses have a customer-centric approach.

Safety: Our goal is to protect the environment and provide a safe working environment for our employees and the communities we serve. We have created our Occupational Health and Safety Management System (OHSMS) to address employees, contractors, business associates and community members in accordance with the safety Framework.

Excellence: With constant development and learning, we aim to reach the highest levels of quality in all the business sectors.

Technology and Innovation: We respect the spirit of entrepreneurship and promote ongoing efforts to advance technology, provide fresh concepts and products and enhance operations as well as management techniques. Through ongoing innovation and research, we hope to

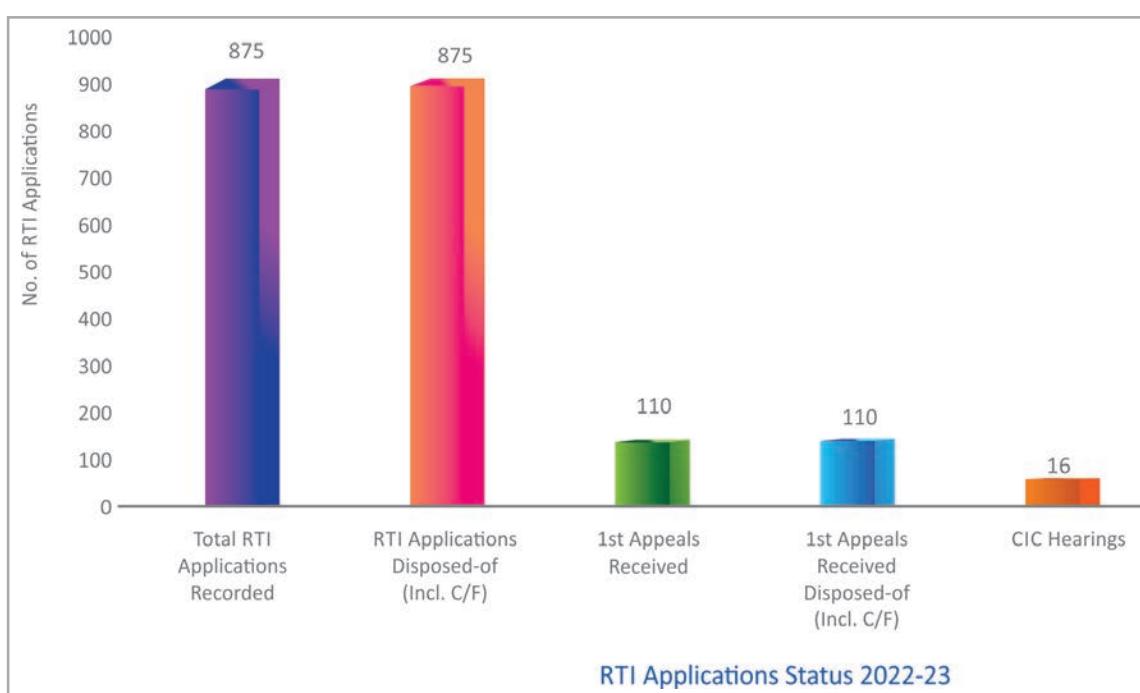
constantly adapt and develop. We are focusing on creating a sizeable renewable energy portfolio, streamlining our current procedures and strengthening our current R&D infrastructure in order to future-proof our business.

Governance Mechanism

(GRI 2-16)

Right to Information: A suitable mechanism has been set up within the company in accordance with the provisions of the Right to Information Act, 2005, in order to promote transparency and accountability. To comply with the requirements of the RTI Act, we have designated CPIOs, ACPIOs and Appellate Authorities at our units and offices throughout the company. RTI Guidelines and related information is available on GAIL's website. Link for access at: [GAIL \(India\) Limited | RTI -- \(gailonline.com\)](http://GAIL(India) Limited | RTI -- (gailonline.com)). Additionally, the same link hosts the most recent RTI Audit Report, the Record Retention schedule and MIS Report on RTI application.

For FY 2022-23, GAIL's Corporate RTI Cell has a 100% disposal rate with respect to RTI Applications received. Further, GAIL has received a 'NIL' penalty/adverse remark from the Central Information Commission for the year 2022-23 regarding the second Appeal filed by Appellants.



Whistle Blower Policy: We encourage our workers who have concerns about suspected misbehaviour to speak up without fear of retaliation. This policy strives to offer a secure environment for employees to express their concerns without fear of being harassed or mistreated in any way.

Fraud Prevention Policy: This policy is put in place for the 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 the employee(s), employee(s) working as an advisor(s), the person engaged on an ad hoc/temporary/contract basis, vendor(s), supplier(s), the contractor(s), the customer (s), the 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.

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 regularly interact with our stakeholders, shareholders, policy makers and peers to take the necessary actions to enhance our advocacy strategy. Effective stakeholder involvement

is essential to achieving our strategic goals because it gives us the chance to comprehend their expectations, resolve their problems and prioritise our key areas. Our stakeholder engagement process is in line with global best practises, giving our businesses within GAIL the tools they need to engage and communicate with their stakeholders in a consistent manner. The Board of Directors routinely reviews internal policies related to training, implementation and action monitoring. In order to adapt and improve our projects through conversations and forums, we publicly state clear opinions, express our concerns and keep ourselves up to date on industry best practises.

Tax Strategy

Being a public sector undertaking, the Government of India (GOI) holds 51.52% of the paid-up equity share capital. The GOI is responsible for governing tax policy. We comply with all legal requirements, including those relating to provident funds, employees' state insurance, income taxes, sales taxes, service taxes, excise taxes, customs taxes, value added taxes, cess and other statutory obligations with the relevant authorities. We strictly abide by the GOI's notifications of tax policy changes.

Settlement of Direct Tax Cases: GAIL has applied to the Income Tax Department under the "Vivad se Vishwas" plan for the resolution of a direct tax dispute for the fiscal years 2022-23.

Anti-competitive Behaviour

(GRI 2-27 a, b, c, d, GRI 3-3, GRI 206-1 a, b)

All of our stakeholders work together to support and uphold clarity in our business operations. We take precautions to prevent anticompetitive behaviour in order to strengthen our company. We do this by aligning our systems and procedures across all levels of our businesses with national and international norms. We have not paid any fines or settlements for such wrongdoings in the recent five years. Additionally, status reports on antitrust violations, monopoly law violations, unfair trade practice violations and



anti-competitive activities in which we have been involved were also filed. Status reports on antitrust violations, monopoly law violations, unfair trade practice violations and anti-competitive activities in which we have been involved were submitted.

The following cases involving GAIL's monopolization, anti-competitive behaviour and unfair trade practices have been resolved or are still pending as of FY 2022–2023:

i) i) GSPCL filed a case against GAIL before PNGRB claiming Restrictive Trade Practice (RTP) for not allowing to change connectivity from GAIL-PLL to GSPL-PLL connectivity. PNGRB held against GAIL. GAIL challenged the same before APTEL which decided in favour of GAIL. GSPCL appealed against that order before Supreme Court which is pending.

Current Status- Supreme Court as an interim measure has directed GSPCL to pay @Rs.12/MMBtu to GAIL till the disposal of the appeal. Notice has been issued and pleadings are to be completed.

ii) GSPC Gas filed a case against GAIL claiming RTP before PNGRB but the same was held in favour of GAIL. GSPC Gas has filed an appeal against the said order before APTEL and the order of PNGRB has been reversed. Now GAIL has pressed an appeal before Supreme Court, which is pending

Current Status- Appeal admitted and notice issued. The order stayed. GAIL to file a reply.

iii) 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 the 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 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 a civil penalty of INR 1 lakh on GAIL. GAIL challenged the said order before APTEL. APTEL vide order dated 28.11.2014 dismissed the appeal of GAIL. GAIL then preferred an appeal before Supreme Court. Supreme Court vide order dated 31.01.2016 set aside the order of PNGRB and remanded it back to PNGRB for fresh determination considering the affiliate code of conduct. 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 an appeal in Supreme Court against the APTEL order wherein notice has been issued and the status quo is to be maintained. The matter is pending.

iv) GIPCL- GIPCL had filed a 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 COMPAT which directed an investigation by DGI against GAIL for such abuse. GAIL has filed an appeal against the said order before Supreme Court wherein the direction for investigation has been stayed and is pending before Supreme Court.

Current status -Next date to be fixed for the final hearing

v) Appeal No 131, 132, & 133 of 2016, Sravanthi Energy Pvt. Ltd, Beta Infratech Pvt. Ltd, Gamma Infraprop Pvt Ltd., had filed a complaint before PNGRB alleging RTP against GAIL which was decided against GAIL by PNGRB vide order dated 11.04.2016. GAIL challenged the order of PNGRB before APTEL. APTEL vide its judgment dated 27.10.2021, reversed the finding of PNGRB and dismissed the appeal. SLP has been filed against the APTEL Judgment in the Hon'ble Supreme Court of India by Sravanthi Energy



Pvt. Ltd, & Gamma Infraprop Pvt Ltd. which is pending.

Disposal during FY 2022-23:

- i) M/s. Pioneer Gas Power Ltd has filed a complaint alleging RTP against GAIL for charging Ship or Pay charges under the GTA. Vide Order dated 01.12.2022 PNGRB has disposed of the appeal.

Dispute resolution Mechanism

A. Cases brought about through Conciliation during FY 2022-2023:

1. Murudeshwar Ceramics Ltd Vs GAIL (India) Ltd. Matter terminated as the dispute was amicably resolved between the Parties.
2. GAIL Vs. Filatex. Conciliation is in progress.
3. Taurant Projects Ltd Vs. GAIL – CGD Ranchi Contract: Conciliation has been closed as no settlement could be reached.
4. Thermosystems Pvt. Limited Vs. GAIL. Conciliation in progress.

B. Present status of cases brought through Conciliation in FY 2021-2022 is as under:

1. Gold Plus Glass Industries Vs. GAIL – Conciliation failed since the proposal for settlement was not approved by the Settlement Grievance Redressal Committee (SGRC) of GAIL.
2. Amrutha Engineering Vs. GAIL Conciliation request withdrawn by Amrutha Engineering.

C. Present status of cases brought through Conciliation in FY 2019-2020 is as under:

1. Newton Engineering Vs. GAIL: Proposal for settlement approved vide settlement agreement 27.07.2022.
2. GAIL Vs. Bhilosa: Proposal for settlement recommended by SGRC.

Board of Directors (BoD) approved vide settlement agreement date 24.08.2022.

6.1.8 Stakeholder Grievance Redressal

(GRI 2-16, 2-25)

GAIL has established a number of systems and processes that allow its stakeholders to interact with them in a systemic way and to express their unique thoughts and opinions. GAIL has a structured grievance redressal mechanism in place to address all stakeholders' grievances. The effective and prompt settlement of complaints made by all stakeholder groups is given top attention at GAIL. In each of its offices, GAIL has set up a grievance cell specifically for this purpose. All complaints are received through this system and each grievance is given equal weight and a thorough investigation. We also address and resolve complaints that have been made about CPGRAMS. By giving our value chain's participants the ability to frequently access pertinent and trustworthy information, we give them the chance to seek an effective remedy when their rights have been violated.

6.1.9 Grievance Redressal Mechanism

(GRI 2-16,2-25)

At GAIL, stakeholder concerns and replies are two of our top objectives. Our stakeholders can file complaints or grievances through the grievance redressal procedure, which enables us to respond immediately to any issues they bring up and improve our services. We have developed an online platform for grievance redress called "SAMADHAN" that all of our stakeholders can use to express their grievances.

Our web portal <https://gailonline.com/onlineComplaints.html> can be used to report and manage system violations such as corruption, forgery, cheating, misappropriation, favours, wilful ignorance, careless decision-making, procedures and anomalies in the exercise of delegated power. The OIC Sam park email can also be used to communicate concerns to the factory head at any one of our locations.



All written complaints received from all offices and centres are uploaded to the Centralized Public Grievance Redressal and Monitoring System (CPGRAMS), which is accessible to all citizens who have filed this complaint, to provide citizens and the public with a mechanism for grievance redressal.

The CPGRAMS portal, run by the Government of India, was created to give citizens a platform to air their problems and have MoPNG handle them immediately. Via the CPGRAMS, a total of 304 public grievances were received during FY 2022-23. All concerns that were submitted to the CPGRAM portal are handled through the grievance procedure.

Grievances/complaints received through CPGRAMS - FY 2022-23

	ENVIRONMENT		LABOUR PRACTICE		HUMAN RIGHTS		SOCIETY		Total	
	SOURCE OF GRIEVANCES/COMPLAINTS									
	INTERNAL STAKEHOLDER	INTERNAL STAKEHOLDER	INTERNAL STAKEHOLDER	INTERNAL STAKEHOLDER	INTERNAL STAKEHOLDER	INTERNAL STAKEHOLDER	INTERNAL STAKEHOLDER	INTERNAL STAKEHOLDER		
Grievances received in FY 2022-23	01	00	00	07	31	03	03	259	304	
RESOLVED	100%	-	100%	100%	100%	100%	100%	100%	100%	

Note: The grievance as given in the table has been received through the CPGRAMS portal, handled/monitored by Dept. of Administrative Reforms and Public Grievances, Govt. of India. These grievances pertain to the year 2022-23.

6.1.10 Vigilance at GAIL

While addressing concerns relating to ethics, bribery and corruption at GAIL and its subsidiaries as well as in joint ventures (JVs) under the authority of the GAIL Vigilance Department, guidelines and circulars of the Central Vigilance Commission are adhered to. GAIL has adopted provision of Integrity Pact (IP) in procurement in its tender of value greater than one crore for works, procurement of products and procurement of services in accordance with the guidelines of the Central Vigilance Commission. Integrity Pact offers an impartial platform for observing adherence to the CVC's defined policies, procedures and guidelines while soliciting bids and, if necessary, resolving complaints. At the moment, GAIL has a panel of three Independent External Monitors (IEMs) to keep an eye on how IP is being applied to all tenders.

GAIL Vigilance examines internal procedures, does routine surprise checks, periodic inspections and in-depth intensive inspections and analyses

CAG / Internal Audit paras to look for any potential vigilance angles. To guarantee that lapses are not repeated, systemic adjustments are suggested after an analysis of the reported lapses. To ensure better transparency and reduce manual intervention, efforts are undertaken to automate procedures as much as possible.

Vendor meetings, customer interactive meetings, vigilance awareness workshop programmes and engineer-in-charge coaching are periodically organized for all the stakeholders in order to promote vigilance awareness and handle complaints. Many awareness workshops are held at various GAIL locations to educate the stakeholders-employees, clients, contractors and suppliers. 54 unexpected/regular inspections of various contracts, processes and files pertaining to various GAIL facilities were conducted during the FY 2022-23. Also, the Vigilance Department has conducted 14 intensive inspections of contracts and projects.

Highlights of VAW FY 2022-23

- GAIL (India) Limited's corporate office and its various site offices observed the Vigilance



Awareness Week (VAW) 2022, which was organized by the Central Vigilance Commission (CVC), from October 31 to November 6, 2022, under the theme of “Corruption-free India for a developed Nation”.

- Employees of GAIL took Integrity Pledges during VAW Week.
- In the Mumbai, NCR and Jaipur regions, customer meetings for the gas, petrochemical and LHC customers were held.

The then **Vigilance Commissioner (VC), Sh. P. K. Srivastava** visited the GAIL Corporate office and addressed employees across all major 40 GAIL locations through video conferencing. He also released a short awareness film called “Jagrati”, the Annual Vigilance Magazine “Jagrook” as well as the updated C&P Manual for GAIL.



Vigilance Commissioner Shri P. K. Srivastava launched the e-Vigilance portal of GAIL (India) Limited on the occasion of Vigilance Awareness Week 2022. He also released a Vigilance Awareness Magazine “Jagrook” and the updated Contracts & Procurement procedure of GAIL

During FY 2022-23, based on the investigations/surprise check into the cases and review of systems and procedures, the following systemic improvements have been suggested/implemented:

- i. Automation of the Vigilance functions for effective monitoring and improved efficiency using an e-Vigilance portal and mapping all Vigilance functions- (complaint/ case, inspections, etc. under a single e-platform).
- ii. Incorporation of additional checks and balances in the SAP system to address CPBG-related issues.
- iii. Streamlining of the pricing and discount-related procedure for polymer products, by having a well-documented and transparent policy and SOP for operationalization of discount schemes with minimum discretion.
- iv. Uploading of a signed copy of the Completion Certificate (in system-generated format) issued by the Engineer-in-Charge (EIC) in the SAP system to maintain uniformity and avoid duplication.
- v. Providing for mandatory submission of a list of sub-contractors along with documents required for processing each Running Account Bill.
- vi. Automation of the process of issue of tender inquiries relating to sourcing and sale of LNG.



Sh. Deepak Gupta, Director (Projects) attended the Pipeline Technology Conference 2023 at Berlin, Germany. He was a panelist in the discussion on one of the most relevant issues - 'Decarbonisation of the pipeline industry'.

Gram Sabha was formed in 09 villages to raise awareness among the general community. A review of procedures and policies has also been carried out with the intention of lowering corruption and guaranteeing general good governance. To raise awareness of vigilance and efficiently manage problems, all stakeholders are regularly involved in vendor meetings, customer interactive meetings, vigilance awareness workshops/sensitization programmes and engineer-in-charge coaching.

In FY 2022-23, we received 93 complaints under vigilance and 98 complaints (including previous year's complaints) were successfully resolved.

GAIL has also organized a 02-day training/knowledge sharing programme in February 2023, under the aegis of Central Vigilance Commission (CVC), that was attended by 59 Vigilance Officers from 19 CPSEs & their JVs which included GAIL, ONGC, IOCL, BPCL, HPCL, Mormugao Port Trust, New Mangalore Port Trust, Goa Shipyard Ltd and their JVCs.

6.2 Risk Management at GAIL (GRI 3-3, GRI 403-2 a)

Our strategy for creating a healthy workplace where people may develop and flourish is centred on eliminating environments where people are injured, killed, or have accidents by taking preventive safeguards.

When an environmental or human health threat is uncertain and the stakes are high, the precautionary approach enables our decision-makers to act. Across all GAIL's operating units, risk management is a continuous process of risk identification, analysis and management. We map and manage both financial and non-financial risks through Enterprise Risk Management (ERM) while adhering to all regulations and keeping up with our industry counterparts. Training on ERM is provided to all the stakeholders.

Through enterprise risk management, the risk assessment of several variables (such as fuel prices, energy supply security and climate change) that may have an impact on our company's growth is researched and analyzed. The risk management process comprises, among other things, resource allocation, risk communication and business continuity planning. Risk management criteria is a part of performance appraisal review of the employees.

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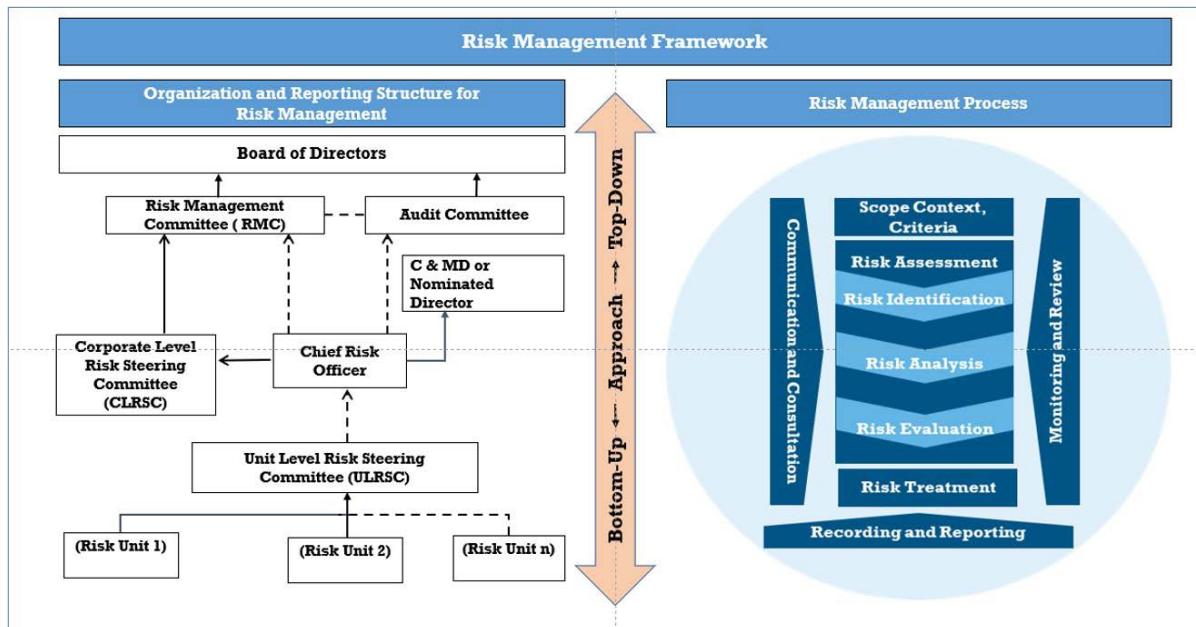
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RISK MANAGEMENT FRAMEWORK:



6.2.1 Overarching Management Approach

(GRI 3-3, GRI 201-2, GRI 2-11 a, b)

Our dedicated and independent Risk Management department implements our complete Risk Management policy & framework on both the corporate and business levels to enhance our approach to risk management and satisfy the demands of a changing business environment. Our organization's risks can be reviewed, reported and mitigated through the use of the risk management policy, which also helps to promote sustainable corporate growth.

By giving the boards an unbiased picture of the complete control system that results in overall risk management at GAIL, the ERM framework offers an integrated framework for periodic reviews of organizational risks. Furthermore, it offers a greater comprehension of the opportunities for enhancing corporate processes related to operations. All Business

verticals including the zonal marketing offices, have adopted the ERM. The highest governing body responsible for judging the effectiveness of GAIL's risk management procedures is the Board of Directors.



Figure: Risk Assessment Process

The establishment and execution of a suitable risk management system across the business are under the direction of the Board, through the Audit Committee, Risk Management Committee, and Corporate Level Risk Steering Committee. The Chairman of the Corporate Level Risk Steering Committee, the Chief Risk Officer (CRO), and other committee members examine various types of risks that may already exist or be foreseen in the near, medium, and long term. The Corporate Level Risk Steering Committee (CLRSC) consists of executive directors, presided over by the Director (BD) meets quarterly, the Board Level Committee of RMC, presided over by an independent director meets bi-annually, and the Audit Committee and the Board meets annually are all co-ordinated by the Risk Management Department.

The unit-level Risk Steering Committee (ULRSC), which is led by the unit OICs/Functional Heads, maps and monitors unit-level hazards, including social and environmental risks, on a quarterly basis. Also, the appropriate units design and oversee mitigation actions. The major corporate risks that GAIL has identified include those related to the market, logistics, strategy, joint venture subsidiaries, and finances.

Risk Management and Strategic Initiatives

(GRI 201-2 a i, ii, iii,)

GAIL's successful risk management strategies help us fulfil our organizational goals and protect operations while upholding legal, regulatory, and societal requirements. Risk management helps us improve our ability to react and adapt to the changing environment.

Identification, analysis, and evaluation of potential risks that can have an influence on business operations are the three steps that make up the risk management assessment process. This procedure aids in monitoring the management of risks as well as the strategic direction and management of our company's business operations. Unit risk

owners submit a quarterly risk register review report on online Risk Management System by the 10th day after the quarter's end, and an annual risk database review report by the 15th June, following the financial year end.

The Company assesses a range of risks, including commercial and financial risks as well as non-financial risks including climate change, fuel prices, and the security of the energy supply, all of which could influence the Company in the future. The "Risk Rating" is given to the identified risks based on how they will affect the organization and how likely it is that they will materialize. For determining "Risk Velocity," the duration between an incident's occurrence and its effect on GAIL is considered.

According to the authorized Risk Management strategy, the Corporate Level Risk Steering Committee (CLRSC) is required to review the status of all Top Corporate Level Residual Risks, including economic, environmental, and social risks, on a quarterly basis. The status is discussed in the Risk Management Committee (RMC) before being presented to the Audit Committee & Board annually. Each year, the Board is presented with the status for approval. We pay close attention to how our operations affect the environment. The impact of greenhouse gases is constantly being reduced or neutralized, and zero waste is disposed of. Several unit work to identify the threat that climate change poses. Groups within GAIL HSE coordinate all risks associated with environmental and safety concerns.

The risks connected to social and CSR issues are coordinated under the supervision of the CSR group. These organizations make sure that all current and foreseeable environmental, economic, and social risks are recognized, evaluated, and properly managed through the use of efficient mitigation plans. Regular updates are sent to Our Management by both parties.





Figure: Risk Management Process

6.2.2 Key Risks and Mitigation Measures

(GRI 201-2 iii, iv, v)

Some risks are easier to manage, while others require a significant amount of time. As a result, tying risks to the fiscal year is difficult. The GAIL Corporate Level Risk Steering Committee has identified risks and mitigation strategies to improve operational performance. GAIL does not have a system in place to calculate the financial implications or costs, or to make revenue projections so we are taking the necessary steps to resolve/consider the identified risks. The list of Top Corporate Level risks is as below:

1. Risk of delay in Project Execution due to delay in obtaining Right of Use (RoU)/Land.
2. Underutilization of gas transmission pipeline will result in loss of revenue.
3. GAIL's Restructuring Risk. [Challenges due to Monetization of GAIL's Pipeline Assets and Creation of Transport System Operator (TSO)].
4. Inadequate controls to protect the systems against malicious attacks may result in loss of data and disruption of operations.
5. Risk of reduction in margin of Petrochemical due to lower industry demand, lower price and high input cost.
6. Market risk of LNG in terms of adverse movement of crude oil price/LNG prices, shortage of LNG cargos and expected increase in domestic gas volumes.

7. Risk of major leakage:

- (a) Explosion / high fatality in case of leakage from LPG/Natural Gas pipeline under high population density region.
 - (b) Explosion / high fatality in case of leakage in Petrochemical & GPU/C2-C3 Recovery Plants.
 - (c) Explosion / high fatality in case of leakage in GAIL CGDs NG pipelines
8. Risk of Third-Party Damage & Encroachment.
 9. Risk of unfavourable Regulatory changes.
 10. Effect on GAIL business on account of shutdown of ONGC fatalities and reduction in allocation of APM/Non-APM Gas for GAIL's internal consumption.

6.2.3 Advocacy through Coalitions and Associations

(GRI 2-28)

We are a member of a number of respected industry organizations and associations, which provide a forum for discussing industry issues and bringing industry voices to the attention of the government in order for it to develop more inclusive policies and reforms. In FY 2022-23, GAIL was a member of the following 21 national and international institutions:

1. Indian Wind Power Association (IWPA)
2. PHD Chamber of Commerce & Industry

3. Chemicals & Petrochemicals Manufacturers Association (CPMA)
4. Indian Centre for Plastic in Environment (ICPE)
5. Indian Biogas Association (IBA)
6. International Swaps & Derivatives Association Inc (ISDA)
7. Indian Federation of Green Energy (IFGE)
8. International Group of Liquefied Natural Gas Importers (GIIGNL)
9. Society for Human Resource Management (SHRM)
10. All India Management Association (AIMA)
11. National Institute of Personnel Management (NIPM)
12. Pipeline Operators Forum
13. TERI Council for Business Sustainability (TERI-CBS)
14. Global Reporting Initiative India Private Limited (GRI)
15. Standing Conference of Public Enterprises (SCOPE)
16. Federation of Indian Petroleum Industry (FICI)
17. Federation of Indian Chambers of Commerce and Industry (FICCI)
18. British Safety Council (India) LLP
19. India Myanmar Chamber of Commerce (IMCC)
20. Confederation of Indian Industry (CII)
21. International Gas Union (IGU)

This lays a solid foundation for the expansion of the public good. During FY 2022-23, we paid a membership fee of INR 11.5 crore to various trade associations and think tank groups in order to create a positive and nurturing environment for businesses and stakeholders. We also communicate on a regular basis with PNGRB, the regulatory agency, to keep them informed of the latest events and industry outlooks.

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 the advancement of the public good. GAIL also regularly interacts with PNGRB, the regulatory body to update them on current status and industry viewpoint. In FY 2022-23, GAIL was part of the following associations –

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

GAIL is a member of the Federation of Indian Petroleum Industry (FICI) and part of the Governing Council. FICI has many specific executive committees of GAIL's interest having member representations from GAIL. FICI functions as an oil industry interface with the Government, regulatory authorities and public and representative bodies of traders in India to work on issues such as optimization of resources, promoting Safety, tariffs, Investments, a Healthy Environment and Energy conservation among other issues related to the industry.

GAIL is an active member of the 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 on various platforms.

CMD, GAIL is a member of the Federation of Indian Chambers of Commerce & Industry (FICCI) Executive Committee and Co-Chair of the FICCI Hydrocarbon Committee. The hydrocarbon committee endeavours to deliberate on issues related to the 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 also a member of the Oil Industry Development Board (OIDB).

GAIL is the founding member of the Global Reporting Initiative (GRI) Focal Point India's Sustainability & Transparency Consortium which helps us in engaging with business leaders, national governments, regulators,



sustainability experts, think tank bodies and professional institutes to discuss issues related to sustainability reporting. GAIL also represents in GRI Corporate Leadership Group on Reporting 2025, GRI Gold Community and GRI South Asia Advisory Group.

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



Shri Ayush Gupta, Director (HR), GAIL (India) Ltd. was invited as a keynote speaker for the 2022 London Global Convention on Corporate Governance and Sustainability Global Business Meet organized by Institute of Directors, India on 9-12th November 2022. The theme of the meet was 'Building an effective Board that works and Top Global Trends'.



Business Growth

07



FY 2022-23, GAIL has achieved a gross turnover of
INR 1,43,976 crores exceeding INR 1 Trillion for
the first time



GAIL processed around **9,700** Capacity Tranche
(CT) requests through online pipeline
open-access portal in FY 2022-23



GAIL has achieved a MoU score of '**94.45**',
which corresponds to 'Excellent' rating in
FY 2022-23



Business Growth

7.1 Business Growth

(GRI 3-3, GRI 2-6, GRI 415-1)

Global Energy Sector

The global energy sector during FY 2022-23 experienced fluctuations due to multiple factors, including global demand dynamics, geopolitical conflict and supply disruptions. Oil and gas companies had to adapt their operations and strategies to navigate the uncertainty caused by price volatility, which influenced revenue streams and profitability.

Oil and gas sector affected by global gas prices are facing significant risks of rationing and are reducing their production levels. Consumers are also adjusting their energy consumption habits due to the high prices and some are participating in emergency demand reduction campaigns.

Further, the implementation of stringent COVID-19 containment measures in China also played a role in reducing global petroleum demand, which subsequently resulted in a decline in prices. Various global energy policy responses are being implemented, but many of them involve a strong focus on accelerating clean energy investments. This includes a greater emphasis on decarbonization and the transition towards renewable energy. The current crisis presents an opportunity to simultaneously address energy security and reduce emissions, aligning with global climate goals. In hindsight, this crisis could be viewed as a pivotal moment in driving both energy security and emissions reduction.

Further, in response to the growing focus on climate change after the COP-26 conference, governments worldwide are actively pursuing the transition to low-carbon energy systems. This includes initiatives such as renewable energy expansion, electric vehicle adoption, blue and

green hydrogen projects and Carbon Capture Utilization & Storage (CCUS) technologies. The BP World Energy Outlook 2022 predicts a rise in the share of renewable energy in the global primary energy mix. However, the report also highlights that fossil fuels will continue to play a significant role in the overall energy mix, as they are essential for social and economic development in the coming decades. This suggests that while the transition to cleaner energy sources is underway, fossil fuels will still be necessary during the transitional period.

As per BP's outlook on World Energy 2023, the future of global energy will be dominated by four major trends: a declining role for hydrocarbons, rapid expansion in renewables, increasing electrification and growing use of low-carbon hydrogen.

India Gas Sector Developments

The gas sector in India is undergoing significant development and transformation as the government focuses on achieving a Gas Based Economy. India's primary energy consumption bounced back in recent years above its pre-pandemic level in 2019. Several key initiatives and policies have been implemented to enhance the country's gas infrastructure and utilization.

The government's commitment to increasing the share of natural gas in the energy mix is reflected in its target of raising gas consumption from 6% to 15% by 2030. To achieve this, the government is implementing supporting policies and initiatives under the "One Nation One Grid" framework, which aims to provide the necessary infrastructure for gas transportation and distribution across the country.

The International Energy Agency (IEA) forecasts that India's natural gas consumption will experience significant growth, with an expected increase of 25 BCM (billion cubic meters) by 2024.

4-Year Data Depicting Consumption of Natural Gas Across Various Sectors in India (% wise)

Sector	2019-20	2020-21	2021-22	2022-23
Fertilizer	28.52	31.70	29.4	33.05
City Gas Distribution	19.26	16.40	19.8	20.49
Power	19.61	19.30	16.5	13.89
Refinery	13.78	14.10	8.6	6.66
Petrochemicals	6.31	5.50	4.7	3.34
Others	12.52	13	21.0	22.58

Source: PPAC- Currently, the Fertilizer sector accounts for the major share of consumption in the country. However, growing at a CGAR of > 12%, consumption of the CGD sector is expected to increase significantly in the coming years.

GAIL's strategy has been devised considering varied assumptions for future business scenarios. Regulatory, market and price risk are interrelated to the strategic initiatives of the dynamic oil and gas industry globally as well as at the national level. Oil and gas commodity prices, market dynamics predictions, etc are volatile and subject to change with changing geopolitical and environmental issues. To understand the risk related to these unpredictable scenarios, GAIL conducts regular strategy revisit exercises. This helps to review the changes while ensuring the mitigation of risks on strategy implementation. Additionally, strategic initiatives which are deemed to have an impact are also reviewed at the Board level through the board-level committee of the Risk Management Committee (RMC).

We've also been diligent in managing our financial structure and making the required modifications to prosper in a variety of economic scenarios. As needed, we change dividend payments to shareholders, return cash to shares, share buybacks and the issuance of new shares. We regularly provide stable long-term returns on our shareholders' investments. In terms of overall dividend amount, GAIL paid the highest dividend payment in this reporting period.

7.2 Economic Performance

(GRI 3-3, GRI 2-6, GRI 201-1, GRI 415-1)

In FY 2022-23, GAIL achieved record-breaking revenue, surpassing all previous milestones, with a turnover exceeding INR 1 trillion for the first

time. Our focus on operational excellence and strategic investments in key sectors drove robust financial performance, enhancing shareholder value. In FY 2022-23 our gross turnover of INR 1,43,976 Crore, is a significant increase from INR 91,426 crore in FY 2021-22. The company's Profit Before Tax (PBT) decreased this year, reaching INR 6,584 crore compared to INR 13,590 crore in the previous year. This decrease can be attributed due to geo-political situation, testing business scenario, provision for TAPI pipeline, inventory losses in gas marketing segment, On-Off in gas transmission segment.

Additionally, the Profit After Tax (PAT) showed a decline of 49% from INR 10,364 crore in FY 2021-22 to INR 5,302 crore in FY 2022-23.

As of March 31, 2023, GAIL's market capitalization stood at INR 69,203 crore, reflecting strong investor confidence in the company. GAIL declared an interim dividend of INR 4 per share to its shareholders in March 2023.

In March 2022, GAIL's Board of Directors authorized a share buyback plan for approximately 5.70 crore shares at a price of INR 190 per share. The total value of the buyback amounts to around INR 1,083 crore, excluding taxes. This buyback price represents a 24% premium over the previous day's closing price at the NSE. The buyback was closed in June 2022.

The main segments of GAIL's business, which contribute over 90% of the company's total turnover, can be summarized as follows:



S. No.	Product/Service	NIC Code	% of total Turnover contributed
1	Solid, liquid and gaseous fuels and related products- Crude petroleum and natural gas (NG Trading)	99611912	87%
2	Plastics in Primary form (Petchem)	99611715	3%
3	Transport via a pipeline of Natural Gas (NG Transmission) Transport services via a pipeline of other goods n.e.c (LPG Transmission)	99651312 99651390	5%
4	Solid, liquid and gaseous fuels and related products n.e.c – Liquid Hydrocarbons (LHC)	99611919	3%
5	Electricity (Wind and Solar Power)	99611970	*

*The Power service and other products/services contribute 2% of the total turnover

Table: Physical Performance

Particulars	UoM	2022-23		2021-22	
		Quantity	Revenue from Operations (INR In crore)	Quantity	Revenue from Operations (INR in crore)
Natural Gas Marketing	MMSCMD	94.91	1,35,290	96.24	77,326
Natural Gas Transmission	MMSCMD	107.28	6,661	110.98	6,392
LPG Transmission	TMT	4,335	722	4,199	669
Petrochemicals (Polymers Sales)	TMT	399	4,917	790	8,549
Liquid Hydrocarbon Sales	TMT	TMT	5,570	1004	4,865

Table 2: Economic Value Generated * (INR crore)

S.No.	Economic Value Generated	FY 2020-21	FY 2021-22	FY 2022-23
1.	Total Revenue (net of ED)	58,752.10	93,772.60	1,46,974.30

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

Table 3: Economic Value Distributed* (INR crore)

S.No.	Economic Value Distributed	FY 2020-21	FY 2021-22	FY 2022-23
1.	Employee Wages and Benefits	1,744.20	1,951.2	2017.3
2	Operating Costs	49,996.60	78,347.8	1,40,186
3	Payments to providers of capital	2,569.20	4,344.7	3,772.3
4	Payments to Governments	1,723.10	3,226.3	1,521.3

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



7.3 Business Initiatives

(GRI 2-6b)

During FY 2022-23, GAIL has undertaken significant initiatives to explore new avenues for expansion and growth. The company is proud to maintain its position as a preferred supplier for end users, having secured a substantial volume of renewal contracts and new contracts with priority customers. Here are some of the key business initiatives undertaken by GAIL:

- GAIL has acquired a 26% stake in LNG Japonica Shipping Corporation Limited, forming a joint venture with Mitsui O.S.K. Lines Ltd for LNG shipping. Additionally, GAIL has signed a Memorandum of Understanding with Galileo Technologies Corporation to establish small-scale LNG manufacturing facilities in India.
- GAIL introduced an online pipeline open-access platform, solidifying its position as India's first pipeline company. This portal enables the easy and transparent booking of Common Carrier Capacity in GAIL's natural gas pipeline. In FY 2022-23 alone, the portal successfully processed approximately 9,500 Capacity Tranche (CT) requests. Since the launch of the online portal in 2018, GAIL has received over 20500 CT requisitions until 31st March 2023.
- GAIL is exploring opportunities in biofuels by setting up 1G ethanol and compressed bio-gas plants in line with the Government of India's National Biofuels Policy-2018. The company also has explored options to replace conventional grid electricity with renewable energy at its process plants to reduce emissions. Furthermore, GAIL has conducted a study on the suitability of ports for developing Ethane import infrastructure to diversify feedstock for its plants.
- GAIL small-scale LNG initiative by awarding liquefaction skids in strategic locations to cater to off-grid customers. This initiative aligns with the Indian government's push for cleaner fuels and promoting LNG as a transportation fuel.
- Additionally, GAIL's resolution plan for the acquisition of JBF Petrochemicals Ltd has been approved, enhancing the company's petrochemical business. Moreover, GAIL is exploring tying up the sale of hydrogen co-produced at its PDH-PP plant at Usar for merchant sale.
- During FY 2022-23, approximately 1074 km of natural gas pipeline has been commissioned. GAIL has also achieved 1,330 km of pipeline lowering in FY 2022-23. Pipeline Projects continue to be a major thrust area for the company to build natural gas infrastructure in the country. 4200 km of pipeline projects as a part of the National Gas Grid & other small connectivity are under different stages of project execution.
- GAIL has expanded the reach of Pradhan Mantri Urja Ganga Pipeline Project, also known as Jagdishpur Haldia and Bokaro Dhamra pipeline (JHBDPL) with the commissioning of 2,096 km out of 2,655 km total pipeline length. All the 4 major anchor Fertilizers plants, namely M/s Matix Fertilizers, Durgapur and 03 units of M/s Hindustan Urvarak & Rasayan Limited (HURL) at Gorakhpur, Sindri and Barauni are drawing full volumes.
- During FY 2022-23, the major addition to the JHBDPL network was made through the commissioning of the Bokaro-Angul Mainline. Dhamra-Angul Mainline with spur lines to Jamshedpur, Ranchi, Cuttack & Bhubaneshwar was commissioned. This will fast-track the expansion of the CGD network in these important cities.





Inauguration of Bokaro - Angul Pipeline by Hon'ble Prime Minister in FY 2022-23

- GAIL has extended the JHBDPL project to the North-Eastern region of India up to Guwahati in Assam with the construction of the 729 km Barauni-Guwahati Pipeline. The Bihar section of the Barauni-Guwahati Pipeline has been commissioned in March 2023.
- GAIL is committed to increasing the reach of Natural Gas in the country by way of providing Last Mile Connectivity to Industrial customers & to City Gas Distribution (CGD) entities for the supply of natural gas as CNG and PNG to various cities. During the year, the Company has completed 30 nos. hook-up connections to CGD Geographic Areas (GAs), 5 nos. Last mile connections to industrial customers and 02 nos. tie-in connectivity from Natural Gas sources during the year. Further, work is in progress to provide connectivity to another 6 industrial customers & 40 CGD GAs.
- Under the Petrochemicals business vertical, work is under progress on the 500 KTA Propane Dehydrogenation and Polypropylene (PDH-PP) Project at Usar, Maharashtra and 60 KTA Polypropylene (PP) project at Pata, Uttar Pradesh. Through the Corporate Insolvency Resolution Process (CIRP), GAIL has acquired the Purified Terephthalic Acid (PTA) plant of JBF Petrochemicals, Mangalore.
- GAIL has started a first-of-its-kind pilot project where the injection of blending of hydrogen in Natural Gas in the Aavantika Gas Limited -CGD network has been commenced. PNGRB has given approval to M/s AGL to implement the proposal for Hydrogen blending with Natural Gas up to 5% vol in the MDPE PNG network Downstream of DRS. Your Company is also setting up a 10 MW green hydrogen production capacity at Vijaipur, MP.
- In terms of Research and Development (R&D), GAIL allocates a significant budget for collaborative research and innovation with various institutes. This year, the company has focused its R&D efforts on waste valorization, wastewater recycling, CO₂ separation, pipeline integrity management and indigenous catalyst development.
- The expenditure for R&D initiatives this year amounts to INR 180.62 crore, which includes collaborative projects with research institutes and innovation/developmental initiatives at GAIL's facilities. Collaborators include academic institutes, Centre of Excellence (CoE) and CSIR Laboratories.

Currently, GAIL has adopted a collaborative approach with an expenditure of INR 5.54 crore



allocated to various R&D thrust areas, which are outlined below:

S. No	Thrust Areas	Expenditure in 2022-23 (INR Cr)
1	P/L protection/monitoring	0.20
2	Development of NG Storage, Methane to Olefins, Bio-CNG, NG Utilization /Storage	1.77
3	CO2 Utilization	0.50
4	Development of value-added petrochemicals /Polymers/ catalysts	0.60
5	Waste Valorisation/Others	1.90
6	Hydrogen/Fuel Cell/ Battery	0.57
	Total	5.54

Key Digital Management Initiatives at GAIL

- SAS data Analytics tool to work faster, stay agile and give the organization a competitive edge
- Three Business Analytics Modules i.e., Margin Optimization, Price Forecasting and Production Planning for Advanced Data Analytics
- Bill Watch System for tracking Suppliers' and Contractors' bills and ensuring timely payment
- E-bidding for LNG Cargo
- CBG Portal
- E-investment of GAIL (India) Ltd Employees Provident Fund Trust
- Bank Communication Management Module
- Medical Reimbursement App
- Permission for WFH during quarantine module HRD
- 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

- Centralised invoicing of NG trading and transmission implemented

During the FY 2022-23, several new initiatives and activities were taken up for information systems and digitization such as:

- UFT Implementation — New PNGRB regulations of Unified Tariff (UFT) for Natural Gas Pipeline (NGGS), made live wef 01 April 2023.
- Central Invoicing — Revamping of Invoicing methodology in NG Transmission business from Central Nodal Business Area (Noida)
- LHC DPR — Automated LHC Daily Production Report (DPR).
- Crude Oil Sale —Crude Oil Production & Sales process for E&P Business
- Vendor Invoice Management — Central processing of vendors' invoices wef 03 April 2023
- Auto Clearing — Functionality developed for Auto-posting of TDS & Auto-clearing of NG customers' invoices
- LNG Tanker Business — Implemented LNG Tanker business in SAP
- Death Relief Measures — Medical (GAIL PRAYAS) & Death Relief Measures-Housing for Covid Deceased employees

- Digitalization of Logbook for GAIL, Pata — Operation and Maintenance work centers.
- Shift E-Logbook - Digitized across 27 locations of GAIL, Pata.
- Analytics Dashboard - Monitoring the progress of planned v/s completed pipeline, on INDIA MAP along with Pipeline Marching chart; NG Sales monitoring, Material and Sales office-wise
- Robotic Process Automation (RPA) — The 10 repetitive processes (HR-4, SD(NG)-2, GMS-2 and FICO-2) were automated using software bot (RPA) which has resulted in reduction of man-hours required to do these repeated manual processes.

7.4 Financial Management Improvement Initiatives in FY 2022-23

(GRI 201-4)

GAIL implemented various financial management initiatives during FY 2022-23:

- The company effectively managed its liquidity needs by carefully planning cash flow and utilizing a balanced combination of borrowings and internal accruals.
- GAIL secured new borrowings at highly competitive rates, ensuring that the overall cost of funds remained manageable whenever required.
- Additionally, GAIL has issued INR bonds worth INR 1,575 crores for a duration of 5 years, attracting a competitive interest rate of 7.34%.

7.5 Business Outlook

(GRI 2-1, 2-6)

In recent years, we have experienced consistent growth across our different business segments. Our growth has been acknowledged and appreciated by multiple agencies and regulatory bodies throughout the financial year. The stable outlook and the potential for further business expansion led to GAIL receiving a domestic credit

rating of 'AAA' with a stable outlook. At the international level, Moody's assigned a credit rating of 'Baa3' with a Stable Outlook, while Fitch rated us 'BBB-' with a stable outlook which is equivalent to the sovereign rating of India.

7.5.1 Opportunities for GAIL

GAIL has committed to creating value for its stakeholders by actively pursuing and nurturing new growth opportunities. The company strives to leverage its existing capabilities while exploring diverse sectors both nationally and globally. One of GAIL's key commitments is to increase natural gas consumption in the country and explore new areas for the use of natural gas and LNG. In line with this, GAIL has undertaken several initiatives in low-carbon sectors such as small-scale LNG, bulk transportation of hydrogen, biofuels and renewables.

The details of each business segment of GAIL are described below:

7.5.2 Natural Gas Marketing (Fertilizer, power)

The two main pillars of GAIL's operations are Gas Transmission and Gas Marketing and the average gas transmission through this network during FY 2022-23 was 107.28 MMSCMD whereas 110.98 MMSCMD in the previous financial year. GAIL has expanded the network of Natural Gas pipelines to ~15,600 km across the length and breadth of our country. Revenue from operations from Natural Gas Transmission segment in FY 2022-23 was INR 6,661 crore as against INR 6,392 crore in FY 2021-22. The share in the country's Natural Gas Transmission is 65%.

Natural gas sales for GAIL in FY 2022-23 totalled 94.91 MMSCMD (which included sales within India of 83.03 MMSCMD and overseas sales of 11.88 MMSCMD) as against 96.24 MMSCMD (which included sales within India of 86.55 MMSCMD and overseas sales of 9.69 MMSCMD) during FY 2021-22 which result in 1.4% decline in the reporting year. The gross revenue generated

from Natural Gas Marketing in FY 2022-23 was INR 1,35,290 crore as against INR 77,326 crore in FY 2021-22. The share of GAIL in the country's Domestic Gas Market is 50%.

In FY 2022-23, GAIL marketed 41.47 MMSCMD of domestic gas. This was slightly lower than the 41.85 MMSCMD in the previous year. The volume of domestic gas accounted for approximately 50% of the total natural gas volume marketed by GAIL in India. The remaining 41.56 MMSCMD (50%) of gas marketed in India consisted of imported long-term, mid-term and spot liquefied natural gas (LNG) volumes. The sector-wise details- are mentioned below;

Fertilizer Sector: During FY 2022-23, GAIL played a crucial role in the Fertilizer sector by supplying approximately 67% of the gas consumed in the country. This involved providing Gas to Matix Fertilizers & Chemicals Ltd, Panagarh, Hindustan Urvarak & Rasayan Limited (HURL) plants in Gorakhpur, Sindri and Barauni, enabling them to successfully commence commercial urea production.

Power Sector: GAIL supplied around 43% of the gas consumed by gas-based power plants in India during the reporting period. The company has been actively collaborating with power producers to revitalize stranded units and is continuously seeking opportunities to supply Natural Gas to gas-based power generation facilities at affordable prices. Apart from domestic gas, GAIL is currently supplying approximately 1.79 MMSCMD of Regasified Liquefied Natural Gas (RLNG) to power plants.

In summary, GAIL's contributions to the Fertilizer and Power sectors during FY 2022-23 were significant, with substantial gas supply to facilitate commercial urea production and support gas-based power plants.

7.5.3 LPG Transmission

GAIL consist of two LPG pipeline networks such as the Jamnagar-Loni Pipeline (JLPL) and the Vizag-Secundrabad Pipeline (VSPL). In FY 2022-23, these networks collectively transported 4.335 MMTPA of LPG, which is an increase from the 4.199 MMTPA transported in FY 2021-22. The revenue generated from LPG transmission operations in FY 2022-23 amounted to INR 722 crore, compared to INR 669 Crore



Glimpses of GAIL's participation in JLPL Review Meet at Madanpur Khadar



7.5.4 Petrochemicals

GAIL operates a polymer production facility with a capacity of 810 Kilo Tons per Annum (KTA) at the Pata complex. Additionally, GAIL's subsidiary, Brahmaputra Cracker & Polymer Limited (BCPL), in which GAIL holds a 70% equity stake, has a capacity of 280 KTA. GAIL has the marketing rights for the BCPL plant, which adds to its total marketing portfolio, reaching 1,090 KTA.

In FY 2022-23, GAIL's PATA Petrochemical complex achieved a capacity utilization rate of approximately 57%. During the reporting period, GAIL generated revenue from operations amounting to INR 4,917 crore, compared to ₹8,549 crore in FY 2021-22.

GAIL received contracts for INR 5,231 crore for the PDH-PP Project Usar and INR 934 crore for the PP Project Pata in FY 2022–23. They sold 645 KTA of polymers, of which 399 KTA came from GAIL and 246 KTA from BCPL. With a 500 KTA PDH-PP facility under construction, GAIL is also seeking to increase its PC (polymerization) capacity.

Some of the projects under the petrochemical business vertical are mentioned below:

- GAIL is in the process of setting up a 500 KTA Propane Dehydrogenation and Polypropylene (PDH-PP) Plant at Usar, Maharashtra, which is expected to be commissioned in 2025. This would be the first plant in India to use Propane Dehydrogenation technology for the production of Propylene. For this project, M/s Lummus Technology LLC, USA has been selected as the technology Licenser for the PDH unit & M/s Grace Technologies Inc. has been selected as Technology Licenser for PP Unit. Various project-related activities are under progress.
- GAIL is also setting up a 60 KTA Polypropylene (PP) plant at Pata. Environment Clearance for the Project has been granted by the Ministry of Environment, Forest & Climate Change. M/S Grace Technologies Inc, USA has been selected as the technology Licenser for the PP unit at Pata.

- GAIL is also setting up 50 KTA Isopropanol (IPA) units at Usar at an estimated project cost of INR 530 crore.

7.5.5 LPG and Other Liquid Hydrocarbon Production

GAIL has five Gas Processing Units at four locations in the country such as Vijaipur, Pata, Gandhar and Vaghodia, with a total LPG & LHC production capacity of 1.4 Million MT. During FY 2022-23, total liquid hydrocarbon production from GPUs was about 0.93 Million MT as against 1.0 Million MT in FY 2021-22, of which almost 92% constitutes LPG and Propane. The revenue from operations from Liquid Hydrocarbons in FY 2022-23 also improved to INR 5,570 crore as against INR 4,865 crore in FY 2021-22.

7.5.6 Exploration and Production

GAIL currently consists of 13 exploration and production (E&P) blocks, with 10 located in India, 2 blocks in Myanmar and 1 shale gas joint venture in the Eagle Ford basin, Texas, USA (through its wholly-owned subsidiary, GGUI). The domestic E&P blocks are situated in basins such as Assam-Arakan, Cambay, Cauvery, Rajasthan and Gujarat Kutch. The overseas blocks are located in Myanmar, specifically the A-1 and A-3 blocks.

The Phase-II development of the Myanmar offshore blocks, A-1 and A-3 has been completed and production from the Shwe and Shwe-Phyu wells commenced in August 2022. Currently, the Phase-II development and reserve assessment for the Maher-2 gas discovery in Myanmar is in progress.

GAIL partners with operators for many of these blocks and operates three blocks in the Cambay Basin and Rajasthan Basin. The total acreage of the 12 blocks, excluding the shale gas JV in the USA, is 2,656 km² based on participation interest in various consortiums.

In FY 2022-23, the E&P activities generated the highest-ever revenue of approximately INR 1,134 crore during FY 2022-23 as compared to INR 834 crore in FY 2021-22. The cumulative gross revenue from E&P activities has reached around INR 7,500 crore.



Development activities are in progress for the following blocks:

- OALP-1 Block (CB-ONHP-2017/12) in Gujarat: Tendering activities for drilling and testing of one exploratory well, where GAIL operates, are in the final stage.
- CB-ONN-2010/11 in Gujarat: GAIL as an operator has recently started commercial crude oil production from Galiyana#1 field in Gujarat in March 2023.
- RJ-ONHP-2021/1 in Rajasthan: GAIL was awarded one block under the OALP-VII Bidding Round. The RSC (Revenue Sharing Contract) was signed in June 2022 and the PEL (Petroleum Exploration License) was granted in November 2022.
- CB-ONN-2000/1 & CB-ONN-2003/2 in Gujarat: Drilling of the PK#2 substitute well and SE DEV#2 has been completed in the CB-ONN-2000/1 block and both wells are under production. The Workover job on well PK2#A2 was completed and an additional zone was perforated in SE#1A. Both wells are now in production.



Surface Production Unit (Sucker Rod Pump and Crude oil Storage tank) at Galiyana#1 Quick Production System (QPS) in the block CB-ONN-2010/11. Commencement of Commercial Hydrocarbon Production by 3rd Indian CPSU as operator.

7.5.7 City Gas Distribution

(GRI 2-1)

GAIL, along with its subsidiaries and joint ventures, operates in 67 Geographical Areas (GAs) across India, including major metro cities. The City Gas Distribution (CGD) networks in these cities cover around 66% of the total domestic PNG connections in the country (~110 lakhs). GAIL and its subsidiaries manage 2,360 CNG stations, accounting for 42% of the total CNG stations in India (~5,600).



Floating CNG Station at Namo Ghat, Varanasi

In FY 2022-23, GAIL, its subsidiaries and joint ventures achieved over 10 lakh domestic PNG connections and established 132 CNG stations. GAIL Gas Limited, a wholly owned subsidiary, is executing and operating



CGD projects in 16 GAs, including Bengaluru. They have also set up 40 CNG stations and provided more than 34,000 domestic PNG connections in the Bengaluru GA area during FY 2022-23.

The 745 km Srikakulam – Angul Natural Gas Pipeline is being built by GAIL (India) Limited at a total project cost of around INR 2,658 crore. This is a part of with Pradhan Mantri Urja Ganga Pipeline being implemented by GAIL, at Angul and with Kakinada-Srikakulam Pipeline of Andhra Pradesh Gas Distribution Corporation (APGDC) at Srikakulam. Out of the total length, 620 km will be in Odisha and 125 km in Andhra Pradesh. The pipeline of 6.65 MMSCMD capacity will supply environment-friendly Natural Gas to domestic households, industries, commercial units and automobile sectors in various districts of Andhra Pradesh & Odisha and usher socio-economic growth in the region. It will supply Natural Gas to City Gas Distribution networks in Srikakulam, Vizianagaram districts in Andhra Pradesh and in Koraput, Malkangiri, Nabarangpur, Gajapati, Kandhamal, Boudh, Sonepur, Rayagada, Kalahandi, Bolangir and Nuapada districts of Odisha.

7.5.8 Coal Gasification

GAIL is currently involved in establishing a coal gasification-based Urea project in collaboration with Talcher Fertilizers Limited (TFL). TFL is a joint venture formed with Coal India Limited (CIL) and Rastriya Chemicals and Fertilizers Limited (RCF), each holding a 31.85% stake and Fertilizer Corporation of India Limited (FCIL) with a 4.45% equity. The project, estimated to cost around INR 13,277 crore, aims to produce 2,200 metric tons per day (MTPD) of Ammonia and 3,850 metric tons per day (MTPD) of Urea.

7.5.9 Renewable Energy

GAIL has a combined installed capacity of 132 MW in alternative energy which includes 117.95 MW from wind energy projects and 14.05 MW

from solar energy projects, which also include small solar units. In FY 2022-23, GAIL generated INR 46 crore in revenue from renewable power generation activities, compared to INR 51 crore in FY 2021-22.

7.6 Industry Events and Engagements

GAIL engages with industries and partners through various events and engagements.

- A City Gas Distribution Company (CGD) review meet was held in May 2023 at GAIL Corporate Office wherein Managing Directors/CEOs from 17 CGD companies of GAIL participated in the event. GAIL took a comprehensive review of the progress and performance of the sector, a major growth driver for increasing the share of natural gas in the energy mix. This event was held as a part of Azadi ka Amrit Mahotsav during April to July 2022.

7.6.1 Initiatives Taken for Engaging with Investors in FY 2022-23

In today's uncertain environment, Investor Relations (IR) is playing a key role in helping businesses to manage investor expectations. The goals of the company's investor relations efforts are to increase trust and develop a long-term relationship with stakeholders, including shareholders, investors and analysts, by providing accurate and fair information and explanations and by fostering bilateral communication.

We continually provide pertinent information and engage in a variety of investor relations initiatives in order to accomplish these goals at all times. We may increase the value of their IR strategy by building investor trust by actively interacting with the investor community. The following investor relations and engagement actions were carried out by GAIL during FY 2022–23 with the aim of communicating with investors effectively:

TOWARDS NET ZERO

- a) GAIL has organized a dedicated meeting for investors and analysts in the reporting year 2022. This event likely provided an opportunity for the company's top management and senior executives to interact with investors and analysts, discussing various aspects of the company's operations, performance and future plans.
- b) GAIL has arranged earning calls immediately after announcing the financial results for the first quarter (Q1), second quarter (Q2)/first half (H1) and third quarter (Q3) of the financial year 2023. These calls would typically involve a presentation of the financial results followed by a question-and-answer session with investors and analysts.
- c) GAIL has participated in 08 domestic investor conferences and 01 international investor conference. These conferences were organized by top brokerage houses in the country. Participating in such events allows the company to showcase its performance, strategy and potential to a wider investor audience.
- d) In March 2023, GAIL held an interactive meeting with investors and analysts. The purpose of this meeting was likely to discuss key regulatory changes, significant projects and their potential impact on the company's operations. The top management and senior executives of the company were present to address any queries or concerns raised by the participants.



Glimpses of GAIL's Interactive Meet with Analysts and Investors

Initiatives for Advocacy of Natural Gas

(GRI 2-28)

Natural Gas needs to be viewed as the pillar of decarbonization. Natural gas will be critical as a transition fuel in coping with the intermittent nature of renewable energy. Coal Gasification facilities might be built closer to the natural gas system under the Cleaner Use of Fossil Fuels program, allowing product gas or hydrogen to be pumped into natural gas pipelines.

GAIL has undertaken number of initiatives for gas advocacy such as:

- GAIL maintains regular engagement with prominent Indian industry associations like FIPCI, CII, FICCI, CSE, TERI, NITI Aayog and others.

- GAIL conducts periodic interactions with the Petroleum and Natural Gas Regulatory Board (PNGRB), the regulatory body, to provide updates on the industry's current status and share industry perspectives.
- GAIL actively collaborates with think tanks and government bodies to advance Natural Gas advocacy and promote market development in India.



GAIL (India) Limited has been awarded the prestigious 'Best Managed Project of the Year Award' for the Vijaipur-Auraiya Pipeline Project at the Oil & Gas Awards 2022 in Delhi, by the Federation of Indian Petroleum Industry (FIDI).



Sh. Deepak Gupta, Director (Projects) GAIL, shared his views in the panel discussion of IEW in the executive session, on a very important & relevant subject: 'Revolutionising and scaling gas infrastructure'.



Operational Excellence

08



GAIL's Customer Satisfaction Index for
FY 2022-23 is **89**



Total of **124 TQM** projects implemented in
FY 2022-23 which resulted in accrued financial
saving of INR **33.21** crores



GAIL has 'NIL' issue related to penalties/action
taken by regulatory authorities on product/
service safety in FY 2022-23



Operational Excellence

(GRI 3-3)

GAIL has taken a proactive approach to sustainability and recognizes the value of continuous improvement in driving operational excellence and long-term business success. By integrating sustainability into core business practice, the Company's operations have become more resilient, better positioned to meet the changing needs of stakeholders and better equipped to address emerging environmental and social challenges. A continuous focus on the improvement of processes and systems achieves better efficiency, quality and customer satisfaction, leading to higher sustainability.

8.1 Our Approach

GAIL is committed to creating value in a responsible and sustainable manner. It focuses on increasing scale, efficiency and profitability through innovation and identifying the best available opportunities which is a sound strategy for long-term success. By staying ahead of the curve and anticipating changes in the market, GAIL continues to thrive and grow while also ensuring that its operations are aligned with its sustainability goals.

Therefore, GAIL has developed improvement strategies to optimize the processes and achieve operational excellence which involves streamlining processes, automating tasks, implementing new technologies, training employees, modifying procedures and investing in new equipment.

GAIL has a standardized and comprehensive approach to operation and maintenance (O&M), which is reviewed regularly to ensure compliance with national and international standards and guidelines. The involvement of certified Subject Matter Experts (SMEs) of international repute in developing and reviewing the O&M philosophy is a positive step towards ensuring best practices and continual improvement. We have established a 3-level investigation mechanism

for carrying out Root Cause Analysis (RCA) of any incidents. We take safety seriously and have a zero-tolerance policy towards breaches. This mechanism helps the Company take corrective measures to prevent breaches from recurring resulting in efficient and safe operations.

8.2 GAIL's Leadership Responsibility

GAIL's strong leadership is responsible for achieving operational excellence. Our collaborative and consultative approach has developed sustainability strategies and plans for short and long-term goals by involving valuable stakeholders and expert agencies. Hence, the Organization can ensure that its sustainability efforts are effective, responsible and aligned with the expectations of our stakeholders and the broader community.

The responsibility for ensuring the proper implementation of these plans falls on the department heads at all GAIL sites, who are overseen by the corporate office. This is a good system, as it ensures accountability and promotes ownership of sustainability goals across all levels.

8.3 Integrated Management System (IMS)

(GRI 3-3)

In order to enhance the efficiency of business operations, the Company has implemented an integrated management system (IMS). This system integrates different management systems (such as asset, quality, environmental, occupational health and safety and energy management) into a single, comprehensive and streamlined system. This comprehensive approach offers valuable insight into crucial business processes, leverages synergies and consolidates resources, ultimately resulting in operational excellence with a focus on quality and efficiency. The integrated management approach encompasses the following elements



1. Asset Integrity Management System
2. Quality Management System
3. Environment Management System
4. Energy Management System

8.3.1 Asset Integrity Management System (GRI 3-3)

GAIL Asset integrity management (AIMS) system within the business operations provides the reliability of assets such as pipelines, storage tanks and processing facilities and also involves managing the risks associated with their operation and maintenance. AIMS is a structured approach that works to increase operational efficiency by optimizing asset utilization (by regular tracking and updating of records of assets), reducing risk, ensuring efficient operations, managing inventory, reducing maintenance costs, enhancing safety and adhering to relevant regulations and ability to implementing risk plans. .

8.3.2 Responsible Pipeline Integrity Management System

The integrity of a pipeline network is determined by the design and construction stage and also by ongoing maintenance and monitoring efforts throughout the life of the pipeline which ensures safe and reliable operations.

GAIL gas pipeline networks comprise predominantly of carbon steel pipelines of sizes ranging from 4" to 48" diameter and upto API 5LX 80 steel grades in adherence to quality specifications and codes 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, for LPG PPPL T4S regulations 2016 and ASME 31.4 which are all positive indications of a well-designed and constructed pipeline network. The pipes are underground having a 3-Layer Polyethylene (TLPE) coating applied to their outside surfaces, and protected by an Impressed Current Cathodic Protection (ICCP) system.

Assets are designed and constructed to meet relevant codes and industry-specific standards for continuous operations. The Organization's gas networks are monitored around the clock using advanced communication and telemetry systems. The monitoring is done from multiple regional control rooms at the headquarter of each network, as well as from the National Gas Management Centre (NGMC), a centralized control facility in Noida.

GAIL has a responsible pipeline integrity management system (PIMS) as per PNGRB Regulations and ASME B31.8S / API 1160. The Integrity Management system comprises a 3-tier governance mechanism with:

- Central Integrity Management Group (CIMG) at the corporate O&M level,
- Regional Integrity Management Groups (RIMG) at all Pipeline headquarters level.
- Maintenance base at sites

The organization make sure that the implementation of Operation & Maintenance Policy and Guidelines for Pipelines is strictly monitored and reviewed regularly.

PIMS are designed to manage the entire pipeline integrity management process, from data collection to analysis and reporting. They integrate various tools such as In-line Inspection (ILI), Direct Assessment (DA) and Hydrostatic Testing (HT) and help in identifying and prioritizing the areas that require inspection, maintenance or repair. To achieve this, various web applications and databases have been developed, which help in analyzing and managing the pipeline integrity data. The software helps in tracking the pipeline's condition and performance over time ensuring that the pipelines are safe and reliable and minimizing the risks associated with pipeline failures.

GAIL major pipelines commissioned during FY 2022 are:



- Commencement of operation of 36" Vijaypur- Auraiya pipeline of length 352 Km on 4th June 2022.



- GAIL has laid a natural gas pipeline called HMEL pipeline connectivity for a total cost of approximately INR 142 crores. This pipeline is part of DBNPL (Dadri Bawana Nangal Pipeline), which runs from Dadri (Uttar Pradesh) through Yamuna Nagar (Haryana) to Nangal (Punjab), to meet the energy needs of these northern states. The pipeline is expected to deliver 1 MMSCMD of gas to HMEL (HPCL Mittal Energy Ltd.), Bhatinda.
- The 30" Bokaro-Angul pipeline section of JHBPL of length 513 km has been commissioned on 30th June 2022.

8.3.3 Total Quality Management

GAIL has implemented Total Quality Management (TQM) system in their operational projects to improve operational efficiency. Total Quality Management(TQM) is an approach to management that aims to optimize the quality of products and services through continuous improvement, involving all employees and stakeholders in the

Company. GAIL TQM department is focused on meeting or exceeding customer expectations which is one of the Company's primary goals - to improve customer satisfaction.

TQM emphasizes the importance of customer feedback and uses it to drive improvements. GAIL continues to gather feedback from its customers and analyse it and identify areas for improvement and make changes to products and services accordingly.

The Company captures the voice of customers through Customer Value Management and Customer Satisfaction Index surveys which is an essential step towards ensuring customer satisfaction. Finally, achieving a customer satisfaction index of 89% for FY 2022-23 is an outstanding achievement that reflects the dedication and hard work put in by GAIL's employees.

GAIL is committed to enhancing customer satisfaction and standardizing business



Inauguration of PPE's and Firefighting Equipment Exhibition at GAIL Vijaipur

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. Quality Management Systems and Energy Management Systems have been implemented along various Pipelines & Process units also at Corporate and Marketing offices. GAIL undertakes Quality Circle Projects with engagement of its employees resulting in high employee morale and increased productivity. To improve customer satisfaction various tools are implemented across GAIL operation sites. These tools are effective to collect feedback from customers on product quality and services.

1. Customer Satisfaction Index (CSI)

GAIL actively conducts surveys, collects and analyses the feedback received from customers about the company's products or services through SAP. In FY 2022-23, a total of 150 customers were surveyed out of the total 69 customer concerns were received and all are resolved. GAIL mitigates customer complaints and their observations properly with pre-defined grievance mechanisms.

2. Quality Circles Projects

Quality circles are a powerful tool we use to improve operations and increase employee engagement. By involving employees from different departments working together to identify and solve quality-related problems. Employees are encouraged to form small groups including 3-4 persons to undertake the improvement/modification projects within their work area pertaining to process, service, procedure and work system to promote teamwork and collaboration and they can lead to improvements in product quality and customer satisfaction. In FY 2022-23, a total of 124 quality circle projects were successfully implemented, all these projects resulted in financial savings of INR 33.21 crore, gas savings of 5.40 MMSCM.

Additionally, there are motivational schemes associated with QC projects in GAIL. The in-house scheme is the CMD Trophy award for best QC projects. Besides, the Quality Circle Forum of India (QCFI) also propagates the quality concept in India - it encourages industries to participate in various



competitions at the (i) Regional Level, (ii) National Level, (iii) International Level.

3. ISO 9001:

GAIL TQM department implemented ISO 9001 (QMS) standards across its zonal offices and corporate offices. This quality management system standard outlines requirements for an organization to demonstrate its ability to consistently provide products and services that meet customer and regulatory requirements.

Major initiatives for FY 2022 – 23:

- Program session on “Stay Healthy and Stress Management” was organized at HIPPA (Himachal Pradesh Institute of Public Administration) in two batches for 30 participants.
- International Conventional on Quality Control circles (ICQCC) 2022: 03 QC teams from GAIL participated in ICQCC held in Nov 2022 and won the gold award
- ISO 9001: 2015 certification completed for 11 zonal offices and 19 corporate departments. Training to 35 participants for ISO 90001:2015 Awareness cum internal auditor certification course was organized through GTI in December 2022.

8.3.4 Environment Management System (EMS)

(GRI 3-3, GRI 413-1, GRI 416-2)

GAIL has implemented an environmental management system that is aligned with ISO 14001:2015 standards. This demonstrates the Company's commitment to reducing its environmental impact and managing its operations in a sustainable manner.

Our robust environmental policy ensures that we operate in an environmentally responsible manner and comply with all relevant regulations. By actively monitoring and improving environmental performance, GAIL is taking a proactive approach to environmental

stewardship. This proactive approach involves the Plan-Do-Check-Act methodology which helps reduce the risk of zero non-compliance and improve health and safety practices for all stakeholders, thus leading to continuous business improvement.

Additionally, it addresses a range of environmental issues, including air emissions, water usage and quality, waste management and the impact of operations on biodiversity. GAIL EMS helps to meet regular requirements, reduce costs and enhance GAIL's reputation as a responsible business entity gas industry. The Company undertakes various measures before initiating any project:

- 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 new technology for construction projects

Based on monthly exception reports received from sites for FY 2022-23, GAIL has a 'NIL' issue relating to penalties/action taken by regulatory authorities on product/service safety (HSE Regulatory Bodies like Director of Factories, PESO, PNGRB, Central and State Pollution Control Board, Indian Boiler Inspectors, Central Electricity Authority, etc. have notified various regulations on their subject areas).

GAIL did not conduct EIA in the current fiscal year since it was not required by legislation for natural gas pipelines.

8.3.5 Energy Management System (EnMS)

(GRI 3-3, GRI 302-4)

GAIL has ventured into Renewable and Alternative energy sources like Wind, Solar,



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Compressed Biogas and Green Hydrogen. It continues to maintain its focus on the usage of renewable energy across its operations in line with India's Nationally determined contribution (NDCs) as per the Paris Agreement. We have implemented an Energy Management system (EnMS) that helps in reducing overall energy consumption by investing and developing innovative solutions across the value chain that decrease environmental impact and directly reduce our carbon footprint.

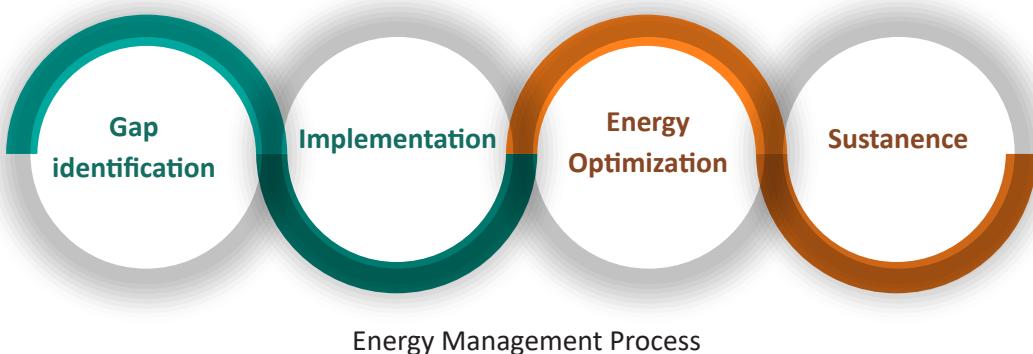
The digitalization of the Energy Management System allows for connecting and coordinating all the network's equipment and devices

at GAIL, which leads to greater operational efficiency. This also helps system operators reduce unplanned downtime and increase equipment reliability. Thus, the digitization in energy processes reshape the infrastructure of the Energy Management System.

All GAIL major sites are accredited with ISO 50001 Energy Management System (EnMS) certification. It helps the Organization improve its energy performance by making better use of its energy-intensive assets. Improved energy performance which can provide rapid benefits to an organization by maximizing its use of energy sources and energy-related assets, reducing cost and consumption.



'Energy Transition – Midstream Company' award at the prestigious Platts Global Energy Award 2022 was received by Shri M. V. Iyer, Director (Business Development and Marketing) and Shri R. K. Jain, Director (Finance) at the awards ceremony held in New York City.



The key initiative taken through the effective implementation of new technologies involving “Energy Efficiency” at GAIL sites in FY 2022-23 are:

1. Installation of Roof Top Solar Energy
2. Installation of an Energy Monitoring System in the operation unit
3. Installation of four Continuous Ambient Air Quality Monitoring Stations (CAAQMS)
4. Installation of modern and new energy-efficient equipment

At GAIL sites, there is an ongoing effort to substitute old and less energy-efficient machinery with contemporary and energy-efficient machinery. Several significant endeavours undertaken in FY 2022-23 in pursuit of this goal are outlined below:

- Installation of Variable Frequency Drive (VFD) in DM Water transfer pump at Vijaipur: VFD has been installed and commissioned in DM water transfer pump motor (Rating-75 KW) to regulate and control the motor speed, on Feb'2023. It is estimated to save electrical energy approx. 1,65,000 units per year.
- Rectification of steam traps in the C2C3 unit at Vijaipur: A comprehensive audit of the steam network installed in the C2C3 unit was carried out and a detailed database of steam traps was prepared besides their operational status, application and location. All faulty steam traps were replaced along with the installation of new traps wherever required. This resulted in savings of approx. 9.5 Tonnes per hour (TPH) steam

Installation of modern and new energy-efficient equipment

At GAIL sites, there is a continuous drive to replace old and lesser energy efficient equipment with modern and new age energy efficient equipment to increase reliability and enhance safety. Some major initiatives taken in this direction are mentioned below:

- **Replacement of old motors with energy-efficient IE3 motors:** New energy-efficient IE3

-Premium efficiency category motors were installed for continuous running services in the unit area. Two motors in each of LG, FG & LPG Air Coolers were replaced with IE3 Energy efficient motors. These motors provide high efficiency for the same output power compared to conventional motors, yielding an annual energy saving of 64,750 kWh.

- **Automated operation of GAC (Gas after cooler) fan Motor of GTC's at Khera Compressor Station** by implementing PLC logic control using temperature as regulating parameter for starting and stopping the fans. Significant Electrical energy savings is anticipated as only 02 nos. of GAC fan are being required/running as per process requirement at night and during winters against 05 nos. of GAC fan running before modification.
- Energy Efficient Motors in Service water pumps, gas after coolers, HRSG and CWP were installed at Vaghodia.
- 200 KVAR Capacitor Bank installed and commissioned at GAIL Bhawan Mumbai to improve power factor and thus reduce energy consumption.
- Retrofitting/replacements of conventional HPMV/HPSV lamps & other lighting systems with energy-efficient LED fittings & lighting systems at various installations of GAIL.
- Hazira Compressor Station achieved energy savings of 1204.5 KWH with an expenditure of INR 0.42 lakhs by replacing 250 W fittings with 140 W LED fittings.

8.3. 6 Responsible Compliance Management (GRI 2-27a)

GAIL has comprehensive, well-documented Internal Legal Compliance Systems (LCMs) which ensure that the company follows all the regulations, standards, policies and codes of conduct that apply to an organization. It directly contributes to successful operations, including favourable interactions with regulators, the ability to attract high-quality operators and

personnel, reduced costs from accidents or incidents and also improve productivity and performance.

GAIL system ensures that organizations communicate and conduct proper training with all personnel, monitor compliance activities and make reporting available. The system's periodic audit activities provide measurements against goals for continual improvement.

While auditing or inspecting the facility, our internal audit teams or HSE teams conduct an audit for verification and identifying any scope of improvement from the lens of compliance - employee interviews, reviews, knowledge sharing and regulatory framework status updates are done for effective employee involvement and building a 'Beyond Compliance culture'. Before starting each project, GAIL's Board of Directors prioritizes HSE compliance, therefore an evaluation is performed by Board-level audit committees and all department heads are made aware of their responsibilities.

Because of our stringent compliance practices, none of our products or services have been prohibited in any market or area. GAIL also incurred no monetary or non-monetary consequences for non-compliance during FY 2022-23.

A Compliance Assessment Audit to the PNGRB Regulations, 2009 of the Hazira-Vijaipur section of Hazira-Vijaipur-Jagdishpur (HVJ) Natural Gas Pipeline (NGPL) was conducted by PNGRB nominated committee during the FY 2022-23.

8.3.7 Information System and Digitalization

(GRI 3-3)

As a leading company in the Natural Gas value chain in India, GAIL recognizes the importance of leveraging information technology (IT) to drive business growth and innovation. GAIL has always adopted start-of-the-art technology solutions with a vision to improve productivity, efficiency and customer experience and gain a competitive advantage while reducing costs. GAIL remains committed to leveraging IT to support business growth and drive value for its stakeholders.

GAIL has implemented robust cybersecurity measures to protect IT systems and data from cyber threats and attacks. This includes operating a round-the-clock Security Operations Centre (SOC) with advanced security software, implementing regular security audits and providing ongoing training and education to our employees. The IT data centres are ISO27001:2013 certified.

GAIL comprehensive Crisis Management Plan has been put in place to deal with Cyber Attacks and Cyber Terrorism. To ensure efficient control, GAIL has set up an Incident Handling Team that includes a Crisis Management Cell (CMC) and a Level-II Incident Resolution Team.

During FY 2022-23, no information security breaches, cyber security incidents, or IT incidents occurred at GAIL.

GAIL has always been at the forefront of technological changes to become a digitally empowered organization. It has implemented



Shri Ayush Gupta, Director (HR), GAIL spoke on "Efficiency at the heart of growth: technology, innovation, digitalization and talent" during the India Energy Week 2023



and adopted new technologies that meet stakeholders' needs and improve transparency in business operations.

The organization Digital Strategy vision aims at addressing the future needs of GAIL in terms of mission-critical services, supporting operations, maintenance, planning and sustainability. The development of new digital technologies is expected to make a huge contribution to achieving sustainability through enhanced monitoring and data capturing. A broad multi-stakeholder alliance and platforms for sharing

digital solutions and services are essential to attain Sustainability Development Goals. Digital cooperation on platforms is helping in creating a database that could be used for big data analytics-based solutions to support better planning and optimization and help the Organization realize its digitalization ambitions.

GAIL approach towards Digital transformation will deliver a substantial increase in revenue mostly due to the increase in production and workplace safety resulting in better operational efficiency in the coming years.



Shri Hardeep Singh Puri, Hon'ble Minister for Petroleum & Natural Gas and Housing & Urban Affairs, Shri Pankaj Jain, Secretary, MoPNG, Shri Sandeep Kumar Gupta, CMD GAIL along with senior officials of MoPNG and Oil & Gas sector companies on cruise in river Ganga during CNG Boat Rally at Varanasi

During FY 2022-23, several new initiatives and activities were taken for responsible information systems and digitalization such as:

1. Implementation of QR code-based inventory management application across GAIL.
2. Functionality developed for entry of letter of credit (LC) details and auto reminder facility.
3. Methodology developed for providing details

relating to CBA bidders is pre-specified performance in e-tendering and thereafter preparation of CBA

4. Non-Mandatory creation of RFQ and CS for GeM tenders.
5. Restriction on good receipt cancellations / reversals and return delivery of GRs in SAP.

Energy and Environment

09



In FY 22-23, GAIL has spent INR **46.33** Lakhs on environmental awareness and employee development.



Implementation of Mission LiFE in GAIL's operational activities



In FY 22-23 GAIL's total expenditure under R&D/Innovation initiatives is INR **180.71** crore



Energy and Environment

(GRI 3-3-a, b, c)

GAIL being in circle of global energy system is aware that the production and use of gas can have environmental implications, particularly in terms of greenhouse gas emissions and air pollution. For GAIL, protecting environment and surroundings is a major focus area. We ensure that all our operations are conducted in compliance with environmental regulations and best practices. This includes monitoring and reporting on environmental performance, conducting regular environmental audits and engaging & building trust with stakeholders to identify and address environmental concerns.

We are committed to reducing our environmental impact while still achieving operational excellence with implementation of various initiatives and mitigations plans.



In FY 2022-23, GAIL has spent INR 46.33 Lakhs on training, seminars and workshops in the areas of environmental awareness and employee development.

At GAIL, we diligently celebrate & conduct environment related events and awareness programs at our sites. This includes World Environment Day, World Wildlife Day, Earth Day, Van Mahotsav, World Water Day, Tree plantation drives and many other such programs.

Mission LiFE

An India-led global mass movement to nudge individual and community action to protect and preserve the environment. Mission Lifestyle for Environment (LiFE) recognises that Indian culture and living traditions are inherently sustainable. The importance of conserving our precious natural resources and living in harmony with nature are emphasised in our ancient scriptures. The need of the hour is to tap into that ancient wisdom and spread the message to as many

people as possible. Mission LiFE seeks to channel the efforts of individuals and communities into a global mass movement of positive behavioural change.

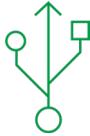
India's Mission LiFE seeks to empower people to fight against climate change. The concept of 'Lifestyle for the Environment (LiFE)' was introduced by Prime Minister Narendra Modi at COP26 in Glasgow, calling upon the global community of individuals and institutions to drive LiFE as an international mass movement towards "mindful and deliberate utilization, instead of mindless and destructive consumption" to protect and preserve the environment. LiFE puts individual and collective duty on everyone to live a life that is in tune with Earth and does not harm it. Those who practice such a lifestyle are recognized as Pro Planet People under LiFE.

Mission LiFE will play an important role in incorporating best practices for employees and company's culture to promote lifestyle for environment.



Theme-wise initiatives by GAIL for Mission Life:

Theme	Initiatives taken for FY 2022-23
Save Energy 	<ul style="list-style-type: none"> Energy transition includes the technology switch and initiatives taken to replace existing source of energy. GAIL is exploring alternate green fuel sources to reduce its emissions such as CBG, Ethanol blended petrol, Green Hydrogen. GAIL has total installed capacity of 132 MW of alternative energy and various RE projects are planned under its Net Zero Roadmap. GAIL is also focussing on operational decarbonization which includes the technology and initiatives to reduce its direct in-house GHG emissions by means of energy efficiency, fuel switch, electrification etc.
Save Water 	<ul style="list-style-type: none"> GAIL ensures that its operations have no negative effects on the supply and quality of water resources throughout the various sites. GAIL has proactively evaluated and mitigated any water-related risk in the future to make its operations resilient. At GAIL, we conduct water audit through third-party to monitor water demand. GAIL encourages and supports water-saving innovative ideas across sites via various initiatives such as reduced freshwater consumption, rainwater harvesting/collection system, monitoring and management of waste-water discharge, wastewater treatment and recycling based on its Environmental Policy, national, local and regional guidelines
Say no to single-use plastic 	<ul style="list-style-type: none"> GAIL is committed to avoiding single-use plastic in its all operations and offices by creating awareness and establishing a system to avoid the usage of single-use plastic.
Reduce Waste 	<ul style="list-style-type: none"> GAIL ensures that waste materials are disposed of in a way that minimizes their impact on the environment and human health. We strive to implement circular economy across our operations by deploying resource efficient technology. We follow effective waste management practices which involve reducing, reusing, recycling and responsibly disposing of Hazardous and Non-hazardous waste at all sites.
Adopt healthy Lifestyles 	<ul style="list-style-type: none"> The Saksham Cyclothon, was organized by GAIL, Karaikal as part of an awakening campaign, " Azadi Ka Amrit Mahotsav Through Green & Clean Energy" -an initiative of the Petroleum Conservation Research Association (PCRA) under the aegis of the Ministry of Petroleum & Natural Gas. The objective of this cyclothon is to create awareness amongst the people about the fuel conservation, environment protection and promote the use of cycle for short distances, which will not only save fuel but also help in creating a cleaner, greener & healthier environment. Further, GAIL ensures availability of Open Gym, Recreational and sports facilities in its townships for leading a healthy lifestyle and soliciting employees to participate in Yoga Day, Walkathons, Marathons etc.

Theme	Initiatives taken for FY 2022-23
Reduce E-Waste 	<ul style="list-style-type: none"> GAIL has effective waste management system which includes e-waste disposal, which is done with utmost care and responsibility by engaging authorized vendors. GAIL's sites have Extended Producer Responsibility plan submitted to respective Pollution Control Boards. Accordingly, it manages its waste collection and recycling.

9.1 Governance and Policy on Energy and Environment

(GRI 3-3-c, e, f)

At GAIL, operations take a holistic approach to energy. Our Sustainability Steering Committee adheres to the Sustainable Development Policy instructions and the Committee is in-charge of implementing the company's sustainability goals as well as risk and performance management. We have sustainable development policy which highlights our approach and initiatives towards economic, social and environmental aspects while taking both development and ecosystem in account. We also have site-specific SOPs and other operational memos to ensure that all our operations and works are in accordance with the procedures that have least impact on the environment.

Link to Policy: [Sustainability Policy-GAIL](#)

9.2 Biodiversity Management

(GRI 304-1a, GRI 304-2a, b, GRI 304-3a, GRI 304-4a)

GAIL is cognizant that effective biodiversity management requires a multi-faceted approach that involves a range of strategies and stakeholders. Biodiversity management is a critical component of environmental management, as it helps to protect and conserve natural resources that support life on Earth. We are committed to maintain, enhance and conserve biodiversity and ecosystems in accordance with regulatory standards. We abstain from operating near IUCN Category I-IV protected areas and World Heritage sites and we adhere to the mitigation hierarchy (avoid, minimize, restore and offset). We refrain from constructing and disturbing areas around ecologically sensitive areas (such as national

parks, wildlife sanctuaries, biosphere reserves, wetlands, biodiversity hotspots, forests, coastal regulation zones etc.)

The Company undertakes environmental impact assessments prior to any new construction activity. We have a well-defined Environment Management Plan (EMP) that outlines the principles and processes for conducting various green-belt and biodiversity management activities at GAIL sites. We have also developed and maintained thick greenbelts at our plant locations, diverse flora and fauna native to the region found in these greenbelt areas. We regularly conduct surveys and studies on the environment and ecology of the area in and around our units to resolve issues and maintain the ecosystem. Our contributions are aligned with the goals and targets of Sustainable Development Goal (SDG) 14 and 15 to create positive impact on the life of living creatures under water and on land.

As part of our attempts to protect biodiversity, we have ensured that no protected habitats are within 10 km of any GAIL working site. Pipelines installed in green cover areas have a lifespan of 25-30 years. This is accomplished by using the smallest amount of space possible. Once the pipeline is installed, the required steps are performed to restore/reclaim the forest area and it is normally left undisturbed until the need for maintenance arises. To reduce the environmental impact of pipelines, we operate less than one-third of the RoU for pipelines passing through forest areas.



Out of all the units of GAIL, Pata plant, being largest plant of GAIL, is the major contributor towards GAIL's sustainability initiatives including green initiatives. We have also contributed towards COMPA (Compensatory Afforestation), which is done for the laying of pipelines through Forest areas.

9.2.1 GAIL's Biodiversity Initiatives at various sites

GAIL has partnered with "Interactions" to contribute to the promotion of environmental conservation and biodiversity worldwide, with a particular focus on India. As part of the Azadi Ka Amrit Mahotsav celebrations, the Consulate General of India screened the global awareness film "Interactions" in Geneva in May 2022.

PATA: GAIL Gaon township has a rich Biodiversity with a variety of flora and fauna with a Butterfly Park, Mini Golf course and approximately 160 acres of green cover. Besides maintaining the micro-climate near the houses, this vegetation supports a great deal of bird and butterfly diversity. Many native species of trees are planted in the gardens and every garden has a different theme-based plantation.

GAIL Pata has nearly 500-acre land (around 33% of total area) that accounts for Greenbelt size. In FY 2022-23, ~ 1,56,465 trees were planted at the operational site and in the residential area.

Vijaipur: GAIL Vijaipur has a total of 321 acre land (> 30% of total area) that accounts for greenbelt size. A total of ~803 trees were planted at the operational site and in the residential area

Vizag: has nearly 28 acre land (around 45.52% of total area) that accounts for Greenbelt size, In FY 2022-23, ~5000 trees were planted at the operational site and in the residential area

An estimated 3300 saplings have been planted across the NCR region to achieve Sustainable Development goal of GAIL and help in the reduction of carbon footprints.

9.2.2 Celebration of World Environment Day

GAIL (India) Limited organized several events on the World Environment Day at its various sites to raise awareness about the need for living with the environment and long-term sustainability & Mission LiFE objectives with focus on "beat plastic pollution."

World Environment Day was celebrated at Jubilee Tower, Noida. Senior Officials inaugurated the Program by taking a pledge along with all employees. Site OICs, WICs & other employees attended the program through an online platform. A renowned external speaker from TERI was also roped in for the occasion, who spoke about the importance of the day & encouraged people to live sustainable lifestyles. In the keynote address it was emphasized for everyone to be a catalyst for enhancing environmental aspects. It was also advised to conduct an Environmental audit with specific mention to Plastics. The importance of environmental conservation for long term sustainability was highlighted. During the Inaugural session, an Environmental talk on "Beat Plastic Pollution & Environmental Awareness" was delivered by a speaker from TERI, New Delhi. Participants were made aware of the importance of environmental activities in various industry across the world. Environment is one of the main drivers of all the business activities and apprised everyone about the life cycle of various plastic pollutants. Corporate HSE department also conducted an Online Environmental Quiz on this occasion & distributed plants and saplings to employees. Few glimpses of the WED Function are as follows:

Few glimpses of the World Environment Day Function



GAIL, Dibiyapur Celebrated World Environment Day 2023





9.3 Energy Management

(GRI 302-1, GRI 302-2- Refer Performance & Standards)

GAIL believes that effective energy management can help reduce greenhouse gas emissions and mitigate climate change, as well as reduce energy costs and improve the overall energy efficiency of buildings and operations. We are dedicated to contributing to energy management through implementing energy efficient practices & technology in accordance with OEM recommendations.

At GAIL, all the major installations are ISO 50001 Energy Management System certified. We are dedicated to the NDCs (Nationally Determined Contributions) set by the United Nations. GAIL has been also associated with Mission LiFE (Lifestyle for Environment) of NITI Ayog and spreads awareness on sustainable use of energy among its own operations and the community at large through social media.

9.3.1 Central Approved Energy Saving Initiatives

(GRI 302-2a, b, c, d, e, f, g, GRI 302-3a, b, c, GRI 302-4a, b, c, d, GRI 302-5abc Refer- Performance & Standards)

GAIL (India) Limited is a Government Company

under the administrative control of the Ministry of Petroleum & Natural Gas (MoPNG). GAIL's Pata plant is a designated Consumer under Bureau of Energy Efficiency (BEE) Perform, Achieve and Trade (PAT) Cycle IV. We have achieved the target of PAT scheme reduction of 6.17% from the base line year of 2016-17.

9.3.2 Site Wise Energy Saving Initiatives

Installation of Variable Frequency Drive (VFD) in DM Water transfer pump at Vijaipur: VFD has been installed and commissioned in DM water transfer pump motor (Motor Rating:75 KW) to regulate and control the motor speed, in February 2023. It is estimated to save electrical energy of approx. 1,65,000 units per year.

Rectification of steam traps in the C2C3 unit at Vijaipur: A comprehensive audit of the steam network installed in the C2C3 unit was carried out and a detailed database of steam traps prepared besides their operational status, application and location. All faulty steam traps were replaced along with the installation of new traps wherever required. This resulted in savings of approx. 9.5 Tonnes per hour (TPH) steam.

Commissioning of Grid Power Supply at Compressor Stations:

With the improvement in reliability of Grid Power

for the remotely located Dibiyapur compressor station, GAIL has shifted from GEG power to Grid power w.e.f. August-2022. Similarly, Kailaras Compressor station is also shifted from GEG power to Grid power w.e.f. July-2022. This has resulted in cost saving operation of GEG at partial load proved to be less energy efficient.

Recovery of condensate water from the PRDS system and HVAC system at LPG unit Vijaipur: In-house modifications were carried out to connect the condensate header of PRDS system and HVAC system at LPG unit to condensate the C2C3 unit for the utilization of condensate water. These projects aimed to conserve natural resources while reducing the effluent load on wastewater treatment plants and saved freshwater consumption of around 29 m³/hr.

At GAIL sites, there is a continuous drive to replace old and lesser energy efficient equipments with modern and new age energy efficient equipments, to increase reliability and enhance safety. Some major initiatives taken in this direction are mentioned below:

- Automated operation of GAC (Gas after cooler) fan Motor of GTCs at Khera Compressor Station by implementing PLC logic control using temperature as regulating parameter for start and stop the fans. Significant Electrical energy savings is anticipated as only 02 nos. of GAC fan are being required/running as per process requirement at night and during winters, as against 05 nos. of GAC fan running before modification.
- Energy Efficient Motors in Service water pumps, gas after coolers, HRSG and CWP were installed at Vaghodia.
- 200 KVAR Capacitor Bank installed and commissioned at GAIL Bhawan, Mumbai to improve power factor and thus reduce the energy consumption.

- Retrofitting/ replacements of conventional HPMV/HPSV lamps & other lighting systems with energy efficient LED fittings & lighting systems at various installations of GAIL.
- Replacement of old and energy inefficient AC systems with energy efficient star rated AC systems at various installations of GAIL.

Other Major Initiatives

Green Hydrogen Blending in NG in CGD Network:

In line with the National Hydrogen Mission, green hydrogen blending in City Gas Distribution (CGD) network of AGL, Indore increased from 2% to 5%. The Impact Study on CGD/NG pipeline network due to various levels of Hydrogen blending in NG is also being carried out through SME consultant.

Renewable Energy at GAIL sites

GAIL has ventured into renewable energy space and already has the installed capacity of 14 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.

At GAIL Pata, Rooftop solar PV powerplant of capacity 5.76 MWp has been commissioned and installation of additional 2.64 MWp is under progress.

Installation and commissioning of Solar Power Plants

Solarisation of installations is a continuous effort to harness the solar potential and on this front 1045 KWp grid-connected and off-grid solar power plants have been installed and commissioned at various locations of GAIL as under:



JLPL Network	103 KWp Grid-connected
Gandhar	267 KWp Grid-connected
Mumbai Region	64 KWp Grid-connected
Vaghodia	190 KWp Grid-connected
Dibiyapur Region	182 KWp Grid-connected
Khera	20 KWp off-grid
Kochi	10 KWp Grid-connected
Vadodara	209 KWp Grid-connected

GAIL is a leading natural gas company of India, we are working to strengthen the infrastructure of delivering natural gas, ~1074 Km of natural gas pipeline section commissioned during FY 2022-23. The company has also achieved 1,330 km of pipeline lowering in FY 2022-23. At our SV/IP stations of pipelines solar power is being used as backup power or energy source for daily operations.

Wind Power generation credit: Wind power generation credit has been availed for wheeling of wind energy, generated by Wind Power Plants installed in Gujarat, through GETCO network for the following locations.

- Hazira
- Gandhar
- Vaghodia
- Samakhiali
- Kandla

GreenCo

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. GAIL has embarked on the journey of adopting of GreenCo Rating in FY 2019-20.

Year	Plant/Location	Green Co rating
FY 2022-23	Jhabua, Vizag-Secundrabad LPG Pipeline (VSPL)	Silver rating by CII GreenCo
FY 2021-22	Pata	Gold Rating by CII GreenCo
FY 2021-22	Gandhar	Silver Rating by CII GreenCo
FY 2020-21	Vaghodia and Vijaipur	Silver rating by CII GreenCo





As a part of India's strategic clean energy partnership aimed at improving efficiency, environment & safety while reducing emissions through technical solutions, MoUs have been signed between GAIL's JV companies (Indraprastha Gas Ltd & Avantika Gas Ltd.) and Baker Hughes in Houston, USA in presence of the Hon'ble Minister of Petroleum & Natural Gas and Housing & Urban Affairs, Shri Hardeep Singh Puri and CMD, GAIL Shri Sandeep Kumar Gupta.

9.3.3 Capital Investment on energy conservation

The capital investment on energy conservation equipment by the company during the year on the completed projects is approx. INR 16 crore as detailed below:

Cost of Project taken in FY 2022-23

Project	Expenditure (INR Lakhs)
Installation of VFD in DM Water transfer pump motor	10.64
Rectification of steam traps in the C2C3 unit area	106
Retrofitting/ replacements of conventional HPMV/HPSV lamps & other lighting systems with low wattage energy efficient LED fittings	194
Roof Top Solar Power Systems at various GAIL installations	1227
Replacement of old & obsolete equipment's with energy efficient equipment's	25

Other Projects and Achievements

- a. Technology Absorption First time implementation of End Point Security (EPS) system for DCS system of OT network at LPG unit Vijaipur, which improves the cyber security of DCS network from external cyber-attacks besides improving the reliability.
- b. Online Continuous Emission Monitoring System (OCEMS) installed in LEF-1 & 2, PRU-1 & 2, RG Heater 1 & 2, Package Boiler stacks of LPG & C2C3 units at Vijaipur for compliance of CPCB/MPCB statutory guidelines.
- c. Upgradation of Siemens PCS7 system for Siemens Gas turbine SGT700 units installed



- in C2C3 recovery unit at Vijaipur to latest platform, which improves the cyber security.
- d. 02 Non-Piggable Pipeline sections under NCR Region were inspected using Large-Standoff non-contact magnetometry method and achieved approximate 90% confidence level.
 - e. Integration of Electrical Meters at VAPL Terminals with SCADA for remote monitoring of power consumption at each station.
 - f. Installation of Real-time Ambient Noise Monitoring system in HVJ compressor station at Vijaipur DVPL-HRSG.

9.4 Emission Management

(GRI 305-1, GRI 305-2, GRI 305-3, GRI 305-4, GRI 305-5, GRI 305-6, GRI 305-7- Refer performance & standard)

GAIL is committed to effective emission management which includes monitoring and reporting of emissions, setting targets for reduction, implementing control measures, and regularly evaluating the effectiveness of the implemented measures. As a responsible corporate, we believe we play an important role in contributing to the government of India's commitment to fulfilling its emission targets in alignment with the NDC (National Determined Contributions) and Paris accords.

Combustion of Natural Gas and Diesel are the primary sources of emission. Electricity purchased for operational purposes including manufacturing and transmission contributes to indirect emissions. We regularly monitor and regulate emissions in accordance with the World Business Council for Sustainable Development (WBCSD) Greenhouse Gas Reporting Standards, ISO 14064-2006, and the American Petroleum Institute (API), a compendium of GHG emissions methodology for the oil and natural gas industry –2021 & API Latest standards 2022.

We undertake various initiatives to reduce and monitor GHG Emissions. Our emission management initiatives are categorized into the following core areas.

9.4.1 Reducing Methane Emissions

Methane emission in the gas industry is a significant environmental issue. Methane is a potent greenhouse gas that has a far greater impact on global warming than carbon dioxide. Methane emissions occur at various stages, including during the production, processing, transmission, and distribution of natural gas.

Methane can escape into the atmosphere from leaking or venting equipment, such as valves, pipelines, compressors, and storage tanks. It can also be released during the extraction process, known as "venting," which occurs when natural gas is released intentionally or unintentionally into the atmosphere during drilling, well completion, and workover operations, reducing the amount sold to the market by operators. Natural Gas and LPG also vent out minuscule quantities in some processes causing methane emissions.

We constantly work to reduce leakage during transmission with the help of our industry peers by developing effective strategies for detecting and reducing potential leaks, thereby reducing transmission related GHG Emissions.

GAIL follows certain practices to reduce the production related GHG emissions such as -

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

9.4.2 Reducing Other Air Emissions

GAIL manages emissions through a cloud-based monitoring system linked to our emission analysers. The websites of the Central Pollution Control Board (CPCB) and the State Pollution Control Board (SPCB) are then linked to ensure effective monitoring. Throughout the year, several emission management efforts have been implemented across all our facilities to reduce air pollutants.

The Ozone Depleting substances (ODS) are potent GHGs and prevalent in our household and commercial electronics such as air conditioners and refrigerators. They are banned by our internal policies. ODS tends to stay in atmosphere for a longer period, during which they contribute to depletion of the ozone layer in the stratosphere.

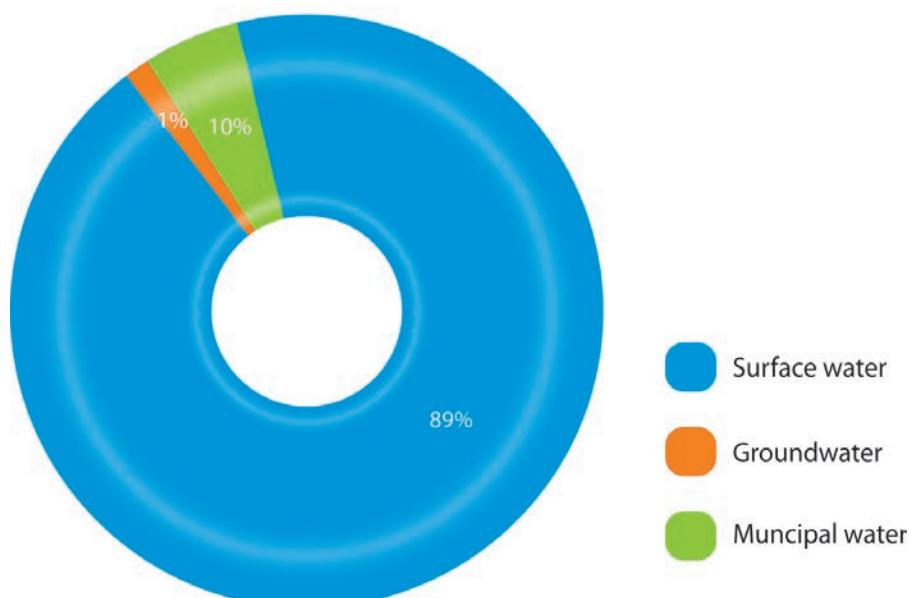
9.5 Responsible Water Management

(GRI 303-1a, b, c, d, GRI 303-2a, GRI 303-5a, b, c); GRI 303-3, GRI 303-4- Refer Performance & Standards

Responsible Water Management is critical to preserving this important and depleting natural resource. Water is a finite resource that is essential for all life on earth - human well-being, economic development, and ecosystem health. At GAIL, we believe that it is critical to address water scarcity, ensure water security. It requires

a coordinated effort from all stakeholders to promote sustainable and equitable water management practices that balance social, economic, and environmental objectives. Rainwater Harvesting is an essential component at design stage of any construction activities. As an ecologically responsible corporate entity, we take it as our moral duty to use water judiciously and raise awareness among our people, community, and society at large. We are working in to develop effective technology and water conservation methods through innovation. To measure impact of our operations, we have conducted assessment of water-stress sites & further to evaluate the risk and opportunity of our operations. Our assessment also helps in visualisation of future demand. There were no negative impacts found on water bodies.

Percentage of Water Sourced



In FY 2022-23, we have withdrawn 17.5 million m³ of water out of which, 15.56 million m³ of water is sourced from surface water (having TDS < 1000 mg/l), 1.8 million m³ from municipal and only 0.15 million m³ of water from groundwater. Water consumption at water stress area locations of GAIL is around 7.62 % of total water consumption.

We ensure that our operations have no negative effects on the supply and quality of water resources throughout our various sites. We have proactively evaluated and mitigated any water related risk in the future to make our operations resilient. At GAIL, we conduct water audit through third-party to monitor the water demand. GAIL encourages and supports

water saving innovative ideas across sites via various initiatives such as reduced freshwater consumption, rainwater harvesting/collection system, monitoring and management of wastewater discharge, wastewater treatment and recycling based on our Environmental Policy, national, local and regional guidelines.

GAIL ensures compliance of all applicable rules and regulations pertaining to water management. Water discharge at all manufacturing sites is monitored continuously on real time basis via OCEMS (Online Continuous Environment Monitoring System). Details of effluent discharged with respective parameters are being recorded and further shared with CPCB/ SPCB as compliance within permissible limits. The majority of GAIL's operations and maintenance facilities are zero liquid discharge. The sites generating wastewater, are treating it through Effluent Treatment Plant (ETP) and suitable treated water is discharged to avoid any negative effect on nearby water bodies. Pata unit is the largest unit of GAIL and is the major contributor of wastewater (~ 95%), all parameters are monitored before discharging treated effluent, periodic monitoring is done at the plant outlet and at the final water body.

9.5.1 GAIL's Water Management Initiatives/approach to reduce water footprint

- **Pata:** Repair of major leakages in underground Drinking water line opposite to Kohinoor Bachelor Hostel and Vinoba Bhave Kunj lead to saving of water approx. 50000 L/ day (Project Cost-~INR 20000); Phase wise Replacement of old Cast iron drinking water line with HDPE line approx. 600 m which lead to saving of water approx. 30000 L/ day (Project Cost-~INR 250000). These initiatives have resulted in effective resolution of water pressure problem in residential Kunj which are located at far end of water supply network and helped to cater the increased demand of water supply due to increase in employee strength with existing water supply infrastructure.
- **Vaghodia:** Treated wastewater is being recycled to use for make-up of Fire water storage. No wastewater is discharged

outside plant premise. b. Reject water from Centralized RO plant installed at Plant is being utilized in FW makeup and horticulture purposes. (4924 m³ in 2022-23 RO reject water recycled)

- **Khera:** Five (05) number of Rainwater Harvesting pits added to the existing Rainwater network in both the colony and compressor station.
- **Vizag:** Completed the Drip Irrigation system for entire green belt of DT Vizag; Completed laying of a new HDPE pipeline replacing the old water network at DT Vizag which had so many underground leakages; Completed laying of the HDPE pipeline from GVMC Municipal tank to DT Vizag by replacing the damaged old pipeline with a cost of INR 2405469.41; Building utility water pipeline network leakages arrested by replacement with fresh spares; Water taps in Security building at the entrance of Vizag DT were replaced with push-cock type for reducing the water consumption; Installation & commissioning of bore wells completed at all SV stations and in DT Vizag region in 2022-23; Rain water harvesting at DT-Vizag. 3 Nos of Rainwater harvesting pits are existing; Maximum contract Demand of Water was reduced at Vizag DT. 50 % reduction in consumption of GVMC water achieved.
- **DBPL (Bangalore):** No process water is used. Water consumption at terminals/sites/offices is being monitored through meters installed at stations & optimum utilization is ensured. Further Rainwater Harvesting is provided at 15 stations/locations of DBPL ZLD- Design basis and Basic Engineering for Zero Liquid Discharge/treated wastewater recycling at GAIL Pata has been prepared. After approval of the project, implementation shall be started at site. GAIL Vijaipur is already being operated on zero discharge basis.

9.6 Responsible Waste Management

(GRI 306-3, GRI 306-4, GRI 306-5- Refer Performance & Standards)

GAIL ensures that waste materials are disposed of in a way that minimizes their impact on the

environment and human health. We strive to implement circular economy across our operations by deploying resource efficient technology. We follow effective waste management practices which involve reducing, reusing, recycling and responsibly disposing of Hazardous and Non-hazardous waste at all sites.

We conduct waste audits facilitated both internally and externally, to identify more waste-reduction options at the source or through minor operational improvements and to meet regulatory compliances. Till date, no waste-related impact on business operations or products have been discovered during waste audits.

GAIL works towards spreading awareness among our workforce, our value partners and communities via various mediums including social media. The Company promotes Mission LiFE initiative of Niti Ayog for greener tomorrow. GAIL believes that it takes only one R at a time to create a more sustainable future. The 6 Rs of Zero Waste we follow are: Rethink, Reduce, Repair, Refuse, Reuse and Recycle.

GAIL has been supporting the initiatives on Plastic Waste Management through ICPE. We are also actively involved with various associations like CPMA, ICPE, PlastIndia foundation, AIPMA, AIFTMA, GSPMA, SPMA, etc. to spread awareness on the “Say Yes to Plastic” campaign.

Approximately 4000 MT PP woven sacks are utilized by GAIL in packaging of petrochemical products and as a brand owner of G-Lex and G-Lene, GAIL takes the obligation of extended producers' responsibility of PP woven sack under plastic packaging.

9.6.1 GAIL's Waste Management Initiatives & approach/ initiatives towards circular economy

(GRI 306-1a, GRI 306-2a,b,c)

1. **Pata:** GAIL, Pata has been registered on centralized portal of CPCB as brand owner of Polymer Products on 24.11.2022 under Plastic Waste Management Rules, 2016. EPR Obligations for the FY 2021-22 (995 MT) and FY 2022-23 (2885 MT) have been suitably completed by receipt of

EPR Certificates for 3880 MT (Category-II Recycling) on the EPR Portal.

2. **Diversion of Waste from landfill:** Non-hazardous wastes like Molecular Sieves, Ceramic Balls, Silica Gel, Resin, Spent Carbon, Perlite, Ceramic Bricks etc. which were disposed of to TSDF are now being sent to recyclers.
3. **Vizag:** GAIL Vizag has partnered with HP for recycling of Printer toner & Cartridges, collected and sent to recycling facility in Tamil Nadu. This facility is fully permitted and meet the requirement of ISO 14001 & 9001. These cartridges undergo multiphase recycling process reduce to raw materials. These can be used to make new metal and plastic products, such as cartridges. Any remaining material is disposed or handled through energy recovery. In FY 2022-23, 72 cartridges were sent to recycling facility.
4. **Vijaipur:** A study/ project has been initiated for making wealth out of waste. All the solid waste generated in the plant & municipal solid waste generated in the township can be converted into useful products by a patented technology (catalytic process).
5. **Vaghodia:** a. Hazardous waste (used oil) is collected, segregated and stored in the CWH yard and then sent to GPCB authorized recycler. b. Bio-medical waste are collected and disposed of through an authorized bio-medical waste management agency.
6. **Samakhiali:** a. Decomposition of waste from the kitchen and dry leaves to composted for horticulture. b. Separate dustbins were provided for dry and wet waste. Awareness programs organized at nearby areas including village schools.
7. **Jhabua:** Setting up of Waste to manure plant at township & plant.

9.6.2 Hazardous Waste Management

Hazardous waste management is the process of handling, storing, transporting, treating, and disposing of hazardous waste in a way that minimizes its impact on the environment and human health. Hazardous waste poses a threat to human health and the environment due to its



chemical, physical, or biological properties. It is highly toxic, flammable and corrosive in nature. GAIL is committed to responsible handling of hazardous waste management and has a zero-tolerance policy against non-compliance.

Majority of sites produce waste oil as a hazardous waste, Pata being the largest plant generates tar, oily sludge, slop oil, molecular sieves, used oil, waste mineral oil, spent carbon, ash and so on, whereas at the Vijaipur site, hazardous waste includes asbestos, glass wool, ceramic, empty barrels/containers/liners contaminated with hazardous chemicals/waste, used, or spent oil, waste or residues containing oil and so on.

We maintain the highest level of compliance and safety throughout the transfer of hazardous waste, which is an essential and sensitive procedure. All our hazardous waste is sent to authorised State Pollution Control Board (SPCB)/Central Pollution Control Board (CPCB) Treatment Storage and Disposal Facilities (TSDFs) or recyclers. We also follow the Manifest (Form-10) and Transport Emergency Card (TERM) rules while carrying hazardous waste. No significant spill was reported in FY 2022-23

Other Initiatives of waste management-

- Development of waste storage shed for segregated storage of various hazardous and non-hazardous wastes is operational for sustainable management of wastes at the premises.
- SOP prepared for transfer of waste to the storage shed has been circulated to concerned departments.
- Knowledge Sharing session on Waste Management has also been imparted to employees.

9.7 Research and Development Initiatives

In FY 2022-2023, GAIL's focus on R&D initiatives is centred around several key areas, including waste valorization and wastewater recycling, CO₂ separation, pipeline integrity management, indigenous catalyst development and hydrogen initiatives.

- Under the **waste valorization and wastewater recycling** program, GAIL is collaborating with IIT-Roorkee to develop a co-gasification hydrothermal process. This process aims to simultaneously utilize lignocellulosic biomass and effluent water from petrochemical plants to produce hydrogen-rich methane and nanometal-impregnated carbon hydrides as valuable by-products. These by-products can find applications in fuel cells and batteries as electrocatalysts.
- To achieve **Zero Liquid Discharge**, GAIL has successfully developed a lab-scale "hydrate forming" process in association with IIT-Madras. This process demonstrates 75-90% separation efficiency in purifying effluent water for reuse/recycling within the plant. It is considered a green process due to its minimal sludge production and low energy consumption. The lab-scale process is currently being scaled up to a continuous bench-scale mode for further validation.
- GAIL is also actively working on developing **novel CO₂ separation processes** to reduce the energy requirements for natural gas purification. In collaboration with IIT-Guwahati, GAIL is focusing on the development of a high-performance mixed-matrix membrane with high selectivity and permeability. This membrane aims to facilitate efficient separation of CO₂ from natural gas, enabling the easy enrichment of natural gas or biogas. Successful integration of this process into GAIL's operations could enhance energy efficiency and reduce emissions.
- Furthermore, GAIL is in the process of collaborating with IIT-Madras for the **indigenous development of a fibre optic-based intrusion and leak detection system**. This system will leverage machine learning techniques and big data analytics to provide reliable information about intrusion incidents and early detection of gas leakages.
- GAIL's R&D efforts also extend to the development of indigenous catalysts for petrochemical production. Through extensive research in collaboration with CSIR-NCL, GAIL has successfully designed a



chromium-based single-site catalyst for polymer (HDPE) production, resulting in improved product quality. Ongoing research aims to enhance its thermal stability.

- CO₂ fixation using Microalgae: GAIL is also implementing a pilot project for fixing CO₂ (1TPD) using Microalgae in an Open Raceway Ponds at the Pata petrochemical complex in association with CIMFER, Dhanbad. Suitable microalgae strains have been already screened and identified in lab scale photobioreactors for its potential application in the large-scale ponds



CO₂ capturing using microalgae at Pata

- GAIL is pursuing various R&D projects for bulk utilization of CO₂ such as CO₂ to methanol, CO₂ to Polycarbonate and CO₂ to Syngas.

Apart from collaborations with CSIR Labs and reputed academic institutes, GAIL has partnered with other oil and gas PSUs to establish a Centre of Excellence for Oil, Gas and Energy (CoE-OGE) at IIT-Bombay. The centre focuses on capacity building for oil and gas executives and the development of sustainable research solutions to address challenges faced by the fossil fuel industries through mission-oriented approaches.

9.7.1 Expenditure for Research and Development Activities

GAIL allocates adequate budget under R&D/ Innovation initiatives to carry out collaborative research works with various research institutes and to execute various innovation activities involving technology upgradations at various GAIL facilities. This year GAIL's total expenditure under R&D/Innovation initiatives is INR 180.62 crore. This includes INR 6.55 crore spent on pursuing

collaborative R&D works with various Research institutes and INR 174.16 crore expended on carrying out innovation/developmental initiatives at various GAIL's facilities. GAIL's R&D/ innovation expenditure target was 2% of PBT, against this 2.49 % achieved in FY 2022-23.

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

R&D initiatives on the development of low-carbon technology is the need of hour for meeting the sustainable business goals. Under this initiative our R&D efforts are focused on direct or indirect conversion of CO₂ to valuable chemicals and energy products that have high potential market and promising benefits.

Accordingly, our approach to mitigate the CO₂ emission is to valorize CO₂ to valuable chemicals such as Methanol/Dimethyl Ether (DME) and poly carbonate. In this aspect, GAIL is developing novel and efficient catalysts which forms the backbone for activating and reacting the inert CO₂. GAIL in association with IIT-Delhi





continued developing robust Cu-ZnO-CeO₂ and Pd-Cu supported on zeolite catalysts for one pot synthesis of DME or Methanol through direct hydrogenation of CO₂. Similarly, GAIL is also pursuing a research project in association with IISER, Tirupati, wherein a robust and sustainable catalyst is being developed for production of carbon dioxide-based poly carbonate diol polymers which can incorporate nearly ~ 45 - 47% CO₂ in the poly carbonate backbone.

In addition, GAIL has also continued operating pilot project for fixing CO₂ (1TPD) using Microalgae in an Open Raceway Ponds at its Pata petrochemical complex. This project is being implemented in association with CIMFER, Dhanbad. Trial runs has been initiated with suitable microalgae strains in the open ponds and good growth of microalgae were observed and is being collected for further testing.

Simultaneously, GAIL is also carrying out a study on "Life Cycle Assessment of Petroleum Refineries/Petrochemical units considering Decarbonization" through CoE-OGE to understand the decarbonisation pathway at our petrochemical unit.

Furthermore, under the clean energy initiative, this year GAIL has also started the work on scale-up study of wastewater purification through "hydrate process" at IIT-Madras. The successful validation of the process shall lead

to development of sustainable Zero Liquid Discharge technology. Likewise, novel mixed-matrix membrane being developed in association with IIT-Guwahati for enrichment of natural gas and biogas that could lower the energy required during the purification of natural gas.

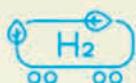
9.7.3 Start-up Initiatives taken by GAIL

GAIL's start-up initiative called 'Pankh' has achieved ongoing success in establishing a robust ecosystem for fostering innovation and supporting start-ups in India. Initially, a fund of INR 100 crore have been allocated to encourage and promote new and promising start-ups operating in core and non-core sectors on flexible portfolio approach basis. GAIL's investments in these start-ups encompasses diverse fields such as AI, logistics, electric mobility, nutrition, rural development, healthcare, pipeline inspection, energy, renewable energy, environment, bioproducts, IoT and industry 4.0 (process improvement), among others.

In FY 2022-23, GAIL entered into an investment agreement with one start-up in the Fintech domain having few unique credit line products like Sisha (Education and Skill Development related), Aarambh (Employment Generation) and Mahila Credit (Women empowerment) and Aarambh Cattle (Cattle income based unsecured credit within 48 hours) ,which were of social cause aligned with GAIL's focus area on Non-Core sector . A investment of INR 1.5 crore has been committed with the Start-up. Overall, GAIL has extended its support to 34 start-ups, with a total investment commitment of INR 69.69 crore. Some of these start-ups have witnessed significant appreciation in their valuations, due to current market trends. This year, 04 nos. of GAIL-supported Start-Ups have raised funds at higher valuation than the valuation at which GAIL made initial investment.

Climate Change

10



Setup India's largest **10 MW** green hydrogen plant
in Guna, Madhya Pradesh



Developed a decarbonization roadmap
by setting a target to achieve net-zero



Cumulative investment of **INR 685 crores** for
renewable energy in FY 2022-23



Climate Change

Climate change is a global emergency and an issue that requires international cooperation and cohesive solutions. Countries around the world are already facing the brunt of accelerated climate change in the form of increasingly frequent and severe flash floods, droughts, heat waves, wildfires, precipitation and tropical cyclones. To tackle climate change and its negative impacts, world leaders at the UN Climate Change Conference (COP21) in Paris reached a breakthrough on 12 December 2015 with the overarching goal "*To substantially reduce global greenhouse gas emissions to limit the global temperature increase in this century to well below 2 degrees Celsius while pursuing efforts to limit the temperature increase to 1.5 degrees Celsius above pre-industrial levels*"

10.1 Climate Change and Sustainable Development (GRI 3-3)

The global community's broad strategy to address climate change and reduce global greenhouse gas (GHG) emissions revolves around transitioning to cleaner energy sources like renewables, while simultaneously phasing out the use of fossil fuels. During the 26th Conference of Parties (COP 26), the Prime Minister of India, Narendra Modi, announced India's goal of achieving 'Net-Zero' emissions by 2070. In his address, he introduced the "Panchamrita" five-fold strategy, which aims to tackle the climate change challenge by setting the following targets for India:

- i. Increase non-fossil energy capacity to 500 GW by 2030.
- ii. Achieve 50% of its energy requirements from renewable sources by 2030.
- iii. Reduce its estimated carbon emissions by one billion tonnes by 2030.
- iv. Decrease the carbon intensity of its economy by 45% by 2030.
- v. Attain Net-Zero emissions by 2070.

These targets reflect India's commitment to mitigating climate change and transitioning towards a more sustainable future. India aims to lead by example and inspire other nations to take decisive action toward a greener and cleaner world.

The oil and gas sector plays a crucial role in global GHG emissions, accounting for approximately 8% of total emissions. As the world moves towards achieving net-zero emissions, the sector faces significant pressure to decarbonize and transition towards cleaner energy sources. This involves reducing emissions from existing operations, investing in low-carbon technologies and transitioning to renewable energy sources like hydrogen and carbon capture and storage (CCS).

As the leading gas distributor agency in India, GAIL has a pivotal role in helping the Indian Government achieve its net-zero ambitions. To reduce India's dependence on carbon-intensive fossil fuels, GAIL is committed to increasing the share of natural gas in the country's energy mix from 6.7% to 15% by 2030. GAIL has embarked on its net-zero journey and developed a decarbonization roadmap by setting a target to achieve net-zero (Scope 1 and Scope 2) status by 2040 while reducing Scope 3 emissions by 35% (from the baseline year of 2020-2021) by 2040.

The Sustainable Development Goals (SDGs) are a set of 17 global goals established by the United Nations in 2015. The SDGs aim to end poverty, protect the planet and promote peace and prosperity for all by 2030. The goals cover a broad range of issues, including health, education, gender equality, climate action and sustainable economic growth. Each goal has specific targets and indicators to measure progress toward achieving them. GAIL's climate change actions are aligned with the following SDGs:

SDG 7: Affordable and Clean Energy: As per the Paris Agreement goals outlined in India's Nationally Determined Contributions (NDCs),

an urgent escalation in renewable energy technologies and improved energy efficiency is imperative. Transitioning to cleaner fuels, which emit fewer carbon emissions will contribute directly to achieving Net-Zero. GAIL, as a responsible energy organization, recognizes the criticality of these actions and is committed to promoting sustainable energy practices to achieve a cleaner, greener future.

SDG 12: Responsible Consumption and Production: The production of goods and services across the world has led to the depletion of natural resources and accelerated environmental degradation, causing soil, water and air pollution. Production processes generate substantial amounts of greenhouse gases, which significantly contribute to climate change throughout their life cycle. GAIL understands the need for sustainable consumption and production and is committed to minimizing its environmental impact by implementing effective measures and promoting sustainable practices in all its operations.

SDG 13: Climate Action: Climate Action SDG-13 is of utmost importance to address the growing concerns of climate change. GAIL recognizes the criticality of reducing greenhouse gas emissions and promoting sustainable practices to achieve the Paris Agreement's climate goals.

SDG 13: Climate Action: Climate Action SDG-13 is of utmost importance to address the growing concerns of climate change. GAIL recognizes the criticality of reducing greenhouse gas emissions and promoting sustainable practices to achieve the Paris Agreement's climate goals.

Climate action is interconnected with several other SDGs, including **SDG 1: No Poverty, SDG 2: Zero Hunger and SDG 3: Good Health and Well-being**. As climate change affects vulnerable communities disproportionately, disrupts food systems and contributes to health issues. The success of climate action will positively impact these areas by promoting socio-economic development, improving public health and ensuring access to food security.

10.2 Vision and Action Pertaining to climate strategy

GAIL is pursuing the goal of achieving net-zero GHG emissions across its operations. The Company aims to achieve this objective through ambitious targets, fostering innovation and knowledge. GAIL plans to install 1 GW of renewable energy capacity by 2025 contributing to India's NDC and accelerating its carbon neutrality efforts. The Company's leadership is benchmarking efforts and innovative initiatives to deliver sustainable value and superior results to all stakeholders.

At GAIL, we remain steadfast in our vision to act against climate change in a collaborative and coordinated manner.

- a. **Quality of Life:** We strive to transform the lives of the people we touch by providing improved and environment-friendly products and services in a sustainable way.
- b. **Clean Energy and Beyond:** We promote the use of superior, sustainable, environment-friendly and efficient energy sources including Natural Gas, Renewables and other clean alternative energy sources.
- c. **Stakeholders:** We aspire to fulfil the aspiration of our larger stakeholder community, from our employees to our customers, partners and society by creating sustainable value. We are accountable for delivering superior results, value creation and creating economic opportunities for underprivileged sections.
- d. **Environmental Responsibility:** We promote the highest levels of operational safety, employee health and a cleaner environment. We strive to minimize our negative impact on the environment and the community.

As the world grapples with the escalating effects of climate change, adaptation and mitigation have emerged as two critical strategies to address this existential threat. GAIL has taken steps to address both these challenges by launching a range of projects and initiatives aimed at mitigating and



adapting to climate change. Our overarching goal is to achieve net-zero emissions and significantly contribute to India's Nationally Determined Contributions while setting a global benchmark for the fossil fuel industry. We will deploy cutting-edge technologies, invest in renewable energy and enhance operational efficiencies to achieve this goal. Our proactive and collaborative approach to sustainability and carbon neutrality will drive innovation and inspire effective solutions to mitigate climate change.

10.2.1 Adaptation

Climate change has a significant impact on the availability of crucial natural resources such as water. GAIL has implemented comprehensive water conservation and management systems across all its operations to ensure the judicious and circular use of water resources. Our efforts include planting trees and expanding green cover at numerous GAIL sites. This not only replenishes groundwater levels but also functions as a carbon sink. Our dedicated R&D team continually works towards developing best practices that promote sustainability and climate action.

The shift towards cleaner energy sources necessitates adequate financial capacity and accountability for emission-reducing activities. Carbon pricing has emerged as a viable strategy to meet both these requirements and GAIL is committed to implementing internal carbon pricing within its business activities to uncover new areas of climate adaptation and mitigation.

At GAIL, we recognize the potential risks of extreme weather to our operations. Events such as sea storm surges, cyclones, excessive rains and floods can cause much damage. We have a well-defined plan of action for each department and individual to take before, during and after such events. Additionally, we incorporate mitigation measures at the design stage before construction and all our coastal sites in India are equipped with flood mitigation systems. We have a Crisis Management Plan in place to ensure a safe shutdown of our operations. Our assessment suggests that the cost of a one-day shutdown of our major plant in Pata due to climate risks

such as flooding could be INR 8 crore, while the cost of implementing flood defence systems at Pata is estimated to be INR 10 crore. To access detailed information about our efforts to combat the impact of climate change, kindly refer to our report submitted to the Carbon Disclosure Project (CDP). GAIL is committed to developing a more comprehensive and robust plan to adapt to the changing climate by implementing sustainable practices and mitigation measures and promoting a culture of climate action across our operations.

10.2.2 Mitigation

GAIL finds itself at a critical crossroads as a natural gas corporation. As a cleaner fossil fuel, natural gas emits only 50% of the carbon dioxide released by coal and 20-30% less than oil. This quality renders it a vital tool in the journey towards a zero-carbon energy system. The Company is dedicated to working towards optimizing the efficient and economical utilization of natural gas and its derivatives, ensuring gains for the national economy.

10.3 Net Zero Strategy

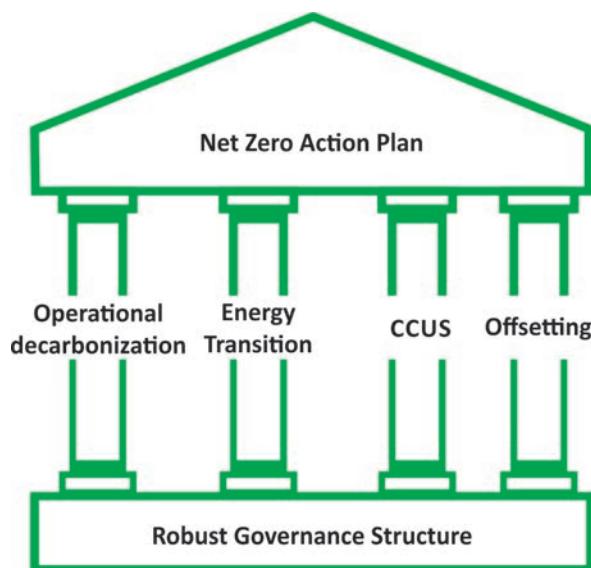
GAIL has adopted a science-based approach and methodology to develop a comprehensive Net-Zero strategy roadmap. To accelerate our journey toward Net Zero, we have identified the following strategic pillars:

- Operational Decarbonization,
- Energy Transition,
- Carbon Capture Utilization and Storage (CCUS), and
- Offsetting.

Our plan to reduce our carbon footprint will be based on these pillars. GAIL will continue to explore innovative solutions and partnerships to achieve our decarbonization goals.

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GAIL has conducted an extensive study to develop a science-based Net Zero ambition and action plan. The study involved an in-depth assessment of GAIL's GHG footprint across operational boundaries (Scope 1 and Scope 2) and the value chain (Scope 3). We also evaluated global target-setting approaches and best practices in carbon abatement across the Oil and Gas sector. Furthermore, we engaged with stakeholders to review our growth plans and assess Organizational readiness toward Net Zero.

Based on the assessments, we have developed a clear carbon abatement roadmap with short-, medium- and long-term targets across Scope 1, Scope 2 and Scope 3. Our Net Zero strategy aims to achieve a 100% reduction in Scope 1 and Scope 2 emissions and a 35% reduction in Scope 3 emissions by 2040. We have also explored decarbonization levers, energy transition opportunities and green financing options to accelerate our transition to Net Zero.

10.4 Net Zero Action Plan

10.4.1 Operational Decarbonization:

Operational Decarbonization includes the technology and initiatives taken by GAIL to reduce its direct in-house GHG emissions by means of energy efficiency, fuel switch, electrification, etc. The various initiatives planned/undertaken are:

Vijaipur Plant:

- Implementing measures to reduce natural gas venting during pipeline repair and

maintenance in Vijaipur. This initiative will save approximately 3 MMSCM of natural gas per year.

- CBG for internal consumption: We are switching from natural gas to compressed biogas (CBG) as an internal fuel source, with an estimated annual usage of 48 million standard cubic meters (MMSCM) of CBG for various applications.
- Green Hydrogen Blending in gas Turbines: Implementing a phased approach to blend green hydrogen with natural gas in gas turbines for power generation is expected to reduce approximately 0.22 million tons of carbon dioxide equivalent emissions.

Gandhar Plant:

- Production of Electricity using the Waste Heat Recovery in Feed Gas Turbine: The proposed plan to utilize the waste heat from the feed gas turbine at GPU Gandhar to generate high tension power for captive usage can yield approximately 2.4 MW of electric power, according to a report submitted by M/S Thermax. This capacity may also be further increased by approximately 10% through detailed engineering. This will enable the facility to meet its power requirements and eliminate the need for GEB's power supply.
- Energy Savings by Stopping of Booster Compressor: GAIL and ONGC are currently evaluating the proposal to supply gas at a single pressure of 28.0 kg/cm² from CPF, ONGCL Gandhar, which includes both MP and HP gas sources. Adopting this approach would eliminate the need for booster compressors at GPU, leading to 4088 MWh of energy savings per year.
- Replacement of Old motors with energy efficient motors: It is proposed to replace 1 no. Booster compressor motor, 1 no. of IAC motor and 2 nos. of cooling water pump motor which runs on 24 hrs basis with IE3 motor of similar rating. This will lead to savings of 553 tCO₂e per year.
- Fuel Savings in Regeneration Gas Heater: After conducting a moisture breakthrough



test, it was determined that Dryer-A and B could process 10 and 8.5 MMSCM of gas, respectively, before moisture slippage occurred. To optimize efficiency, the feed gas drying cycle has been adjusted to 7.5 MMSCM, resulting in an annual savings of 0.09 MMSCM gas.

Pata Plant:

- i. Conversion of Conventional Lights into LED Lights: PATA has proposed energy conservation measures to replace the traditional HPMV lights with efficient LED fixtures. This shift, along with the upcoming replacement of other light fittings in PC-2, is expected to result in a potential energy saving of around 2,966 MWH.
- ii. Phaseout of SF6 from circuit breakers: Upgrading the outdated Voltas circuit breaker switchboards with compatible Vacuum circuit breakers is an effective method to eliminate the use of SF6 gas, which has a significant GWP of 22,800 tCO₂e. Out of 161 circuit breakers in the plant, 138 have already been replaced and the remaining 23 will soon be upgraded, ensuring a sustainable and eco-friendly operation.

Renewable Energy: GAIL plans to establish solar PV projects to minimize carbon emissions and support the country's clean energy initiative. The company is investigating different solar opportunities with the goal of creating a significant solar energy portfolio. GAIL is dedicated to decreasing its carbon footprint and has implemented renewable projects, resulting in a total installed capacity of 132 MW of alternative energy. The company has set a target to attain 1 GW of renewable energy by 2025 through both organic and inorganic means, including solar and wind energy. To achieve this goal, GAIL allocated INR 6000 crore towards its renewable energy plan. The various projects planned/undertaken are as follows:

- i. Target of 1 GW renewable energy by 2025
- ii. Target of 3 GW renewable energy by 2030
- iii. 2.4 MWp Solar rooftop at Pata Plant
- iv. 25 MW Floating Solar in Pata Plant
- v. 1.8 MWp Solar ground mounted at Vijaipur

Plant

- vi. 10 MW Floating Solar in Vijaipur Plant
- vii. 100 MW Solar power Project in Uttar Pradesh
- viii. 170 MW Wind power project in Usar

GAIL has spent INR 685.27 crore in FY 2022-23 on renewable energy.

10.4.2 Energy Transition

(GRI 302-4, 302-5)

Energy transition includes the technology switch and initiatives taken to replace existing source of energy. While currently gas is a clean transitional fuel, it is not the clean fuel of the future. Hence GAIL is exploring alternate green fuel sources to reduce its emissions.

a. **Compressed Biogas (CBG):** GAIL and its CGD JVs, along with GAIL Gas Limited and its JVs, have invited Expression of Interest (EOI) and issued Letter of Intent (LOI) for the GoI's SATAT (Sustainable Alternative towards Affordable Transportation) Initiative, which promotes compressed biogas (CBG) as a sustainable and affordable alternative to transportation fuel. CBG is produced from various waste/biomass sources and contains over 95% pure methane, making it an ideal replacement for commercially available natural gas. GAIL is issuing LOI's to interested entrepreneurs for setting up 400 CBG plants by 2025, with 327 LOIs already issued and is venturing into the CBG business by setting up its first 5 TPD CBG production plant in Ranchi. This plant will process Municipal Solid Waste (MSW) and supply CBG to various Retail Outlets of CGD companies in Ranchi.

GAIL has been recently awarded Compressed Bio Gas (CBG) plant at Bengaluru and facilitating the CBG Scheme in total through Synchro & SATAT scheme.

b. **Ethanol Blended Petrol:** The Government of India aims to decrease oil imports and achieve 20% blending of Ethanol Blended Petrol (EBP) by 2025. GAIL is considering the establishment of a 500 KLPD 1G grain-based ethanol plant in Gujarat & Rajasthan to support this goal. The use of E20 fuel is projected to reduce carbon monoxide emissions by 30-50%.

- c. **Green Hydrogen:** Green Hydrogen is a renewable energy based alternative fuel for meeting Hydrogen requirements in fertilizer production and petroleum refining. It has the potential to reduce India's dependence on fossil fuels and decrease the carbon footprint of these industrial processes. It can help curb the emissions from several processes that depend upon input materials or feedstock derived from fossil fuels such as production of fertilizers, chemicals, petrochemicals and steel. Hydrogen can also be used as a fuel for long range transportation and for long duration storage of renewable energy. In line with Strategy 2030, GAIL is exploring various opportunities for increasing its renewable portfolio through organic as well as inorganic routes. GAIL has started a pilot project to blend up to 2% hydrogen with natural gas in the City Gas Distribution (CGD) network of Avantika Gas limited, Indore. Under National Hydrogen Mission, GAIL applied for permission to blend up to 5% hydrogen and is conducting impact studies on the CGD/NG pipeline network. PNGRB has approved M/s AGL to implement the proposal for Hydrogen blending with Natural Gas up to 5% vol in PNG network. Additionally, GAIL is setting up a 10 MW PEM water Electrolyser based green hydrogen plant in Guna, Madhya Pradesh, which will be the largest of its kind in India. Once commissioned, this plant is expected to produce nearly 4.3 metric tons of green hydrogen per day.
- a. CO₂ to Methanol & DME (Dimethyl ether)- in collaboration with IIT-Delhi
b. CO₂ to Polycarbonate Diol- in collaboration with IISER- Tirupati
c. CO₂ to Syngas- in collaboration with IIP Dehradun
d. CO₂ Valorization Commercial Scale Project at Vijaipur
e. CO₂ fixation using Microalgae

10.4.4 Offsetting

Offsetting Action includes the technology and initiatives that are designed to reduce/remove the carbon emitted from the air to compensate for the emissions. GAIL's primary focus on achieving decarbonization goals is to prioritize the mitigation hierarchy, which involves reducing its greenhouse gas emissions. However, the Organization acknowledges that reaching net-zero emissions through avoidance and reduction alone may not be feasible. As a result, GAIL is exploring a range of nature-based solutions to offset its emissions, which will be considered a last resort to achieve net-zero targets. The Company's willingness to explore innovative solutions to address climate change demonstrates its commitment to sustainable practices

Nature-Based Offsetting: In the fiscal year 2022-23, GAIL successfully planted a total of 1,67,854 trees as part of its nature-based offsetting efforts. Of these, 1,56,465 trees were planted at the PATA plant. Looking ahead, GAIL aims to further enhance its reforestation initiatives by utilizing the "Miyawaki Forestry" technique and follow extensive plantation.

10.4.3 Carbon Capture, Utilization and Storage:

Carbon Capture Utilisation and Storage (CCUS) technology includes methods and technologies to remove CO₂ from reaching the atmosphere. The CO₂ is captured from significant emission sources and either stored permanently or utilized.

As part of its efforts to explore carbon utilization and storage, GAIL is actively pursuing a range of initiatives. The company has partnered with esteemed institutions to undertake four significant R&D and pilot projects aimed at developing effective CCUS technology. These initiatives reflect GAIL's commitment to driving sustainable innovation. The projects include:

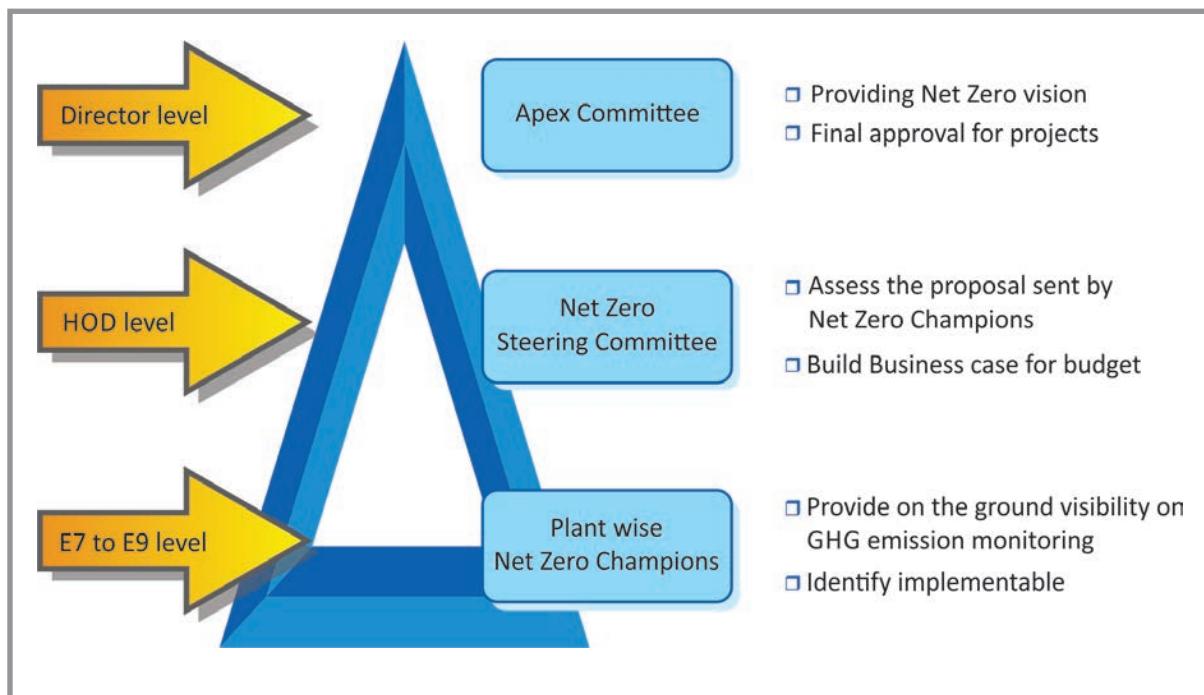
10.5 Key Enablers

(GRI 2-24-ii)

GAIL has identified key net-zero pillars to reduce its carbon footprint. Additionally, we have outlined focus areas to achieve our climate ambitions

Climate Governance: GAIL has in place a dedicated governance structure to streamline its journey toward decarbonization and achieve its Net-Zero targets. A three-tiered governance structure for close monitoring and progress of GAIL's Net-Zero journey is illustrated below:





Green Financing/Carbon Credits: Carbon credit is a verified and transferable unit that represents one metric tonne of CO₂ or other greenhouse gases that have been avoided or removed. These credits can be used to offset residual emissions and generate additional income for green projects. GAIL can consider incorporating carbon credit benefits in the feasibility assessment stage for projects that meet the additionality criteria, thus improving their feasibility. As the Government of India is establishing a voluntary carbon market by 2023, followed by a mandatory one by 2025, availing of carbon credits can help GAIL become more prepared and reduce risks from future carbon taxes.

Operationalizing Internal Carbon Pricing: Internal Carbon Pricing (ICP) is a method for businesses to assign a cost to their greenhouse gas emissions, incentivizing efficiency and low-carbon innovation in their operations. Assigning a financial value to both emitted and avoided CO₂ emissions also reveals hidden risks and opportunities. GAIL can operationalize ICP as a negative Carbon Price (Notional Revenue) for its green projects to improve its business case and make them financially viable at a lower tariff rate.

Digitalization: Recent advancements in digital tools and technology have enabled companies

to establish real-time and efficient monitoring systems, reducing energy wastage, emission intensity and leakage. GAIL will accelerate its decarbonization efforts by adopting digital technologies that improve emission accounting, early leakage detection, real-time monitoring of emission hotspots and enhance energy efficiency.

Change Management Linking to Sustainable Lifestyle: Change Management involves assisting individuals and groups to adjust to new ways of working - new tools, processes, or goals. Incorporating sustainability and decarbonization within the lifestyle and ideology of our workforce will significantly accelerate GAIL's decarbonization journey. Creating awareness at all levels and encouraging employees to incorporate sustainability into GAIL's culture will foster an atmosphere of innovation and enthusiasm towards achieving the Company's climate ambitions.

Green CSR: GAIL prioritizes projects with carbon reduction benefits for its CSR allocation and registers them on carbon markets like VCS, GCC and GS to generate carbon credits. These credits can be used to offset GAIL's own emissions in the short term, by a maximum of 5% of overall emissions. By doing so, we contribute to the global efforts to mitigate climate change while

fulfilling CSR obligations.

10.6 Progress on Net Zero

10.6.1 Site-wise Initiatives

Over the last 3-4 years, these sites have worked actively to manage their GHG emissions, by implementing several key steps to reduce their environmental impact.

Vijaipur Plant:

1. Installed FGRU unit at C2-C3 Flare to recycle 1000 Sm3/Hr Flare gas and reduced approx. 18000 tCO₂ emissions.
2. Installed 2 HRSGs on DVPL Compressor to convert exhaust heat into HP steam and reduce 72 tCo₂e per day by burning less natural gas.
3. Implemented IA/PA header interconnection between C2-C3 and HVJ Offsites to save 150 kWh per hour.
4. Installation of 30KW Solar PV at HVJ and 25KW at C2C3.
5. Installed VFDs on high power-consuming motors to optimize energy consumption.

Pata Plant:

1. Pata exceeded its BEE PAT Cycle IV target of 6.1% reduction in Specific Energy Consumption by achieving a significant 22% reduction through innovative projects and conservation efforts.
2. The contribution of renewable energy in GAIL Pata's total energy-mix has been increasing with approximately 1% of the plant's total power consumption presently met through solar power.
3. Through the implementation of a comprehensive Leak Detection and Repair (LDAR) program on a quarterly basis, GAIL Pata has been able to substantially reduce fugitive emissions.

4. Gradually phasing out old equipment and replacing them with 5-star rated energy efficient equipment such as ACs, fans and coolers to reduce energy consumption.
5. Comprehensive surveys and rectification of faulty valves connected to flares have led to a reduction in flare flow and subsequent flare loss reduction.

Gandhar Plant:

1. Implementation of a closed-loop chiller deriming procedure and the development of SOP for flare minimization, coupled with the ABT Scheme and Summation metering at switch yards, resulted in a reduction of 0.07 MMSCM NG flare per instance, while also minimizing plant tripping and subsequent flaring losses.
2. SF₆ circuit breakers were replaced with vacuum circuit breakers to avoid SF₆ emissions.
3. The unit maintains an extensive greenbelt with plantation drives and has 87,443 trees with a total carbon sequestration capacity of 1311.65 tCO₂e per annum.
4. A 267 KWp rooftop solar power plant has been installed on various buildings.
5. A comprehensive fugitive emission monitoring and control mechanism is in place, with quarterly monitoring to identify and arrest fugitive emissions from the process area.
6. GAIL owns 4.5MW (3 wind turbine generators (WTG), 1.5MW each) and 14.7MW (7 wind turbine generators, 2.1MW each) wind power plants in Sinoi and Jamanwada, respectively. The Gandhar unit has a share of 66% in the 4.5 MW WTG and a share of 40% in the 14.7 MW WTG. The unit consumes power generated by these WTGs through a pooling mechanism to offset grid emissions.



10.6.2 Partnerships for Net-Zero (GRI-2-24-iii)

Case Study 1: GAIL and Carbon Clean Solutions sign an MoU for Compressed Biogas projects

GAIL (India) Limited and Carbon Clean Solutions Limited (CCSL) signed an MoU to explore Compressed Biogas (CBG) project development opportunities in India. The partnership will address various aspects of the CBG value chain, including feedstock arrangements, technology, gas off-take arrangements, funding models, transportation, marketing and distribution of CBG. CCSL will initially build four CBG plants using its own funding and technology, with 10-year off-take agreements with GAIL or its associated CGD companies in line with the Government of India's SATAT initiative. The partnership will contribute to India's clean energy transition and CCSL's commitment to cost-effective decarbonisation solutions in the region.

Case Study 2: GAIL starts India's maiden project of blending hydrogen into the CGD network

State gas utility GAIL (India) Ltd has launched India's first hydrogen blending project in Indore, Madhya Pradesh. The hydrogen blended natural gas will be supplied to Avantika Gas Ltd, a joint venture of GAIL and HPCL, for retailing CNG to automobiles and piped natural gas to households. The grey hydrogen will eventually be replaced by green hydrogen. GAIL has obtained regulatory permissions and engaged domain experts for impact assessment. The pilot project aims to establish a regulatory framework and pave the way for similar projects in India.

Case Study 3: Pipeline Infrastructure and GAIL ink MoU to collaborate, develop a hydrogen-based ecosystem

Pipeline Infrastructure Ltd (PIL) has signed an MoU with GAIL (India) to collaborate on developing a hydrogen-based ecosystem in India. The two companies will jointly explore the feasibility and

viability of hydrogen as a source of energy and investigate options for transportation and end-use through existing natural gas pipelines. As India is at a nascent stage in adopting hydrogen as an energy source, stakeholders including the government, industry bodies, industry peers and consumers must focus on exploring production, transmission and distribution to fulfil India's COP26 commitment.

Case Study 4: Cummins to power GAIL's green hydrogen ambitions in collaboration with Maire Tecnimont

Cummins, a global power solutions provider, will collaborate with Tecnicont Private Limited (TCMPL) to build one of India's largest proton exchange membranes (PEM) electrolyzer for GAIL at Vijaipur, Madhya Pradesh. Cummins will use its proprietary PEM electrolysis technology to manufacture electrolyzers for the GAIL project, which is expected to produce 4.3 tons of green hydrogen per day. Cummins is aligned with India's National Hydrogen Mission and believes that decarbonization is a growth opportunity. The Company has supplied and commissioned over 600 electrolyzers worldwide with PEM and alkaline technologies, operating successfully in hydrogen refuelling stations, industrial applications, gas grids and energy storage projects.

Case Study 5: Tata Power, GAIL to jointly develop EV charging points in Bengaluru

Tata Power, a leading supplier of EV charging solutions, has partnered with GAIL Gas Limited to install DC fast charging points at two GAIL Gas CNG retail outlets in Bengaluru. The collaboration aligns with GAIL Gas' objective of providing convenience to EV users and Tata Power's goal of promoting electric mobility across India. Tata Power aims to set up 25,000 public EV charging stations across the country in the next five years. This partnership also supports the National Electric Mobility Mission Plan of the Indian government.

Our Employees

11



Achieved training efficacy
score of **92.75%**



Average spent on training & development
of FTEs in FY 2022-23: INR **33,812**



Turnover rate- **4.06%** in
FY 2022-23



Our Employees

11.1 Employee Engagement and Empowerment

(GRI 3-3)

At GAIL, we consider a dedicated and technically competent workforce to be the cornerstone of a successful organisation. Employees contribute significantly to enhancing our competitive edge and making us a resilient business. With a people-centric organisational culture that motivates staff, strengthens community partnerships and adds value to all stakeholders, we seek to achieve our vision of a net zero future by working together with our employees.

We work hard to make sure that GAIL has a fair, encouraging and discrimination-free workplace. By offering significant training and development opportunities, as well as long-term career options, we strive to attract and retain qualified professionals. We are committed to establishing a work culture in which everyone can realise their full potential to continue being a high-performing organisation.

The Company uses organised learning frameworks, coaching and on-the-job training to increase staff efficiency. Our Employee Value Proposition (EVP) is targeted at both internal and external candidates and makes it simple for potential workers to remember us. Internally, we ensure that assignments are made in accordance with the individual's interests and talents and they receive the necessary training to advance their skills.

Our human capital includes each person's physical and mental well-being as well as their knowledge, abilities and their drive and interpersonal skills. It contains the components necessary for people to engage in fruitful labour and wealth creation in a professional environment, improving the quality of their lives. Throughout the year we invest in the training, advancement and career development of our employees as well

as in rewarding them for their efforts. GAIL put particular emphasis on the following areas:

- Supportive atmosphere for learning, creativity and knowledge along with provision for training, development and lifelong learning to employees.
- Employee development, retention and succession planning. Human rights are upheld in all operations.
- Diverse workforce, free from any prejudice. Health & safety of all our staff.
- Incorporate fair labour norms, refraining from forced or child labour and fair compensation of employees and business partners.

11.2 Initiatives for Employee Welfare

The focus of GAIL's HR practices is the welfare of the workforce and GAIL has been constantly taking several progressive HR initiatives for the betterment of its employees. GAIL strives to establish a secure and beneficial work environment and offers several avenues for growth, both professional and personal. The execution of numerous new HR initiatives reflects the importance we place on employee well-being. HR policies are continually assessed to ensure that they are in line with organisational goals, strategy and evolving business needs while maintaining a competitive edge.

GAIL's policy incorporates 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, Incentives for obtaining Higher Education etc.), General (Grievance Redressal Procedure, CDA Rules) and Other Schemes (Sports Promotion Policy, Whistle Blower Policy, etc.).

GAIL ABHA

GAIL ABHA is a one-of-a-kind initiative to nurture the entrepreneurial skills of spouses of its employees, GAIL (India) Limited, to educate them about the start-up environment and provide mentorship, training and assistance with the necessary tools to begin their own ventures. It is dedicated to the unwavering support, contribution and commitment of GAIL employees' spouses. It provides an opportunity for them to step forward and pursue their professional goals. This unique incubation initiative has a five-layer programme spread over 30 weeks with the objective to build their ideas into flourishing businesses.



GAIL ABHA's initiative aims to fuel and support the entrepreneurial spirit of GAIL employees' spouses. This is an excellent example of recognising and developing latent talent. This platform enables spouses to realize their potential and fulfil their dreams of being engaged in an entrepreneurial venture. Currently, this programme is applicable to two centres but will be replicated at other centres soon.

We organize specialised programmes to rejuvenate the spirit of teamwork and knowledge advancement among our employees to keep our workforce motivated. GAIL upholds a people-oriented management philosophy and encourages self-motivation so that each employee can unleash their creative and entrepreneurial spirit.



Launch of GAIL ABHA at GTI in FY 2022-23



11.3 Talent Acquisition and Development

GAIL is committed to inspiring people by providing great career opportunities, good work-life balance, an excellent work culture and offering a vibrant talent pool for business development. We implement a training system that supports professional training at all levels, caters to the various needs of individual employees, aids in their personal growth and encourages the realisation of their own value. To find the best available talent, we use a structured and objective assessment approach as part of our HR recruitment strategy. As part of our manpower planning, we analyse and determine the need for new entrants and their changing skill sets to align with the requirements arising at different locations and functions on a regular basis.

GAIL's recruiting team plays a critical strategic role in developing a future-ready workforce, which will serve as a key differentiator for the company in the face of increasing competition and uncertainty. We want to build a team of employees who are growth-oriented, productive and eager to learn and grow with us.

11.4 Diversity, Equity and Inclusivity in Workforce

(GRI 2-1, (405-1 a (i, ii)))

By employing a diverse workforce, we hope to foster an open culture which values ideation, innovation and creativity.

GAIL has made diversity, equity and inclusion (DEI) a top priority in recent years. Last year, the implementation of DEI initiatives across locations gained traction across all its sites. A diverse workforce is essential for producing better results. We strive for diversity by hiring people from diverse backgrounds, genders and communities. We are committed to giving all our employees' equal rights and respect, regardless of their gender, ethnicity, cultural background, age, region, caste, religion, marital status, race, sexual orientation, disability, or language.

The GAIL Board's approved recruitment policy

is updated on a regular basis to ensure diversity and inclusion. We adhere to the principles of Diversity, Equity and Inclusion (DEI) to ensure that there is no discrimination and that we follow all relevant government regulations to protect and promote diversity.

As part of our staff, 17030 male and 471 female contractual workers work across various operational sites. Our total permanent workforce across our units consists of 3772 male and 278 female management employees, as well as 789 male and 34 female non-management employees. There are 3497 male security personnel and 09 female security personnel. GAIL employed 407 apprentices this year (**325 male and 82 female**). ***For diversification in the age group of the employee please refer performance and standards section.***

The Organization's non-core tasks, such as housekeeping, pantry, horticulture and security, employ many temporary workers.

11.4.1 Employee Benefits and Incentives (GRI 401-2 a, 404-2 b)

In accordance with applicable regulations, we provide a variety of benefits to our employees. Our benefit schemes, however, go beyond that. Gratuity, post-retirement medical benefits and other terminal benefits are among our employee benefits.

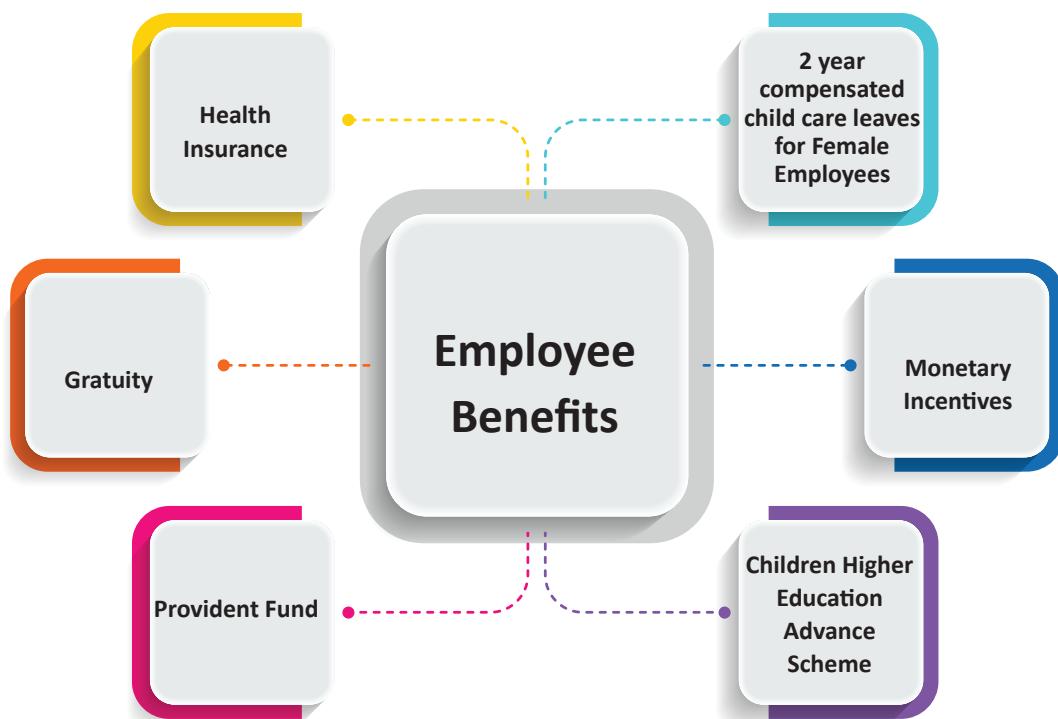
Employee benefits under defined contribution plans include the Provident Fund (PF), the Post Retirement Benefit Scheme (PRBS), the Employee Pension Scheme (EPS)-1995 and others.

Other long-term employee benefits include leaving encashment for un-availed leave and the provision of commuted leave as a 'Good Health' benefit at the time of retirement.

At GAIL, we believe that our employees are essential to our long-term success as a market leader in the oil and gas sector. To ensure the well-being of our employees, GAIL has put in place several schemes:



- Under the Employees State Insurance Scheme, the Workmen's Compensation Act and other statutory benefits/payments, all GAIL permanent employees are entitled to Provident Fund coverage and contract labour coverage.
- PF, gratuity, pension and Post PRMS - According to DPE guidelines, O.M. No. W-02/0028/2017-DPE (WC)-GL-XIII/17, contributions to these superannuation benefits are limited to 30% of the basic and DA.
- Most of our policies and efforts are aimed at making our workplace more productive for our employees. Female employees can also take a two-year paid maternity leave. We also reward our employees for obtaining higher qualifications, which increases their competence and efficiency.
- We have put in place IT systems to support workforce management strategies. The SAP ERP system is used to monitor and capture all workforce-related information, which is then systematically analysed to improve our workforce strategies.
- Employee benefits include salaries, wages, Contributory Provident Fund, gratuity, leave encashment towards un-availed leave, compensated absences, post-retirement medical benefits and other terminal benefits. All these benefits are available to our valued employees.
- Our permanent employees are all covered by health insurance. GAIL provides employee benefits that go above and beyond the minimum legal requirements, such as the Children's Higher Education Advance Scheme, GAIL Medical Attendance Rules and Relief Measures for dependent family members of deceased employees.
- Under employee benefits we do not offer stock ownership to our employees.
- In FY 2022-23, GAIL revised the ceilings/ entitlement under various schemes/ provisions, provisions for reimbursement of Dental treatment and ceiling of reimbursement of OPD in non-empanelled Hospitals/ Clinic under GAIL medical Attendance rules. The scope of the Post-Retirement Medical Scheme (PRMS) has been extended to include the dependents of the employees who died while in service prior to January 1, 2007.
- In FY 2022-23, 4 employee benefit schemes have been made paperless in SUGAM Portal



11.5 Employee Engagement

We believe that a dynamic and engaging workplace is critical for a company's success. We make every effort to engage with our entire workforce through various modes of engagement, policies, training and recognition programmes. Throughout the year, our HR team implements a variety of employee engagement initiatives to foster a sense of involvement and belonging among our employees.

At GAIL, employee engagement begins with the recruitment process and continues through onboarding, learning, career planning and advancement until the employee superannuates GTI-1 the company. GAIL facilities are outfitted with sports, gyms and other recreational amenities to ensure that employees and their

families do not miss out on important recreational or fitness-related activities while on site. We also encourage people to live a more active lifestyle by implementing the Sports Promotion Policy.

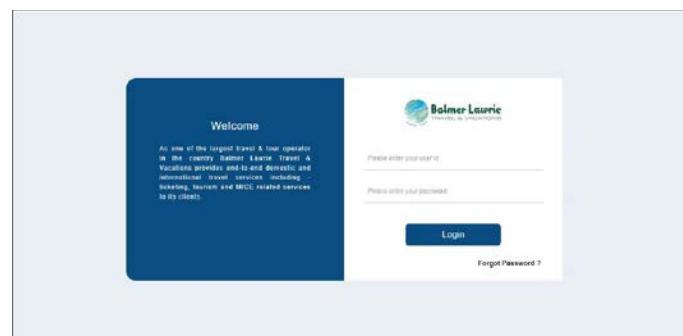
We operate as a family unit, hosting various celebrations to foster a sense of camaraderie and oneness.

To form a sector-wide engagement platform for the Millennial executives in the Oil & Gas PSUs, an HR Task Force was constituted under MopNG's administrative control and was mandated with an industry-wide youth engagement platform named YOUphoria. GTI Organized a fortnight-long Theatre Workshop for young participants from Oil & Gas PSUs. The workshop culminated in the form of a play that was staged on 26th January 2023, at GTI.



Culmination of YOUphoria Theatre Workshop attended by CMD and Board Members of GAIL

In FY 2022-23, GAIL has launched the 'Personal Booking Tool' portal for employees of the company to facilitate booking of air tickets for themselves and their family members with several benefits associated with the same. Detailed circular and user manual has been provided to employees for accessing the tool.



Inauguration event of Personal Booking Tool by Shri Ayush Gupta, Director HR on 29th May 2023.

As part of HR outreach efforts, GAIL launched Project Samanvay in January 2023 wherein HR representatives from Delhi/NCR offices visited sites/plants to understand the pressing HR issues/matters and gather employees' feedback/opinions to improve HR service delivery.

An all women led initiative group, comprising women executives from various locations, has been formed to drive employee Engagement/Development initiatives for employee across GAIL.

During the reporting period, 37 complaints were received from employees and 94.6 % of them were addressed. No employee engagement survey was conducted in the reporting year.

Vigilance Awareness Week – As part of the Vigilance Awareness Week-2022, GAIL (India) Ltd., Raja Mahendravaram organized various programs under the theme “Corruption-free India for a Developed Nation”. During the week, after with inauguration by CGM(O&M)/OIC by administering the Integrity Pledge with employees, various activities like elocution and essay writing competitions were organized in RMC School, Lalacheruvu, Smt. Kandukuri Rajyalakshmi Mahila College, Raja Mahendravaram. Apart from the above activities, GAIL has also organized street plays (Burra Katha) at Ramachandrapuram, Draksharamam, Oolapalli (Biccavole Mandal) and Kadiyam villages. Moreover, rallies, gram-sabhas, distribution of pamphlets to the general public and displayed posters at prominent places in and around Raja Mahendravaram and nearby villages. All these programs were aimed at educating the citizens & students about the ill affects/evils of corruption in India and the importance of its eradication for making India a developed Nation. During all the above activities, Integrity Pledge was also administered with general citizens/students



11.6 Employee Capacity Building

We believe that developing employees' capabilities and improving their competencies is critical to GAIL's overall success as an organisation. We have established processes at GAIL for effective capacity building and development of our existing resource base.

Our employees' capacity development is primarily focused on their overall development. We encourage our employees to develop their leadership and technical skills. We provide a diverse range of engaging training programmes, skill development programmes, performance appraisal and feedback sessions and other opportunities to advance their careers.

11.6.1 Training and Development Programmes

(GRI 404-3 a)

GAIL offers its employees regular opportunities for personal and professional development through a variety of training programmes. The goal of this training is to help our employees learn new skills and stay current on recent advancements in the oil and gas industry.

GAIL Training Institute (GTI)

GAIL Training Institute (GTI) is a platform for developing our valuable human resources by imparting critical knowledge and experience in a variety of sectors. It is sponsoring GTI-2 employees to attend training programmes, conferences and seminars on current topics in India and abroad, giving them the opportunity to learn from and interact with experts in a variety of technical and management fields. Policy development for personnel selection is also being considered.

During FY 2022-23, GTI celebrated 25 glorious years of its foundation



The training will aid in improved performance and skills while keeping our employees ahead of current industry conditions. GAIL has conducted 76 skills management and lifelong learning programmes to support retired employees' employability. GAIL has implemented several initiatives to promote lifelong learning, including the following:

- a) **Orientation Programs** - Newly hired Executive Trainees were given a three-week orientation programme covering important topics related to GAIL's business and an overview of the organization's history. Lateral entrants are also given a 6 month mentoring programme.
- b) **Leadership Development** - GAIL is conducting the Senior Management Development Centre (SMDC) exercise as part of the Leadership Development Program to assess the potential of its middle to senior-level executives (Chief Manager/Dy. General Manager). This activity is an important part of GAIL's pipeline for developing leaders. The goal of this exercise is to identify the development needs of senior executives and to design development programmes to fill gaps using the seven identified competencies. Regular Risk Management related training is given to Non-Executive Directors as a part of Orientation Programme.
- c) **Trainings Post Covid** - GTI resumed the trainings in physical mode from April 2022, post COVID-19. GTI (Noida and Jaipur) conducted 221 training programs based on the Training Need Assessment (TNA) of the employees and covered more than 4520 employees under these training programs during the FY 2022-23.
- d) **ASME Accreditation of the Institute**- Accreditation by American Society of Mechanical Engineers (ASME)- GTI is an Authorized Training Provider (ATP) for training programmes such as ASME B31.8 and ASME B31.8S that are accredited by the

American Society of Mechanical Engineers (ASME). GTI has a pool of 14 certified trainers for ASME B31.8 and ASME B31.8S GTI-3 standard training for participants within and outside of GAIL.

- e) **Collaboration between industry and academia** - GTI goes beyond training employees and stakeholders to support various academic institutions and provide students with internship opportunities. Collaborating with undergrad engineering colleges to host subject matter experts and guests in Natural Gas Engineering. GAIL is providing support to academic institutions by providing Faculty / Subject Matter expert for the elective course titled Natural Gas Engineering, for the students of Undergraduate Engineering program.
- f) **Sectoral Development GTI-4** - GTI has imparted training to the executives of various organisations in the Oil & Gas Sector including BPCL, IOCL, IGL etc. and various participants from across the globe. GTI partnered with Ministry of External Affairs in India's Development Partnership through Capacity Building Initiative under ITEC (Indian Technical and Economic Cooperation) Program organized for Developing and Neighbouring Countries and conducted a training program through International Centre for Information Systems and Audit (ICISA).

Capability building programs in the emerging areas - Capability building programs in the emerging areas such as *Renewable and Alternate Energy (Solar and Wind Energy), Speciality Chemicals, Hydrogen Transport in NG Pipeline, Industry 4.0 & Automation and Role of Hydrogen in Emerging Economy* were organized with the help of reputed Academic Institutions like IIT Delhi, IIT Bombay and National Institute of Wind Energy, Chennai etc. For the year 2022-23 more than 150 Executives have been trained with a total of about 550 Executives trained in last three years, in the areas of GAIL's Strategy and other emerging business areas.

Focus Areas of Training Programmes

Strategy, Leadership and Business Knowledge	Management, Functional Development and Process Improvement	Operations, Technology, Information Technology and Safety
<p>This category includes important training programmes such as:</p> <ul style="list-style-type: none"> (i) Hedging & Risk Management; (ii) Domestic & International Business & Economic Scenarios; (iii) Business Planning & Growth Strategies; (iv) Strategic Thinking & Execution and so on. 	<p>Some of the important training programmes covered under this category are</p> <ul style="list-style-type: none"> (i) LNG Industry Development in an International Context, including Shipping; (ii) Dynamics of Polymer Business in a Global Context; (iii) City Gas, CNG; Commercial & Operational Perspective; (iv) Emerging Technologies in Renewable Energy and Alternate Fuels; (v) Contractual Disputes and Arbitration; and (vi) Project Management. 	<p>This category includes the following important training programmes: (i) Advanced Process Control System; and (ii) Flow Metering.</p> <p>The following are some key performance indicators (KPIs) for tracking the success of training and development initiatives:</p> <ul style="list-style-type: none"> • Score of Training Efficacy (%) • % Actualization of annual training plan • Number of sessions delivered as internal faulty • Number of programmes delivered to external organisations • Percentage coverage of Executives due for SMDC exercise • Timely completion of activities such as orientation programme, knowledge sharing seminar and so on.

GAIL Trainings

(GRI 404-1 a, 404-2, 404-3, 412-2 a, b, 2-24 iv)

- GAIL educated 9.81% of its employees, including top management, on anti-corruption policies and procedures.
- 76 skill management and lifetime learning sessions (equivalent to 13588 manhours) were held for better transition of retiring employees and their employability.
- Through training, 9.10% (439) of total permanent employees were made aware of human rights issues
- Sustainability training was attended by 10.93% of employees.
- Several internal sustainability training sessions were held. During the financial year, the total expenditure on environmental training and education was INR 46.33 Lakhs
- An average of 40.01 hours of training and development were provided per Full-Time

Employee (FTE), with an average of INR 33812.38 spent per FTE on training and development.

- Total training expenditure - INR 16.05 crore

Average manhours of training per year per employee	FY 2022-23
Management- Male	42.80
Management- Female	40.59
Non-Management- Male	28.07
Non-Management- Female	22.82
Permanent Employees Total	40.01

11.6.2 Utilising Technology & Training Strategy

GAIL's e-learning Management System (LMS) keeps employees up to date on the latest developments in the Oil & Gas industry. The LMS was implemented with the intention of broadening the scope and flexibility of learning at GAIL. It also serves as a management tool for training and skill development programmes,



as well as their implementation. The principles of non-discrimination are followed throughout the process.

Presentations, animations, audio-visuals and other interactive eLearning experiences are available as learning materials. The LMS includes a large library of e-learning materials for topics and issues critical to GAIL's businesses, such as ASME/API standards, OSID standards, PNGRB rules and SOPs, among many others.

In FY 2022-23, programmes focused on capacity building in line with GAIL's 2030 strategy were conducted for 147 Executive Trainees (ETs). In 2011, a flagship programme called "SAARTHI" was launched with the goal of training newly hired Executive Trainees. For Executive Trainees, skill management and lifelong learning programmes are delivered in batches, with 76 programmes delivered in FY 2022-23.



Participants at GAIL Strategy meet FY 2022-23

13 online/offline sessions and physical workshops were conducted for creating awareness and performance management system and web-based e-PMS applications covering around 971 employees (i.e., 233 executives & 584 non-executives) during the year.

11.7 Managing Performance of GAIL Employees

GAIL implemented performance management procedures to not only serve as a means of feedback and appraisals, but also with a positive outlook on how this would eventually guide employees with opportunities to improve their

performance, be recognised for their efforts and be rewarded for their achievements.

This results in a positive conversational culture among managers and teams. GAIL has standard systems in place to evaluate the performance of its employees. We provide a well-designed and performance-linked PMS framework to our employees that is aligned with business objectives and provides clear goal setting and goal monitoring.

A lot of emphasis is placed on an individual's professional development through 360-degree feedback and a motivating and encouraging



environment maintained on a regular basis. Employees can receive feedback and comments from co-workers, managers and subordinates. Every year, all GAIL employees receive performance feedback and appraisals.

11.8 Leadership and Succession Planning

Leadership development is a major concern and challenge in human resource management. As GAIL grows and expands, the organization's top priority has been to develop leaders who can deliver business growth. Employees also want more active leadership roles within their departments and jobs to feel ownership and engagement, which is also beneficial to the organisation because it brings in accountability.

Systematic processes such as the PMS framework, DPC, have been put in place to identify the right talent to be deployed for key assignments in both domestic and foreign locations.

11.8.1 Succession Planning at GAIL

The GAIL Succession Planning Framework is primarily an initiative focused on Executive Development. It is intended to put in place a structured framework to ensure the availability of a sufficient talent pool/skill set, both in terms of quantity and quality of potential successors, in accordance with the Company's business plan. The ready availability of a sufficient talent pool will enable the Company to make quick decisions in the event of unexpected vacancies and/or business requirements.

The GAIL Succession Planning Framework applies to positions in Senior Management Executive Levels up to three levels below the Board level. These are the positions of Executive Director (E-9), Chief General Manager (E-8) and General Manager (E-7). GAIL has implemented an Integrated Leadership Development Framework to facilitate leadership development and career planning as part of our preparation for future challenges.

Talent Development Interventions

- **360 Degree Feedback Exercise:** The goal of 360 Degree Feedback is to provide appropriate feedback to concerned executives via peers, subordinates and superiors.
- **Senior Management Development Centre (SMDC) Exercise:** SMDC is a tool for ensuring that the organization's leadership is better and more inspiring. A Senior Management Development Centre (SMDC) exercise is conducted for senior executives in the E-5 grade and above. Following the SMDC, top B-schools provide executives with books, e-learning modules and competency-specific training. Women executives in positions E-5 and above have also participated in customised leadership management development programmes. Furthermore, all newly promoted E7 and E8 executives are subjected to a structured Management Development Programme. GAIL places a premium on the development of its leadership capabilities. We continue to conduct SMDC exercises as part of the Leadership Development Programme, with a focus on individual executive development. To date, the programme has covered nearly all senior executives in the E-5 and above grade levels.
- **Focussed Development Programmes:** GAIL is preparing senior executives at the Executive Director and Chief General Manager levels for Board positions through competency-building programmes like Master Class for Directors and Board Room Effectiveness, in which GAIL Board Directors have participated. Capability-building programmes in emerging areas such as Renewable and Alternate Energy (Solar and Wind Energy), Water Value Chain, Speciality Chemicals Segment and other upcoming areas such as Mobility Future, Industry 4.0 and Automation are held on a regular basis to

meet the objectives of GAIL's Strategy-2030 in line with the global business environment and India's future growth trajectory.

11.9 Labour Practices

We are committed to advancing fundamental human rights and responsible labour practices throughout our operations as part of our commitment to becoming a true socially responsible organisation. For human rights and labour practises, we follow local laws as well as international frameworks (including the ILO convention). Furthermore, we advocate for the abolition of the abhorrent practices of child labour and forced or compulsory labour.

GAIL believes that our employees have the right to have their voices heard while raising concerns, either openly or anonymously, without fear of repercussions. We allow our employees to form employee or worker associations and labour unions within the confines of the law and our code of conduct.

Our organisational values ensure remuneration equity and non-discrimination, which are based on performance-based and competency-based principles. Collective bargaining applies to all employees.

11.10 Human Rights

(GRI 2-19, 2-30, 402-1 b, 406-1, 407-1 a, 407-1 b, 408-1, 409-1 a, 409-1 b, 410-1 a, 410-1 b)

We strictly enforce our policy of no child labour or forced labour. All security personnel have been trained to ensure that no underage workers enter the plant/office premises and our contractors are not permitted to hire underage workers. The only exceptions to the 18-year-old age limit for any operation are those who are enrolled in government-approved apprenticeship programmes and internships. We provide human rights training to all employees and security personnel on a regular basis.

GAIL maintains a zero-tolerance policy towards any act that violates human rights. We have also ratified a zero-tolerance policy for the

prevention of child and forced labour and ensure that such employment does not occur at any of our operations. During the reporting year, no incidents of child labour, forced labour, or compulsory labour were reported.

We follow the Presidential Directives and other instructions and guidelines issued by the Government of India to provide reservations, relaxations, concessions and other benefits to Scheduled Castes (SCs), Scheduled Tribes (STs), Other Backward Classes (OBCs) and Persons with Disabilities (PWDs) in Direct Recruitment.

We recognise workers' rights to join, form, or not join trade unions of their choice without fear of retaliation or harassment. We protect our employees' rights to free association and collective bargaining by recognising and supporting various employee associations such as Workers' Unions, Women's Forums, SC/ ST Employees Associations and so on. GAIL currently has three employee associations in operation: GAIL Employees Association (GEA), GAIL Karamchari Sangh (GKS) and GAIL SC/ST Employee's Welfare Association (GSEWA).

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

The Industrial Relations Team oversees resolving labour-related disputes. There were no lost man-days due to a labour dispute or disruption in the fiscal year 2022-23.

At our company, we accept collective bargaining 16.62% of our non-management employees are covered by a collective bargaining agreement.

We follow a principle of remuneration equity and non-discrimination that is aligned with the organization's values and is solely based on performance and competence. Statutory Social Security benefits are paid in accordance with applicable laws. Aside from the benefits



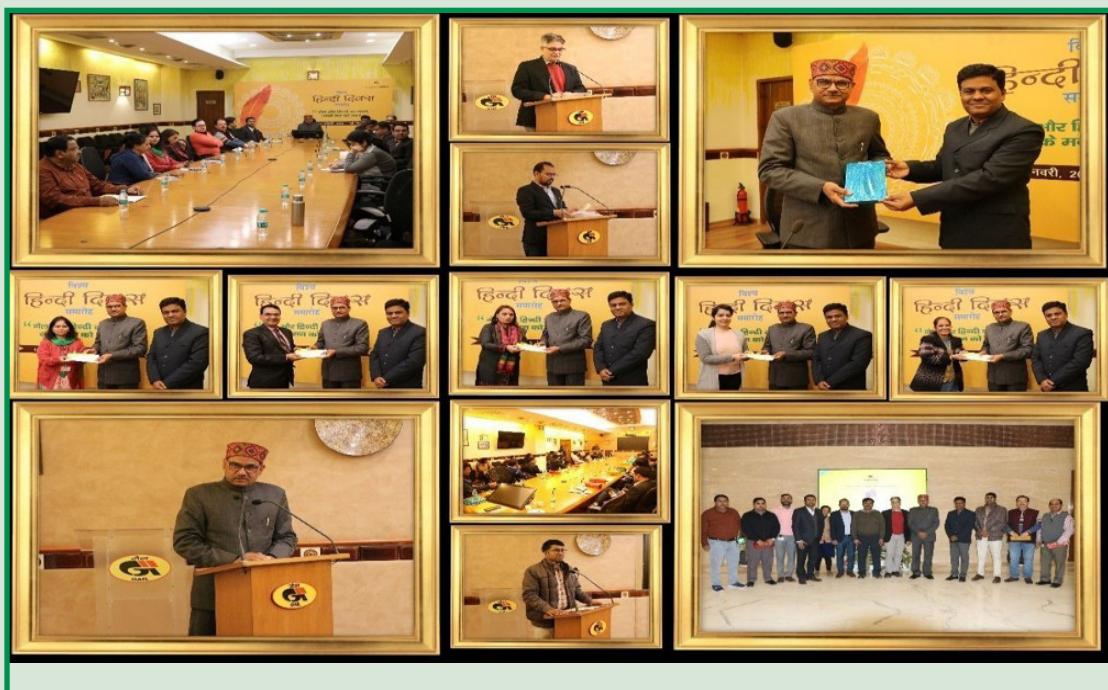
mentioned here, there are several other non-statutory social security benefits.

Pension benefits are available to all GAIL employees and meet all legal requirements.

GAIL ensures that all its facilities in India comply with the minimum wage regulations outlined in The Minimum Wages Act, 1948. Actual pay is significantly higher than the required minimum wage and it varies by state.

GAIL's commitment to human rights and labour practises, including the provision of the minimum wage, is demonstrated by regular interaction with employee collectives, coordination with labour authorities, the resolution of industrial disputes, the recording and analysis of work-centre level issues and long-term settlement with Unions.

World Hindi Day was observed at GAIL, Corporate Office on 10th Jan 2023 to motivate and encourage all the Executives/Non-Executives to enable them to do their original work in official language, Hindi. On this occasion, self-composed (Poem, Storytelling, Memoir etc.) competition was organized in the August presence of Sh. Sunil Kumar Meena, GM (HR).



11.11 Grievance Redressal System

(GRI 2-25, 406-1 b, 412-1 a)

Employee grievances are handled through an online system. The portal employs a three-tiered structure to ensure that grievances are quickly resolved and that the system is frequently monitored. The concerned HR person is responsible for registering the complaint and resolving it within 10 days of its receipt.

In the event of unsatisfactory redressal, the system allows for escalation to the corporate HR department, which must then resolve the matter within 15 days. If the matter is still unresolved, an appeal can be filed to the Director (HR), whose decision is binding and final. The Director of Human Resources must also respond to the appeal and resolve it within 15 days.



No unfair labour practices

Unfair practices are discouraged and strictly prohibited by policies and regulations in place. Employees must adhere to the rules under the following policies:

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

For FY 2022-23, 37 employee grievance cases were filed and 35 were successfully resolved.

Apart from the Policies and Code of Conduct, employees are expected to follow any instructions or directions that are circulated from time to time.

GAIL Training Institute offers a variety of training programmes for all employees, including executive, non-executive and contractual personnel. These are used to educate, inform and sensitise them about labour laws and human rights. Human rights policies educate new employees about GAIL's commitment to human rights and the processes in place.

Furthermore, 100% of security personnel have been trained on specific human rights procedures related to security services.

As part of our commitment to providing a safe workplace for all employees, we take the necessary steps to ensure that our employees are not subjected to any form of harassment and we have a clear policy in place to prevent sexual harassment in the workplace.

The Internal POSH Committee oversees the drafting the annual report, which is submitted to the Company Secretary in accordance with the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013. It addresses all aspects in accordance with

GAIL's policy on the prevention, prohibition and redressal of workplace sexual harassment of women. In the financial year 2022-23 there were no reports of sexual harassment.

Periodic meetings are held at the unit and corporate levels with both employee unions and management to address actual employee complaints. In terms of change notification, we adhere to Section 9A of the Industrial Disputes Act of 1947. Contractors must also provide all statutorily mandated social security benefits, including a provident fund, to contract workers.

Contract workers are covered and benefitted under the Employees' Compensation Act of 1923 or the Employees' State Insurance Act (ESI) of 1948 and the Contractor obtains an Insurance Policy on a regular basis for the grant of Death/ Disability benefits. Contract workers are also covered by the Occupational Safety and Health Administration (OSHA).

We believe that decent employment is a societal right. We have made every effort to provide suitable working conditions for all our employees, including adequate housing.

All GAIL operations are subject to regular human rights reviews and impact assessments. During this financial year, no employees were laid off and no complaints of discrimination in the workplace were filed.

11.12 Employee Well-Being

(402-1 a)

Physical and mental health are inextricably linked and GAIL prioritises employee well-being. When it comes to the health of our workforce and community, there is no room for compromise.

Healthy individuals can significantly contribute to our company's long-term success. Aside from the annual occupational health check-up, there is a provision for a full health screening programme for both permanent and contract employees. Our entire workforce is represented



on our official joint management health and safety committees. This committee conducts health and safety awareness sessions. It includes fitness, yoga, stress management, lifestyle management and nutrition classes. Sporting events such as cycling and badminton are also used to promote a healthy lifestyle. Minimum notice periods of 15 days are provided by the organization to maintain employee satisfaction and motivation while implementing significant changes to operations.

Our Corporate Medical Cell (CMC) conducts regular health screenings for our employees and maintains individual employee health records. Any GAIL employee, both at corporate headquarters and at operational sites, always has access to a doctor.



The construction work of a new PDH PP project with a production capacity of 500 KTA has started at GAIL (India) Limited, Usar at the site of the erstwhile LPG Recovery Plant. GAIL (India) Limited has provided a mobile clinic ambulance of Wockhardt Foundation with free basic health services

as a social responsibility for good health to the people in the villages around this project under the CER/CSR program of GAIL. An MBBS doctor, a nurse, a pharmacist and basic medicines will be available in this ambulance. This mobile clinic ambulance will visit the villages on rotational basis every day to provide medical services to the people of the villages.

As an initiative to promote and conduct Social, Educational, Cultural, Sports, & Charitable events along the route of Mumbai Nagpur Jharsuguda Pipeline project to increase awareness about GAIL pipeline and its value addition to all the nearby cities along the route of this prestigious Natural gas pipeline project through CGDs, GAIL sponsored a half marathon in the city of Amravati, Maharashtra.

GAIL Employees and project teams have actively taken part in this event. Marathon was started by a flag off of 21 KM, 10 KM and 5 KM by honourable guests Sh. Ravikant Kohle, Independent Director and Sh. F M Mahajan, GM (Construction). Around 20 runners from GAIL have taken part in the run and successfully completed it. A prize distribution ceremony was held to give away cash prizes to all the winners. Chief guests addressed the gathering by briefing about the ongoing MNJPL pipeline project of GAIL and the importance of adding cleaner energy to meet daily needs.



Ensuring Health and Safety for All

12



HSE Score of **97.6** for
the FY 2022-23 against an internal
target of **95**



Various HSE guidelines-policy,
HSE Manual etc. were revised and updated



Implementation of HSE Score for
GAIL's City Gas Distribution Networks and
Retail Outlets of CNG/LCNG



Ensuring Health and Safety for All

GAIL is committed to the health and safety of our employees, stakeholders and the public at large. Occupational Health and Safety is an essential component of our operations. GAIL strives to prevent serious incidents and accidents from occurring during operations and we constantly improve safety systems.

The Company is committed to the Occupational Health, Safety and Environment at all of its installations. Adopting cutting-edge technologies and leveraging IT in safety, GAIL constantly enhances process involving HSE management System. Employees including contract workers are encouraged to adopt safe working habits and positive behaviour to drive HSE culture within the organization, and they are empowered to report and stop any unsafe work/acts that may occur. This matter has already been spelt out and communicated to all employees through our HSE policy.

12.1 GAIL HSE Policy

(**GRI 3-3-c, GRI 403-1b, GRI 403-2a, GRI 403-2c, GRI 403-2d, GRI 403-3, GRI 403-5, GRI 403-7, GRI 416-2**)

In accordance with the Group's Safety Framework, we have developed our Health, Safety and Environment (HSE) Management System, which covers employees, contractors, business associates, visitors and the community at large. We implement occupational hygiene measures, regular medical surveillance and risk-based monitoring as part of the Corporate HSE Policy. GAIL aspires to generate value through sustainable development by ensuring the Occupational Health, Safety and Environment of its plants, pipelines, CGDs involving personnel.

GAIL's commitment to Health and Safety to:

- Establish Safety, occupational health and environmental protection by adopting cutting-edge technology.
- Design, build, operate and maintain its facilities in accordance with national /

international standards to ensure the safety of all stakeholders, plants, pipelines, projects and surrounding areas.

- Comply with the applicable laws and regulations of the country in our operations.
- Optimize HSE resources and provide structured trainings on HSE Management Systems, including Behaviour Based Safety (BBS), at all installations and ensuring effective emergency preparedness measures & response mechanism.
- Implement occupational hygiene measures, as well as regular medical surveillance and risk-based monitoring to ensure GAIL employees' health and well-being.
- Implement an effective Waste Management System that includes e-waste and bio-medical waste.
- Share HSE Policy and HSE performance with all interested Stakeholders.

Significant Policy Level Initiatives taken in FY 2022-23 are as follows:

- Various HSE guidelines like Corporate HSE Policy, HSEM system, F&S Policy document, Incident reporting system and Environment guidelines have been revised and updated in line with applicable HSE requirements.
- Internal Technical and Safety Audit of City Gas Distribution Networks and associated Retail Outlets carried out by a multi-disciplinary team in compliance with PNGRB (Third Party Conformity Assessment) Regulations 2015.
- Environmental Audits were conducted in compliance with HSE practices.
- Uniform Internal Training Modules on Operational and Safety aspects have been duly approved by ED (O&M-CO) and circulated to O&M sites for implementation
- Uniform Procedure for Organizing Emergency Preparedness Exercise/Mock Drill has been formulated and circulated to all the sites

- Implementation of HSE Score for GAIL's City Gas Distribution Networks and Retail Outlets of CNG/LCNG.

More details of our HSE Policy can be found at [Corporate HSE Policy-GAIL](#).

12.2 HSE Management System

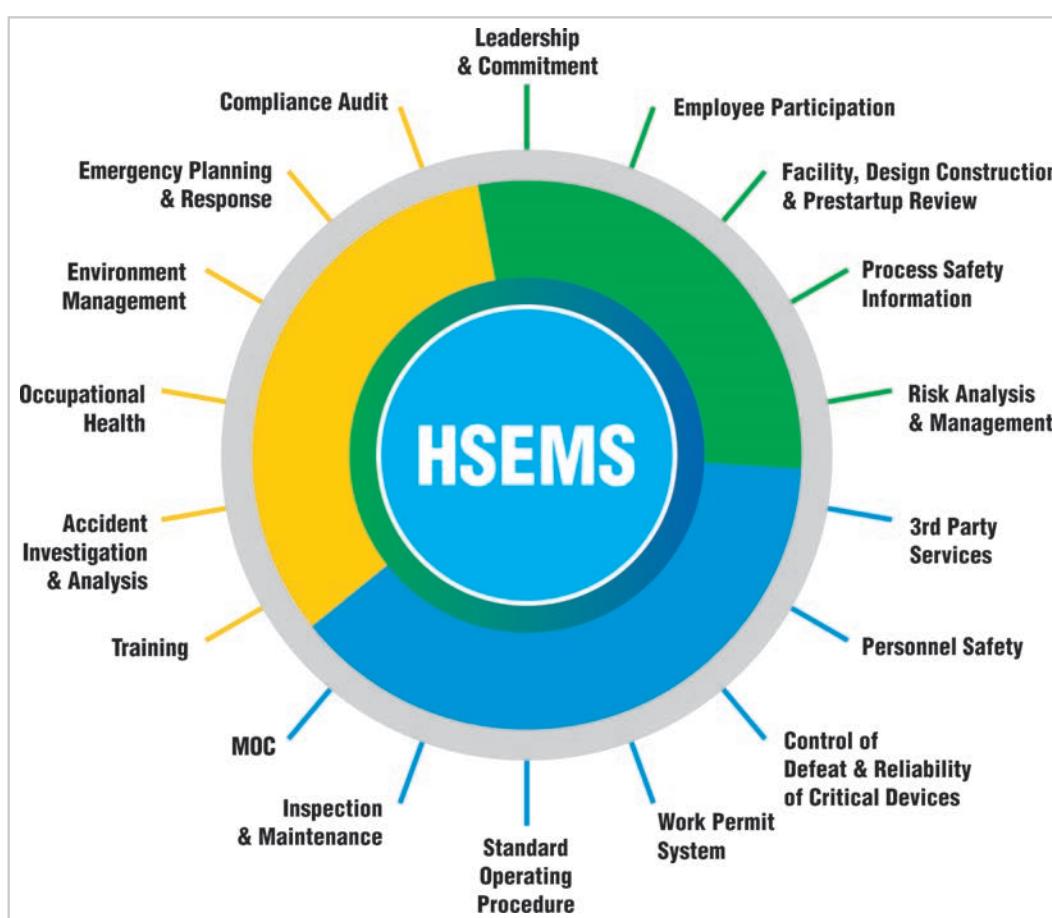
(GRI 3-3b, GRI 3-3d, GRI 403-1a, GRI 403-1b, GRI 403-2a, GRI 403-2d, GRI 403-3, GRI 403-4a, GRI 403-4b, GRI 403-7, GRI 403-8)

Our HSE Philosophy includes a Health, Safety and Environmental Management System (HSEMS). The HSE Management System is in accordance with the Oil Industry Safety Directorate Standard on "Safety Management System in the Petroleum Industry". It is an integrated approach to manage workplace safety that encompasses all aspects of plant and facilities to mitigate any losses as related to personnel, equipment, materials and the environment.

GAIL's HSE Management System includes 18 elements that apply to GAIL's operational

activities. The HSE document specifies requirements and guidelines for each element for implementation across GAIL installations. Our HSEMS covers a variety of elements, including leadership and commitment, operational and maintenance procedures, work permit systems, third-party services, training, incident reporting, investigation and analysis, occupational health and environmental management etc.

To meet the statutory requirements of the Factories Act 1948, prescribed under section 41 (G) and to improve the safety standards in day-to-day work activities in the plant/facility, a Safety Committee(s) comprising of equal numbers of members from management and non-management staff, including trade unions etc., has been formed. Site-level Safety Committees oversee safety at our operational sites. Safety Committees meet at least once in every three months to review health and safety performance and make decisions on preventive and corrective actions.



12.2.1 GAIL's HSE Score Implementation (GRI 3-3-d, GRI 3-3-e, GRI 3-3-f)

In order to ensure continuous monitoring and implementation of the HSE Management System, the HSE performance of sites and safety compliances are measured on a regular basis. For achieving the same, we are having "HSE Score" system. This system aids in the effective monitoring of various elements such as Leadership and Commitment, Employee Participation, Work Permit System, Risk Analysis, Maintenance and Inspection of Critical Safety Appliances/Equipment, Occupational Health, Emergency Preparedness and Compliance Audit etc.

The benefit of the HSE score system is reflected in the increased productivity and morale of all those involved in operation & maintenance activities. This has resulted in fewer workplace accidents, injuries and illnesses.

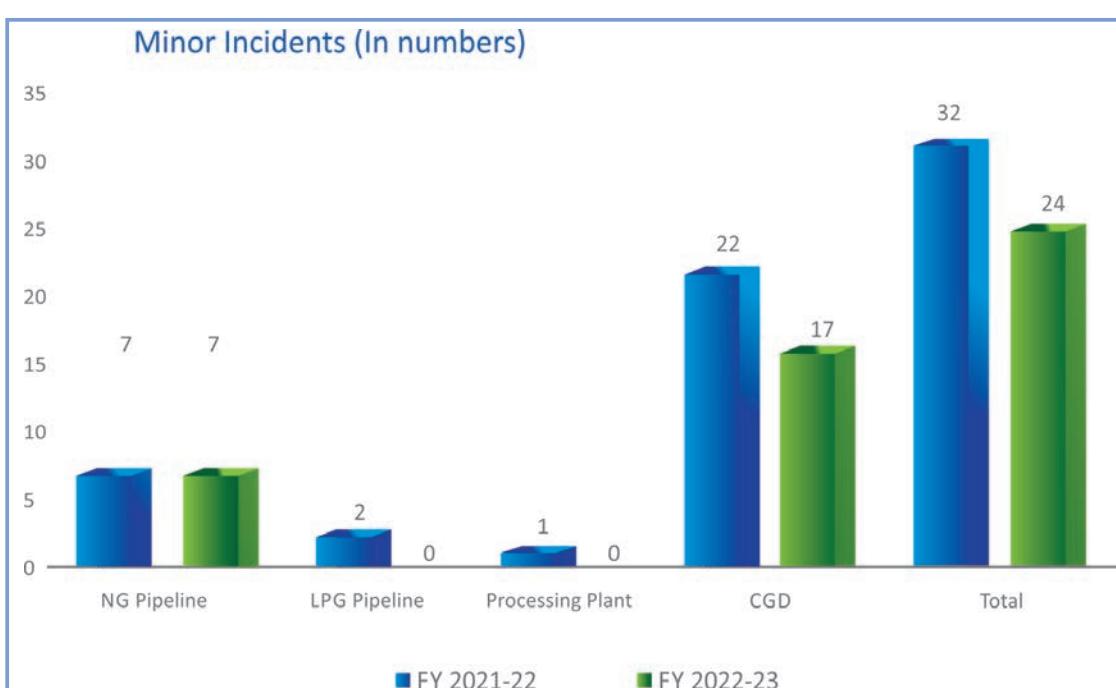
The HSE Score System was revised in 2021-22 to capture the key performance areas of Safety in Operation and Maintenance while considering the latest/amended PNGRB/OISD Regulations/Standards. All applicable GAIL sites submit an annual HSE plan and annual training calendar that has been approved by the site OIC/WIC. Fire and safety in-charges and O&M in-charges of respective sites carry out programmes based

on the annual plan. Few examples of common practices are:

- Entry of site-specific HSE performance in HSE Score Entry System available in GAIL intranet by the designated executive, preferably HOD (Fire and Safety): Entries are then reviewed and approved by the respective OIC/WIC.
- The Corporate HSE Department compiles and computes the HSE score on monthly basis. HSE scores are discussed at each site during the monthly Safety Day meeting and necessary actions are also taken to improve upon the existing performance.
- The Functional Director reviews the exception report on Monthly Safety Day Observations on a regular basis.
- Sites with high safety scores of HSE Performances are also being physically verified by Corporate HSE officials at sites.

12.2.2 Health, Safety and Environment Performance (GRI 3-3-a)

- Health, Safety and Environmental Management Performance of GAIL's installations are measured by the "HSE Score," which is evaluated on monthly basis and the key elements of the HSE Management System



indicate the respective level of performance wrt various elements. HSE Score System is an unique tool to measure the performance of O&M installations on significant aspects like Leadership Commitment, Employees Participation, Standard Operating Procedures, Risk Assessment, Healthiness and Operability of Fire Fighting Systems and Appliances, Emergency Preparedness, Safety Audits etc. of HSE Management System through pre-defined parameters with weightage.

- GAIL achieved an average “HSE Score” of 97.6% in FY 2022-23, compared to an internal target of 95%.
- With reference to the PNGRB, OISD and MOPNG incident reporting categorization, 3 major incidents occurred at GAIL installations including projects during the reporting period. 24 no of minor incidents occurred during the reporting year.
- A multidisciplinary committee investigates all incidents to determine the root causes and mitigation actions to prevent the recurrence of any such incident.

12.3 Transportation Safety in GAIL:

We transport natural gas and liquefied petroleum gas (LPG) through cross-country pipelines, which is one of the safest modes of transportation. Oil marketing companies such as IOCL, BPCL, HPCL and GAIL primarily transport hydrocarbons such as LPG, Propane, Pentane and Propylene via road transport. Transportation safety evaluation with severity categorization allows us to identify potential hazards, risks, injury, or harm that may occur during gas transportation and distribution. Standard operating procedures and processes are followed to keep the risk as low as possible.

We provide the necessary support/assistance for the recovery/coverage of flammable liquid hydrocarbon products due to in-transit accidents in the vicinity of GAIL's supply plant(s), which is always provided by GAIL's Fire and Safety & Operations department.

Transportation Safety for Cross-Country Pipeline

- Risk assessments of cross-country pipelines are conducted to determine the Individual Risk Per Annum (IRPA) and risk mitigation measures are being implemented.
- GAIL raises community awareness about pipeline safety through FM radio jingles. On a regular basis, safety awareness campaigns are organised for nearby residents along pipelines to disseminate information about pipeline location, Do's and Don'ts in the ROU area, potential consequences of damage, company contact information for reporting leakage and informing before carrying out any excavation and so on.
- Nukkad Natak on pipeline safety is being held in villages that are close to cross-country pipelines.
- To improve communication during an emergency, an all-India toll-free dedicated short key number 15101 has been provided.
- Our nodal point for emergency management is the National Gas Management Centre (NGMC) in Noida.
- To identify encroachments / suspicious activities, daily foot patrolling in populated/ urban centres and monthly foot patrolling of Lines in other locations is conducted.
- Across the organization, a GPS-based online tracking system for foot patrolling is implemented.
- The PNGRB (Integrity Management System for Natural Gas Pipelines) Regulations 2012 govern the entire Cross Country Pipelines Integrity Management System.

12.3.1 Road Transport Safety

Hydrocarbon tank trucks are permitted to enter the plant for loading only after proper physical verification of tank trucks & documentation has been validated in accordance with RTO and PESO requirements etc. Prior to entering the plants,



the trucks are inspected by CISF. The following are some of the most important road transportation safety measures:

- Online SAP-based ‘Dangerous Goods Authorization’ to ensure the safety of hydrocarbon tankers prior to loading by reviewing the safety aspects.
- Regular employees conduct physical inspections of hydrocarbon tankers.
- Periodic capacity building sessions for workers involved in hydrocarbon product loading to make them aware of the hazards associated with the operation and mitigation measures
- When the truck arrives at the bay, the flow is checked.
- Ensuring that there are no protruding objects in the trucks that could damage the bags.
- Regular road safety/personal hygiene trainings for LHC tanker and truck drivers
- All hydrocarbon truck drivers are issued with a Transport Emergency Card (TREM) to provide them with emergency management and communication information.
- Drivers are personally instructed to uphold safety standards both inside and outside the plant premises.

12.4 Environment, Health and Safety Management (EHSM) Using SAP

(GRI 403-2b)

SAP-based Environment, Health and Safety Management (EHSM) have been implemented, with numerous functionalities including an incident management system (safety observation, recording near miss and incident/accident), risk assessment and job safety analysis, change management, safety audit/activity monitoring.

Instead of offline complaints, we have an online system accessible to all employees, including contractual workers, for reporting safety observations (Unsafe Acts/ Unsafe Conditions)

and ‘near miss’ in the portal using a developed interactive form. Contract employees can report such incidents to their GAIL supervisor / physical submission of forms in drop boxes for corrective action

The followings are the impacts and benefits of the EHSM SAP:

- Establishment of uniform procedures for incident management, job safety analysis, risk assessment and change management across GAIL
- Implementation of a workflow to improve clarity and accountability to transform the compliance approach
- Through a single portal, incident reports for institutions/statutory bodies such as PNGRB, OISD, PESO, Factory Directorate and GAIL are generated.
- GAIL’s Work Permit System is being strengthened by linking it with Job Safety Analysis (JSA).
- Increasing the efficiency of monitoring and analytical reporting by providing OICs/WICs/ coordinators with a user-friendly dashboard.

FY	No of Safety Observation Reported	Nos. Closed	Nos. In Progress
2022-23	6117	5778	339
2021-22	5933	5845	88

12.5 GAIL Safety Audits

(GRI- 403-7)

Safety audits are performed on a regular basis to ensure the implementation and performance of the HSE Management System Guidelines and Emergency Preparedness. These audits are carried out in accordance with the applicable National Codes and Standards by PNGRB-approved Third Party Inspection Agencies, other external agencies, and our experienced in-house team. Suggestions and recommendations made during various audits are being compiled in a timely manner.

An in-house team is conducting an internal safety audit (Proactive Audit & Internal Audit-CO) to identify areas for improvement in terms of PNGRB and other regulations, OISD Standards, Management Governance and so on. Furthermore, a specific Internal Audit on Occupational Health and Environment Management is conducted on a regular basis to identify specific potential improvements while considering various health and safety standards.

To ensure time-bound compliance, all recommendations received during various audits are recorded in the Online Audit Monitoring System. In addition to internal audits, third-party inspection agencies conduct external safety audits of GAIL's installations in accordance with applicable national codes and standards. GAIL undertakes Safety Audits of O&M Installations to identify the gaps with respect to applicable Codes & Standards and identify the improvement areas, if any. External Safety Audits of Installations are carried out by Third Party Inspection Agencies (TPIA), in accordance with the applicable Central and State Regulations.

- External Safety Audit of Major Installations is carried out once in a year in line with Manufacturer, Storage & Import of Hazardous Chemical Rules (MSIHC), 1989.
- Technical and Safety Audits of GAIL, LPG Storages and Handling facilities, NG/LPG Pipelines and CGD Networks are being carried out by Third Party Inspection Agency duly approved by PNGRB to ensure compliance w.r.t applicable PNGRB Regulations.
- A Compliance Assessment Audit to the PNGRB Regulations, 2009 of Hazira-Vijaipur section of Hazira-Vijaipur-Jagdishpur (HVJ) Natural Gas Pipeline (NGPL) Conducted by PNGRB nominated committee during 2022-23.
- OISD, a technical wing of MOPNG, Government of India also conducts Safety Audits of Gas Processing Plants,

Petrochemicals and NG/LPG Pipelines once in 3/4 years to check the conformity with various OISD Standards and Guidelines.

GAIL has established a structured procedure to carry out Internal Technical and Safety Audit of O&M Facilities. Internal Audit (Proactive Safety Audit and Internal Audit-CO) is being conducted at least once a year by an in-house team to identify the improvement areas w.r.t PNGRB and other regulations, OISD Standards, Management Governance etc. Also, two Electrical Safety Audits of O&M Installations have been undertaken to ensure various compliances about electrical safety aspects

12.6 Employee Safety: Occupational Health, Training and Emergency Preparedness (GRI 403-5, GRI 403-7)

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

Occupational Health

To implement occupational health, hygiene measures and medical surveillance programmes to monitor and improve employee occupational health, GAIL has developed occupational health guidelines. The meeting of Corporate Occupational Health Committee is held once in three months to assess the success of GAIL's occupational health programmes. Regular employees at O&M installations covered by the Factories Act, 1948 undergo an occupational health examination in the financial year (2022–2023).

In-house multidisciplinary teams at Gas Processing Units Vaghodia and Gandhar conducted Occupational Health Audit in the FY 2022-23 to evaluate the efficiency of the occupational health system and facilities. In FY 2022-23, Environmental Audits at the processing facilities in Vaghodia and Vijaipur were carried



out to assess the efficiency of the environmental management system and legal compliance.

The Corporate Occupational Health Committee meets quarterly to monitor the occupational health programme. Its effectiveness is evaluated using the results of an Occupational Health Audit performed by in-house multidisciplinary teams. Among the topics covered by the Occupational Health Guidelines are site-specific occupational health infrastructure, occupational health committees, medical surveillance programmes, health data documentation & analysis and biomedical waste management.

Medical surveillance is performed on employees on regular basis to assess their health, while occupational health check-ups are performed on permanent employees once in a year to assess their well-being.

We also conduct health awareness workshops on a regular basis. Employee health scores are computed and recorded using predefined parameters that are communicated to employees.

12.7 Occupational Health and Safety at GAIL (GRI 403-2-d, GRI 403-6, GRI 403-7)

Petrochemicals, Gas Processing Plants, Natural Gas Compressor Stations & associated pipelines, LPG Pumping Stations and associated pipelines, and CGDs are the primary drivers of installations. In accordance with the Corporate HSE Policy, a site-specific HSE Policy is in place. The following are some of the key Occupational and Health safety practices implemented for permanent employees:

- Quarterly safety committee meetings, chaired by the Occupier/Factory Manager, are held to discuss Occupational Health and Safety issues affecting employees, including contract workers.
- The Corporate Occupational Health Committee meets quarterly to monitor GAIL's occupational health programmes.

- At GAIL's O&M sites, Safety Committee Meetings with members from Management and Non-Management were held to discuss various safety and occupational health issues.
- Job Safety Analysis (JSA) is used to conduct a task-based risk assessment to identify the hazards and risks associated with the job, as well as their mitigation plans to ensure safety at workplace.
- All employees receive a mandatory Personal Protective Equipment (Cotton Uniform, Safety Shoes and Helmet) kit. At the workplace, a Personal Protective Equipment (PPE) Matrix has been displayed. Enough identified Personal Protective Equipment are made available at sites. All employees have been issued with Personal Protective Equipment (PPE).
- To reinforce positive behaviour among employees, including contract workers, 'Advance Behaviour Based Safety' has been implemented.
- The Online Reporting System for Safety Observations was created to provide a platform for employees to report Unsafe Acts / Unsafe Conditions for necessary and timely action.
- Every year, medical surveillance is performed to assess the health of employees.
- Medical insurance facilities are provided to all employees. The company also conducts medical health camps and annual health check-up for all permanent employees and workers

12.7.1 Contractor Safety

GAIL's health and safety policies are applicable to contractors. Every contractor must adhere to GAIL's health and safety practices, rules and guidelines. When a new employee joins for work, all contractors are required to submit a health

check-up certificate.

Contract employees, including canteen workers, have their occupational health checked on a regular basis. Contract employees can use first aid centres and receive outpatient department (OPD) treatment. Contract employees are sensitized to health issues in their daily activities through lectures on important health topics.

GAIL employees as well as contract workers are included in the structured HSE training matrix. Internal safety training is in place at O&M installations, where training modules, such as behaviour-based safety (BBS) etc. are imparted to employees and contract workers to upgrade their skills, knowledge and competence to effectively develop their HSE functions and positive safety culture. The below mentioned aspects are adhered to ensure better compliance on Contractors safety.

- Safety Training/Awareness Programs prior to job deployment.
- The Work Permit System is followed and all workers are imparted with safety / toolbox talks prior to starting of any work.
- Personal Protective Equipment (Cotton Cloths, Safety Shoes and Helmets) are required to be used/worn by the employees at site.
- A Personal Protective Equipment (PPE) Matrix is used to guide the selection of appropriate PPEs for the job.
- Job-specific Personal Protective Equipment (PPE) is made available to all employees and its use is strictly enforced.
- Before deployment, workers' health is assessed for critical jobs such as working at heights and vessel entry.
- Training provided to contract employees on various safety topics such as First Aid, Fire Fighting, PPE Use, Workplace Hazards and so on.

- Behaviour Based Safety (BBS) has been implemented at all GAIL installations to foster a safe work culture by empowering and enabling all employees, including contract workers, to report any unsafe condition or unsafe act to improve workplace safety.
- Standard Operating Procedures (SOPs) have been established.
- Safety information, data sheets, SOPs and other documents are prominently displayed.
- Non-sparking tools are used during plant maintenance activities.
- Workers are also encouraged to participate in various ways, such as Safety Suggestions, Observance of Safety Week and Environment Day, which act as a platform to provide suggestions and feedback for continuous improvement in the HSE Management System.
- Periodic workplace monitoring is carried out to assess the concentration of hydrocarbons and gases, illumination level, noise level, environmental quality and so on, and advice recommendations to reduce the level if found to be excessive.

12.7.2 Health and Safety Initiatives in FY 2022-23 (GRI 403-5)

GAIL strives to have a positive impact on the environment and the community by promoting the highest standards of safety, employee health and a clean environment.

In line with the vision statement, Health, Safety and Environment is of utmost importance and its qualities are embedded in the organization's fundamental values. GAIL has created a corporate health, safety and environmental policy, which is evaluated on a regular basis to ensure that it is in line with the organization's vision. The top management's commitment and employees' responsibility to conduct business in accordance with an integrated Health, Safety



and Environmental (HSE) Management System are clearly outlined in the HSE Policy document.

GAIL is committed to Occupational Health, Safety and Environment of our business areas and various stakeholders to generate value through sustainable development. To ensure adequate safety in all areas of our business, GAIL has ensured proper design, construction, operation and maintain its facilities in accordance with national and international standards. To foster positive HSE culture within the company, we encourage all employees including contract workers to adopt safe working practices and behaviour. They have the duty and authority to report and stop any unsafe work or behaviour as they see fit. The followings are the HSE initiatives:

- 10th day of every month is observed as “Monthly Safety Day” at each Operations & Maintenance (O&M) site in GAIL during FY 2022-23. On this day, the Officer-In-Charge of all installations (OICs) reviews all the safety-related aspects of their installations under their jurisdiction.
- 08 Nos. of Health, Safety and Environment Review Meeting organized, chaired by Executive Directors / Functional Directors.
- 19th Annual HSE Workshop on the theme “Achieving HSE Excellence through Innovations and Learnings” organized in June 2022. The Workshop was inaugurated by Honourable Chairman and Managing Director.
- Petroleum & Natural Gas Regulatory Board (PNGRB) organized a ‘Knowledge Sharing Workshop on Natural Gas Pipelines’ in association with GAIL (India) Limited at GAIL Jubilee Tower, Noida in June 2022. The Knowledge Sharing Workshop was attended by members from Cross Country Pipelines and City Gas Distribution Networks entities.
- Organizational HSE Audit of GAIL (India) Limited carried out by a multi-organizational team headed by ED (IOCL), coordinated by OISD in January 2023, as recommended by High-Level Committee set up to inquire into the incident of Baghjan and Cyclone Tauktae.
- A senior Level Committee headed by Executive Director, Corporate Operational & Maintenance visited City Gas Distribution Networks to review the compliances of GAIL’s HSE Management System and identify the systemic improvement areas.
- 10 Nos. of T4S/OISD Audit Compliance Checks carried out by Corporate HSE Officials at O&M sites to physically verify the compliance of audit recommendations.
- 26 Nos. of Awareness Sessions covering more than 400 employees on EHSM Modules organized to further strengthen the HSE Management System in GAIL.
- GAIL participated in the 3rd Session of the National Platform for Disaster Risk Reduction in Vigyan Bhawan, New Delhi in March 2023.
- A specialized training on “Safety Aspects of Scaffolding, Rescue from Work at Height & Confined Space Work” conducted for two batches of employees at Pata from 13th -15th and 16th - 18th February 2023 respectively.
- 02 No of internal Electrical Safety audits were conducted during FY 2022-23.
- 02 No of Environmental Audits were conducted in compliance with our HSE practices.
- Occupational Health Audit was also undertaken by in-house multi-disciplinary teams in Gas Processing Units at Vaghodia and Gandhar, in the FY 2022-23, to check the effectiveness of the Occupational Health System/facilities.



As an initiative to promote and conduct Social, Educational, Cultural, Sports, & Charitable events along the route of Mumbai Nagpur Jharsuguda Pipeline project to enhance awareness about GAIL pipeline and its value addition to all the nearby cities along the route of this prestigious Natural gas pipeline project through CGDs, GAIL sponsored the Half marathon event in the city of Amravati, Maharashtra.

Awards and Appreciations

GAIL awarded with following safety awards in the financial year 2022-23 for excellence in Occupational Safety and Health (OSH) performance and commitment to reducing hazards, workplace incidents, and injuries through the implementation of best OSH practices:



GAIL has received an individual award in FY 2022-23

1. OHSSAI OH&S GOLD award
2. OHSSAI HSE LEADERSHIP AWARD.
3. OHSSAI LIFETIME ACHIEVEMENT AWARD



GAIL received Grow Care India Occupational Health & Safety Platinum Award 2022, for best safety practices.



- Gandhar GPU won the “International Safety Awards 2022” with Distinction (Score 53/58) – awarded by British Safety Council
- Chhainsa Compressor Station has been declared as the Winner of “Safety Innovation Award-2022” by the Institution of Engineers (India)
- GAIL Vaghodia has bagged “Gold Award” Under Apex India Occupational Health & Safety Award 2022
- Dabhol Bangalore Pipeline awarded as the “Winner of Best-in-Class Safety Excellence Award-2022”.
- GPU & HVJ Compressor Station, Vijaipur has been declared as winner in NSC MP Chapter- Safety Award
- KKBMPower awarded with Shrestha Suraksha Puraskar by National Safety Council – 2022.
- GAIL Vijaipur, Gas Processing Unit has been awarded as the Winner of Suraksha Puraskar (Bronze Trophy) – 2022 by National Safety Council of India.

Responsible Supply Chain Management

13



INR **1,541** crores of total procurement made from MSEs in FY **2022-23**



MSEs owned by SC/ST entrepreneurs has increased to **4.04%** from **1.9%** in FY **2022-23**



Order value through GeM in FY **2022-23** is INR **2,541**



Responsible Supply Chain Management

Our Suppliers

At GAIL, suppliers are key stakeholders as they ensure smooth business operations and are significant contributors to our overall success. GAIL collaborates with its suppliers to establish a sustainable framework that benefits both parties. The Company assists its suppliers in providing essential materials, goods and services to its core and non-core operations, while also ensuring that its values are in line with its suppliers in a sustainable manner.

13.1 Procurement Practices

(GRI 3-3-a, b, c, d, GRI 308-1)

At GAIL, effective management of purchasing and supply plays a vital role in improving the Company's sourcing practices. Efficient and responsible procurement practices help the Company avoid risks and threats associated with non-core operations and ensure better transparency, opportunities to connect with suppliers, enhanced brand image, and limited exposure to the uncertainties in the business. The Company ensures that all its suppliers adhere to the applicable regulations and standards set by GAIL. This in turn enables uninterrupted operation of facilities.

- GAIL is actively working towards enhancing procurement from Micro and Small Enterprises (MSEs) owned by SC/ST (Scheduled Caste/Scheduled Tribe) entrepreneurs and make a positive impact to marginalised communities. GAIL has adopted a special tie-breaker methodology in tenders for services/works to prioritize procurement from MSEs owned by SC/ST entrepreneurs. In cases where there is a tie at the lowest bid position between two or more bidders, the following preference sequence is followed when awarding the contract:

1. If one of the bidders is an MSE owned by SC/ST Entrepreneur, the order shall place with that bidder.

2. If one of the bidders is an MSE owned by a Women Entrepreneur, the order shall place with that bidder.
 3. If one of the bidders is an MSE, the order shall be placed with that bidder.
 4. If none of the above conditions are met, the order shall be placed with the bidder having a higher turnover in the previous financial year.
- GAIL regularly conducts Special Vendor Development Programs specifically aimed at MSEs owned by SC/ST entrepreneurs. In collaboration with the National SC/ST Hub, a Corporate Level Special Vendor Development Program are conducted. During the program, participants are briefed about GAIL's procurement policies and the special initiatives taken to promote MSEs owned by SC/ST entrepreneurs.
 - GAIL had successfully organized an Entrepreneurship development program at Jaipur in 2022 wherein 14 budding SC/ST entrepreneurs were taught the aspects of entrepreneurship.
 - GAIL also organizes Entrepreneurship Development Projects (EDPs) in partnership with companies like M/s HPCL to support the development of SC/ST entrepreneurs.
 - GAIL is committed to promoting MSEs owned by SC/ST entrepreneurs and actively encourages their participation in their tenders. To reach out to more MSEs, especially those owned by SC/ST entrepreneurs, GAIL has published advertisements in newspapers across the nation in languages like Hindi, English, Bengali, Telugu, Tamil and others.

13.2 General Conditions of Contract and Shaping of Contracts

(GRI 3-3-c, d, GRI 308-2, GRI 414-2)

All bidders are required to conform to GAIL's General Conditions of Contracts (GCC) wherein

they confirm adherence to all provisions relating to impact on society, environment, labour practices, and human rights outlined in GAIL's General Conditions of Contract and Integrity Pact (IP). These guidelines mandate adherence to the following standards:

- Promoting the rights and welfare of workers
- The contractor shall ensure that all workers comply with all health and safety regulations at the worksite.
- Commit to protecting the environment in compliance with all applicable environmental laws and regulations.

Additionally, GAIL implements all government policies which contribute towards the Organization's sustainable sourcing. The procurement policy guides the Company's procurement processes and sourcing strategies to ensure that the services and goods acquired are a result of transparent processes, time- and cost-effective decision-making and risk management.

The suppliers are expected to adhere to the Supplier Code of Conduct and compliance based on environmental and social criteria. Adherence to both is also monitored by GAIL.

Apart from this, 20 Vendor Development Programmes for MSEs (including 4 Special Vendor Development Programmes / Hand Holding Sessions especially for MSEs owned by SC/ST & Women Entrepreneurs) were organized by GAIL.

13.3 Zero Tolerance to Child Labour

(GRI 3-3 a, b, d, 407-1a, b, 408-1a, b, c, 409-1a, b)

The UN 2030 Agenda for Sustainable Development has set a goal to eliminate forced or compulsory labour, modern slavery, human trafficking, and child labour (SDG Target 8.7). GAIL adopts a zero-tolerance policy towards child labour in its supply chain. The company advocates sustainable and responsible business practices across its value chains, which can potentially make a significant

contribution towards eradicating child labour in supply chains.

GAIL strictly prohibits the use of child labour in its operations and supports the government's legislative action plan on child labour policies. The company enforces mandatory due diligence across all supply chains and fully trained security personnel to prevent underage workers from entering their plant or office premises including exposure to hazardous work. Contractors are prohibited from hiring underage workers. The organization conducts regular checks at every stage of operations, including their subsidiary companies, to prevent any violation of human and children's rights.

GAIL's management focuses on the convergence of general development programs to benefit children wherever possible. To ensure the upliftment of child labour families, a Core Group has been established in the Ministry of Labour & Employment to coordinate various welfare schemes of the Government and prioritize the needs of these families.

During FY 2022-23, there have been no instances of child labour, forced labour, or compulsory labour. GAIL put continuous efforts to avoid these in its operations and supply chain.

At GAIL, employees have the privilege to express any concerns, either openly or anonymously, without facing any adverse consequences. The organization offers its employees the liberty to associate themselves with employee or labour unions within the framework of legal provisions and ethical norms. The company upholds the rights to Freedom of Association and Collective Bargaining by acknowledging and endorsing various employee associations such as Workers' Unions, Women's Forums, SC/ST Employees Association, etc. Currently, three employee associations, namely GAIL Employees Association (GEA), GAIL Karamchari Sangh (GKS) and GAIL SC/ST Employee's Welfare Association (GSEWA), are operational in GAIL. As of 31st March 2023, 16.62% of GAIL's total employee strength, are members of these associations.



GAIL complies with local laws as well as international frameworks (including the ILO convention) for human rights and labour practices. Furthermore, GAIL's plants and offices undergo a comprehensive 100% internal screening periodically. For initial screening, GAIL has included the human rights clause in all the investment agreements and contracts with suppliers.

13.4 Vendor Grievances Portal

(GRI 3-3-e, f)

The aim of GAIL grievance mechanisms is to receive and manage grievances from all stakeholders throughout the Organization's value chain to minimize the social risks to the business. GAIL is committed to providing services to its stakeholders in a transparent manner by upholding the highest values of corporate governance and ethics. This reduces potential conflicts and strengthen relationships with business partners.

GAIL also has specific complaint channels for each stakeholder group to monitor and collect feedback. For suppliers, it has an Online Complaint System that not only ensures the outstanding performance of individuals but also that of the units, divisions and departments of GAIL.

GAIL has a designated Vendor Grievance Portal- "SAMADHAN" to address issue(s) of Vendor/ Supplier/ Contractor/ Consultant in a timely manner. Its function is to receive reports on incidents or complaints directly from marginalized communities if GAIL activities have affected the communities which focus on effective grievance resolution that may arise during both normal operations and construction expansion projects. The Company also continuously interacts with communities through online platforms and conducts community visits to build trust and understanding, as well as reduce community concerns, ensuring that the Organization manages, maintains and protects the rights of all stakeholders. The link of the portal is available on our Corporate [Website: Vendor Grievance-GAIL](#)

Vendors also have the option to address their grievances by reaching out to Independent External Monitors. These monitors have been appointed to ensure the proper implementation of the Integrity Pact Program in GAIL. The Integrity Pact is included in all tenders with a value exceeding INR 1 Crore.

Apart from this, to capture the feedback of suppliers and contractors in an effective way, a Vendor Feedback portal has also been launched.

13.5 Responsible Supply Chain Management

13.5.1 Sustainable Procurement

(GRI 3-3, 204-1a, 308-1, 308-2)

GAIL strives for sustainable procurement across its supply chain for sourcing its raw material and goods from local suppliers. The suppliers at GAIL play an important role in the value chain and have a significant impact on a company's environmental and social performance.

Encouraging suppliers and contractors to meet strict requirements and certifications related to quality, environmental impacts and health & safety is an effective way to ensure that suppliers are aligned with the company's sustainability goals and values. GAIL reduces its risks associated with non-compliant suppliers and improves the overall sustainability performance of its supply chain.

Suppliers and contractors are engaged based on sustainability performance, which is part of the General Conditions of Contract (GCC) guidelines and Integrity Pact. These guidelines require them to comply with labor laws, strengthen health and safety and minimize environmental issues. To procure energy efficient and sustainable products, GAIL has 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

Further GAIL has also incorporated provisions for green packaging in its tenders wherein vendors are advised for using sustainable material and adapt sustainable practices while supplying material to GAILC&P-2.

GAIL's journey to adopt the Atmanirbhar Bharat mission as a revival strategy for its supply chain aims to promote domestic production and encourage maximum participation of local domestic bidders. By sourcing approximately 88% of raw material and goods from local suppliers, GAIL has been able to meet most of its requirements locally. This approach contributes to the development and growth of local vendors.

Some of the procurement initiatives taken are mentioned below:

- No GTE (Global Tender Enquiry) tender below 200 crores

To promote domestic manufacturing in micro, small and medium enterprises under the Atmanirbhar package, the government, or its agencies for the procurement of goods and services decided that no global tender will be floated if the value is less than Rs 200 crore. In exceptional cases where there are special reasons for tenders below-mentioned limit, prior approval from the competent authority is obtained along with a detailed justification. The Secretary (Coordination) and the Cabinet Secretariat are the competent authority to approve the processing of tenders on a GTE basis up to INR 200 crore, in the exceptional cases mentioned above.

- Implementation of Purchase preference

policy

GAIL provides purchase preference to MSEs in line with the requirements of various procurement policies for MSEs to promote and support local vendors. The policy aims to incentivize the growth in local content in goods and services by implementing oil and gas projects in India by providing purchase preference to the manufacturers/service providers who meet the local content targets in oil and gas business activities.

- ▶ Public Procurement Policy for Micro and Small Enterprises (MSEs) 2021
- ▶ Policy for Purchase Preference to Domestically Manufactured Electronic Products (DMEP)
- ▶ Policy to Provide Purchase Preference as per Public Procurement (Preference to Make in India), Order 2017
- ▶ Policy for Preference to Domestically Manufactured Iron and Steel Products (DMI&SP)
- ▶ Policy for Purchase Preference Domestically Manufactured Products of MoP&NG
- ▶ Policy for Purchase Preference Domestically Manufactured Telecom Products, works and services
- ▶ No ICB (International Competitive bidding) tender below INR 200 Crores. In exceptional cases, ICB tenders to be floated only with the approval of the competent authority.
- ▶ Restriction on Procurement from a Bidder which shares a land border with India

The Department of Expenditure at GAIL has issued updated guidelines on the Procurement of Goods, Works and Services. The procurement procedure was aligned with the guidelines launched by the Vigilance Commissioner.

- Modified General Conditions of Contract



(GCC) Good.

- Execution of Document Transmittal Systems across GAIL
- Revised Model Tender Documents (12 in number), aligned with the procurement process, were released to ensure consistency in tendering across all work centres of GAIL and also assist bidders in presenting their bids.

The procurement policies target 25% of procurement from MSEs with sub-targets for marginalized communities of 4% from MSEs owned by Scheduled Castes or the Scheduled Tribes and 3% owned by Women entrepreneurs for the Goods and Services procured. Out of the total eligible value of annual procurement of approx. INR 3343 crore towards Goods produced and Services rendered by MSEs (including MSEs owned by SC/ST Entrepreneur) during the FY 2022-23, the value of total procurement made from MSEs is INR 1541 crore which is approx. 46.09%. as compared to INR 1,478 crore, which

is approx. 40.06% in FY 2021-22.

The procurement made from MSEs owned by SC/ST Entrepreneurs is INR 137 crore which is approx. 4.01 % of the total eligible value of annual procurement and that from MSEs owned by Women Entrepreneurs is INR 108 crore which is approx. 3.61 % of the total eligible value of annual procurement

All government policies related to sustainable sourcing are implemented by the company such as Domestically Manufactured Iron & Steel Product, Policy to Provide Purchase Preference as per Public Procurement (Preference to Make in India), Order 2017, 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. GAIL has also introduced a start-up policy where registered start-ups are exempted from the mandatory requirement of meeting the Technical Bid Evaluation Criteria (BEC).

Procurement of Goods and Services from small/local producers

S. No.	Particulars	Unit of Measurement	FY 2022-23 (INR Crores)	FY 2021-22 (INR Crores)
1.	Total Annual procurement	INR Crores	1541	1478
2.	% of total procurement (including MSEs owned by SC/ST Entrepreneur)	%	46.09%	40.06%
3	Procurement from MSEs owned by SC/ ST entrepreneurs)	INR Crores	137	69
4.	% Of Procurement from MSE owned by SC/ST entrepreneurs)	%	4.01	4.6%
5.	Target of Procurement	%	25%	25%
6.	Procurement from MSEs owned by women entrepreneurs	INR Crores	108	111
7.	% of Procurement from MSEs owned by women entrepreneurs	%	3.61%	3.01%

Procurement of Goods and Services from GeM

S. No.	Particulars	Unit of Measurement	FY 2022-23 (INR Crores)	FY 2021-22 (INR Crores)
1.	Procurement through GeM	INR Crores	2541	2593



Uploading of Annual Procurement Plan and Future Procurement Plan

To promote the participation of Micro and Small Enterprises (MSEs), GAIL ensures regular upload of the Annual Procurement Plan on its dedicated tender website. This plan outlines the procurement requirements specifically targeting MSEs and serves as a valuable resource for local vendors. Also, GAIL maintains transparency by providing comprehensive details of all procurements from MSEs over the past three years on its official website. This information allows interested parties to access previous years' data and gain insights into the company's engagement with MSEs.

Qualification of Indian Bidder Based on Experience of Foreign Supporting Company

To strengthen the Government of India's, Make in India and Atmanirbhar Bharat initiatives and encourage greater involvement of Indian bidders, GAIL has implemented a policy that prioritizes Indian bidders based on the qualifications of their foreign supporting bidders. This policy aims to promote domestic participation in various projects and initiatives undertaken by GAIL.

INDEG Group constituted for the development of Import substitution

All the public sectors under the Ministry of Petroleum and Natural Gas (MoPNG) have constituted the INDEG Group (Indigenisation Group) to promote the participation of indigenous-produced goods and services in the oil and gas sector. GAIL has constituted INDEG Group at the Apex level and site level and monitoring its progress at regular intervals. The MoPNG has developed an exhaustive portal where all Oil & Gas organizations (such as IOCL, BPCL, ONGC including GAIL) will upload their future demands and various item categories procured by them. GAIL is actively participating in the development of this portal which is useful for Indian manufacturers to enhance their manufacturing capacity, thus giving impetus to 'Make in India' towards "Atmanirbhar Bharat".

13.5.2 Initiatives taken for Engaging with Suppliers for FY 2022-23

(GRI 3-3-d, f)

GAIL has implemented few of the initiatives to simplify and enhance business interactions with its vendors and suppliers.

GAIL ensures broader participation and educates vendors on the tendering process through pre-tender and/or pre-bid meetings in all its tender processes. The company regularly organizes Interactive Meets & Development Programs for its vendors, suppliers and contractors at its various work centres.

These events aim to provide coaching on best practices for facilitating business, executing contracts and include presentations on GAIL's initiatives and policies, as well as those of the Government of India.

GAIL has also conducted various meets with MSEs including those run by SC or ST entrepreneurs across India. Vendor Coaching Programs are organized to bridge gaps in understanding and interpretation of RFQ/Tender documents, offering guidance to vendors on common mistakes in the tender process and contract execution, with the goal of fostering long-term mutually beneficial associations. In this financial year, GAIL has conducted 20 Vendor Development Programs for MSEs (including 4 Special Vendor Development Programmes / Hand Holding Sessions especially for MSEs owned by SC/ST & Women Entrepreneurs) were conducted in FY 22-23 across our various work centres.

Additionally, GAIL arranges dedicated physical and virtual meetings to coach vendors and familiarize them with the company's latest digital initiatives, such as the Vendor Invoice Management Portal, which facilitates the digital processing of invoices. GAIL has established an email helpdesk called ED C&P Cell to facilitate communication for seeking advice and addressing concerns related to the tendering and contracting process. Officials can submit their questions and issues, which are



promptly attended to and then compiled into a Frequently Asked Questions (FAQ) format. In FY 2022-23, approximately 50 queries were effectively resolved by the ED-C&P Cell.

Other Sustainable sourcing initiatives for FY 2022-23

- 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 countersigns the document and sends it back to GAIL.
- Provision for Green Packaging has been incorporated in tenders of GAIL.

13.5.3 Digital Transformation

(GRI 3-3d,e,f)

Digital transformation is the approach for leveraging digital technologies to create new or modify existing policies, processes, procedures and customer experiences to meet changing business and market challenges.

GAIL aims to undergo a digital transformation as part of the Digital India campaign, envisioning a society and knowledge economy empowered by digital technologies. By implementing new systems and processes, GAIL is actively contributing to the growth of a modern digital economy. As part of ongoing transformation, introduced various online management tools such as the Bill Watch system, cashless transactions, a File Movement system and

paperless transactions. These measures have significantly improved operational efficiency and streamlined workflows.

Tenders at GAIL are conducted on digital platforms, specifically the Government e-Marketplace (GeM) or through the E-tendering system. Adhering to the latest Government guidelines, GAIL aims to maximize the use of the GeM portal for tendering purposes. This portal is fully compliant with various Central Vigilance Commission (CVC) guidelines, ensuring transparency and accountability in the procurement process. By leveraging these digital platforms, GAIL aims to streamline and enhance the efficiency of its tendering procedures in accordance with government regulations.

GAIL has successfully brought transparency and accountability to the e-business and has become one of the top procurers under the Ministry of Petroleum and Natural Gas. GAIL with its substantial efforts has exceeded the target of 25% procurement through the GeM portal. GAIL procurement through the GEM portal stood at INR 2541 crore in FY 2022-23 as compared to INR 2593 in FY 2021-22 with consistent growth.

As a part of the Digital India initiative, GAIL recognizes the importance of reducing paper consumption and streamlining record-keeping processes. GAIL has developed a standard document called the General Conditions of Contract (GCC), which is readily available on GAIL's tender website. GAIL has implemented a Document Transmittal System that simplifies the signing and countersigning of bulky contract documents in projects. Instead of printing and physically signing these documents, relevant GAIL officials utilize digital signatures to sign them electronically.

GAIL's ongoing efforts to streamline, digitize, automate and bring further efficiencies in its accounts payable processes following digital initiatives were taken during FY 2022-23.

1. **'SARATHI'** – GAIL has taken a major step towards complete digitization, centralization

and automation of its payment processes with the inauguration of its first state-of-the-art centre for Vendor Invoice Management (VIM) - Shared Service Centre (SSC) called 'SARATHI', which has been partnered with IBM Consulting. The centre is a modern facility that will serve as a pan-India hub for processing and managing vendor invoices. GAIL centralized VIM aims to provide prompt payments, better experiences, enhanced efficiencies & transparency with end users.

2. '**SPARSH'** – A Vendor or Supplier Portal for ingestion of digitally signed PDF copies of invoices, credit notes & retention release requests by Vendors into the VIM System. The following documents are available at Vendor Invoice Management System Portal.
 - SPARSH Portal User Manual
 - SPARSH FAQs Document
 - Presentation containing information about various tabs and buttons available on the portal.
3. '**ASK-ASHA'** – A Self Service BOT for vendor query resolution which is embedded in the welcome page of the SPARSH Portal. It helps to provide the status of Invoice Payment and features and usages of SPARSH.
4. **VIM Helpdesk:** GAIL has introduced a new VIM helpdesk, which provides the vendor with a dedicated support system for any issues or queries related to the above-mentioned initiative. To access the VIM helpdesk, simply contact through the designated email address viz. VIMHD@gail.co.in or phone number 0120-4446060. The VIM team will respond promptly to queries and works to ensure that any issues are resolved in a timely and satisfactory manner.

GAIL believes that the introduction of the above initiative 'SARATHI', 'SPARSH', 'ASHA' & 'Vendor Helpdesk' greatly enhance the relationship and provide valued vendors with the highest level of service, support and satisfaction.

A. Pre –Award Stage

(i) Pre-Tender Meeting:

- For better understanding of technical & financial qualification criteria, specifications / scope of work, etc. of tender.
- Feedback from prospective bidders
- Avoid complexity during evaluation stage.
- Pre-tender meetings details are uploaded on GAIL's website for wide publication.

(ii) 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.

(iii) 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.

(iv) E-Tendering

- Secure platform for sending & receiving tenders by electronic means.
- The threshold value of E-Tendering has been lowered to INR 2 Lakhs

(v) Implementation of SAP

SAP allows all transactions & reviews of various business activities on one platform



(vi) Model Instructions to Bidders (ITB) for all Tenders

Bring uniformity in tendering across all work centres of GAIL and also facilitate bidders in submitting their bid.

(vii) Meeting with OEMs for Standardization of Terms & Conditions with OEMs

- To bring uniformity in terms and conditions with OEM all across GAIL
- Reduces lead time in processing OEM cases
- Till date agreement has been signed with 25 OEMs.

(viii) Document

- For signing and countersigning of the bulky contract documents in Projects.

(ix) Submission of Security Deposit/Contract Performance Security & EMD through Online Bank transaction to facilitate bidders

(x) 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.

(xi) Verification & Certification of Documents About the Bid Evaluation Criteria:

- Provision of authentication of BEC documents by empanelled third party agency has been introduced.

(xii) Relaxation Norms for Start-up

- Prior turnover & experience criteria relaxed for all Start-ups in the procurement of goods/works/services

(xiii) Implementation of Govt. Policy Initiatives

- GAIL is implementing the Govt. policies in letter and spirit.

- Some of these policies are public procurement policy for MSEs, purchase preference (linked with local content), domestically manufactured iron & steel products, domestically manufactured electronic products, domestically manufactured products, services or works relating to telecom, domestically manufactured products of petroleum and natural gas sector, restriction of procurement from team bidders from country sharing land border with India, etc.

(xiv) Procurement through Government e-Marketplace (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 onto GeM.
- Till date GAIL has procured more than INR 2500 crore through GeM.

B. Post –Award Stage

(i) Kick Off Meeting

- After award of contract, EIC organises a kick off 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.

(ii) Bill Watch System

- Helps in tracking Vendors bills and ensuring timely payment to them.
- Vendors can keep watch on their bill & know the status

(iii) 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 been rationalized.

(iv) Measures taken in Pipeline Laying Contracts

- Mobilization advances 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.

(v) 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.

(vi) 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.

(vii) Vendor Grievance Portal:

- To capture the grievances of suppliers and contractors, a portal has been developed which is known as 'Samadhan'.

(viii) 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 monthly to Management.

(ix) Quarterly Closure of Contracts

- Implemented in GAIL to resolve all the issues on quarterly basis.
- To ensure that contracts are managed and executed with satisfaction of all the stakeholders & resulting in ease in contract closure.

(x) 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 that the no. of disputes turning into arbitrations/legal disputes can be minimized.
- Working Principle: IRR (Identify Report Resolve): Identify → Report → Resolve

(xi) 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).

(xii) 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 INR 25 lakhs and above INR 25 crore.
- (xiii) 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.

(xiv) Contract Management Document (COMAND):

- For better contract management, COMAND was launched for EICs containing the various aspects and procedures for a better contract execution.

(xv) Digital payments Initiative:

- GAIL has introduced Vendor Invoice Management (VIM) portal settlement of vendor invoices digitally. Dedicated coaching programs (virtual & physical) were organized by C&P department across all work site for coaching and smooth on-boarding of vendors to the newly introduced portal.

Event: Indian Energy Week, 6th to 8th February 2023

GAIL (India) Limited, a Partner organisation of the prestigious India Energy Week (IEW) being held in Bengaluru from 6th to 8th February 2023, is showcasing its commitment towards a Cleaner and Greener Future at the exhibition being held on the occasion.

The India Energy Week, being organized under the patronage of the Ministry of Petroleum and Natural Gas, is the first major event under India's G20 Presidency.

The theme of the GAIL stall at the IEW exhibition, 'Energizing a Sustainable Future', is an affirmation of the Company's Mission Statement - "Enhancing quality of life through clean energy and beyond." The stall located at Hall 4 of Bangalore International Exhibition Centre.

The GAIL stall uses a variety of technologies to showcase the Company's portfolio and its march towards new energy sources. These include an immersive video experience, augmented reality, 3D hologram, touch screen kiosks, etc. Visitors can also plant a sapling virtually at the stall and GAIL will plant real saplings at its installations later. Not just business, visitors can entertain themselves by trying their skills in a virtual reality game to beat pollution, virtual cricket and football, and quiz rounds.

Our Customers

14



In FY 2022-23, no incidences of consumer privacy violations reported



BIS Standard Mark for the License granted to GAIL as per IS **7328:2020**



GAIL engaged in an Advance Pricing Agreement (APA) with the Central Board of Direct Taxes (CBDT).



Our Customers

(GRI 3-3)

GAIL aims to provide eco-friendly fuel to households, industries, and the transport sector, with the objective of enhancing the convenience of people while also prioritizing environmental concerns. Customer experience plays a crucial role in our business growth strategy. We aspire to deliver the best customer experience by focusing on quality, innovation, and responsiveness. We have adopted a customer-centric approach to achieve this and implemented various initiatives such as online registration and payment, using automatic smart meters to record natural gas consumption, and offering mobile applications for a seamless experience.

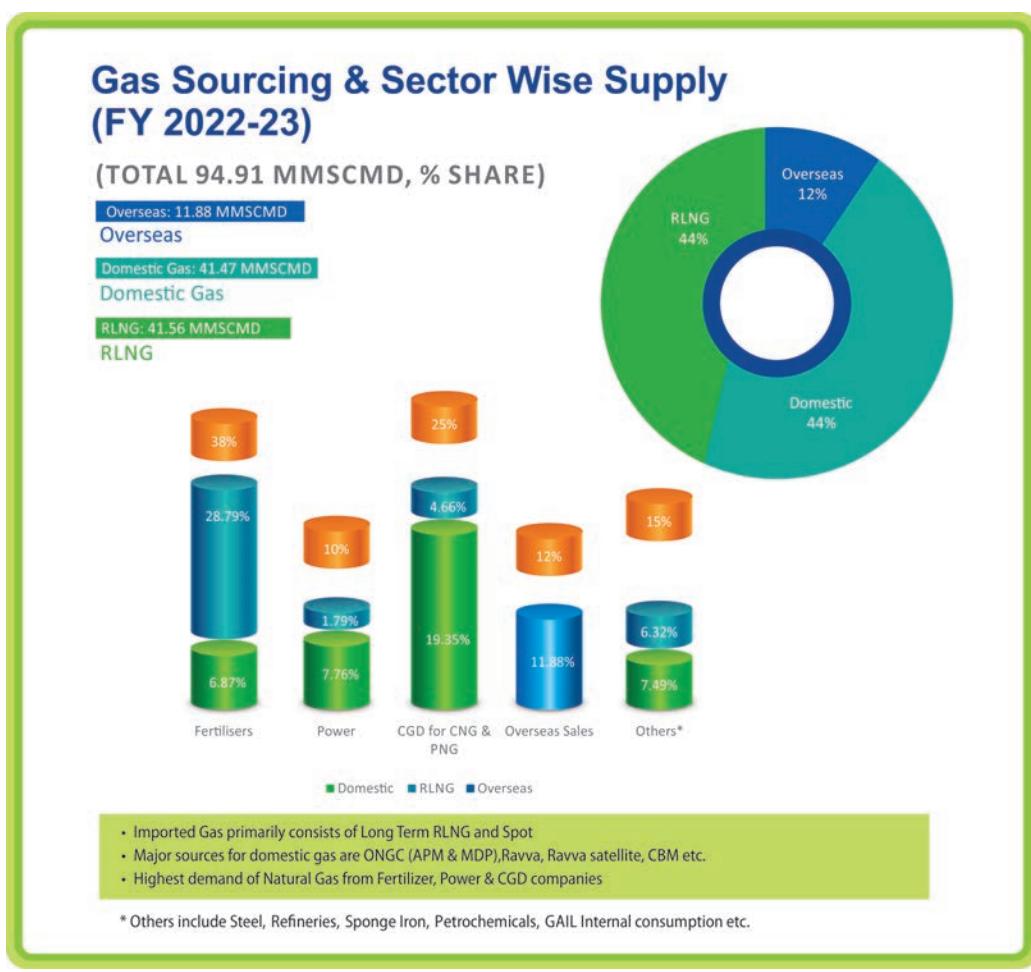
Customer loyalty and satisfaction are at the heart of GAIL's business and are highly essential for its long-term growth. GAIL reviews its strategies, redefines its approaches, and undertakes business initiatives focused on providing better services.

We are committed to improving our customer experiences by continuously monitoring and evaluating them through various means, including customer feedback surveys, customer engagement initiatives, and market research. This knowledge enables us to improve our products and services and ensure customer satisfaction helping us establish long-term relationships with our customers that serve as the foundation for our growth.

14.1 GAIL's Customers

Our customers are as follows:

- Natural Gas:** The most prominent customers of GAIL in this segment are from:
 - Fertilizer Sector
 - Power Sector
 - CGD sector



2. **Natural Gas Transportation:** Natural gas pipeline infrastructure connects various gas sources to different gas markets to meet the existing/ future natural gas demand of various power, fertilizer, City Gas Distribution (CGD) and other industries in the country.
3. **LLDPE and HDPE:** GAIL provides LLDPE and HDPE to more than 1600 customers dispersed across the nation.
4. **Liquid Hydrocarbon:** Various industries such as domestic, commercial and auto segments are some of our prominent customers in the liquid hydrocarbon market.

14.2 Customer Privacy

(GRI 418-1 a, b, c)

Rapidly increasing digitalization has resulted in a greater emphasis on privacy. As a result, customer privacy is a critical issue, and hence a crucial element of our agreements. Customer privacy concerns encompass data protection, ensuring that information/data is used for the intended purpose, maintaining confidentiality and preventing information theft or abuse. We place a high emphasis on our customers' privacy and take the necessary steps to ensure that there are no breaches such as leaks, thefts, or loss of customer data.

We understand that it is our responsibility to maintain the integrity and accuracy of our stored papers, data, and information. All material generated, recorded, and stored complies with our Document Preservation Policy. Furthermore, consumer privacy is a fundamental component of GAIL's agreements. These include using information or data for its intended purpose, ensuring confidentiality, and protecting information and data from misuse or theft. There were no incidences of consumer privacy violations reported in FY 2022-23. GAIL makes further measures to protect consumer privacy (end consumers and business-to-business customers) based on the industry in which the customer operates:

- **RLNG:** Gas Supply Agreements and Gas Supply Purchase Agreements with RLNG customers include a confidentiality clause. This clause requires both the buyer and seller to keep the details of their transactions and business confidential, except for specific legal purposes. This measure protects sensitive business information and fosters trust between GAIL and its customers.
- **Domestic Gas:** GAIL provides natural gas to a diverse range of firms along the natural gas value chain, resulting in a wide range of customers. Contractual arrangements and financial agreements are different selling propositions for each customer type. Clauses with customers, whether end users or business-to-business customers are kept private. Domain specialists were contacted to put safeguards in place to secure data and prevent its improper use and theft.

14.3 Product Labelling

(GRI 3-3, GRI 416-1 a, GRI 416-2, GRI 417-1a, GRI 417-2, GRI 417-3)

We focus on providing our customers with comprehensive information on the social, economic, and environmental impact of our products through responsible product labelling. GAIL ensures that the information given is sufficient and correct. During the reporting period, there were 'NIL' instances of non-compliance with regulations or voluntary codes related to the health and safety effects of our products and services.

Our strategy for delivering product-specific information is displayed on 25 kg strong bags made of woven fabric:

- Grade Name
- Batch Number
- Manufacturer details
- Made in India
- Symbols for storage, Recyclable, handling of bags
- Recycling information



- Instructions on the handling of bags
- Net Weight
- BIS Standard Mark for the License granted to GAIL as per IS 7328:2020 which is meant for Product Quality Certification for its polyethylene grades
- Contact e-mail for customer support
- CPCB message for SUP items - A message for not using GAIL's grade in manufacturing of banned SUP items as per Plastic Waste Management Rules.

As per the Plastic Waste Management (Amendment) Rules, 2022, our product labels communicate to all petrochemical customers, not to use GAIL's products in the production of banned single-use plastic items. Additionally, GAIL's Polymer Technology Centre (GPTC) issues quality certificates as needed to ensure the quality of polymer products.

GAIL also provides Technical Data Sheets (TDS) and Material Safety Data Sheets (MSDS) with instructions on using its petrochemical products safely. GAIL provides technical assistance through its Zonal Office representatives and the GAIL Polymer Technology Centre (GPTC) team to further promote the safe use of its products.

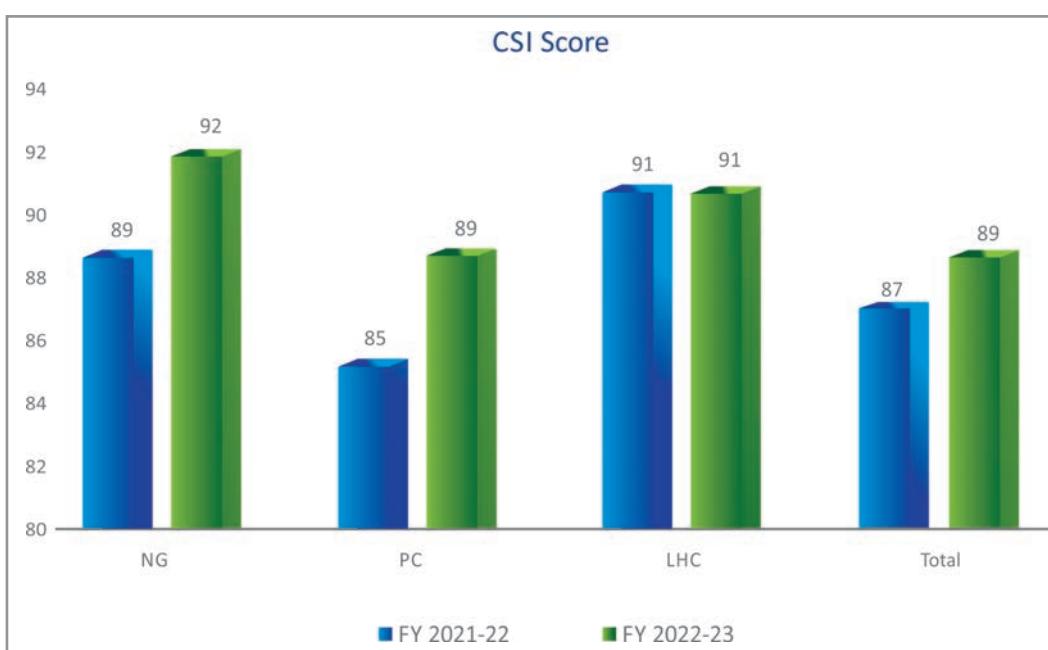
14.4 Customer Satisfaction

Our core values are centred on consistently exceeding customer expectations and being

their one-stop solution by providing exceptional products. As a result, we guarantee customer satisfaction and strive to cultivate a loyal customer base that will help us grow in the long run. We use Customer Value Management and Customer Satisfaction Index surveys to collect feedback from our customers. Our in-house, semi-annual, online (via SAP) Customer Satisfaction Survey is designed to collect customer complaints and feedback. Customers rate various parameters such as Quality, Delivery, and Technical Support, which are then combined to create the Customer Satisfaction Index (CSI). These surveys are provided to the marketing department to improve solutions and services.

Customer Satisfaction Index (CSI) online survey 2022-23

The Customer Satisfaction Index (CSI) is an in-house attempt to collect feedback from customers. A link is provided to all active customers to their registered email-id. Customers share their feedback on various parameters on quality and services. Their feedback is collected through SAP and analysed. The observation is mitigated promptly and appropriately and thereafter customers are informed to complete the loop. The customer satisfaction score in FY 2022-23 was 89%.



14.5 Customer Grievance Redressal

(GRI 416-2 a)

At GAIL, ensuring high customer satisfaction entails having an accessible, efficient, and effective customer grievance redressal process. To fulfil our commitment to providing excellent customer service, we collaborate with the appropriate business units to develop a plan of action to resolve customer complaints as soon as possible. We acknowledge all customer complaints upon receipt, and once an issue has been resolved, we notify the customer via email or letter.

GAIL provides numerous means for customers to log complaints - through their website, through letters, emails, or in-person at their physical complaint registers located in various Zonal Offices. Furthermore, existing customers in the natural gas, petrochemical, liquid hydrocarbon, gas trading, and transmission business segments can log their complaints, suggestions, and grievances through GAIL's Customer Relationship Management (CRM) system at any time. Complaints received through the CRM module are forwarded to the appropriate Zonal Offices, where their technical, finance, and marketing teams collaborate to address and resolve the issue as soon as possible. It is important to note that GAIL's technical, financial, and marketing teams assist the relevant zonal offices in addressing complaints submitted through the CRM module in order to provide the earliest possible solution.

The GPTC resolves customer issues about polymer product quality and provides technical support to resolve consumer concerns about polymer grades. In FY 2022-23, GPTC received the following complaints:

- Total of 35 Technical Complaints and 09 Physical complaints for PATA polymer products and
- Total of 04 technical complaints for BCPL polymer products.

The GPTC team/Zonal, Pata/BCPL team and Zonal PC Mktg. executives addressed technical customer complaints to the client's satisfaction. All technical complaints received by GPTC were satisfactorily resolved to the satisfaction of the customers.

Customer complaints and their status, as received by respective zonal offices in FY 2022-23 regarding (a) liquid hydrocarbon (LHC) (b) petrochemical (PC) (c) gas marketing are listed below:

- **Hyderabad Zonal:** Polymer Customer complained of bluish polymer received. The material was replaced.
- **Mumbai Zonal:** No complaints were received
- **Jaipur Zonal:** No complaints were received
- **Chandigarh Zonal:** One customer complaint was received in the PC segment, which was successfully resolved with the cooperation of GPTC. One Customer Complaint was received in the NG segment which was successfully resolved with the cooperation of Corporate Gas Marketing. No pending complaints by the end of FY 2022 23.
- **Marketing Retail:** One complaint was received which was sent to the plant and resolved satisfactorily.

In FY 2022-23, a total of 74 complaints were received with 100% of them being properly handled. Furthermore, 100% of technical concerns received at GPTC were handled satisfactorily. We have also taken the required steps to address physical problems.

GAIL & CGD Customers - A total of 3200 customer complaints were received, with management resolving 95% of them satisfactorily.

Customer Value Management (GRI 2-29)

Consumer Value Management (CVM) involves collecting feedback from customers through a third-party evaluation agency. Customers are required to respond to a series of questions,



and their answers are recorded. This input is subsequently analysed and presented to GAIL's management by the assessment agency. Customers' complaints are thoroughly examined, and the marketing staff develops a strategy for addressing any issues that arise. Customers are informed of the steps taken in response to their feedback.

Customer Value Management (CVM) Survey – In the Customer Value Management (CVM) Survey, the feedback from customers on product quality and services offered by GAIL is captured through a structured questionnaire in offline mode. For FY 2022-23, 161 customer visits were carried out to capture their voices. The observations are mitigated appropriately by GAIL, and after mitigation of the observations, customers are informed accordingly. The number of customer complaints are 26 and the number of NG customers visited was 60 in FY 2022-23.

The Marketing group is currently working on addressing and resolving the customer observation to mitigate any concerns. This observation was identified through a Consumer Satisfaction Survey, indicating the importance of capturing customer feedback to ensure their satisfaction.

14.6 Customer Engagement (GRI 2-29)

GAIL's goal is to provide an end-to-end customer experience to a large extent. Engagement with customers at multiple contact points throughout the year allows us to build trust with them. Our staff participates through different channels and specialized activities under our customer engagement programs, in addition to customer satisfaction surveys and customer complaints processes. Customer engagement activities are aimed at answering customer questions regarding our products and portfolio, as well as raising awareness about our services. Long-term goals involve building brand trust and expanding our reach with potential customers.

At GAIL, we leverage technology and customer information to gain a better knowledge of our customers' demands, market knowledge on current RLNG pricing, polymer grade-specific discounts, and LHC product prices are obtained and communicated to our Corporate Office for action. Steps are being taken to tie up GAIL volume with customers and to enhance our product price and services to become more competitive. Customers are given a choice from GAIL's portfolio. Marketing Retail has also created an application that notifies customers of pricing changes straight from the system.

GAIL has also put in place systems to keep customers informed of government developments and any danger of service disruption or cancellation. Any expected interruptions in gas supply are communicated to consumers as soon as possible via e-mails and phone calls. Regional control rooms for gas marketing communicate with customers round the clock to advise them of any potential delays or interruptions, plant closure operations and grade availability. Changes in government laws affecting our petrochemical sector are notified quickly by e-mail and phone.

At GAIL, we inform and educate consumers about the safe and responsible usage of products and services. Contracts, MoUs, and our Sales Policy have specific information on the usage of products. With regards to Natural Gas, LHC, and Polymer segments the Material Safety Data Sheet (MSDS) is also provided to customers. Customers are also asked to retain statutory licenses mandatory to handle products sold. Customer interactions, whether visits or meetings are also a key channel for communicating information around the safe and responsible usage of products. Additionally, GAIL organizes demonstrations on Fire and Safety to educate customers about the safe and responsible use of NG. Periodic mock drills are also done to educate customers and the public about actions to be taken in case of any hazardous situations

GAIL conducts public awareness programs on pipeline safety under corporate guidelines, at various sites including City Gas Distribution (CGD) and Compressed Natural Gas stations and a training session on City Gas Distribution as well.

Further, consumer awareness activities are conducted through Industry associations like TAAPMA and their publications, in which GAIL actively participates. Whenever in-person visits were not possible, we have emphasized strongly on virtual meetings to inform and educate consumers on the safe and responsible usage of our products and services.

Initiatives are taken during the reporting year for engaging with customers:

- GAIL (India) Limited has engaged in an Advance Pricing Agreement (APA) with the Central Board of Direct Taxes (CBDT). This agreement governs the determination of the Transfer Pricing Margin to be paid on GAIL's long-term LNG sourcing contract with the United States. The APA lasts five years. It is worth noting that GAIL is the first public sector organization (PSU) in the Indian oil and gas sector to successfully sign such an APA.
- The Unified Tariff regime (as notified by PNGRB) would benefit customers located in far-flung areas and facilitate the development of new markets to increase gas utilization in all pipelines including those of GAIL.
- **Addition of new sources of gas into the existing pipelines:** GAIL is committed to increasing the length of its Natural Gas pipeline infrastructure by developing new Natural Gas pipelines and expanding/extension of its existing Natural Gas pipelines. GAIL has taken steps to provide Tie-in connections with its Natural Gas pipelines to the upcoming new gas sources including in Rajasthan/ Gujarat/ Krishna Godavari (KG) Basin, Cauvery Basin, Coal Bed Methane (CBM) discoveries in Jharia, Bokaro & Shadol, new sources of domestic gas through bidding route and upcoming RLNG Terminals to enable more and new gas injections into its pipelines.
- **Inter-connection with pipelines of other operators**
- GAIL has interconnected several other pipeline operators, including M/s PIL's EWPL (at Oduru/Mhaskal/ Ankot), with its KG Basin NG pipeline network, DUPL pipeline, and HVJ pipelines. M/s IOCL's Dadri Panipat NGPL (at Dadri) with its HVJ pipeline, M/s GSPL's HP Gujarat Gas Grid (Dahej) with its HVJ pipeline, GIGL's Bhatinda-Jammu-Srinagar NGPL (at Jalandhar) with its DBNPL, and RGPL (at Phulpur) with its integrated HVJ/JHBDPL, providing access to almost all the other operators to its pipelines.
- Inter-connection with upcoming pipelines: GAIL will also be providing interconnection of the Jagdishpur-Haldia & Bokaro-Dhamra Pipeline (JHBDPL) (2,655 km) and Barauni-Guwahati Pipeline (BGPL) (729 km) section as an integral part of JHBDPL: This pipeline network shall pass through the Eastern part of U.P., Bihar, Jharkhand, Odisha, West Bengal, and Assam. The pipeline network would have two gas sources, one at Phulpur (Allahabad, U.P.) and the other at Dhamra RLNG Terminal (Odisha) which is also connected to the Integrated HVJ network to receive gas supply. The pipeline from Barauni to Guwahati will connect the North-Eastern gas grid to National Gas Grid. Recently, PNGRB has granted authorization of the Dhamra-Haldia Pipeline (DHPL) (253 km) for capacity expansion of the JHBDPL network and increasing the size of the Dhamra-Paradip spur line.
- Approved guidelines on "Amicable settlement of Disputes with Consumers/shippers under Gas Transportation Agreement" applicable for small Consumers/shippers.
- Facilitating common carrier capacity booking through open access portal.
- Introduced more customer friendly flexible GTA/GSA for small customers.



- Provide Hook-up facilities and connectivity to the CGD entities from the nearest SV/ IP - Station and expedite the contracting process for Hook-up facilities.
- GAIL is targeting liquid fuel consumers around GAIL's pipeline network to switch over to Natural Gas.
- Organising customer meets regularly through Zonal Offices (ZOs).
- During the FY 2022-23, GAIL has also been granted authorization for developing a Tie-In Connectivity pipeline in the Jambusar region in Gujarat which shall bring in more gas from new domestic sources. In this period, affiliates of GAIL have also been granted authorization for developing a City Gas Distribution Network in a Geographical Area located in the state of Chhattisgarh under the 11A Round of CGD Bidding.

For the petrochemical business area, the GAIL Polymer Technology Centre (GPTC) in Noida (Delhi NCR) provides customer satisfaction services, technical help, and resolution of product-related problems on polymer grades. GAIL customer service and feedback interface do the following tasks:

- Resolving customer complaints
- Assisting with the right selection of GAIL grades
- Entrepreneurial guidance
- Development and modification of GAIL petrochemical grades to satisfy market demands
- Application development and promotion for client advantages
- Participating in and representing GAIL in technical forums and business associations with the aim of raising awareness and advocating for policy changes.

Additional initiatives on customer engagement by zonal offices have been outlined below:

Hyderabad Zonal: A customer meet was conducted in October 2022 regarding the import of polymers. Customers provided their feedback on the pros and cons of importing polymers.

Mumbai Zonal: Regular customer interactions, undertaking visits, meetings through physical or virtual modes, Annual Stakeholder engagement survey, Product development and trials for Polymer grades, participation in business exhibitions, retention of customers by understanding their exact requirements and insights, long-term tie-ups with GAIL to retain the customer. Market intelligence regarding prevailing RLNG prices, polymer grade specific discounts, and LHC product prices in the market are obtained and communicated to Corporate Office for necessary action with a view to tie up GAIL Volume with customers and refine GAILs product prices and offers to make us more competitive. Customers are also being offered a mix of the portfolio available with GAIL linked with various indexes.

Chandigarh Zonal: LHC Segment: Regular interaction with customers by conducting regular visits and interaction vide Email or telephone. PC Segment: Regular telephonic interaction was maintained with the MOU customers. All CS were regularly updated with the latest market information. NG Segment: Regular interaction with customers through visits meet and interactions vide E-mail or telephone.

SAHAJ digital platform implemented for DPNG customers for an end-to-end solution, instant & self-billing, online bill payment, digital cheque clearing, CRM, customer satisfaction survey, etc. An APP-based solution implemented for self-billing, online payment, etc.

Our Community

15



In FY 2022-23, GAIL has spent
INR **99.1** crore under CSR initiatives



In FY 2022-23 GAIL won Asian Leadership
Awards- CSR Leadership Award



100% of beneficiaries from CSR Projects were
vulnerable/marginalised and disadvantaged people



Our Community

15.1 Our Community

(GRI 3-3, GRI 413-1)

Community engagement is a key indicator of a socially responsible business. Creating shared value underpins all GAIL's actions. Inclusive development is an essential aspect of GAIL business strategy.

Our vision and strategy goal are to be a leader in the natural gas business while impacting lives positively. Our direct interactions with local communities have given us the ability to understand the lives of the underprivileged, identify significant challenges and provide appropriate strategic solutions. We've launched various CSR initiatives to help underprivileged and marginalised groups, in-keeping with the ideology, aspirations, and concerns of the community.

Active participation of the community is crucial to successful implementation of CSR initiatives and it aids in further improvement in our CSR strategy, generating positive socio-economic outcomes for GAIL and the community. We interact with the local communities through various channels on a regular basis to get insights on their needs, concerns, and feedback including socio-economic surveys.

15.2 Social Commitments

(GRI 3-3a, b, c, GRI 413-2)

GAIL being in a natural gas business understands that its business has both positive and negative impact on the communities. No negative impacts have been recorded in the reporting year (FY 2022-23).

During the planning, designing and execution of any project, we obtain valuable insights of our stakeholders and value their perspectives. One of our major responsibilities is to investigate the concerns and issues of local communities before beginning any CSR project. There were no notable disagreements with local communities or abuses

of indigenous peoples' rights documented throughout the reporting year (FY 2022-23).

There was no significant impact identified on the health of local communities because of exposure to pollution caused by GAIL's operational sites or use of hazardous substances in the reporting year (FY 2022-23). Environment Monitoring as per statutory guidelines is conducted at all operational sites on regular basis and report is published on the corporate website.

15.3 CSR Policy

(GRI 3-3c, e, 2-24)

GAIL believes in responding to the needs of the people, benefitting communities and protecting the environment that will ultimately determine the continued sustainable progress of the Company. The CSR policy guides the organization in carrying out CSR initiatives covering a wide spectrum of welfare and developmental activities across key focus areas. The activities are mostly undertaken in and around our major work centres with a focus on vulnerable and marginalised groups.

As a part of our CSR activities and various corporate initiatives, GAIL actively contributes for charity and sponsorship programs. In FY 2022-23, GAIL has incurred CSR expenditure 2.18% against the mandated 2% towards achieving its CSR objectives through implementation of meaningful & sustainable CSR programmes. The same is in alignment with the provisions of Section 135(1) of the Companies Act, 2013.

The CSR projects at GAIL are monitored and overseen by the Board on the recommendation of CSR Committee as per the Companies Act 2013, CSR Rules 2014 and their subsequent amendments, as notified by the Ministry of Corporate Affairs from time to time. The CSR Committee of Board currently constitutes the following members:

Sh. Sandeep Kumar Gupta	Chairman & Managing Director/ Chairperson CSR Committee
Sh. Ayush Gupta	Director (HR)/ Member, CSR Committee
Sh. Akhilesh Jain	Independent Director/ Member, CSR Committee
Sh. Sanjay Kashyap	Independent Director/ Member, CSR Committee



Roles and responsibility of CSR committee

- To formulate and recommend a CSR Policy to the Board
- Recommend the amount of expenditure to be incurred and monitor GAIL's CSR Policy from time to time.
- Any other activity delegated by the Board.
- Role of CSR Committee is as per Companies Act, 2013 & DPE guidelines as amended from time to time.

GAIL is committed to improving the social and economic conditions of aspirational districts which are defined by NITI Aayog through strategic CSR projects and has spent INR 12.87 Crores in 20 Aspirational districts in FY 2022-23.

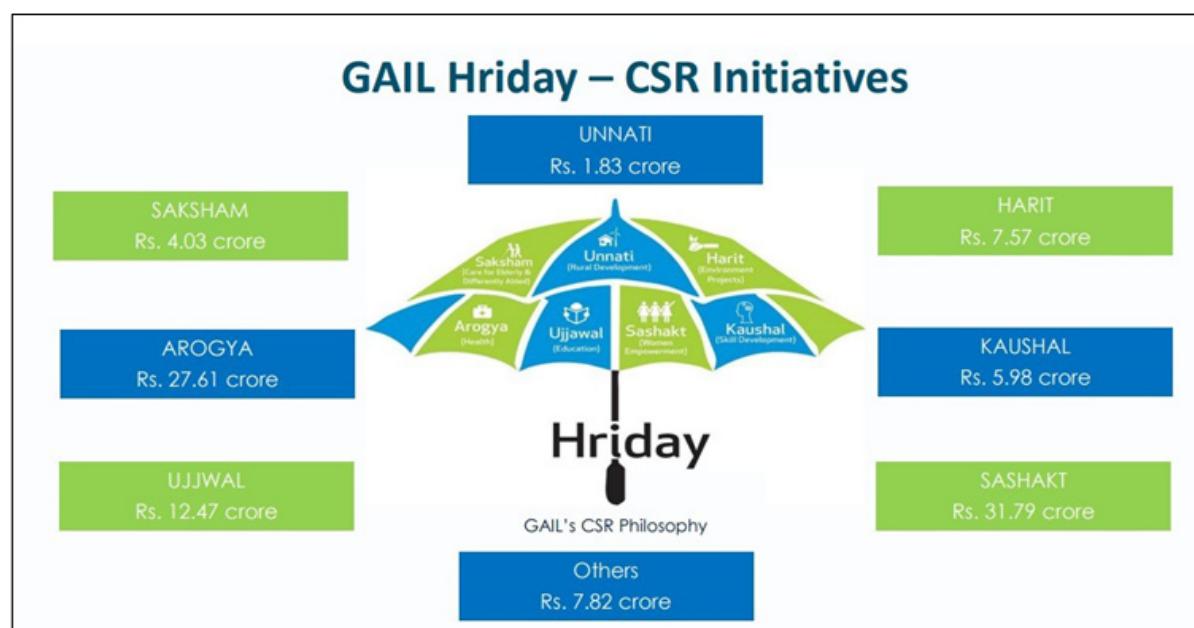
In FY 2022-23, GAIL has spent INR 99.1 crore (Mandated Target- INR 165.05 Crores out of which INR 74.27 Crores was set off against the excess expenditure of previous years. Therefore, Net Target of INR 90.78 Crores) which is more than net target.

[Link to GAIL's CSR Policy— GAIL-CSR Policy](#)

15.4 GAIL Hriday

(GRI 413-1a-iv)

GAIL's "Hriday" initiative is umbrella programme under which various communities are engaged. Our team aims to empower people from different communities and create a good impact on society. All Hriday initiatives adhere to the activities defined in Companies Act, 2013 (Schedule VII) and subsequent amendments.



GAIL endeavours to follow best practices in identifying, implementing, and monitoring our CSR interventions to maximize sustainability, scalability and transparency. We seek to enhance the lives of thousands of impoverished people by increasing social capital throughout our seven CSR focus areas, which are decided by assessing the needs and requirements of local

communities. These efforts are carried out through partnerships with communities and non-governmental organisations (NGOs), staff volunteers, and direct corporate donations. These focused, value-driven developmental CSR projects are driven by passion and fuelled by the dedication of our staff, allowing us to reach out and affect many lives positively.



The beneficiaries of GAIL's CSR projects are from vulnerable/marginalised and disadvantaged segments, within 100 kms of GAIL's installations/pipelines and offices. Majority of these include socially and economically disadvantaged groups. In FY 2022-23, no concerns were received from these beneficiaries.

Our CSR programmes are carried out by designated implementation agencies. GAIL's CSR project implementation agencies keep open a channel of communication with the identified beneficiaries. Through site visits, our nodal officers contact with beneficiaries/communities on a regular basis. These discussions aim to promote community engagement by identifying genuine needs and bridging last-mile delivery gaps.

S. No.	Hriday Focus Area	Total Investments (in INR Crore)	No. of lives touched
1.	GAIL Aarogya (Healthcare and Sanitation)	27.61	13.40 lakhs
2.	GAIL Ujjwal (Education Centric Initiatives)	12.47	74,999
3.	GAIL Kaushal (Skill Development Related Initiatives)	5.98	4,397
4.	GAIL Shashakt (Women Empowerment)	31.79	8,117
5.	Initiatives)	1.83	12,359
6.	GAIL Unnati (Rural development projects)	4.03	8,892
7.	GAIL Saksham (Care for elderly & differently abled peoples) Disaster management, protection of heritage, welfare of dependents of armed forces, etc.)	2.84	69,584
8.	GAIL Harit (Environment Centric Initiatives)	7.57	10,000

Details of GAIL Initiatives

15.4.1 GAIL Arogya:

GAIL is actively addressing health and sanitation issues by adopting measures that make primary health care facilities accessible and inexpensive to rural and vulnerable communities. GAIL's flagship initiative, Arogya, is leading these efforts.

Objectives of GAIL Arogya:

- Improve the local communities' health and sanitation facilities and increase their awareness on various health diseases.
- Support low-income residents and increasing their accessibility of healthcare services through various healthcare initiatives.
- Facilitate water conservation and community nutrition activities.
- Support and advocate for the government's initiatives to enhance health and sanitation infrastructures.

- Boost the accessibility and availability of potable water in the targeted areas.

Few Major Events/Activities Under GAIL Arogya initiative in FY 2022-23.

1. Support through Mobile Medical Units.

The project aims to provide free primary healthcare services to vulnerable people in rural regions by ensuring affordability, accessibility, awareness, and availability through Mobile Medical Units (MMUs). As a social responsibility towards good health services through the services of an MBBS doctor, a nurse, a pharmacist, and free basic medicines available in this ambulance. This mobile clinic ambulance visits the villagers on rotational covers Mobile Medical Units (MMUs) in Madhya Pradesh, Uttar Pradesh, Gujarat, Haryana, Uttarakhand, Andhra Pradesh, and Punjab, among other states. In FY 2022-23, GAIL facilitated Health Care through operation of 46 Mobile Medical Units in various states.



MMU inaugurated at Usar, adjacent to the upcoming GAIL Usar Plant at District Raigad, Maharashtra. The inauguration ceremony was attended by DM, Raigad

2. Support towards Health Check-up camps and Eyewear



Under this initiative GAIL organised a health camp for training 150 students. The trainees underwent regular health check-ups and were provided with vital medicines. The facility was inaugurated by GAIL CGM (Training) Shri Sanjay Agarwal.



As part of GAIL's CSR initiative, Aarogya, a health camp at GAIL Vijaipur's village Padarkhedi was organized by an NGO National Youth Foundation. During this event, skin, eye, and other health check-ups were set up and more than 350 patients were given essential medicines and eye-wears post examinations.



GAIL CSR is also supporting the construction and redevelopment of Shri Badrinath Dham town as a spiritual smart town through extension of Hospital and Public Service Building, which will be state of the art facility for providing medical support to the pilgrims.

15.4.2 GAIL Ujjwal

GAIL's Ujjwal project focuses on education. The goal of this project is to increase educational outreach to the underprivileged.

Objectives of GAIL Ujjwal:

- To aid in the development of infrastructure for the education of children from disadvantaged and marginalised communities.
- To aid in the renovation of various government school facilities, including IT facilities, science labs and the procurement of equipment and stationeries.

GAIL supported the initiative of quality education to over 30,000 students by promoting education to underprivileged student in rural and urban slums, infrastructure supports in Government Schools and supports for Atal Innovation Mission of Government of India in Madhya Pradesh.

Few Major Events/Activities Under GAIL Ujjwal initiative in FY 2022-23

1. GAIL Utkarsh

The initiative focuses on facilitating education to meritorious students from marginalized sections of society through scholarships, specialized residential coaching and mentoring for competitive examinations such as IIT JEE, etc.

In FY 2022-23, 210 students were covered. This year, all 100 students from its Kanpur centre qualified for the JEE Mains 2023 examination. Besides this, 47 out of 50 students from the Haldwani centre (Uttarakhand) and 28 out of 30 girl students at GAIL Utkarsh, Varanasi (all girl centre) cleared the prestigious JEE MAINS Exam. This is the second year in a row when 'GAIL Utkarsh' saw 100 % success in JEE Mains from its Kanpur centre. The overall success rates this year is 97% by combining all 3 centres i.e. Kanpur, Haldwani and Varanasi in JEE Mains 2023.

Apart from above 28 out of 30 girl students at GAIL Utkarsh, Varanasi (all girl centre), and all 20 students at Kalpana Ki Udaan, New Delhi, qualified the NEET exam.





Shri Ayush Gupta, Director (HR), GAIL, felicitated students who have qualified the JEE Mains 2023 exam in an event organised at GAIL Utkarsh Centre at Kanpur.

2. INAUGURATION of INDOOR STADIUM AT BALANGIR, ODISHA

To nurture the sporting abilities of the youth in interior regions, it is crucial to provide them with adequate infrastructure where their talent and passion can be cultivated. With this vision, GAIL CSR supported the construction of an indoor stadium at P R School, Balangir, Odisha, which will significantly contribute to identifying, nurturing, and showcasing rural sports talent residing in remote corners of the nation who have limited access to sports equipment and infrastructure. This project aims to enhance sporting facilities and promote sports in the region, fostering the talent and passion for sports among the youth. The newly inaugurated indoor stadium at P R High School offers state-of-the-art facilities, including a main hall with four badminton courts conforming to national standards.



Shri Dharmendra Pradhan, Hon'ble Minister of Education & Skill Development and Entrepreneurship, GOI and Shri Hardeep Singh Puri, Hon'ble Minister of Petroleum and Natural Gas & Housing and Urban Affairs, GOI inaugurated Indoor Stadium at P R School, Balangir, Odisha, supported by GAIL (India) Limited.

3. Inauguration of innovative Pilot project 'GAIL Green Education Resource Centre' at Govt. Primary School, Kothipur, Bhagya Nagar block, Auraiya

GAIL under its CSR initiatives conceptualized and established 'GAIL Green Education Resource Centres' in five Govt. Schools of District Auraiya as innovative Pilot project. The project includes installing a set of two biogas units (2m³ capacity each), Solar water pump unit (1 HP), Solar Panels (1KW), UV water purifier, developing an organic kitchen garden through manure and setting-up a library consisting of books on environment and organic farming.

Fresh animal dung, the feed stock for the biogas units is collected from the local animal keepers and farmers. The slurry (manure) from the biodigester is used to develop and maintain a purely organic



kitchen garden in the school compound. The gas generated from bio gas units used in school kitchen to prepare mid-day meals using the organic vegetables are grown up in the school kitchen garden.

Solar submersible pump and UV water purifier ensures the availability of safe drinking water to the students protecting from water-borne diseases. The project is intended to sow the seeds of promoting renewable energy education & awareness among the young generation by demonstration in school premises.

15.4.3 GAIL Kaushal

Kaushal is a GAIL CSR flagship project focusing on skill development and livelihood enhancement. Its purpose is to enable and empower the underprivileged by implementing various skill development projects that will make them employable and improve their quality of life.



Inauguration of GAIL Green Education Resource Centre at Primary School, Kothipur, Bhagya Nagar block, District Auraiya, Uttar Pradesh by Shri. Ayush Gupta, Director (HR), GAIL (India) Limited

Objectives of GAIL Kaushal:

- To provide skill development training to the poor and marginalized communities of the society
- To set up Skill Development Institutes (SDIs) for providing training to the beneficiaries
- To empower the women and the youth to improve their livelihood by providing them skill development training in various fields such as CAD, web design, domestic BPV/BPO, welding, industrial electrician, CNC operator, instrument technician, retail associate and masonry.

In FY 2022-23, approx. 4,400 beneficiaries were covered under this initiative.

Few Major Events/Activities Under GAIL Kaushal initiative in FY 2022-23

1. Support towards skill development trainings in Plastic Manufacturing

GAIL supports in conducting Skill Development Training programmes for the underprivileged and unemployed youth in the states of Assam, Andhra Pradesh, Chhattisgarh, Jharkhand, Maharashtra, Manipur, Uttar Pradesh, in collaboration with Central Institute of Petrochemicals Engineering and Technology (CIPET). GAIL has invested about INR 1.04 crore for this project.

2. Support towards Skill Development Institutes (SDIs) – An Oil PSE Collaborative Initiative

Six Skill Development Institutes (SDIs) (SDI- Raebareli, Bhubaneswar, Kochi, Vishakhapatnam, Ahmedabad, and Guwahati) have been established across the country as part of the collaborative efforts of Oil PSEs under the guidance of MoPNG and in line with 'Skill India Mission' of Government of India. Out of these, SDI Raebareli is being managed by GAIL

- SDI Raebareli has been registered and approved as Government Training Partner (GTP) with NSDC for skill training under PMKVY 4.0 Scheme of Govt. of India, in a step towards self-sustainable model. The institute is accredited and affiliated with 5-star rating.
- A total of 405 youth were skilfully trained to gain employment including 117 candidates

trained under UPSDM scheme of skilling during the FY 2022-23 on self-sustainable model.

- Further, SDI Raebareli has registered 120 beneficiaries for providing skill training under PMKVY4.0 scheme of Ministry of Skill Development and Entrepreneurship for FY 2022-23.
- A smart phone distribution program was organized in January 2023 at Skill Development Institute- Raebareli under DigiShakti Program of UP Govt. in which smart phones were distributed to the trainees of the Institute.
- Total of 98 girls were trained during the reporting period in job-roles of Data Entry Operator, Industrial Electrician & Process Instrumentation Operator.
- Online lectures on each course and other events of SDI are hosted on YouTube channel "SDI Raebareli" to facilitate the trainees.

3. GAIL CSR Skill centre at Amravati, Maharashtra

GAIL CSR supported establishment of Skills Training Centre in Amravati, with an aim of instilling economic security and stability among young men and women in the country by facilitating enhanced access to employment opportunities.

The skill trades or job roles in which the training of candidates is to be conducted are: (1) Pipe Fitter (Oil & Gas / CGD), (2) Industrial Electrician (Oil & Gas), (3) Fire Safety Technician (Oil & Gas), (4) Gas Meter Reader, (5) Pipeline Maintenance Technician (Mechanical) and, (6) Cathodic



Swachhata Abhiyaan at Skill Development Institute, Raebareli



Protection Technician - for a total nos. of 300 students with the aim to provide specialized training and placement to these candidates.

4. Support for Setting up Natural Fibre Diversified Product Training and development Centre for Women Empowerment at Murshidabad, West Bengal

As part of the project, 08 Nos Common facility centres (CFCs) are being set up at various locations in Murshidabad district for capacity building and training of underprivileged women beneficiaries in natural fibre diversified product (Jute and its derived products). This is an integrated project which aims to achieve capacity building, empowerment and development of approx. 1600 women beneficiaries through capacity building and enhancement of skills in jute related products and trades.



Inauguration of GAIL CSR training centre at Amravati, Maharashtra

5. Support for job linked skill training at GAIL Skill Schools - Guna (MP) and East Godavari (A.P)

GAIL has extended job linked skill training at GAIL Skill Schools at Guna in Madhya Pradesh and Nagaram, East Godavari in Andhra Pradesh, in collaboration with National Skill Development Corporation. The main goal of the institute is to offer training to the unemployed youth on the trade courses like Auto CAD, Technician Instrumentation, Industrial Welding and Industrial Electrician to get the employment in reputed companies. Local Students like qualified, drop outs from college education, Technical Students are utilizing this opportunity by enrolling their names in respective trades. Job Linkages are built before commencement of the training Program and hence a person joining the program is assured of a job at the end of the training process.

As part of the Project, GAIL Institute of Skills, Guna trained approx.400 people in the trades of Industrial Vendor, Industrial Electrician, CNC machine operator, unarmed security guard and customer Care Executive trades while, GAIL Institute of Skills, Rajahmundry trained 180 youth in the trades of Industrial Vendor and Industrial Electrician



"Inauguration of CSR project "Support for Setting up Natural Fibre Diversified Product Training and Development Centre for Women Empowerment at Murshidabad, West Bengal"

15.4.4 GAIL Unnati

GAIL acknowledges that economic competitiveness is intrinsically related to a society's social, economic, and environmental well-being. GAIL Unnati was conceptually created to achieve all three of these goals. This programme promotes rural livelihood through a variety of measures.

During FY 2022-23, GAIL has supported infrastructure for communities under the Unnati Initiative. Around 12,400 individuals have been benefitted as a part of this project.

Also, GAIL extended the support for development activities in Vishakhapatnam, Andhra Pradesh by construction of community centre in association with Greater Vishakhapatnam Municipal Corporation. GAIL also facilitated inverter and batteries for public waiting room near Vijaipur, Guna district, Madhya Pradesh.

Few Major Events/Activities Under GAIL Unnati initiative in FY 2022-23



Certificate distribution program at GAIL Institute of Skills, Guna Madhya Pradesh



Print media on GAIL Skills School, Rajahmundry

1. Support for Promoting Sustainable Livelihoods through agriculture- Water- Energy nexus in Rajahmundry, Andhra Pradesh

The Project Strives towards promoting organic farming by Enhancing skills and Capacities of Farmers to adopt sustainable agriculture based-production practices, promotion of Inclusive & effective

15.4.5 GAIL Sashakt

This initiative of GAIL focused on empowering 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.

In FY 2022-23, around 8117 beneficiaries were covered under this program.

GAIL provided support towards Building Climate Resilient Communities – Training rural women

as Solar Engineers and Solar Electrification in Ranchi and Giridih.

GAIL facilitated sustainable livelihood of poor women SHG members by providing skill training and establishing rural marts at Guna, Madhya Pradesh under this program. Under this project, vocational training is being provided to 600 SHG women on Stitching & Tailoring, Food Processing, Soft Toy making, Beauty & Wellness and Candle & Agarabatti making.

As part of a Women Empowerment and Leadership Development programme 'Nai Roshni' in Jabalpur, Madhya Pradesh, 200 women were trained in fashion design job role aligned with Apparel Made-Ups Home Furnishing and Leadership Development Training.

Support was extended towards "Khushi"- A livelihood generation program for women in early childhood care & Education" in Jabalpur, Madhya Pradesh where 270 women from the

ITS BENEFITS
In 2018-19, GAIL (India) Limited started its first ever skill development programme for skill enhancement, at Nagaram village in Mahabubnagar district of East Godavari district.

An expansion in its pipeline has seen GAIL claim 22 lives, and since then GAIL has been trying to provide opportunities by taking up many initiatives. As a result, it has been open till date to more than 1000 students, which is part of GAIL's Social Responsibility (CSR).

GAIL established a skill development programme at Nagaram in 2018. GAIL's Skill Development Company (GSDC), which works in

brief at the moment. Of the 1000 students who have completed courses, 70 % were given an opportunity for employment in various companies, including MRSC.

In 2021, GAIL constructed,

a modernized

state-of-the-art equipment

at a cost of ₹1 crore for other

skill areas like auto-

rical, electrical, pipe welding

and instrumentation

technician with a target of

employment certificate pro-

gramme for 100 students for

the financial year 2021-22.

"Our seniors have got very

good placement and we are

learning welding and

industrial electrical works, which

are very useful," said Mr.

Kiran and Kanapathy

Lakshmi Srinivasan.

Preference to locals

found, head of the GAIL, In-

dustrial Mill Develop-

ment Nagaram, Manikalladu,

very few from Kakinada and

Jabalpur districts.

He

placed around 250 to

350 students and are going

to 200 more in this year.

Mr. Srinivasan said

that the skill developmen-

programmes are necessary

to achieve industrial growth

given the favourable demographi-



target location were given 3 months training in Ayurveda Ahara & Poshan Sahayak job role and Early Childhood Care and Education.



Empowerment through employment and entrepreneurship initiative for sustainable livelihood support in textile and jute to women in Vijaipur

15.4.6 GAIL Saksham

GAIL Saksham projects recognize and address the need for attention and care for differently abled people and the elderly. This involves providing people with special needs with hearing aids and other assistive devices. It also helps people with disabilities (PwDs) achieve self-confidence, a feeling of dignity, and less reliance on others, as well as better access to livelihood options.

In FY 2022-23, about 8,892 people were benefitted from this program.

Support for Distribution of Aids & Assistive Devices to Divyangjans

Under this flagship project of GAIL CSR, the implementing agency Artificial Limbs Manufacturing Corporation of India (ALIMCO), prosthetic limbs, wheelchairs, tricycles, hearing aids and other products were supplied to identified and qualified recipients. The procedure involves a district-wide assessment camp to establish the number of beneficiaries and the assistive aids required. Following the assessment camp, the aids are provided to the designated beneficiaries in a distribution camp.

15.4.7 GAIL Harit

The vision statement of GAIL includes an implicit commitment to the environment. GAIL maintains natural habitat and ecosystem sensitivity as part of its broader sustainability strategy. As a result, GAIL's Harit initiative focuses on rebuilding the planet by conserving the ecosystem and limiting the detrimental impact of its operations.

Few Major Events/Activities Under GAIL Harit initiative in FY 2022-23

1. Support towards setting up Natural Gas based crematoriums

For protection of the environment and reduction of pollution level as well as deforestation, GAIL is providing support towards setting up/renovation of CNG crematoriums in Cuttack, Bhubaneswar & Calicut, as part of CSR initiative under GAIL Harit.

2. Conversion of diesel/ petrol Boats into CNG propelled Boats in Varanasi

In a move to make the revered ghats at Varanasi pollution free, GAIL CSR under its Harit initiatives is supporting the conversion of petrol/diesel boats to CNG boats in association with Varanasi Nagar Nigam. Hon'ble Prime Minister,

Sh. Narendra Modi on 07.07.2022 dedicated 500 boats to the Nation, which have been converted to run on the environment-friendly Compressed Natural Gas (CNG) from petrol and diesel.



PM DEDICATES 500 CNG BOATS

VARANASI : In a move to make the Ganga pollution free, Prime Minister Narendra Modi on Thursday dedicated to the nation 500 which have been converted to run on the environment-friendly Compressed Natural Gas (CNG) from petrol and diesel.

These boats are being supplied fuel by India's first floating CNG station built by GAIL (India) Limited at Namo Ghat here. The conversion of the petrol/diesel boats to run on CNG also was carried out under GAIL's corporate social responsibility initiative in association with Varanasi Nagar Nigam (VNN). VNN appointed Varanasi Smart City as coordinator of the project while Mecon Limited is

providing engineering and consultancy services for conversion of boats to run on CNG. Many of the boats present across Ganga ghats are used by tourists when they visit Varanasi.

Leakage and exhaust from conventional fuels is a major concern which affects the water quality and marine life of the Ganga.

Conversion to CNG will not only reduce pollution, but the resultant savings on fuel will lead to improvement in the economic condition of boatmen.

While 500 boats have been converted to CNG, work is on at a fast pace to convert the other boats to the clean fuel too.

15.5 Need Analysis and Impact Assessment

(GRI 3-3-d, GRI 3-3-e, GRI 411-1, GRI 413-1a i,iii)

GAIL is putting forth concrete efforts to enhance community development by providing a wide range of opportunities through targeted and proactive projects. These projects are executed based on thorough analysis with the goal of making a significant contribution to society.

We conduct surveys and collect feedback to determine the impact of our programmes, and we then measure the social impact of our efforts depending on the feedback we receive. We also conduct third-party evaluations of our critical programmes to ensure their long-term viability.

Our CSR initiatives are consistent with our knowledge and abilities. As a result, we have had a significant impact on the lives of the recipients. We acknowledge that no amount of secondary data on a community can entirely justify the requirements of that group. A preliminary baseline survey/need assessment research is usually required before beginning any CSR initiative. We design our CSR programmes in line with our CSR policy: GAIL – [GAIL-CSR Policy](#)

Need Analysis

The GAIL CSR Committee examines and approves CSR activities based on local community needs and desires. The following are the steps involved in doing a need analysis:

- Field assessment by the local CSR team to identify the need
- Requests from communities, local authorities, and the district administration
- Needs assessments by third parties
- International organisations and ministries issue reports, publications, and surveys
- Requests received from people representatives for their respective constituencies

Impact Assessment

Funds are allocated by GAIL to conduct impact assessments to maximise impact while being sustainable and participatory. The impact assessments are carried out by GAIL's CSR section and site coordinators

in partnership with various agencies and academic institutions. In project planning, design, execution, and operational planning, we value stakeholder input. We consider resolving the problems and issues of local communities to be one of our top considerations before starting any project. As part of the impact assessment process, case studies, success stories, and comments from interested parties are gathered.

The impact assessment also includes a SWOT (Strengths, Weaknesses, Opportunities for Improvement/Augmentation/ Modification and Threats) analysis, which allows the CSR team to determine the projects' viability, sustainability and areas for improvement.

Impact assessment of eligible CSR projects of FY 2019-20 and FY 2020-21 has been carried out by independent agencies in FY 2022-23 in accordance with sub-rule (3) of rule 8 of the Companies (Corporate Social Responsibility Policy) Rules 2014 through third party. The reports are available on the link: <https://www.gailonline.com/CSRIndex.html> (Impact Assessment Reports). Our impact assessment study measures the stakeholder participation and ensure that maximum community people get benefitted through our CSR projects. The detailed outcome of the study is given in the report, link of same is given in the report. The CSR Committee monitors the assessment and outcomes of the study on the society.

15.6 Community Grievance Redressal

(GRI 3-3f, GRI 413-1a viii)

At GAIL, we believe that community grievance redressal acts as a mechanism for strengthening social ties by being more transparent and accountable. We deliberate to engage with our communities on a regular basis to understand their needs, issues, and feedback, give them a channel to voice their issues, resolve complaints, and find solutions to the challenges they are encountering. As a result, we have set up a grievance cell at each of our offices & sites. All complaints are collected and maintained in a single system, and each grievance is properly investigated individually and with the same importance.

During FY 2022-23, GAIL received 304 complaints from internal and external Stakeholders through CPGRAMS portal and 100% of them being promptly resolved.

15.7 Awards and Recognition

- Asian Leadership Awards- CSR Leadership Award (an international recognition held at Dubai)
- Golden Peacock award for Corporate Social Responsibility
- ET Ascent National Award for Leadership & Excellence in CSR & Sustainability 2022
- SKOCH Order of Merit Award
- National CSR Award 2022
- CSR Times Award for CSR work in education domain
- The CSR Journal Excellence Awards 2022 for project Arogya
- Felicitation of GAIL's contribution towards TB Elimination under CSR by FujiFilm

Performance and Standards

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Performance and Standards

GRI 301-1, GRI 301-2

Material Consumption	Unit	2020-21	2021-22	2022-23
NG Processed	MMSCM	17,499	30,502	26,924
NG used for making product (LHC Shrinkage)	MMSCM	1,807	1,704	1,003
NG sent back to Pipeline	MMSCM	14,533	13,945	15,487

Material Consumption	Unit	2020-21	2021-22	2022-23
Alum	MT	498	562	414
Chlorine	MT	3	2	2
Lube Oil & Grease	MT	176	207	287
Mercaptan	MT	21	18	18
Methanol	MT	309	218	190
Other chemical & catalyst	MT	7,930	6,549	6,470
Sulphuric Acid	MT	250	227	174
Water treatment chemicals	MT	10,993	13,475	7,301
Packaging bag	MT	4,231	3,832	2,243
Total associated material	MT	24,410	25,089	17098
Material recycled/reused	MT	12	15	32

GRI 302-1, GRI 302-2, GRI 302-3, GRI 302-4, GRI 302-5

Energy Consumption* (GJ)	2020-21	2021-22	2022-23
Direct Energy	4,86,52,359	5,50,14,953	4,66,73,781
Indirect Energy	19,29,828	19,83,078	14,99,471
Renewable Energy	81,049	1,13,711	1,21,673
Energy from NG Flaring	9,24,846	9,31,853	11,40,567
Energy from LPG Flaring	18,201	3,707	9,698
Energy from NG Venting	4,22,113	4,78,334	6,18,811
Energy from LPG Venting	659	734	1,333
Total Energy Consumption	5,20,29,055	5,85,26,370	5,00,65,334

* Energy calculation as per fuel quantity reported from various sites. Indirect energy is from grid electricity only. No other form of energy is purchased.

** The energy considered NG and LPG venting as energy consumption for accounting of emissions

Energy Savings (GJ)	2020-21	2021-22	2022-23
Diesel Saved	281	760	2,153
Electricity Saved (GJ)	8,149	50,891	38,349
NG Saved (GJ)	3,81,738	6,57,361	5,98,300
LPG saved (GJ)	-	25	154
Total Energy Saving	3,90,168	7,09,037	6,38,956



TOWARDS NET ZERO

Energy Sold * (GJ)	2020-21	2021-22	2022-23
Electricity Sold	18,776	5,537	10,781

* No other form of energy is sold.

Direct Energy Consumption Sources (GJ)	2020-21	2021-22	2022-23
Diesel	13,368	15,890	37,492
Natural Gas	3,37,87,609	4,10,41,469	3,35,07,905
Residual Fuel	1,48,51,382	1,39,57,595	1,31,28,383
Total Direct Energy	4,86,52,359	5,50,14,953	4,66,73,780
Total Energy Intensity (Energy consumption/ total annual turnover)	920	640	347

Renewable Energy generated (GJ)	2020-21	2021-22	2022-23
Wind	5,13,559	5,49,347	7,71,388
Solar	31,318	31,836	38,698
Total Renewable Energy	5,44,877	5,81,183	8,10,086

GRI 305-1, GRI 305-2, GRI 305-3, GRI 305-4, GRI 305-5, GRI 305-6, GRI 305-7

Air Emissions*	Unit	2020-21	2021-22	2022-23
SPM	Tons/annum	291	290	243
NOx	Tons/annum	1,367	1,142	800
CO	Tons/annum	241	949	713
SOx	Tons/annum	201	474	520
VOC	Tons/annum	70	53	88
R-134 a	Kg/annum	507	713	337

*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	Unit	2020-21	2021-22	2022-23
R-22 (ODS)	Kg/annum	2,846	3,524	4,267

GHG Emission*	2020-21	2021-22	2022-23
Scope-1 Emissions (tCO2e)	32,81,058	41,33,249	36,56,175
Scope-2 Emissions (tCO2e)	4,19,125	4,34,135	3,19,380
Total GHG Emissions (tCO2e)	37,00,183	45,67,384	39,75,555
GHG Intensity (tCO2e/INR)	65.5	50.0	27.61
Turnover (Gross) (INR crore)	56,529	91,426	1,43,976

*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.

GHG savings (tCO2 Equivalent)	2020-21	2021-22	2022-23
Diesel	21	56	160
Electricity	1,788	11,593	8,629
NG savings	21,415	36,878	38,411
LPG saving	-	1.62	10
Total GHG savings	23,224	48,527	47,209

Water Performance (million m3)	2020-21	2021-22	2022-23
Total Water consumption	23.10	22.19	17.59
Total waste water generated	2.20	2.31	1.86
Total waste water discharged	1.50	1.64	2.20
Water recycled/reused	0.88	0.72	0.70

Water Withdrawal by Sources (Parameter) (million m3)	2020-21	2021-22	2022-23
Municipal water supplies (or from other water utilities)	1.50	1.69	1.72
Fresh surface water (lake, rivers etc.)	21.30	20.22	15.56
Fresh groundwater	0.30	0.28	0.15

Total water withdrawal from all areas with water stress (Gandhar, Jamnagar, Jhabua) (million m3)	2020-21	2021-22	2022-23
Groundwater	0.02	0.03	0.03
Municipal water supply	1.06	1.24	1.31
Surface water (river, sea, lake stream)	-	-	-
Total water consumption	1.08	1.26	1.34

*At these sites all the waste water generated is recycled. No waste water is discharged outside plant boundary.

Waste Generation	UoM	2020-21	2021-22	2022-23
Hazardous				
Basket filter waste	MT	2.57	800.54	2616
Bio-medical waste	MT	0.25	3.59	0.21
Empty drums	MT	75.57	48.72	41
ETP Sludge	MT	0	0	0
E-waste	MT	13.44	6.83	23
Oily Sludge	MT	3,670	430	2,450
Slop Oil	LIT	25,26,144.00	32,25,306.50	10,93,399
Tar	MT	14.80	17.40	27
Used batteries	NUMBERS	1,585	239	1,938
Used lube oil	LIT	78,148	88,413.68	94,091
Used oil	LIT	95,340	45,592.38	61,753
Non Hazardous				
Cables	MT	21.64	18.25	30
Canteen waste	MT	16.06	16.30	16



TOWARDS NET ZERO

Waste Generation	UoM	2020-21	2021-22	2022-23
Ceramic Material	MT	0	7.72	19
Metal scrap	MT	667.18	1,677.12	836
Misc. Waste	MT	193.40	25.27	63
Molecular Sieve	MT	115.91	63.97	241
Paper Consumption	MT	19.83	12.72	28
Plastic scrap	MT	134.73	249.68	137
Silica Gel	MT	51.27	57.27	200
Spent Alumina	MT	1,237.30	1,158.30	966
Tyre	NUMBERS	466.00	517.00	499
Used bag filters/filters	NUMBERS	4,087.00	4,307.00	4,233
Used Consumables	MT	0.39	2.76	40
Wooden scrap	MT	263.88	151.83	375

Type of Waste Disposal	2020-21		2021-22		2022-23	
	Liquid (Litres)	Solid (MT)	Liquid (Litres)	Solid (MT)	Liquid (Litres)	Solid (MT)
Incineration	0	4,003.28	0	713.24	0	2,809
Landfill	0	216.05	1.50	21	1	241
Onsite Storage	2,360	105.67	4,110.20	2.03	3,557	5
Recycling	26,97,272	6,191.89	23,26,082	2,594	11,36,745	1,820
Total	26,99,632	10,517	23,30,194	3,330	11,40,302	4,874

Disposal (FY 2022-23)	Hazardous	Non-Hazardous
Incineration (MT)	2,476.95	332
Landfill (MT)	0.08	241
Onsite		
Liquid (Litres)	3,557	2.02
Solid (MT)	0	5
Recycling		
Liquid (Litres)	11,36,745	NA
Solid (MT)	21	1,799.02

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.

Environment Expenditure (INR Million)	2020-21	2021-22	2022-23
Treatment and disposal of waste	69.79	78.37	140
Depreciation & Maintenance Cost of Equipment Used In Pollution Control	37.68	32.65	43
External services for environmental management	7.33	8.43	11
External certification of management systems	1.05	3.54	3
Cost of personnel for general environmental management activities	71.94	85.52	99
Expenditure for installing cleaner technologies	101.72	16.29	27
Insurance for environmental liability	41.93	35.77	16
Other environmental cost	33.64	40.79	109

Environment Expenditure (INR Million)	2020-21	2021-22	2022-23
Total Environment Expenditure	365.08	301.37	447
Environmental fines	-	-	-

Cost of Total Energy (Particulars) INR (Crore)	2020-21	2021-22	2022-23
Power Charges	412.49	385.79	361
Gas used as Fuel	1,280.84	1,762.44	3607
Water Charges	17.69	20.66	24
Total Cost	1711.02	2,168.89	3992

Health & Safety of Permanent Employees	Units	2020-21	2021-22	2022-23
Management representative in Safety Committee	NUMBERS	264	247	518
Non-management representative in Safety Committee	NUMBERS	190	183	272
Near miss case male permanent employee	NUMBERS	1,050	1,036	1085
Near miss case female permanent employee	NUMBERS	3	99	8
Minor injuries male permanent employee	NUMBERS	0	0	0
Minor injuries female permanent employee	NUMBERS	0	0	0
Reportable injuries male permanent employee	NUMBERS	0	0	0
Reportable injuries female permanent employee	NUMBERS	0	0	0
Lost days due to reportable injuries permanent employee-Male	NUMBERS	0	0	0
Lost days due to reportable injuries permanent employee-Female	NUMBERS	0	0	0
Fatalities male permanent employee	NUMBERS	0	0	0
Fatalities female permanent employee	NUMBERS	0	0	0
First aid cases male permanent employee	NUMBERS	17	5	17
First aid cases female permanent employee	NUMBERS	0	0	0
Manhours worked permanent employee – Male	MAN HOURS	57,00,000	41,76,132	62,76,652
Manhours worked permanent employee – Female	MAN HOURS	3,00,000	1,64,297	2,88,972
Occupational diseases-permanent employee – Male	NUMBERS	0	0	0
Occupational diseases-permanent employee – Female	NUMBERS	0	0	0

Health & Safety of Permanent Employees	Unit	2020-21	2021-22	2022-23
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-hours worked	0	0	0
Fatality Rate – Male	Fatalities per million-manhours worked	0	0	0
Fatality Rate – Female	Fatalities per million-man-hours worked	0	0	0

TOWARDS NET ZERO

Health and Safety of Contract Employees	Units	2020-21	2021-22	2022-23
Near miss case male contract employee	Numbers	215	177	193
Near miss case female contract employee	Numbers	4	0	7
Minor injuries male contract employee	Numbers	0	0	3
Minor injuries female contract employee	Numbers	0	0	0
Reportable injuries male contract employee	Numbers	1	0	4
Reportable injuries female contract employee	Numbers	0	0	0
Lost days due to reportable injuries contract employee-Male	Numbers	16	28	24044
Lost days due to reportable injuries contract employee-Female	Numbers	0	0	0
Fatalities male contract employee	Numbers	0	0	4
Fatalities female contract employee	Numbers	-	-	-
First aid cases male contract employee	Numbers	187	104	99
First aid cases female contract employee	Numbers	11	1	0

Health & Safety of contract Employees	Units	2020-21	2021-22	2022-23
Man hours worked contract employee : Male	Man hours	2,43,00,000	2,17,35,261	2,83,29,076
Man hours worked contract employee : Female	Man hours	3,50,000	3,29,872	4,23,216
Occupational diseases-contract worker-Male	Numbers	0	0	0
Occupational diseases-contract worker-Female	Numbers	0	0	0
LTIFR – Male	Reportable injuries per million-man-hours worked	0.04	0.046	0.141
LTIFR – Female	Reportable injuries per million-man-hours worked	0	0	0
Severity Rate – Total	Lost Days per million-man-hours worked	0.7	1.27	836.6
Fatality Rate – Male	Fatalities per million- man-hours worked	0	0	0.141
Fatality Rate – Female	Fatalities per million- man-hours worked	0	0	0
First aid cases – Female	Numbers	11	1	0

Permanent Employee Distribution (Numbers)	2020-21	2021-22	2022-23
Senior Management (E7-E9) – Male	322	348	384
Senior Management (E7-E9) – Female	8	8	6
Middle Management (E4-E6) – Male	1707	1684	1671
Middle Management (E4-E6) – Female	85	108	116
Junior Management (E0-E3) – Male	1511	1583	1661
Junior Management (E0-E3) – Female	163	156	156
Non-Management (S0-S7) – MALE	856	825	789

Permanent Employee Distribution (Numbers)	2020-21	2021-22	2022-23
Non management (s0-s7) – female	38	36	34
Senior Management (E7-E9) : <30 years Age	0	0	0
Senior Management (E7-E9) : 30 To 50 Years Age	66	62	57
Senior Management (E7-E9) : >50 years Age	264	294	333
Middle Management (E4-E6) : <30 Years Age	1	0	0
Middle Management (E4-E6) : 30 to 50 years Age	1193	1201	1117
Middle Management (E4-E6) : >50 Years Age	607	591	670
Junior Management (E0-E3) : <30 years Age	496	703	750
Junior Management (E0-E3) : 30 to 50 years Age	713	577	582
Junior Management (E0-E3) : >50 years Age	465	459	485
Non Management (S0-S7) : <30 years Age	186	185	83
Non Management (S0-S7) : 30 to 50 years Age	587	550	580
Non Management (S0-S7) : >50 years Age	121	126	160
New Employees Hired During FY: Male	146	231	245
New Employees Hired During FY: Female	10	18	19

FY 2021-22

Differently Abled Employees	Total	Male		Female	
		No.	%	No.	%
Permanent Employee	62	56	90	6	10
Permanent Workers	34	29	85	5	15
Other than Permanent	7	7	100	0	0
Total differently abled employees	96	85	89	11	11

FY 2022-23

Differently Abled Employees	Total	Male		Female	
		No.	%	No.	%
Permanent Employee	63	57	90.48	6	9.52
Permanent Workers	34	29	85.29	5	14.70
Other than Permanent	0	0	0	0	0
Total differently abled employees	97	86	88.65	11	11.34

Contract Employee Distribution (Numbers)	2020-21	2021-22	2022-23
Security staff male	1,878	3,676	3497
Security staff female	4	9	9
Regular contract worker male	12,997	12,694	13208
Regular contract worker female	382	380	380
Total number of Apprentice in GAIL in FY – Male	444	275	325
Total number of Apprentice in GAIL in FY – Female	101	50	82

TOWARDS NET ZERO

Particulars	FY 2022-23 (Turnover rate in current FY)			FY 2021-22 (Turnover rate in previous FY)			FY 2020-21 (Turnover rate in the year prior to previous FY)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Permanent Employees	4.29%	5.39%	4.37%	4.82%	3.73%	4.75%	2.84%	3.77%	2.91%
Permanent Workers	2.61%	0%	2.55%	2.16%	2.74%	2.19%	2.43%	2.63%	2.44%

Training data	Unit	2020-21	2021-22	2022-23
Management Employee Male	MANHOURS	72,297.0	98,979.5	1,55,351
Management Employee Female	MANHOURS	7,180.0	7,457.5	11,120.5
Non-Management Employee Male	MANHOURS	13,055.0	14,881.0	22,736
Non-Management Employee Female	MANHOURS	609.0	481.0	776
Contract Worker Male	MANHOURS	57,360.3	1,57,106.0	13,26,788
Contract Worker Female	MANHOURS	1,270.2	817	13,545
Permanent Employee-Physically Disabled	MANHOURS	1,581.0	2,411.5	3,216
Contract Worker-Physically Disabled	MANHOURS	NA	25	128

Employees Returned Work After Parental Leave	Gender	2020-21	2021-22	2022-23
Number of employees entitle to parental leave	Male	4,401	4,446	4510
	Female	304	308	312
Number of employees that took parental leave	Male	153	155	177
	Female	15	15	24
Number of employees who returned to work after parental leave ended	Male	149	152	175
	Female	9	10	13
Employee returned to work after parental leave ended who were still employed 12 months after their return	Male	132	152	152
	Female	9	8	10

GRI 414-1, 414-2

Procurement Highlights	2020-21	2021-22	2022-23
Total Procurement of Goods & Supplies in INR crore	7201.60	8961.00	3415
Total Procurement of Goods & Supplies from Local Suppliers in INR crore	6769.20	8169.00	1541
% of new suppliers that has been screened through Environmental Criteria	100.00	100.00	100.00
% of new suppliers that has been screened through Labour Practice Criteria	100.00	100.00	100.00
% of new suppliers that has been screened through Human Rights Criteria	100.00	100.00	100.00
% of new suppliers that has been screened through Criteria for impacts on society	100.00	100.00	100.00
% of suppliers identified having significant actual & potential negative impacts on society	0.00	0.00	0.00
% of suppliers identified having significant actual & potential negative impacts on society with which relationship has been terminated	0.00	0.00	0.00

Independent Assurance Statement

Assurance Statement on Sustainability Report (SR) of GAIL (India) Limited

For

Reporting Period:

April 01, 2022 – March 31, 2023



Bureau Veritas (India) Private Limited

72 Business Park, 9th Floor, MIDC Cross Road 'C', Opp. SEEPZ
Gate #2, Andheri (East) Mumbai-400 093 India.



Independent Assurance Statement

BUREAU
VERITAS

To

GAIL (India) Limited,

Plot Number B-35 & 36, Street Number 13,
Noida Sector 1, Noida – 201301

Introduction and Objective of Work

BUREAU VERITAS has been engaged by **GAIL (India) Limited** (hereinafter abbreviated as ("GAIL") to conduct an independent assurance of its sustainability parameters in its Sustainability Report ("SR") for the reporting period from 01.04.2022 to 31.03.2023. This assurance statement applies to the related information included within the scope of work described below.

The selection of reporting criteria, reporting period, reporting boundary, monitoring and measurement of data, preparation and presentation of information for the Sustainability Reporting (SR) is the sole responsibility of the management of "GAIL". Bureau Veritas was not involved in the drafting or preparation of the back-up data of "GAIL" for the Sustainability Reporting (SR). Our sole responsibility was to provide independent assurance on its content.

Intended User

The assurance statement is made solely for "GAIL" as per the governing contractual terms and conditions of the assurance engagement contract between "GAIL" and Bureau Veritas. To the extent that the law permits, we owe no responsibility and do not accept any liability to any other party other than "GAIL" for the work we have performed for this assurance report or for our conclusions stated in the paragraph below.

Scope of Work

- Checking that the data and information included in the SR for the reporting period from 01.04.2022 to 31.03.2023 was fairly presented without material misrepresentation.
- Appropriateness and robustness of underlying reporting systems and processes, used to collect, analyse, and review the information reported.

Reporting criteria:

GAIL reports in accordance with the most recent version of the International Petroleum Industry Environmental Conservation Association (IPIECA) guidelines, which is a global oil and gas industry association that focuses on environmental and social issues.

This report has been prepared in compliance with the GRI Sustainability Reporting Standards; Sustainability Accounting Standards Board (SASB); National Guidelines on Responsible Business Conduct (NGRBC) principles, the American Petroleum Institute (API) guidelines, ISO 26000:2010 and the United Nations Global Compact (UNGC) & SEBI's Business Responsibility and Sustainability Reporting (BRSR) requirements, Task Force on Climate-Related Financial Disclosures (TCFD),





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International Sustainability Reporting Council's (IIRC's) Sustainability Reporting Framework and National Guidelines for Responsible Business Conduct (NGRBC).

Reporting period: 01/04/2022 to 31/03/2023

Assurance standard: Bureau Veritas conducted sustainability assurance in accordance with the requirement as per AccountAbility's AA1000 Assurance Standard v3.

Level of assurance: Limited (the level of assurance obtained in work performed in a limited assurance engagement is lower than for a reasonable assurance engagement, but is higher than no assurance).

Methodology used to conduct the assurance

GAIL initially submitted the SR for the reporting period from 01.04.2022 to 31.03.2023 covering the sites that are within the reporting boundaries. The assessment of the reports and the data was done at GAIL headquarters in New Delhi.

The reporting boundaries considered for this reporting period include; The facilities covered for this assurance are GAIL's Gas Processing units at five locations (Pata, Vijaipur, Vaghodia, Gandhar), one Petrochemical Plant at Pata, Natural Gas Compressor stations (Hazira, Vaghodia, Jhabua, Khera, Vijaipur, Dibiyapur Kailaras & Chhainsa), LPG pumping / receiving stations (Loni, Mansharampura, Nasirabad, Abu Road, Samakhiali, Jamnagar, Kandla, Vizag, G Konduru and Cherlapalli), 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.

The assessment team from Bureau Veritas, for this verification, included the following members;

1. Mr. B S Vishwakarma – Team Leader
2. Mr Amit Kumar – Team Member

The assessment was carried out, of the submitted information, based on a sampling exercise, to verify the data and computations that were prepared by GAIL. On-site visit to the company's corporate office, as well as the remote assessment was conducted by the audit team. Assurance process covered data verification of sites Pata, Vijaipur, Vizag, Khera, Gandhar, G Konduru, Bengaluru, GTI Noida, Delhi Corporate Office, and Jubilee Tower, Noida through physical visits and Video Conferencing.

The assessment was carried out only for the parameters that have been considered by GAIL for the sustainability reporting in the Sustainability Report for FY 2022 -2023 based upon GRI standard which includes the following:

GRI 2: General Disclosures 2021:

- Disclosure 2-1 to 2-5 (The organization and its reporting practices)
- Disclosure 2-6 to 2-8 (Activities and workers)
- Disclosure 2-9 to 2-21 (Governance)
- Disclosure 2-22 to 2-28 (Strategy, policies and practices)





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- Disclosure 2-29 to 2-30 (Stakeholder engagement)

GRI 3: Material Topics:

- Disclosure 3-1 to 3-3 (Material Topic)

Economic Performance 2016:

- Disclosures 201-1 to 201-4 (Economic performance)
- Disclosures 202-1 and 202-2 (Market Presence)
- Disclosures 203-1 and 203-2 (Indirect economic impacts)
- Disclosures 204-1 (Procurement practices)
- Disclosures 205-1 to 205-3 (Anti-corruption)
- Disclosures 206-1 (Anti-competitive behaviour)

Environmental:

- Disclosures 301-1 to 301-3 (Materials)
- Disclosures 302-1 to 302-5 (Energy)
- Disclosures 303-1 to 303-5 (Water and Effluents)
- Disclosures 304-1 to 304-4 (Biodiversity)
- Disclosures 305-1 to 305-7 (Emissions)
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- Disclosures 307-1 (Compliance)
- Disclosures 308-1 and 308-2 (Supplier environmental assessment)

Social:

- Disclosures 401-1 to 401-3 (Employment)
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- Disclosures 418-1 (Customer Privacy)

The data of the reported parameters in the Sustainability Report (SR) were verified by Bureau Veritas Team from the published data in the SR of FY 2022-2023. A separate BV verification checklist protocol was also utilized during the assessment.





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Bureau Veritas has validated the quantification methodology used by GAIL for the monitoring and calculations of the sustainability parameters from its different sources and confirms the same to be in line with accepted practice of standard GHG computations. The materiality threshold of 5% has been considered in this assessment process.

The data were also cross-checked by Bureau Veritas against the data backup provided by departments, sites, official documents on GAIL website such as Annual Report of FY 2022-23 etc. Also, data related to the other entities / JV's of GAIL, within the reporting boundaries was not available for verification.

GAIL Sustainability Report FY 2022-23 has been confirmed in accordance to GRI Sustainability Standards. This SR has been certified in accordance with Type 2 Moderate level based on AA1000AS Assurance standard (AccountAbility 1000 Assurance Standard).

Our work was conducted against the requirements defined in the Sustainability Reporting Framework and National Guidelines for Responsible Business Conduct (NGRBC), along with the requirements of AA1000AS v3 Assurance standard and Bureau Veritas' standard procedures and guidelines for external assurance of sustainability information, based on current best practice in independent assurance. The Bureau Veritas assurance process has also involved an Independent Technical Review (ITR) to check for correctness and accuracy of the assurance conclusions as well as adherence to Bureau Veritas internal procedures and/or assurance standard requirements.

Conclusions

On the basis of our methodology and the activities described above, it is our opinion that the SR for FY 2022-23 of "GAIL", containing its reporting and declaration of the various ESG parameters from the operations within the reporting boundary and the reporting period, as described above, is prepared in all material respects in line with the applicable criteria here before stated. The organization may review the mechanism to capture data related to renewable energy on real time basis for better efficacy. The organization can think about positively influencing scope 3 (indirect) emission with rational stakeholder engagement related to business travel, carbon emission from waste disposal, purchase of goods and services like Transportation and distribution occur in upstream (suppliers) as well as downstream (customers), this will also improve carbon footprint and benefit to society at large.

Limitations and Exclusions

Excluded from the scope of our work is any assurance of information relating to:

- Activities outside the defined assurance stated herein above;
- Positional statements, expressions of opinion, belief, aim or future intention by "GAIL" and statements of future commitment;
- Competitive claims in the report claiming "first in India", "first time in India", "first of its kind", etc,





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- Our assurance does not extend to the activities and operations of “GAIL” outside of the scope and geographical boundaries mentioned in this report as well as the operations undertaken by any other entity that may be associated with or have a business relationship with “GAIL”.
- Our assurance of the economic and financial performance data of GAIL is based only on the audited annual reports of GAIL and our conclusions rely entirely upon that audited report

Uncertainty

The reliability of assurance is subject to uncertainty(ies) that are inherent in the assurance process. Uncertainties stem from limitations in quantification models used, assumptions or data conversion factors used or may be present in the estimation of data used to arrive at results. Our conclusions in respect of this assurance are naturally subject to any inherent uncertainty(ies) involved in the assurance process.

Statement of independence, impartiality, and competence

Bureau Veritas is an independent professional services company that specializes in Quality, Health, Safety, Social, and Environmental management with almost 190 years history in providing independent assurance services. Bureau Veritas has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities. We are particularly vigilant in the prevention of conflicts of interest.

No member of the assurance team has a business relationship with “GAIL”, its Directors, Managers or officials beyond that required of this assignment. We have conducted this verification independently and there has been no conflict of interest. The assurance team has extensive experience in conducting assurance over environmental, social, ethical and health & safety information, systems and processes an excellent understanding of Bureau Veritas standard methodology for the Assurance of Sustainability Reporting.





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Independent Assurance Statement

Bureau Veritas (India) Private Limited

72 Business Park, 9th Floor, MIDC Cross Road 'C', Opp. SEEPZ Gate #2, Andheri (East) Mumbai-400 093
India.

A handwritten signature in black ink, appearing to read "Bholenath Vishwakarma".

Bholenath Vishwakarma
Lead Assurer

A handwritten signature in black ink, appearing to read "Amit Kumar".

Amit Kumar
Team Member

A handwritten signature in black ink, appearing to read "Rupam BARUAH".

Rupam BARUAH
Technical Reviewer

A handwritten signature in black ink, appearing to read "Anantha Prabhu Uppunda".

Anantha Prabhu Uppunda
Issuer

Date: 16/08/2023
Place: Mumbai, India



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000-137

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Linkages to UNSDG

Sustainable development goals (SDGs)		Description	GAIL Initiatives	Report Section/Chapter
Greenhouse gas Emission	EM-MD-110a.1	Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations		Chapter 10: Climate Change- 10.6- Scope wise emission and trends Chapter 16: Performance and Standard
SDG 01	No Poverty	End poverty in all its forms, everywhere	15.4.3 GAIL Kaushal initiatives under GAIL CSR Initiative 15.4.4 GAIL Unnati initiative under GAIL CSR	Chapter 15: Our Community
SDG 02	Zero hunger	End hunger, achieve food security and improved nutrition and promote sustainable agriculture	15.4.1 GAIL Arogya initiatives under GAIL CSR Initiative	Chapter 15: Our Community
SDG 03	Good health and well being	Ensure healthy lives and promote wellbeing for all at all ages	11.12 Employee Well-Being: Corporate Medical Cell (CMC) 12.7 Occupational Health and Safety 15.4.1 GAIL Aarogya (Healthcare and Sanitation) initiative under GAIL CSR 11.4.1 Employee Benefits and Incentives	Chapter 11: Our Employee Chapter 12: Ensuring health and safety for all Chapter 15: Our Community
SDG 04	Quality Education	Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	11.2 Initiatives for Employee Welfare: GAIL ABHA 15.4.2 GAIL Ujjwal initiative under GAIL CSR	Chapter 11: Our Employee Chapter 15: Our Community
SDG 05	Gender Equality	"Achieve gender equality and empower all women and girls"	11.4 Diversity, Equity and Inclusivity in Workforce 15.4.5 GAIL Sashakt initiative under GAIL CSR	Chapter 11: Our Employee Chapter 15: Our Community
SDG 06	Clean water and sanitation	Ensure available and sustainable management of water and sanitation for all	9.5 Responsible Water Management 9.6 Responsible Waste Management 15.4.1 GAIL Arogya initiative under GAIL CSR	Chapter 9: Energy and Environment Chapter 15: Our Community
SDG 07	Affordable and clean energy	Ensure access to affordable reliable, sustainable and modern energy for all	8.3.5 Energy Management System Installation of modern and new energy-efficient equipment 9.3.2 Site Wise Energy Saving Initiatives Commissioning of Grid Power Supply at Compressor Stations Green Hydrogen Blending in NG in CGD Network Installation and commissioning of Solar Power Plants 10.4.2 Energy Transition Compressed Biogas (CBG)	Chapter 8: Operational Excellence Chapter 9: Energy and Environment Chapter 10: Climate change



Sustainable development goals (SDGs)		Description	GAIL Initiatives	Report Section/Chapter
SDG 08	Decent work and economic growth	Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all	11.6 Employee Capacity Building Capacity Building Initiative under ITEC 11.11 Grievance Redressal System 11.6.2 Utilising Technology & Training Strategy: GAIL's e-learning Management System (LMS) 15.4.3 GAIL Kaushal	Chapter 11: Our Employee Chapter 15: Our Community
SDG 09	Industry, innovation and infrastructure	Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation	9. Installation and commissioning of Solar, Power Plants, Green Co Assessment of sites 13.5.3 Digital Transformation: GeM portal for tendering purposes, SARATHI Vendor Invoice Management 15.4.1 GAIL Arogya (Healthcare Infrastructure) 15.4.2 GAIL Ujjwal (Education Infrastructure) 15.4.4 GAIL Unnati (Infrastructure for marginalized section)	Chapter 9: Energy and environment Chapter 13: Responsible Supply Chain Chapter 15: Our Community
SDG 10	Reduced inequalities	Reduce inequality within and among countries	15.4.5 GAIL Sashakt initiative under GAIL CSR 15.4.6 GAIL Saksham initiative under GAIL CSR 13.1 Procurement Practices: Procurement from MSEs owned by SC/ST entrepreneurs 13.2 General Conditions of Contract and Shaping of Contracts 13.5.1 Sustainable Procurement: Implementation of Purchase Preference Policy, INDEG Group constituted for the development of Import substitution	Chapter 13: Responsible Supply chain Chapter 15: Our Community
SDG 11	Sustainable cities and communities	Make cities and human settlements inclusive, safe, resilient and sustainable	15.4.1 GAIL Arogya initiative under GAIL CSR 15.4.4 GAIL Unnati initiative under GAIL CSR Mission LiFE initiative	Chapter 9: Energy and Environment Chapter 15: Our Community



Sustainable development goals (SDGs)		Description	GAIL Initiatives	Report Section/Chapter
SDG 12	Responsible consumption and production	Ensure sustainable consumption and production patterns	9.3 Energy Management 9.4 Emission Management 9.5 Responsible Water Management 9.6 Responsible Waste Management 13.5.1 Sustainable Procurement 13.5.3 Digital Transformation	Chapter 9: Energy and environment Chapter 13: Responsible Supply Chain
SDG 13	Climate action	Take urgent action to combat climate change and its impacts	4.2 Sustainability Policy 9. Mission LiFE: Theme-wise initiatives 10.1 Climate Change and Sustainable Development: Target to achieve net-zero (Scope 1 and Scope 2) status by 2040 while reducing Scope 3 emissions by 35% 10.2 Vision and Action Pertaining to climate strategy: target to install 1 GW of renewable energy capacity by 2025. 10.2.1 Adaptation: Implementation of internal carbon pricing, Digital Technology to measure the Carbon footprint 10.4 Net Zero Action Plan 8.3.4 Environment Management System 8.3.5 Energy Management System 9.2 Biodiversity Management 9.4 Emission Management	Chapter 4: Sustainability at GAIL Chapter 8: Operational Excellence Chapter 9: Energy and Environment Chapter 10: Climate Change
SDG 14	Life below water	Conserve and sustainably use the oceans, seas and marine resources for sustainable development	9.5 Responsible Water Management: 9.5.1 GAIL's Water Management Initiatives/approach to reduce water footprint: Replacement of old Cast iron drinking water line with HDPE line, Rainwater harvesting pits, recycling of wastewater, drip irrigation system, Zero liquid discharge 15.4.7 GAIL Harit initiative under GAIL CSR	Chapter 9: Energy and Environment Chapter 15: Our Community



Sustainable development goals (SDGs)		Description	GAIL Initiatives	Report Section/Chapter
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	9.2 Biodiversity Management:9.2.1 GAIL's Biodiversity Initiatives at various sites: Tree Plantation drive	Chapter 9: Energy and Environment
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	6.1.7 Ethics and Integrity Transparency in Business 6.1.9 Grievance Redressal Mechanism 11.9 Labour Practices 14.4 Customer Satisfaction	Chapter 6: Strong Governance and risk management Chapter 11: Ensuring Health and Safety for all Chapter 14: Our Customer
SDG 17	Partnerships for the goals	Strengthen the means of implementation and revitalize the global partnership for sustainable development	10.7.2 Partnerships for Net-Zero 10.4.2 Energy Transition Sustainable Alternative towards Affordable Transportation(SATAT)) Initiative of GoI	Chapter 10: Climate Change

Linkages to TCFD

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b) Describe management's role in assessing and managing climate-related risks and opportunities.	Sustainability at GAIL: Sustainable Development Steering Committee	43
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c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario	Climate Change: Climate Change and Sustainable Development	119
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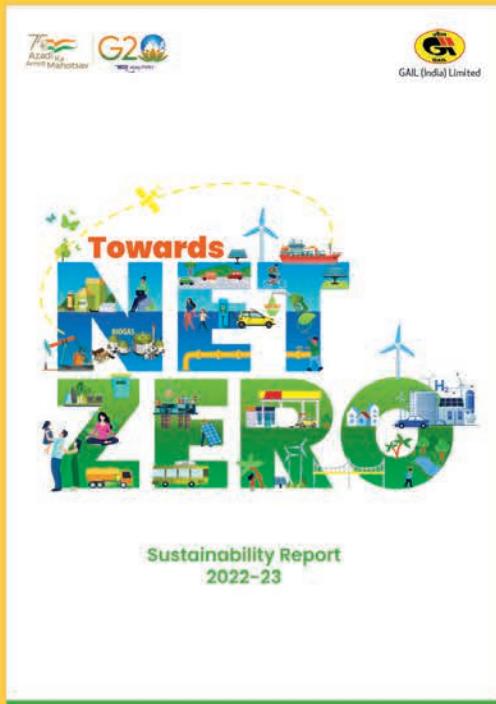
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GAIL's **NET-ZERO** Mission
will be the **NET-GAIN** for India

GAIL is well-placed to play an important role in promoting use of natural gas with an existing LNG (liquefied natural gas) portfolio of more than 14 million tonnes per annum, diversity in supply sources and price indices as well as a wide pipeline network. In line with India's vision to achieve net-zero by 2070, it has completed a comprehensive study on science-based net-zero ambition and intends to achieve 100 percent reduction in Scope 1 and 2 emissions and a 35 percent reduction in scope 3 emissions by 2040. To cut its carbon footprints, it is venturing into green hydrogen production and aims to set up 3 gigawatts of renewable energy capacity by 2030.



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