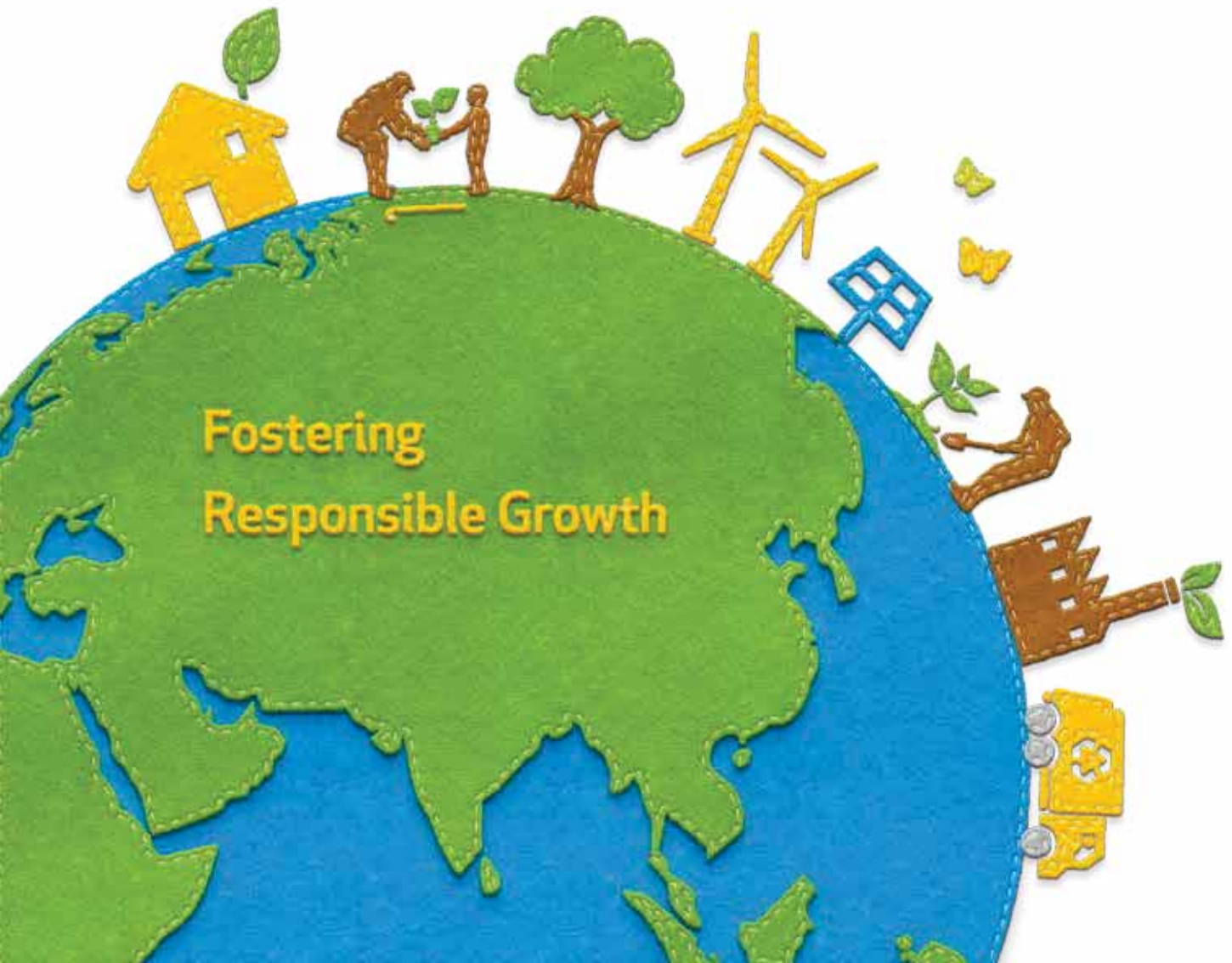




GAIL (India) Limited
India's Youngest Maharatna

Sustainability Report 2014-15





Fostering Responsible Growth

Prosperity for society, community and nation is the underlying principle for GAIL's existence and is the driving force behind every action that we undertake. This goes in sync with our commitment towards our stakeholders. On the other hand, safety of our natural environment is a primary requisite for a healthy and happy society. GAIL sews them together with such finesse that prosperity and happiness are not seen as two sides of a coin but relished as different colours on a canvas. GAIL is committed to not just making a developed & prosperous world but a beautiful & happy one too, where every colour of life thrives. As the proverb says, "A stitch in time saves nine", GAIL spends every moment caring passionately for the environment with *Fostering Responsible Growth* as a way of life.



About the Report



Sustainability Strategy



Stakeholder Engagement
& Materiality



Our Stakeholders



Performance Snapshot

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About the Report

'Fostering Responsible Growth', GAIL's Sustainability report for FY 2014-15 G4-28, marks the completion of half a decade of annual G4-30 sustainability reporting practice. As GAIL enters its fifth year of sustainability reporting, it takes forward the promise made to its stakeholders last year through "Care, Share & Grow". GAIL, India's premier integrated gas company became the youngest Public Sector Enterprise to be accorded the Maharatna Status, highlighting the Government's confidence in our organisation. We have to demonstrate that we are a worthy recipient of this honor through our sustained efforts towards responsible growth aiding in India's energy security while safeguarding the environment and the welfare of the society.

Cur current sustainability report reflects how we are determined, poised and remain committed for growth, that is responsible and sustainable. The report covers the Company's sustainability performance for the financial year 2014-15. GAIL's Corporate Sustainability Reports are publicly available on GAIL's website (www.gailonline.com).

This year's sustainability report, "Fostering responsible growth" is even more special as we make the transition from GRI G3.1 to GRI G4 guidelines. The report is in line with GRI G4 Guidelines 'in-accordance' option core^{G4-32}. The GRI content index on pages 142-149 gives a detailed reference on the GRI performance indicators and standard disclosures. Along with GRI G4 it also adheres to the requirements of the following:

- ▶ Nine principles of National Voluntary Guidelines (NVG) on Social, Environmental and Economic responsibilities of business, published by the Ministry of Corporate Affairs, Government of India.

- ▶ Oil and Gas industry guidance on voluntary sustainability reporting (2010) developed by IPIECA, the global oil and gas industry association for environmental and social issues and the American Petroleum Institute (API).
- ▶ Principles and disclosure requirements under United Nations Global Compact (UNGC).

This report is a materiality centric report and also contains dedicated sections for each of the stakeholders. These material issues have been identified after a thorough materiality assessment and stakeholder engagement exercise which was conducted at 10 locations of GAIL amongst different stakeholder groups. Each material issue is mapped with the respective aspect and indicators as per the GRI-G4 guidelines. Further, each aspect is mapped to the relevant stakeholders that may affect or get affected with the issue discussed. Material issues which emerged from this exercise have been responded to in the relevant sections of the report. In addition, to cater and address the concerns and initiatives with respect





to various stakeholder groups has been addressed in the relevant stakeholder section of the report.

This year we also revised our voluntary targets of Sustainability Aspirations 2020. The existing and additional parameters along with their performance have been shared in the Sustainability Strategy section of this report.

Data Management Approach^{G4-22, G4-23}

Performance snapshot and trend is presented for all relevant indicators in the report. Report also elaborates on new developments in the reporting year, on-going initiatives and future plans of expansions in the sustainability domain of the company.

We have a dedicated data and information management system for managing sustainability related data and information through in-house developed e-sustainability module and e-Business Responsibility Reporting Module respectively. The data presented in the report is verified by the concerned HoDs.

Some assumptions, calculation methodologies have been used for the estimation and quantification of data that has been presented in the report. Disclosures on these assumptions and

calculation methodologies have been made wherever used.

Certain information included in this report refers to our future plans and intentions, in order to present a holistic account of our sustainability activities. This information relates to our strategy, operations, performance goals and targets, business plans, research & development and investments in the countries, sectors or markets where we operate. By their sub-nature, such information involves a certain degree of uncertainty as the end result is dependent on future market conditions and geo-political developments, most of which are beyond our control or cannot be predicted by us. While we will strive to achieve progress on these, we cannot ensure a desirable outcome in all cases.

Report Scope and Boundary^{G4-13, G4-18, G4-23}

The report includes the following operations:

- ▶ Gas Processing Units (GPUs) at Gandhar, Pata, Usar, Vaghodia and Vijaipur;
- ▶ Petrochemical unit at Pata;
- ▶ Natural Gas compressor stations at Dibiyapur, Hazira, Jhabua, Khera, Vaghodia and Vijaipur;

- ▶ LPG pumping / receiving stations at Abu Road, Cherlappali, G Konduru, Jamnagar, Kandla, Loni, Mansarampura, Nasirabad, Samakhiali and Vizag;
- ▶ Regional pipeline offices at Agartala, Baroda, Mumbai, Puducherry and Rajahmundry;
- ▶ GAIL Training Institute (GTI) at Jaipur and Noida;
- ▶ Corporate Office at New Delhi and Info Hub at Noida;
- ▶ Zonal Marketing Offices;

The E&P operations, Joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities are out of scope & boundary. As per this reporting boundary, all aspects are reported for India region (unless otherwise mentioned).

Assurance^{G4-32, G4-33}

All sustainability reports of GAIL have been assured by external third party. Continuing the practice, this year's Sustainability Report has been assured by DNVGL. This is a Type 2 Moderate level assured report based on AA1000AS (2008) standard. Assurance process includes data verification at different sites of GAIL that will continue to help GAIL improve its processes and data management mechanisms.

Fostering Responsible Growth



Growth lies at the core of every business. The meaning of this *growth*, in terms of business has evolved over the years. While progressing and performing on the top and bottom lines is essential for basic sustenance, it is the thread of responsibility and value creation for stakeholders that reflects *growth* in true sense for GAIL.

While our previous Sustainability reports highlighted our commitment and action-orientation to fulfill and achieve our targets, our Sustainability Report for FY 14-15 centred around

the theme of 'Fostering Responsible Growth' focuses on our aim to grow as an organization in challenging times while being responsible and committed to our stakeholders. GAIL being a Public sector company is guided by the principles of accountability and transparency, where ethical business conduct becomes even more imperative as our reach goes beyond our immediate stakeholders with expanding business operations.

GAIL is no more in a natural monopoly situation as it started with in the 1980's. The competition is fierce and

we understand that there is a need to shift gears. Successful organizations adapt to a continually changing market, whether these changes are economic, social or environmental. We are taking concrete steps to maintain the trust of our stakeholders. With decline in domestic gas availability, GAIL is focusing on ensuring energy security for the Nation, through investments in LNG sourcing and infrastructure. With changes in the regulatory scenario, and implications on the business, we are gearing up to address the emerging challenges. As tread to new horizons, we aspire to retain our leadership



position following an innovative approach to do business while ensuring highest standards of safety and operational excellence to build the trust of our stakeholders.

The national priorities are seeing a gradual shift. Public sectors which have governments as principal stakeholders are naturally aligned to fulfill national sustainability targets and commitments. In this dynamic environment, we believe that while addressing the challenges, it is imperative to derive opportunities while creating a positive impact on

society. Over the past few years, we have been investing a part of our profits towards addressing the social needs of the communities providing us with the social license to operate.

The most important asset for a business is its Human Capital. Understanding the growing complexities in the business and regulatory scenario, we believe in fostering a working culture that encourages learning and development while emphasizing on individual excellence that ultimately results in growth of the organization.

With the fifth edition of our Sustainability Report, FY 14-15, Fostering Responsible Growth communicates that although the times are changing, our ethics and values are at the core of our growth. Learning from the age old adage, **when the going gets tough, the tough get going;** it is with this unrelenting spirit, we aspire to grow.

CMD's Message^{G4-1}

I am happy to present GAIL's fifth Sustainability Report for FY 2014-15, titled '**Fostering Responsible Growth**'. Since its inception, GAIL, has been guided by the objective to be a good corporate citizen with sustainability ingrained in our Vision and Mission. This report marks our transition from GRI G3.1 to G4 reporting framework with a focus on what matters and where it matters.

Energy plays a key role not only in driving India's economic growth but also social progress. However, India is an energy importing country with a majority of people not having access to clean and modern sources of energy. This places greater responsibility on GAIL to not only secure adequate and clean energy resources but also to make them available at affordable prices to people and industries.

GAIL is taking several steps to ensure the supply of the cleanest fossil fuel-natural gas -across India through its widespread pipeline infrastructure. Out of the total 15,000 km of existing gas pipeline network in India, GAIL is operating approximately 11,000 km pipelines. In order to cater to the growing demand in the country and to increase its geographic reach in the length and breadth of the country, government has plans for building another 15,000 km of pipeline network. GAIL has already taken a leadership role in the planning and development of bulk of these future pipelines in various phases in the coming years, to help realize the vision of a national gas grid in India.

As an environment friendly measure, highest priority in allocation of natural gas has been given to the transport

(CNG) and domestic households (PNG). As of 2015, over 28 lakhs households and 22 lakhs vehicles are benefitting from these clean and convenient fuels. The Ministry of Petroleum and Natural Gas aims to expand the PNG network across the country, raising the numbers of households connected with PNG to one crore within 5 years.

We are also participating in the 'Make in India' initiative of the Government and recently became member of the Mid-stream Working Group which shall work to identify products and services that can be developed domestically. We have constituted a specialized Indigenization Development Group (INDEG) to promote indigenization. For Digital India campaign, GAIL has a social platform to connect with its stakeholders through GAIL Social. We have also rolled out e-Digitization system among others initiatives.



GAIL is taking several steps to ensure the supply of the cleanest fossil fuel - natural gas -across India through its widespread pipeline infrastructure. Out of the total 15,000 km of existing gas pipeline network in India, GAIL is operating approximately 11,000 km pipelines.



Further, for the first time, GAIL has been acknowledged among the CDP's India Leaders 2014 Climate Disclosure Leadership Index (CDLI). We are the only Company in Utilities category among the top 22 India Leaders.

For India to emerge as an innovation hub, the next big idea has to be driven by the power of technology, where there will be a need to learn new skills and adapt to emerging technologies, GAIL has an advantage in terms of having on-board a team of young professionals, lending it energy, dynamism and professionalism to take on the challenges of an ever evolving business environment.

Besides wealth and value creation in financial and economic terms, GAIL has always strived for providing value beyond business by taking care of the environment and society. At GAIL, a major facet of sustainable development is assessing and managing our environmental footprint and involving with the community with diligence and foresight. In 2012, we developed our 'Sustainability Aspirations 2020', which are self-driven targets focused towards the reduction of Green House Gas (GHG) emissions, water consumption and specific energy intensity. In 2014, we have further added targets in areas of Specific energy reduction, Specific fresh water reduction, Specific GHG Emission reduction and increase in Waste Water Recycling which have been disclosed in the Sustainability Strategy section of this report. GAIL

is progressing well to achieve these targets.

To further inculcate the concept of operational excellence across our operations, processes, systems and procedures, we launched Project 'Sanchay' (Profit Maximization). It aims at optimization of resources and improvement of operations and process performance to maximize returns ensuring profitable growth.

There have been some unfortunate accidents and fire incidents in the Oil and Gas sector recently, including in GAIL. This presents us with the opportunity to introspect our approach and efforts towards maintaining utmost standards of safety in our operations and processes while ensuring uninterrupted operations of the pipelines. A series of actions have been taken to assess health and integrity of gas and LPG pipelines and reinforce the culture of 'Safety First'.

With 'Hriday' at core of our CSR philosophy, we have taken eight different areas for the overall development of the nation, namely Swachh Bharat, Aarogya (Health), Unnati (Rural Development), Saksham (Care for elderly & differently abled persons), Harit (Environment Project), Sashakt (Women empowerment), Ujjwal (Education), Kaushal (Skill development). GAIL is supporting and constructing nearly 3500 toilets under "Swachh Bharat, Swachh Vidyalaya" program. This year, 50 out of the 100 students who have been receiving specialized academic coaching under

GAIL Utkarsh project have qualified in the IIT entrance examination.

Further, our CSR initiatives also work in the line of the National Skill Mission- to create a large pool of skilled workforce to sustain the ambitious 'Make in India' initiative. Further, GAIL has been ranked 11th among the top 115 Indian Companies on CSR and Sustainability by The Economic Times.

Further, for the first time, GAIL has been acknowledged among the CDP's India Leaders 2014 Climate Disclosure Leadership Index (CDLI). We are the only Company in Utilities category among the top 22 India Leaders. Further, GAIL is a signatory to the United Nations Global Compact (UNGC).

As we go forward, our objective remains to derive opportunities for growth that are responsible and create positive value for all the stakeholders. We aim to fulfill national and global commitments and continue to work towards ensuring availability of cleaner and affordable energy to support the nation's growth story and help to bridge the gap between National and International Climate action.

We believe in growth that is sustainable and inclusive while remaining deeply committed to ensuring the trust of our stakeholders. In the end, I would like to thank our stakeholders for their valuable support and continued belief in GAIL.

B. C. Tripathi,
Chairman & Managing Director,
GAIL (India) Limited

About GAIL



Operates 3/4th of the total
NG Transmission P/L



Operating more than 2/3rd CNG
Stations through alliances



Contributes to more than
2/3rd of the NG Sold



Produces LPG for every 13th
LPG Cylinders



Produces 1/5th of the
polyethylene



Responsible for 1/4th of LPG
Transmission





GAIL aspires to emerge as integrated Hydrocarbon Major with significant upstream & downstream presence.

About GAIL (continue)



Exploration & Production (E&P)

- ▶ A part of vertical integration
- ▶ Participation in 15 blocks (operator-3 blocks)
- ▶ Presence in Myanmar & USA

Natural Gas

- ▶ Over 11,000 Km of network, Expanding to 15,000 km
- ▶ Capacity – 206 MMSCMD
- ▶ Sophisticated Gas management System
- ▶ Pursuing for expansion, Participation in RGPPL (5 MMTPA LNG Regasification Facility)

Liquid Hydrocarbons



- ▶ 7 Gas Processing Plants producing LPG, Propane, Pentane, Naphtha etc.
- ▶ LPG Transport Capacity 3.8 MMTPA (2038 Km)

City Gas Distribution

- ▶ Serving over 10 lakh vehicles & 10 lakh households through Subsidiary & Joint Ventures
- ▶ GAIL Gas Limited, 100% subsidiary, has setup CGD Network in Dewas, Sonapat, Kota, Meerut & Taj Trapezium zone

Petrochemicals



- ▶ Domestic market share ~ 15%
- ▶ Petrochemical Plant in Pata(UP) with capacity of 0.4 MMTPA (expanding to 0.81 MMTPA)
- ▶ Participation in BCPL & OPAL

Power & Renewables

- ▶ 118 MW Wind Power Plant and 5 MW Solar Power Plant
- ▶ Participation in RGPPL(Capacity 1967 MW)

Our Presence, Subsidiaries and JVs

Domestic Subsidiaries

- ▶ GAIL Gas Ltd. – GAIL's wholly owned subsidiary (100%), supplying to Dewas, Sonapat, Agra, Ferozabad, Vadodara & Panvel.
- ▶ Brahmaputra Crackers & Polymers Ltd. (BCPL)

Overseas Subsidiaries

- ▶ GAIL (Global) Singapore Pte,
- ▶ GAIL (Global) USA Inc.,
- ▶ GAIL Global (USA) LNG LLC (100% subsidiary of GAIL (Global) USA Inc.)

Associates

- ▶ Gujarat State Energy Generation Ltd. (5.96%),
- ▶ Fayum Gas (19%),
- ▶ China Gas Holdings Ltd. (3%),
- ▶ Natural Gas Company "NATGAS" (15%)

City Gas Distribution (CGD) JVs

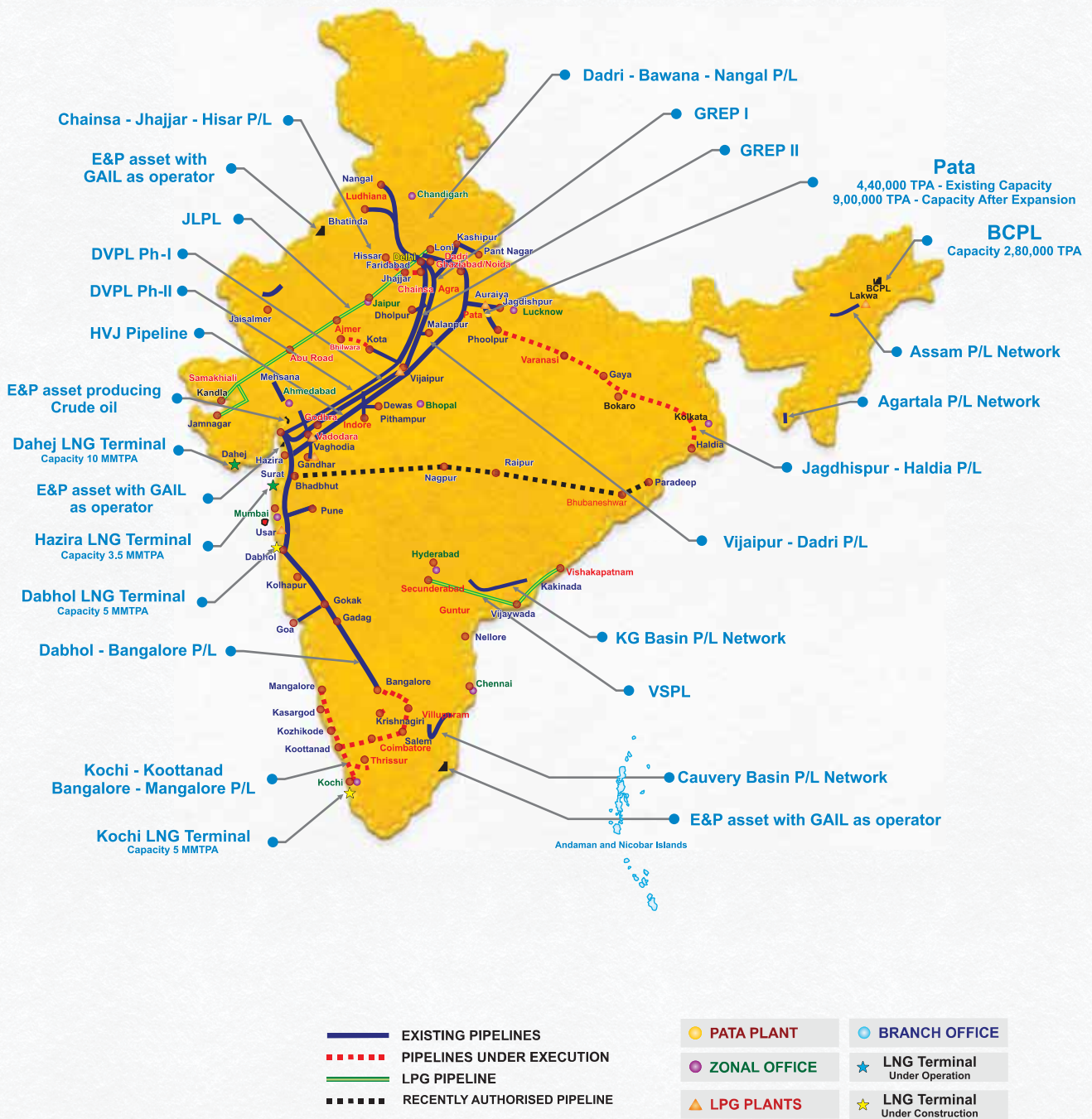
- ▶ Mahanagar Gas Limited - MGL (35%),
- ▶ Indraprastha Gas Limited - IGL (22.50%),
- ▶ Bhagyanagar Gas Limited - BGL (22.50%),
- ▶ Green Gas Limited - GGL (22.50%),
- ▶ Central U.P. Gas Limited - CUGL (25%),
- ▶ Maharashtra Natural Gas Limited - MNGL (22.50%),
- ▶ Aavantika Gas Limited - AGL (22.50%),
- ▶ Tripura Natural Gas Company Limited - TNGL (29%)

Joint Ventures

- ▶ Petronet LNG Ltd. - PLL,
- ▶ ONGC Petro additions Limited- OPAL,
- ▶ Ratnagiri Gas and Power Private limited- RGPPL,
- ▶ GAIL China Gas Global Energy Holding,
- ▶ TAPI Pipeline Company limited

About GAIL (continue)

GAIL's Pan - India Presence



*Map not to Scale

Global Presence



Presence in 5 countries and 3 continents

Overseas Presence in US, Singapore, Myanmar, China, Egypt (upto 09.01.2014)

About GAIL (continue)



Vision

Be the leading company in Natural Gas and Beyond, with Global Focus, Committed to Customer Care, Value Creation for all Stakeholders and Environmental Responsibility.

Mission

To accelerate and optimize the effective and economic use of Natural Gas and its fractions for the benefit of the national economy.

Key Elements of GAIL's Vision



Ethics

We are transparent, fair and consistent in dealing with all people. We insist on honesty, integrity and trustworthiness in all our activities.



Customer

We strive relentlessly to exceed the expectations of our customers, both internal and external. Our customers prefer us.



People

We believe our success is driven by the commitment and excellence of our people. We attract and retain result-oriented people who are proud their work and are satisfied with nothing less than the very best in everything they do. We encourage individual initiative by creating opportunities for our people to learn and grow. We respect the individual rights and dignity of all people.



Shareholders

We meet the objectives of our shareholders by providing them superior returns and value through their investments in us.



Safety, Health and Environment

We promote highest levels of safety in our operations, health of our employees and a clean environment. We strive for continuous development of the communities in which we operate.

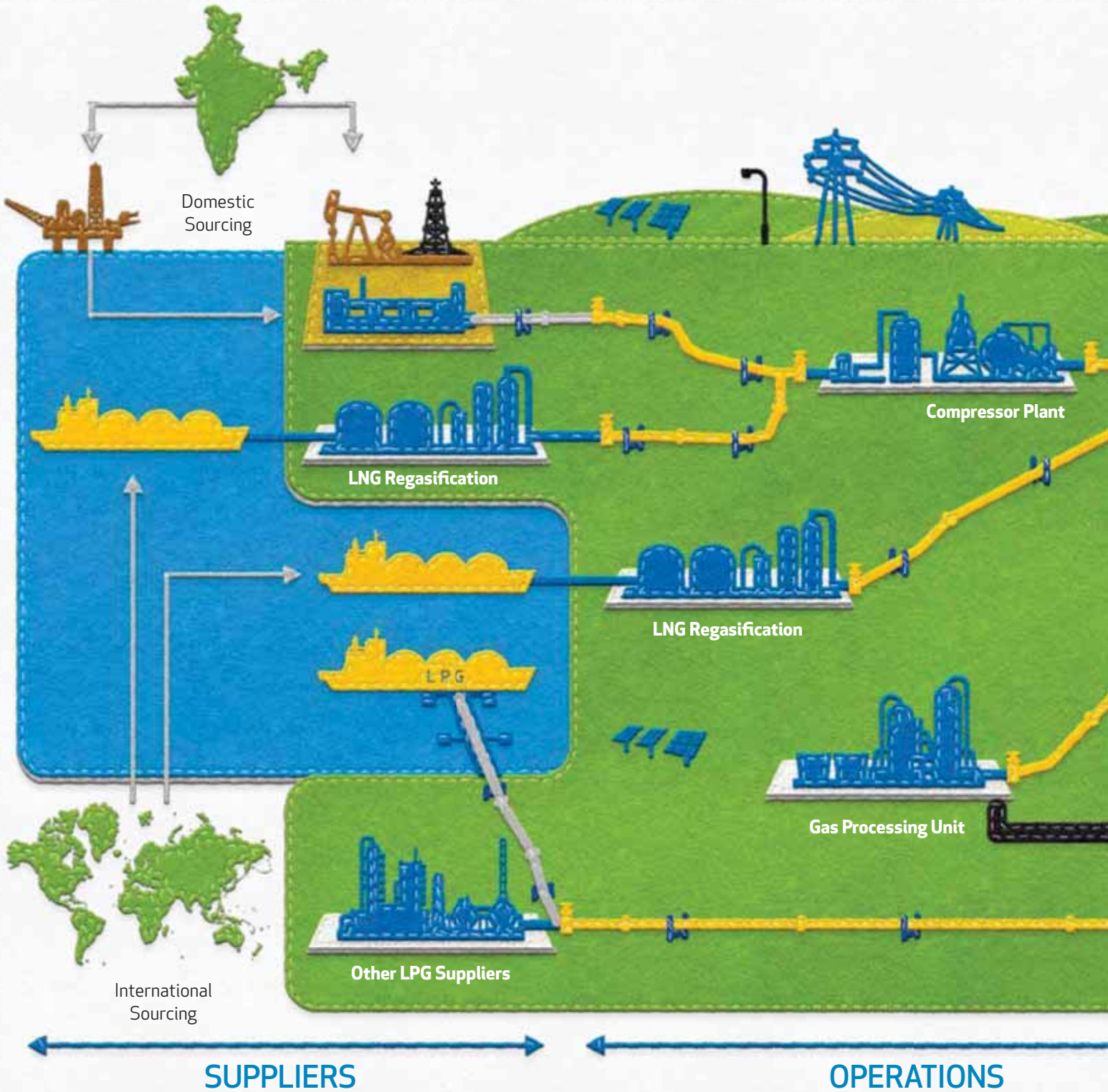


Technology

We believe technology is the key to the future success of our organisation. We advocate use of 'best-in-class' technologies.

About GAIL (continue)

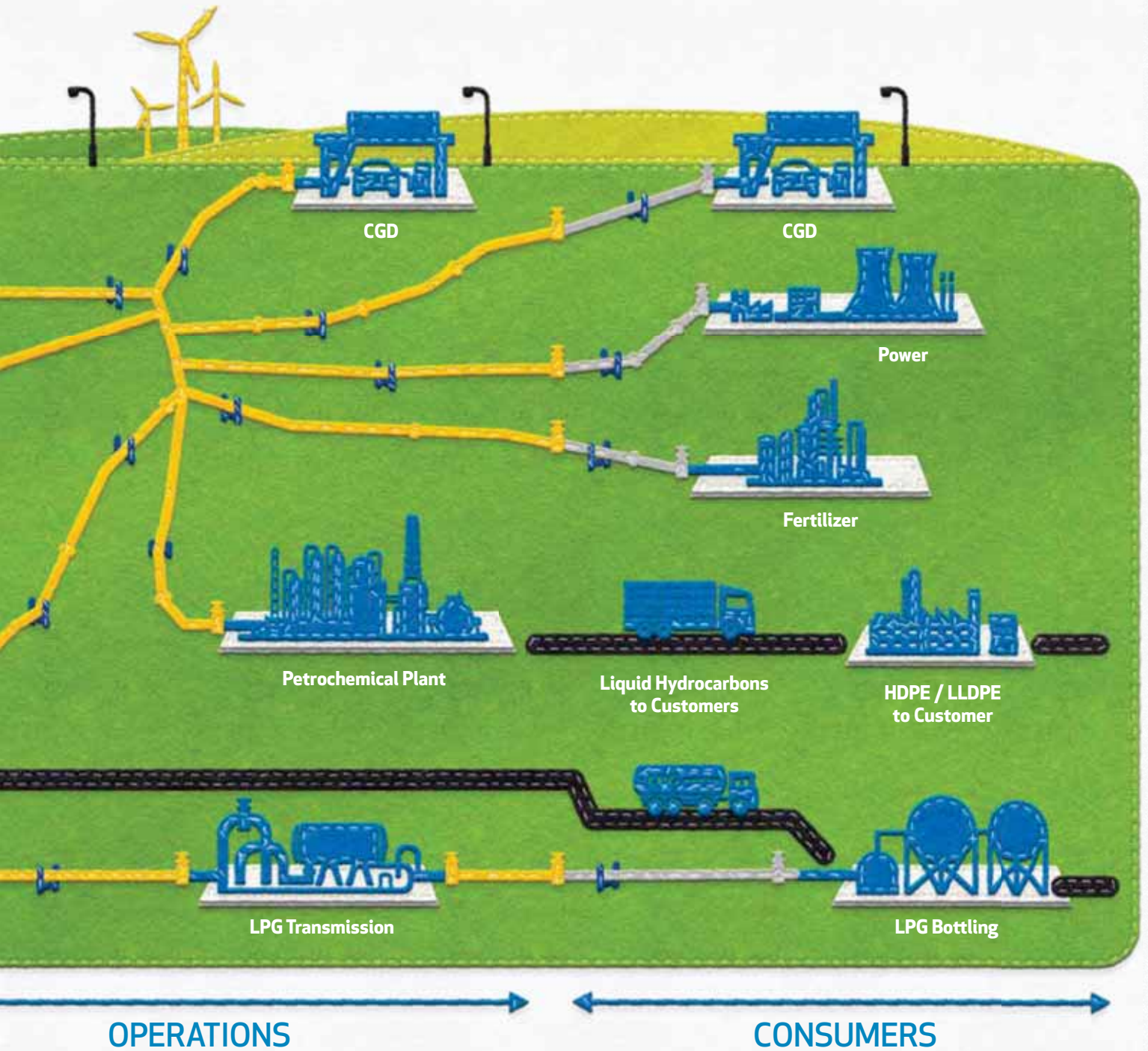
GAIL's Supply Chain Management^{G4-12}



Over **11000 KM**
Natural Gas Pipelines

2038 KM
LPG Pipelines

24 MMTPA
Natural Gas Pipelines



**1700 KTA
Petrochemical**
Production Capacity: 810 KTA
Pata + BCPL + OPaL

**1.3 MMTPA LPG/
LHC capacity**
Total of 6 Plants

Accolades and Recognition

Corporate

- ▶▶ GAIL featured amongst "India's 100 Best Companies to Work For 2014 Study" conducted by Great Place to Work Institute for the third consecutive year.
- ▶▶ 'Company of the Year' in the Project Management category for its Dabhol - Bengaluru natural gas pipeline project at the Petroleum Federation of India (PetroFed) Oil & Gas Industry Awards 2013.
- ▶▶ GAIL has been ranked 11th among the top 115 Indian Companies on CSR and Sustainability by The Economic Times.



CMD, GAIL, Shri B. C. Tripathi receiving 'Best Performing Company' (Maharatna Category) at the India Today PSU Awards 2014 from Shri Ram Vilas Paswan, Minister of Consumer Affairs, Food and Public Distribution.

- ▶▶ GAIL adjudged 'Best Performing Company' (Maharatna Category) at the India Today PSU Awards 2014
- ▶▶ GAIL has been acknowledged among the CDP's India Leaders 2014 Climate Disclosure Leadership Index (CDLI). We are the only Company in Utilities category among the top 22 India Leaders.
- ▶▶ GAIL has been awarded for the Best Overall Performance amongst the Upstream Sector Oil Companies for the Oil & Gas conservation activities / programmes during OGCF 2014.
- ▶▶ Sustainability Report for FY 2013-14, received the coveted 'A+ Application Level' statement by international organization Global Reporting Initiative (GRI).
- ▶▶ GAIL received Sustainability Reporting Award during India Corporate Governance & Sustainability Vision Summit & Awards 2015 by Indian Chamber of Commerce.



Dr. Ashutosh Karnatak receiving 'Company of the Year' in the Project Management category for its Dabhol – Bengaluru natural gas pipeline project at PetroFed Oil & Gas Industry Awards 2013. 3rd from left Director (Projects), GAIL

Health & Safety

- ▶ International Safety Award - 2015 by the British Safety Council, UK to HVJ Compressor Station, Vijaipur.
- ▶ International Safety Award - 2014 from the British Safety Council, UK to GAIL Pata and GAIL NCR.
- ▶ Shreshtha Suraksha Puraskar (Second Level - Silver trophy) for year 2014 from the National Safety Council, Mumbai to GPU, Vijaipur.
- ▶ Suraksha Puraskar (Third level - Bronze trophy) for year 2014 from National Safety Council, Mumbai to HVJ Compressor Station, Vijaipur.
- ▶ Golden Peacock Environment Management Award 2014 by the Institute of Directors, New Delhi to GAIL, Vijaipur.
- ▶ Golden Peacock Occupational Health & Safety Award 2014 by the Institute of Directors, New Delhi to GAIL NCR.
- ▶ Safety Innovation Award-2014 by the Institution of Engineers (India), Delhi State Centre to Maharashtra region pipeline system.

Corporate Governance & Risk Management

Ratio of the Total Compensation



SUSTAINABLE DEVELOPMENT COMMITTEE OF BOARD





Corporate governance is of paramount importance to a Company. It dictates the shared philosophy, practices and culture of an organization and its employees. A corporation without a system of corporate governance is often regarded as a body without a soul or conscience. Effective and transparent corporate governance practices presents opportunities to manage risks and creates value for the organization and its stakeholders.

Corporate Governance & Risk Management (continue)

GAIL^{G4-42, G4-43} believes in an open and transparent governance system which is underpinned by our commitment to operate virtuously and fairly. GAIL is driven by its core values viz., ethical practices, concern for people at work, delight of customers and wealth creation for shareholders. It relentlessly strives to use best-in-class technology, focus on all aspects of the Natural Gas value chain including petrochemicals; promote highest levels of safety in its operations, maintain better health of its employees, a clean environment for sustainable development and meet the objectives of shareholders by providing them better returns.

Good governance at GAIL is ensured through deployment of strategy and oversight by the Board of Directors, building a robust governance structure, laying and implementing transparent policies, establishing systems & processes for internal control, strengthening risk management framework and ensuring compliance with all the applicable laws, rules and regulations.



Minister of State (I/C) for Petroleum & Natural Gas, Shri Dharmendra Pradhan (Centre) during review meeting at GAIL Corporate Office.

Governance Structure^{G4-34, G4-35, G4-36, G4-39, G4-40, G4-44}

GAIL, being a CPSE, appointment/nomination of all the Directors is being done by the President of India, through the Ministry of Petroleum & Natural Gas (MoP&NG). The Board of Directors consists of a combination of executive and non-executive Directors which provide strategic direction to GAIL. Further, various sub-committees of the Board have been constituted by the Board as required under statutory regulations & guidelines and also to facilitate the smooth & efficient flow of decision making process. GAIL's Board has constituted inter-alia, Sustainable Development Committee of the Board to formulate and monitor sustainable development plan and its execution and to review HSE performance and emergency preparedness.

Further, the Board of Directors has approved the Delegation of Powers for delegating the powers to CMD and Functional Directors. CMD has been empowered by the Articles of Association to delegate to executive below Board level.

A Code of Conduct for Board Members and Senior Management Personnel has been formulated to ensure ethical business conduct. Further, we have also developed and implemented systems and processes for proper operation of internal controls for the organization.

GAIL complies with Clause 49 of the equity listing agreement with stock exchanges and the DPE guidelines on corporate governance that are applicable except relating to composition of Board of Directors as to the requirement of independent Directors and consequential impact on composition of Audit Committee and Nomination & Remuneration Committee. The Government of India is in process of selecting requisite number of Independent Directors.



GAIL management interacting with Mr. Michael Meehan, CEO, GRI.

Remuneration & Incentives^{G4-51, G4-52, G4-53, G4-54, G4-55}

GAIL signs a Memorandum of Understanding (MOU) with the Ministry of Petroleum & Natural Gas every year. The MOU specifies targets for various parameters including physical, financial, social and environmental parameters. The performance of the Company is evaluated with reference to the targets set against each of these parameters and the composite score is determined. The composite score is one of the key variables in determining the MOU rating which determines the quantum of variable pay for the year in the form of Performance Related Pay. The remuneration of Directors is determined by the MoPNG.

The Ratio of the annual total compensation for the organization's highest-paid individual to the median annual total compensation for all

employees (excluding the highest-paid individual) is 4.04:1. The Median percentage increase (from FY 13-14 to FY 14-15) in annual total compensation for all employees (excluding the highest-paid individual) is 16.22%. The increase (from FY 13-14 to FY 14-15) in annual total compensation for the organization's highest-paid individual is 37.70%.

Conflict of Interest

Identification, resolution and striving for avoidance of any situations giving rise to conflict of interest is crucial to good governance and maintaining trust in public institutions.

At GAIL, conflict of interests at Board level are avoided and managed in the following manner:

- ▶ Directors gives the disclosure of his concern or interest in any company or companies or bodies corporate, firms, or other association of individuals by giving

a notice in writing and the same is put up to the Board. In case a Director is directly or indirectly interested in a particular agenda/matter, he abstains himself from participation in discussion of such agenda item.

- ▶ Related party disclosure(s) is made as per the applicable Accounting Standards as well as under the Companies Act, 2013 and Rules made thereunder.
- ▶ As per requirement of the Companies Act, 2013 and clause 49 of the Listing Agreement approval of the Audit Committee and/or Board and/or Shareholders as required is taken for Related Party Transactions. Further, a policy has been formulated for dealing with Related Party Transactions as mandated under Clause 49 of the Listing Agreement and is also hosted on the website of the Company.

Corporate Governance & Risk Management (continue)

Risk Management^{G4-2, G4-14, G4-45, G4-46, G4-47}

Risk management is one of the key aspects of corporate governance. Most prominent of these being Organisation of Economic Co-operation & Development (OECD) principles of corporate governance and Securities and Exchange Board of India's Clause 49 of the listing agreement which integrates risk management to corporate governance. The Companies Act 2013 requires its Board of Directors to develop and implement a risk management policy and identify risks which may threaten the existence of the Company.

While it may be impossible to eliminate all risks, we take utmost care to mitigate and reduce our risk exposure to the maximum possible levels. These measures include:-

- ▶▶ Specialized Corporate Level Risk Steering Committee to deal with risks
- ▶▶ Risk management policy
- ▶▶ Risk Officers at units institutionalize risk management professionals throughout GAIL at all levels

GAIL's risk management framework was institutionalized way back in the year 2007. A robust risk management framework supports GAIL's business strategy and operations. Risk management framework is constantly updated for new and emerging risks emanating from business expansion and interests.

GAIL has formulated and implemented the Enterprise Risk Management Policy across all assets, plants and offices. The Chief Risk Officer and Risk Management Committee review various types of risks whether existing and or anticipated in short to medium term in future. Risk Management Department appraises the corporate level Committee of Executive Directors, Risk Management Committee of functional Directors of Board, Audit Committee and Board of Directors. Unit level risks including Social & environmental risks are mapped and being monitored quarterly through unit level steering

committee headed by unit head. Mitigation measures are also devised by respective units.

Risk Management Policy & Procedure to protect & add value to the organization and its stakeholders with the following objectives:

- ▶▶ To establish a risk intelligence framework for the organization
- ▶▶ To establish ownership throughout the Organization and embed risk management as an integral part of the business rather than a standalone system
- ▶▶ To help the decision makers of the organization explicitly take account of uncertainty, the nature of that uncertainty, and work towards a solution to address it
- ▶▶ To ensure that all the current and expected risk exposures of the organization are identified, qualitatively and quantitatively evaluated, analysed and appropriately managed
- ▶▶ To enable compliance with the relevant legal and regulatory requirements and international norms
- ▶▶ To assure demonstrable achievement of objectives and improvement of financial stability of the organization

The risks are evaluated, quantified & prioritized and mitigation plans are reviewed & monitored at various stages. The Corporate

Level Risk Steering Committee has been established to oversee the implementation of the risk management policy & procedures. This committee meets quarterly to review the corporate key risks, reports from sites and units. The same is reviewed by Risk Management committee bi-annually and annually by Audit Committee. Policy & procedures are periodically reviewed & monitored by Functional Directors, Audit Committee & Board.

GAIL has identified top corporate business risks which are NG Sourcing, Demand risk, E&P Business, Project Execution, Overseas Venture, Regulatory Compliance & Reporting, New Pipeline bidding, Human capital deficit, Financial and Change in Govt. Policy. Specific groups for instance HSE coordinates all risks pertaining to Environmental & Safety related issues and Social & CSR related issues are administered by another corporate group. These groups update GAIL Management from time to time.

We have also formulated and implemented the Enterprise Risk Management Policy across all assets, plants and offices. The Chief Risk Officer and Risk Management Committee review various types of risks whether existing and or anticipated in short to medium term in future. Risk Management Department appraises the corporate level Committee of Executive Directors, Risk Management Committee of functional Directors of Board, Audit Committee and Board of Directors. Unit level risks including Social & environmental risks are mapped and being monitored quarterly through unit level steering committee headed by

unit head. Mitigation measures are also devised by respective units.

The following risks have been identified and deliberated in Corporate Level Risk Steering Committee meetings as well as other corporate level meeting in line with the Risk Framework of GAIL. GAIL is deploying all efforts to mitigate the identified risks. Identified risks are as follows:

- ▶▶ Risk associated with non-development of critical infrastructure to support supply chain management of long term business decision of importing LNG. Business Development, Project Execution & Marketing groups are trying to formulate a strategy to counter all possible situations.
- ▶▶ Risk associated with ageing and exposure of Pipeline. Corporate O&M department is in the process to address the issue.
- ▶▶ Operational risks emanating out of post petrochemical expansion have been identified and concerned departments are making their roadmaps to tide over the situation.
- ▶▶ Risk associated with non-sync of Human Resource with the upcoming GAIL's Business portfolios. HRD is developing strategy to meet the situation.
- ▶▶ Risk emanating from Third Party Damage in Pipeline. O&M department is gearing up to meet the eventuality.

Identified risks generally have a long gestation period and it is difficult to

bind them in terms of financial year.

GAIL is very sensitive to environmental impact coming out of our operations. The environmental concerns are paramount and efforts are always in place to minimize / neutralize the impact of climate change & greenhouse gas emission, fresh water withdrawal, waste disposal etc. We take all possible precautionary steps to ensure that our operations perform within permitted limits keeping the effect on community and society to a minimum.

Internal Control Systems & their Adequacy

GAIL has developed Internal Control System in its various business processes, commensurate with size & nature of business to help achieve its objectives. The Company has an in-house Internal Audit Department functionally reporting to Audit Committee (Sub-Committee of Board) which is considered as global best practice. Internal Audit carries out risk based auditing as per the annual audit plan approved by Audit Committee.

Internal Audit Department consists of professionally qualified executives from various disciplines who carry out audit of financial, commercial, technical and other business activities of the Company besides reviewing the adequacy of Internal Control Systems; risk management framework in line with Board approved Internal Audit Charter/Manual which contains best global practices in the profession of Internal Auditing.

Corporate Governance & Risk Management (continue)

Ethics & Integrity^{G4-56, G4-57, G4-58}

Ethics and integrity are the cornerstones of performance and sustainability. At GAIL, we believe in adhering to all applicable statutes in letter and spirit and endeavour to adopt best practices to go beyond adherence of statutory frameworks and bring transparency, accountability and equity in all facets of its operations. In terms of SEBI (Prohibition of Insider Trading) Regulations, 1992, the Board has formulated the 'Code of Internal Procedures and Conduct for Prevention of Insider Trading in dealing with the securities of GAIL' (Code of Insider Trading). Being a Public Sector Enterprise, GAIL also ensures that all the applicable rules, regulations, laws and bye-laws of the land are adhered to. Code of Conduct for Board Members and Senior Management Personnel has also been framed for the Board Members and Senior Management Personnel to ensure ethical business conduct. Over the years, we have also been successful in developing and implementing systems and processes for internal controls throughout our organizational structure.

Anti-Corruption and Bribery^{G4-DMA, G4-S03, G4-S04, G4-S05}

Besides strengthening the risk management framework and building strong internal controls, GAIL is redoubling its efforts towards developing suitable vigilance mechanisms in order to curb corrupt practices it may encounter during the course of its business. During the reporting year, various improvements were introduced in its systems and processes by GAIL for achieving better governance. Some of these significant improvements are:

- ▶▶ Development and utilization of Complaint Monitoring System (CMS) to monitor all complaints received at work centres/ departments for further disposal.
- ▶▶ Introduction of percentage base tenders in the organisation.
- ▶▶ Quarterly automatic alerts to respective Officer In-charge for taking suitable action on outstanding retention money of the vendors.
- ▶▶ Whistle blower policy hosted on Company's intranet for wider awareness of the employees.

Vigilance department is taking care of the bribery and corruption related issues based on the CVC guidelines and related circulars. These guidelines and circulars extend to wholly owned subsidiaries and Joint Ventures of GAIL where equity of GAIL is more than 50%.^{G4-58} Various systems and procedures have been developed / adopted to make the company's system and practices robust against bribery and corruption e.g. Whistle Blower Policy^{G4-55}, Fraud Prevention Policy, Integrity Pact and Complaint Monitoring System.

The Code of Conduct, CDA Rules / Standing Orders, Fraud Prevention Policy and Whistle Blower Policy are applicable to all GAIL employees including those on secondment or deputation to the Joint Venture Companies, Subsidiaries, Government Bodies including autonomous institutions, Regulatory Authorities etc. Further, 'Integrity Pact' and 'Fraud Prevention

Policy' extend to suppliers, contractors etc. In the past, the company has taken initiatives in order to reduce incidents of corruption within the organization. Some of these initiatives are discussed below:-

- ▶▶ **Integrity Pact:** GAIL has signed MoU with Transparency International. As part of this MoU, Integrity Pact is incorporated in all tenders valued at INR 1 Cr. & above. In order to promote transparency the MoU and Integrity Pact Program are accessible on GAIL's public domain website. As part of the Integrity Pact Program, GAIL has appointed Independent External Monitors who are responsible for monitoring the implementation of Integrity Pact Program and address the grievances of vendors/contractors.
- ▶▶ **Anti-corruption awareness for employees:** All Employees at the time of joining are sensitized to the policies and mechanisms related to Anti-Corruption. Every year, all major locations observe Vigilance Awareness Week as per

CVC guidelines in which GAIL and contract employees participate in different activities focused on anti-corruption measures.

- ▶▶ **Bill Watch system (BWS)** implemented in GAIL is a web-enabled software for tracking the movement of bills submitted to GAIL in order to ensure transparency in the system and to monitor timely payments to the party.
- ▶▶ **File movement system (FMS)** implemented in GAIL is an e-monitoring tool for tracking file movement within the organisation in order to bring transparency in decision making.
- ▶▶ **e-Payments** implemented in GAIL for online transfer of funds for payments to vendors against service / supplies rendered.
- ▶▶ **e-Receipts** implemented in GAIL for receipt of payments from various customers for easy accounting and automatic update in customer ledger.

- ▶▶ **e-tendering** implemented in GAIL is an electronic system of receiving bids for all tenders floated by GAIL having estimated value of INR 25 lakhs and above.

- ▶▶ **Online Reverse Action** was implemented in GAIL to maintain clarity and transparency in high value procurements.

Training Programs on Anti-Corruption Policies & Procedures of the Organization are conducted at GTI Noida. Employees are also nominated for such programs organized by external agencies. Apart from these, employees are updated on Anti-Corruption Policies & Procedures of the Organization through Lecture series by eminent speakers, online quizzes, essay competitions etc. every year during the Vigilance Awareness Week.

All the business units are analysed for business related risks as per the CVC guidelines by conducting investigations against complaints, surprise inspections, periodic inspections, major works inspections and CTE-Type inspections.

Corporate Governance & Risk Management (continue)

Grievance Redressal^{G4-37, G4-41, G4-49, G4-50, G4-DMA, G4-EN34, G4-LA16, G4-HR12, G4-SO11}

GAIL is committed to provide services to its stakeholders to their satisfaction in a transparent manner by upholding the highest values of corporate governance and ethics.

Our endeavour is to uphold and ensure implementation of our core organizational values. However, if due to any unprecedented reasons, stakeholders find that there is / are reason(s) to improve, then they are encouraged to report the same. Option to lodge complaints online is available on our website (http://www.gailonline.com/final_site/online_complaints.html). Vigilance complaints can be lodged for complaints regarding vigilance viz. corruption, forgery, cheating, misappropriation, favours, wilful negligence, reckless in decision making, blatant violation of systems and

procedures, irregularities and exercise of delegated powers. Customers can lodge complaints related to product quality, technical and commercial in nature. GAIL Customers can register Service Request / Complaint / Indents 24 x 7 online through GAIL's webpage.

^{G4-57}In order to ensure speedy disposal of employee grievances, GAIL has established an Online Grievance Redressal System and the same is monitored by Corporate HR. The aggrieved employee registers his/her grievance in the system and the concerned HR –In-Charge has to redress the grievance within stipulated time period. The system has auto-escalation feature and in case grievance is not redressed within stipulated time period, the grievance escalates from HR-In-Charge to GM(HR), Corporate Office and finally to Director (HR). Further, the system has also provision for appeal to next level in case the aggrieved employee is not satisfied with the replies / relief provided.

GAIL is also operating Centralized Public Grievance Redress and Monitoring System (CPGRAMS) portal which is a Government of India Portal (Department of Administrative Reforms and Public Grievances) and aims at providing the citizens with a platform, for redressal of their grievances. It empowers the citizens to lodge their grievances / complaint online. Grievances related to GAIL are received online through the Ministry of Petroleum and Natural Gas. After responding / redressal, the grievance is closed in the portal. Grievances received, redressed and responded through this portal during the year 2014-15 are classified below:-

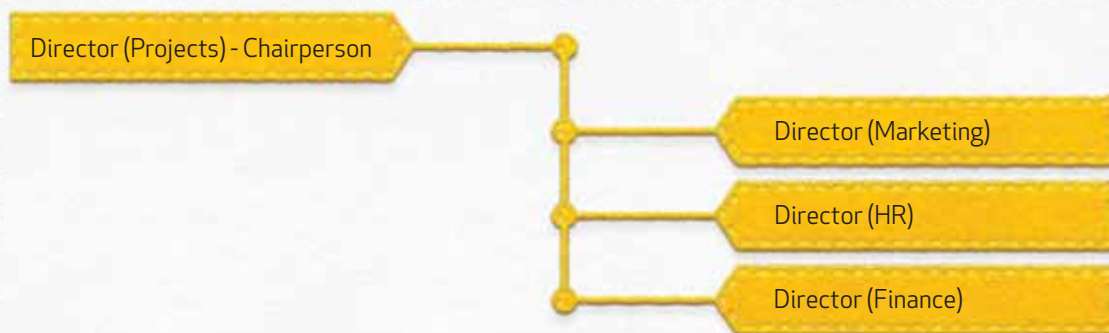
	Complaints Received	Complaints Under Investigation	Complaints Resolved
Environment related complaints	1	0	1
Labour practices complaints	5	0	5
Human rights related complaints	11	0	11
Society related complaints	16	0	16

Besides this, GAIL also has a Complaint Handling System whereby written complaints received at various work centres are uploaded in the system, for centralized monitoring and redressal.

Sustainability Governance^{G4-34, G4-35, G4-36, G4-48}

GAIL has a well-defined sustainability governance structure following a top-down approach that spans across various critical functions to effectively manage organizational complexities. At Board level we have Sustainable Development Committee is chaired by Director (Projects) and all functional directors are members to the committee. This committee has been instrumental in giving direction, implementing, and monitoring progress on sustainability parameters across GAIL's operations.

Sustainable Development Committee

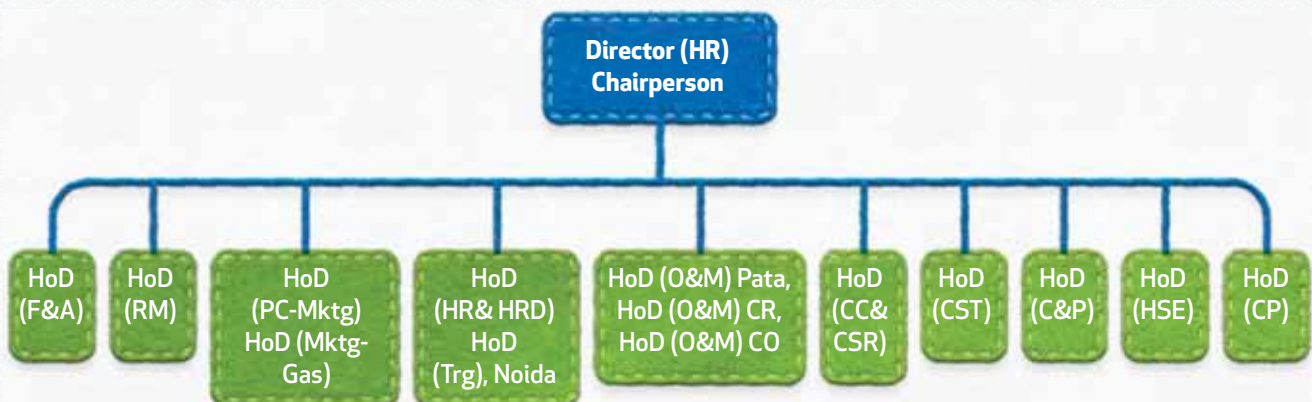


During the reporting year, the Committee met three times and took some key decisions which are presented below:

- ▶ Mapping of revised Sustainability Aspirations 2020 targets with KRA's of OICs / HoDs.
- ▶ Approval of GAIL's Sustainability Report.

- ▶ Effective and focused communication of GAIL's sustainability initiatives and achievements to internal and external stakeholders.
- ▶ Initiation of accounting for GAIL's Scope 3 emissions.

- ▶ Apart from the Board level committee, GAIL also has a Sustainable Development Steering Committee, which is chaired by the Director (HR) and includes all aspect owners at HoD level.



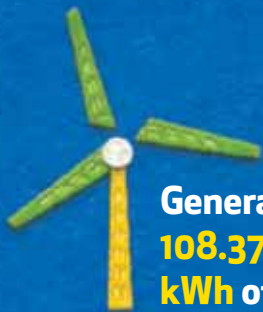
GAIL also has multi-disciplinary committee at sites comprising senior executives including aspect owners and site coordinators. These site specific coordinators and the aspect owners receive trainings in their respective set of specialized areas. With the purpose of integrating sustainability with the Corporate Strategy, Corporate Sustainability Team is a part of the Corporate Planning Department. To further strengthen the reliability and data authenticity, internal committees formed at GAIL sites crosscheck / verify sustainability data captured.

Sustainability Strategy



2600 KM
Jagdishpur- Haldia
Pipeline

Initiated activities for construction



Generated
108.37 million
kWh of Wind
Power



Generated
1.24 million kWh
of Solar Power





Energy is considered as catalysts for economic growth. With a growing economy and a 1.26 billion population aspiring for a better quality of life, India's energy demand growth is inevitable. While three-fourth of the hydrocarbon energy requirements are met through imports in India, it becomes imperative to explore sustainable opportunities by securing cleaner, accessible and affordable energy to fuel nation's growth story.

Sustainability Strategy (continue)

In order to sustain our growth trajectory responsibly, GAIL has developed strategy for the period 2011-2020. This strategy is currently under execution and the Company is closely monitoring progress on various strategic initiatives as well as assessing the dynamic environment to evaluate its impact on GAIL's businesses. The top management has been playing a crucial role in achieving strategic objectives and to make the company an integrated hydrocarbon major with significant upstream, midstream and downstream interests by 2020. Maharatna status has given greater flexibility to pursue global opportunities aggressively.

Business Strategy

"Our aim is to reach every state and household of India. In line with the national priorities of developing 15000 Km National Gas Grid over next 3-4 years, we are committed to develop gas infrastructure throughout the country for efficient delivery of gas to end consumers. As we envisage GAIL to make rapid strides in terms of growth, our firm intent on responsible growth will help us to stand apart. With this positive outlook, we aim to tread towards and go beyond the realms of traditional success."- Director (Projects)

This year we have witnessed game-changing disruptions in oil and gas sector with significant implications on GAIL's businesses. Our year-on-year profits dropped by 31% and our revenues by 1.18%. GAIL's management has taken a strong note of these changes and has devised a robust strategy to overcome these challenge. Our endeavor remains to ensure business sustainability across different segments.

In the upstream segment, GAIL aspires to import substantial LNG through conventional route as well as through terminal capacity booking and also

acquire equity in producing assets / liquefaction facilities to source equity-linked LNG. GAIL has made remarkable progress in sourcing LNG by finalizing several short-term and long-term deals with suppliers, like Sabine Pass Liquefaction LLC (USA), Gazprom (Russia) and WGL Midstream Inc. (USA). Further, GAIL's US subsidiary has booked LNG capacity in Dominion Cove Point's LNG liquefaction terminal in US. In addition, GAIL is pursuing LNG shipping business and plans to own / long term charter hire LNG ships to transport LNG from US to India and other global markets and has also



CMD, GAIL, Shri B. C. Tripathi addressing gathering during MoPNG Strategy Meet-2015



Left to Right - Shri Santanu Roy, GM(CP), Ms. Vandana Chanana, ED(CC&CSR), Shri L. R. Gupta ED (F&A), Dr. Ashutosh Karnatak, Director(Projects), Dr. Ajay Mathur, D.G. (Bureau of Energy Efficiency), Shri M. Ravindran, Director(HR), Shri A. K. Manchanda, ED (Mktg-JV & IGS), Shri N. K. Nagpal, GM (F&A & CST), Shri S. C. Hatwal, ED(C&P)

ventured in the LNG trading business through its wholly owned subsidiary, GAIL Global Singapore Pte Limited.

To facilitate increase in LNG volumes, GAIL plans to set up LNG terminals / floating storage and regasification units (FSRUs) and is also booking additional regasification capacities in existing and new terminals being set up by other companies. After commissioning of Dabhol LNG terminal, GAIL aims to bring the terminal to full capacity by constructing breakwater facility. GAIL has also tied-up additional regasification capacities at Dahej LNG terminal with Petronet LNG Limited (PLL). Further, in line with the LNG sourcing efforts, the Company has intensified its gas market development efforts in the country to attract and retain more customers.

In order to bridge the demand-supply gap of natural gas and to address energy security needs of the country, GAIL is aggressively pursuing the transnational pipeline project, Turkmenistan-Afghanistan-Pakistan-India (TAPI) pipeline project. GSPA has already been signed to import 38

MMSCMD gas into the country through this pipeline. Further, TAPI Pipeline Company has been incorporated as a Special Purpose Vehicle in the Isle of Man.

In the midstream segment, GAIL aspires to retain its leadership position through continuous pan-India expansion of pipeline network. The Company now has a total network of approximately 11,000km pipeline in the country. Additionally, GAIL has started pre-project activities for constructing approximately 2600 Km Jagdishpur-Haldia Pipeline. Actual construction will commence in synchronisation with readiness of anchor load customers along the pipeline network. Further, to cater to the growing demand and to increase its geographic reach, various other pipeline projects are at different phases of execution which will take the network size to around 15,000 km.

In the downstream segment, GAIL aspires to be amongst the top petrochemical players in the country by expanding existing capacities, setting up new plants, acquiring equity stakes in upcoming projects, along with product off-take rights for

marketing. The Company is currently doubling existing petrochemical capacity at Pata and the project is at the commissioning stage. A Greenfield petrochemical plant is also being setup in Assam through its subsidiary, Brahmaputra Cracker & Polymer Limited (BPCL). Another petrochemical plant at Dahej is being set up through a JV, ONGC Petro-additions Limited (OPaL). By 2016, the Company is expected to have 1.7 MMTPA polymers.

On the retail side, GAIL is targeting additional 40-50 cities / Geographical Areas (GAs) through its subsidiaries and JVs for City Gas Distribution (CGD) in the coming few years. The wholly owned subsidiary, GAIL Gas Limited, is progressing on track with respect to CGD projects in the cities of Kota, Dewas, Meerut and Sonapat. Further, GAIL Gas Limited has won the 4th PNGRB CGD bidding round for the city of Bengaluru.

In order to achieve all the strategic goals efficiently and in a time bound manner, major thrust is being given to strengthen and enhance the capabilities of human resource. Accordingly, recruitment, training

Sustainability Strategy (continue)

and development activities are being suitably aligned with strategic objectives to enable GAIL to implement and achieve its strategic goals by 2020.

Sustainability Strategy^{G4-EN5, G4-EN18}

As India's youngest Maharatna public enterprise, GAIL is committed to creating a better future for tomorrow. Our commitment towards India's better future is not limited to the virtue of our cleaner energy business but extends beyond that. We have been rigorously working to reduce the impact of our operations on the environment and society. This involves taking strategic initiatives and venturing in clean energy initiatives such as wind and solar. In FY 14-15, GAIL has generated 108.37 million kWh of wind power and 1.24 million kWh of solar power. At an operational level, we have implemented various energy conservation initiatives during the year which have resulted in collective

savings of 2.65 million kWh. We have renewed our commitment towards our communities by implementing GAIL Utkarsh initiative which remains our flagship Corporate Social Responsibility (CSR) initiative. Apart from this, we also have other CSR activities such as GAIL Kaushal (livelihood generation and Skill development) Sashakt (women empowerment initiative), and Saksham (care of elderly and differently abled people) which were implemented during the year.

We have taken strong steps in the direction to ensure safety and that no incidents take place in future. Some of these initiatives include monthly safety day observance, monthly safety review by Director (HR) & Director (Projects), revised incident reporting system, greater sensitization of employees, review and improvement of existing disaster management systems and emergency response and plan, introduction of safety score (a more comprehensive safety performance monitoring system) in place of safety

index, implementation of SAP incident / accident log, and HSE workshop on safety leadership.

GAIL is among the leading Oil & Gas Company in India to take voluntary targets to improve its sustainability performance. In an attempt to raise the bar further, we have revised our Sustainability Aspirations 2020.

"As an energy major, our responsibility is not only to ensure availability, affordability and access of energy to the nation, but also to strengthen our operations and processes with the aim to be less resource intensive. Our Sustainability Aspirations 2020 is a step in this direction. Through these voluntary targets in our priority areas we have not only created an internal pressure but have also taken the bold step to disclose it transparently in the public domain."

*-Director (Human Resources)**

(* for Business Development related activities)

Sustainability Aspiration 2020

Key Focus Area	Aspiration 2020 (Base Year 2010-11)
GHG Emissions (Scope I and II)	<ul style="list-style-type: none"> ▶▶ 33 % reduction of GHG emission intensity. ▶▶ 5% reduction of Specific GHG emission. (Additional Corporate Level Target)
Specific Energy Consumption	<ul style="list-style-type: none"> ▶▶ 5% reduction of specific energy in LHC & PC products ▶▶ 5% reduction of Specific Energy Consumption. (Additional Corporate Level Target)
Water Consumption	<ul style="list-style-type: none"> ▶▶ 45% reduction water consumption intensity. ▶▶ 15% reduction of specific fresh water consumption. (Additional Corporate Level Target)
Waste Water Recycling	<ul style="list-style-type: none"> ▶▶ Increase Waste Water Recycling by 5% ▶▶ Zero Discharge at Pata & Vijapur (Additional Corporate Level Target)
Training/Awareness on Sustainability	<ul style="list-style-type: none"> ▶▶ 100 % of our employees and all new joinees to be made aware within one year of their joining

Our Progress on Sustainability Aspirations

Sustainability training is provided to 40% GAIL Employees till FY 14-15.

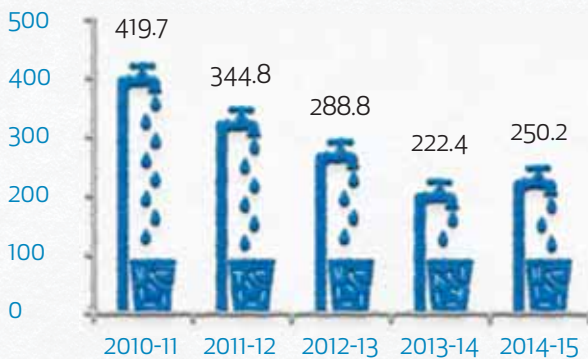
GHG Intensity (tCO₂e/INR Crore)



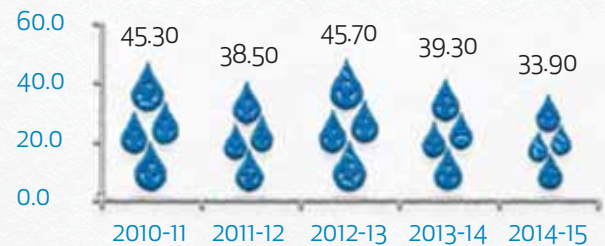
Specific Energy Consumption
GJ/MT of LHC & PC Product *



Water Consumption Intensity
(m³/INR Crore)



Waste Water (WW) Recycled
(% of WW generated) *



* Performance moving away from target in following areas

- ▶ Specific Energy Consumption – Due to underutilization of capacity of some plants.
- ▶ Waste Water Recycling – Due to ongoing pre-commissioning & commissioning activities especially at GAIL Pata & Vijaipur plant.

Stakeholder Engagement & Materiality



One to One Engagement

1026
employees
participated in
Online Survey

What matters and where it matters: Our Materiality Centric Approach





सुन्दर भारत

गैल (इंडिया) लिमिटेड

भारत का रॉयल्टी महारज

झाबुआ कम्प्रेसर स्टेशन

समन्वय एवं मटेरियलिटी निर्धारण कार्यशाला

Engagement & Materiality Determination Workshop



With the changing business dynamics, the performance of a company, apart from tradition financials, is also measured through how they manage on the economic, social, environmental and ethical aspects to create a long-term value for its stakeholders. At GAIL, we remain committed to our stakeholders with the aim to grow in a transparent and accountable manner. Engaging with our key stakeholders and materiality process helps us in deciding on issues to focus on in order to mainstream sustainability into our decision making.

Stakeholder Engagement & Materiality (continue)

For GAIL stakeholder engagement is about managing relationships with our stakeholders in an efficient and an effective manner. This not only helps us in identifying opportunities but also in assessing emerging risks which may increase in magnitude at a later stage in future.

These stakeholders include individuals, groups and organizations that affect or are affected by our business. A mapping of the primary and secondary stakeholders was prepared in discussion with different departments. This mapping has been presented.^{G4-24, G4-25, G4-26, G4-27}



Stakeholder Engagement Session

Over the past few years we have been successful in constructively integrating stakeholder engagement into our governance, organizational strategy, and management. The engagement exercises are taken up through different departments and also with the help of external agencies. Such exercises are taken up at regular intervals (customer and employee satisfaction surveys) while some remain need based (such as need and impact assessment survey). The results of stakeholder engagement are informed to and reviewed by senior management.

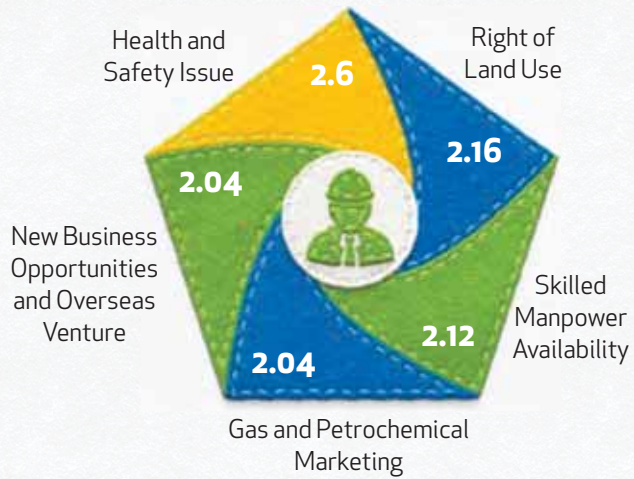
During this reporting a dedicated stakeholder engagement exercise was conducted with six stakeholder groups across 10 locations.

Stakeholder responses were sought for a list of 20 issues across economic, environmental, social and governance dimensions. The medium of engagement included focused group discussions, questionnaire surveys, and face to face interactions with the stakeholders. Both qualitative and quantitative techniques were used for data collection. Questionnaires were developed based upon shortlisted issues identified. As a part of this engagement exercise 28 customers, 7 NGOs, 25 Contractors/Vendors, 16 representatives of local communities, were consulted. Apart from this, 195 employees took part in the exercise through interactions at sites and 1026 employees participated in the online survey.

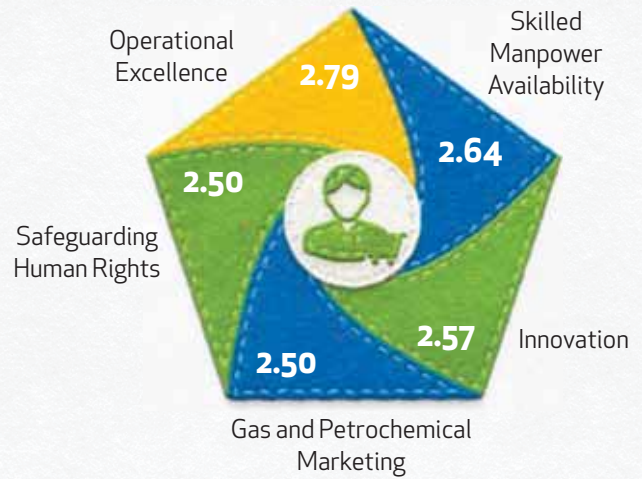


The top 5 issues emerging (for each stakeholder surveyed) as a result of this stakeholder engagement exercise have been presented below:-

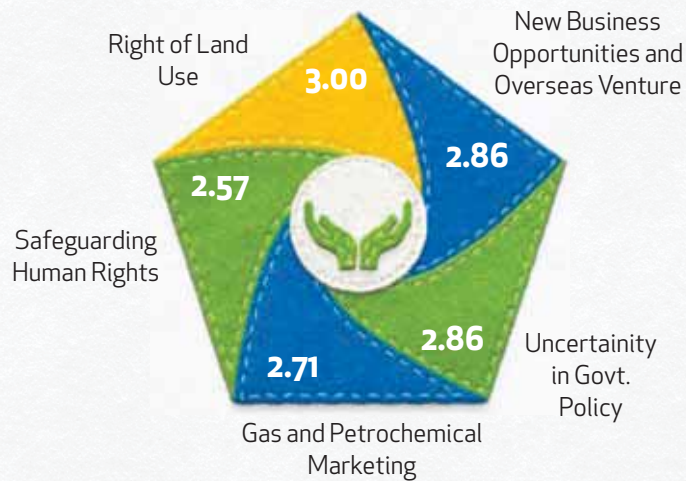
Contractor / Vendors



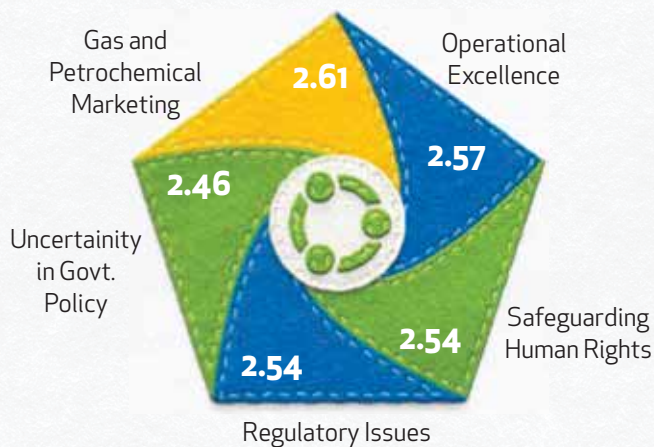
Customers



NGO



Community



Regular Employees



Stakeholder Engagement & Materiality (continue)



Employees

1. Health and safety
2. Operational excellence
3. Gas and petrochemical marketing
4. Skilled manpower availability
5. Transparency and ethics



Customers

1. Operational excellence
2. Skilled manpower availability
3. Innovation
4. Gas and petrochemical marketing
5. Safeguarding human rights



Community

1. Gas and petrochemical marketing
2. Operational excellence
3. Safeguarding human rights
4. Regulatory issues
5. Uncertainty in govt. policy



NGO

1. Right of land use
2. New business opportunities and overseas venture
3. Uncertainty in govt. policy
4. Gas and petrochemical marketing
5. Safeguarding human rights



Contractor / Vendors

1. Health and safety
2. Right of land use
3. Skilled manpower availability
4. New business opportunities and overseas venture
5. Gas and petrochemical marketing

A summary of our engagement strategy has been presented below:-

Employees



Importance of the Stakeholder Group	We regard our employees as our greatest asset and engages with them continuously for superior results.
Engagement Teams	Human Resource Department, Human Resource – Employee Relations & Policy, Corporate Operations & Maintenance, Health Safety & Environment Department, Corporate Sustainability Team.
Frequency of Engagement	Annual, Quarterly, Monthly, Daily.
Mode of Engagement	Satisfaction surveys, Grievance Redressal, Suggestion schemes, CMD open house, Sustainability Survey, Various committees, Emails, Journals, Meetings with employee associations and unions; Various Events including GAIL Day celebration, Sports Meet, Health Campaign etc.
Key initiatives taken to address concerns, perceptions, advice & suggestions	<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

Suppliers



Importance of the Stakeholder Group	GAIL's primary business is of gas transmission which makes it very important for the Company to engage with the suppliers on a continual basis. Transparent relationship with supplier help the Company to reduce risks and discover new opportunities. Also, this helps us to improve our supply chain and planning.
Engagement Teams	Contracts & Procurement Department, Projects Department.
Frequency of Engagement	Annual, Quarterly, Monthly, Daily.
Mode of Engagement	Supplier meet, Emails, meetings.
Key initiatives taken to address concerns, perceptions, advice & suggestions	<ul style="list-style-type: none"> » Integrity Pact Mechanism » Pre-tender & Pre-Bid Meeting » Conciliation through Settlement Advisory Committee » Reverse auction » Bill watch system » File Movement System » e-Tendering

Stakeholder Engagement & Materiality (continue)

Customers



Importance of the Stakeholder Group

GAIL regards its customers as partners in growth and works with them to improve the quality of services and products. The Company has also developed an online customer suggestion system to effectively address customer concerns.

Engagement Teams

Marketing Department, Total Quality Management Department.

Frequency of Engagement

Annual, Quarterly.

Mode of Engagement

Customer Interactive Meets, Customer feedback.

Key initiatives taken to address concerns, perceptions, advice & suggestions

- » Customer Suggestion Box: To understand customer requirements, address operational concerns & to get feedback on new product development.
- » Customer Satisfaction Index: To understand their satisfaction levels
- » Customer Ledger: For transparent transactions

Communities



Importance of the Stakeholder Group

Community is an important stakeholder for us as these communities provide us the social license to operate. We have also developed a CSR policy for effective development of the community.

Engagement Teams

Corporate Social Responsibility Department.

Frequency of Engagement

Annual, Quarterly, Monthly, Daily, Need-based.

Mode of Engagement

Community Meetings, Project Meetings, Annual Reviews.

Key initiatives taken to address concerns, perceptions, advice & suggestions

- » Executing social responsibility initiatives /projects.
- » Understanding and addressing their concerns on critical incidents

Investors



Importance of the Stakeholder Group

Investors play primary role in a company by funding the operations of the company and thus receiving 'part ownership'. By this virtue they become one of the most important stakeholders. GAIL respects the rights of the investors and keeps them informed through various channels. One such channel is the Company website which has an exclusive section dedicated to the investors.

Engagement Teams

For Institutional Investors & Analysts: Finance & Accounts
For Retail Investors: Company Secretariat

Frequency of Engagement

Annual/ Quarterly/ as and when necessary

Mode of Engagement

Annual General Meeting, Investor Meets, Investor Conferences, Conference Calls, Website hosting of financial information

Key initiatives taken to address concerns, perceptions, advice & suggestions

- » Clearly communicating the company's values, business plan, strategy, risks, growth prospects, etc.
- » Highlight the company's performance vis-à-vis previous periods
- » Address the concerns of investors with respect to the future challenges.

Media



Importance of the Stakeholder Group	In today's well-connected world, media plays the role of an opinion maker in the society. Apart from this, media also helps businesses in communicating with other stakeholders through various channels.
Engagement Teams	Corporate Communication Department
Frequency of Engagement	Need-based
Mode of Engagement	Press Meets, Interviews
Key initiatives taken to address concerns, perceptions, advice & suggestions	<ul style="list-style-type: none"> » Relationship building » Appraising on performance highlights and lowlights » Point-of-view on major sectoral developments

Industry Associations^{G4-15}



Importance of the Stakeholder Group	Industry associations provide an opportunity to businesses to voice their concerns, present best practices, share knowledge and collaborate with each other. GAIL has been a member of key industry associations like PETROFED, SCOPE CII, FICCI, PHD Chamber of Commerce, GRI Focal Point India, TERI-BCSD etc.
Engagement Teams	Various Departments such as Corporate Planning, Marketing, Business Development, TQM, HSE, Internal Audit, Projects, etc.
Frequency of Engagement	Need-based
Mode of Engagement	Seminars, Conferences, Industry Expo
Key initiatives taken to address concerns, perceptions, advice & suggestions	<ul style="list-style-type: none"> » Share performance data » Inform on key decisions and projects » Participate in conferences and seminars » Engage in public policy advocacy

Government and Regulatory Agencies



Importance of the Stakeholder Group	Government and other regulatory agencies play a very important role in influencing how businesses operate throughout the world. This is in form of taxes, regulatory and other policies, creating a level playing field for businesses, providing access to capital and other related functions. GAIL regards compliance to all laws and regulations as a high priority.
Engagement Teams	Regulatory Affairs Department, Law Department, Corporate Planning Department, Liaison & Parliamentary Affairs Department, Company Secretariat.
Frequency of Engagement	Annual, Quarterly
Mode of Engagement	MoUs, QPR, Open-House sessions, Hearings and other Meetings, written views/comments to PNGRB on various regulatory matters, as required by PNGRB.
Key initiatives taken to address concerns, perceptions, advice & suggestions	<ul style="list-style-type: none"> » Relationship building » Performance appraisal through MoUs » Submission of progress reports » Discussions on major investment plans

Stakeholder Engagement & Materiality (continue)

Engagement with other Stakeholders^{G4-15, G4-16}

We engage with our stakeholders to share values and co-create growth with them. Further their concerns were identified by them through

various channels and engagement mechanisms as mentioned above, which are vital for our business continuity. We have defined specific roles and responsibilities of the key departments in GAIL to address these concerns, monitor, and ensure that they are addressed in a timely and efficient manner.

In addition to engaging with the stakeholder groups as mentioned above, GAIL is also member of many trade and chamber/ associations. These associations help us engage with various other stakeholders to communicate our views and opinion through the association's platform. Some of the major ones are as below:-

Broad category of engagement	Trade and chamber / associations
Sustainability	Global Reporting Initiative India Private Limited
	Global Compact Network India (UNGC's India Chapter)
	TERI – BCSD (The Energy and Resources Institute -Business Council for Sustainable Development)
	India GHG Program
	World Environment Foundation
Other business related engagement	Project Management Associates
	International Market Assessment CEO Forum
	The India CFO Forum - IMA India Private Ltd.
	Institute of Internal Auditors, USA
	Oil Industry Safety Directorate (OISD)
	Petroleum Federation of India (Petrofed)
	International Gas Union (IGU)
	National Institute of Corrosion Engineers International, USA (NACE)
	British Safety Council (BSC)
	International Group of Liquefied Natural Gas Importers (GIIGNL)
	United Nations Economic Commission for Europe (UNECE) Gas Centre
	World Energy Council India
	Chemical & Petrochemicals Manufacturer's Association (CPMA) International
	Confederation of Indian Industry (CII)
	Standing Conference of Public Enterprises (SCOPE)
	Federation of Indian Chambers of Commerce and Industry (FICCI)
PHD Chamber of Commerce & Industry	
Institute of Company Secretaries of India (ICSI)	

Materiality

Even though materiality assessment remains ingrained in our sustainability conduct, it received renewed focus this year as this year marks GAIL's first sustainability report as per GRI G4 guidelines. Under the light of these new guidelines, materiality receives even more focus as the report would revolve around these key material issues identified.

materiality was to deliberate on sustainability issues that impact us and would drive our growth in the future. An exhaustive list of 57 issues was shortlisted to 20 issues across economic, social, environmental, governance and other domains. These issues were taken to stakeholders for their views. 1300 responses across six stakeholder groups were received which were used to deduce our most material six issues. With such widespread response, we believe that exercise of identifying

areas of conjunction between our business and stakeholders is the key to unlocking "responsible growth". GAIL has been conducting materiality assessment for the past five years to identify sustainability issues of critical importance. This is essential in developing a focused sustainability strategy for the Company. This year as we graduate from GRI G3.1 reporting guidelines to GRI G4 reporting guidelines we have renewed our materiality exercise to deduce six key material issues from an exhaustive list of 57 issues.^{G4-2}

G4-24, G4-26, G4-27 Our approach to

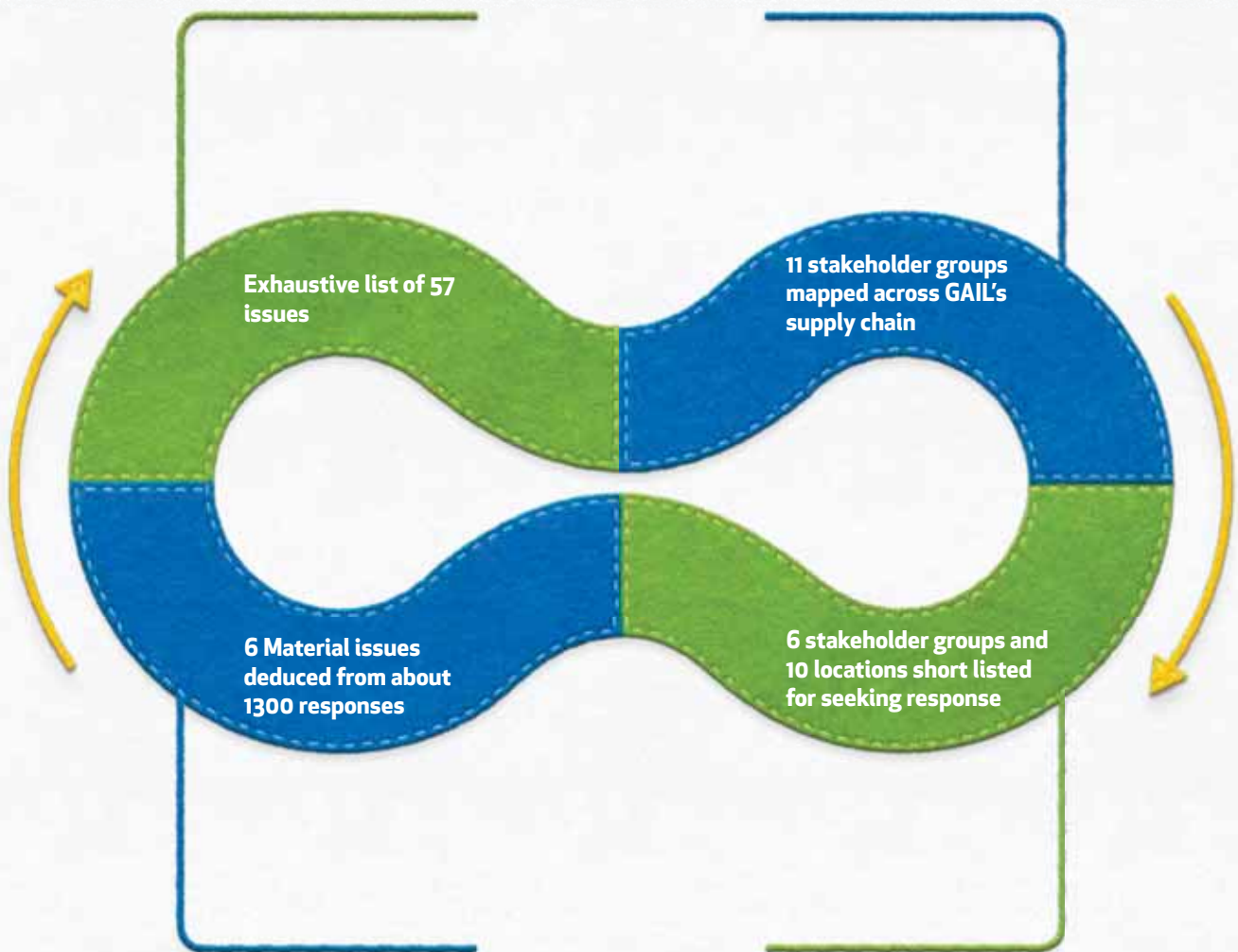
Materiality Assessment Approach of GAIL^{G4-18}

Step : 1

Identifying key issues related to the GAIL from the perspective of business sustainability

Step : 2

Mapping the stakeholders to be consulted



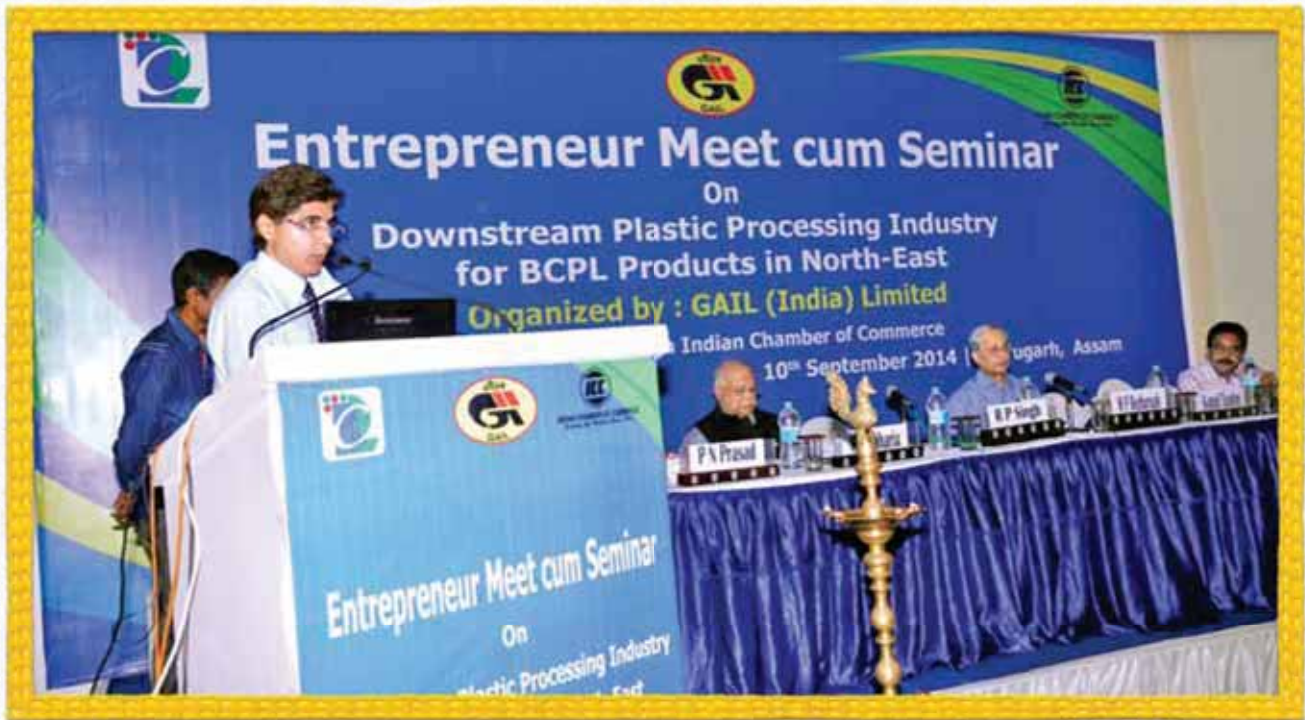
Step : 4

Collating stakeholder feedback and deriving top material issues

Step : 3

Seeking stakeholder response / data collection

Stakeholder Engagement & Materiality (continue)



^{G4-19} This year's materiality assessment involved a greater detail of research. To start with we reviewed our primary sources such as risk management approach, business performance & strategy and other internal documents. Secondary resources such as media reports, press releases, issues highlighted by peers in the Oil & Gas sector etc. were also reviewed. Based on this research, an exhaustive list of 57 issues were identified and deliberated upon. Various departments (including Business Development, Operation & Maintenance, Company Secretariat, Corporate Communications, Finance & Accounts, Human Resources, Security, Legal, Marketing, Parliamentary Affairs, Project Development, Business Information Systems, Internal Audit, GAIL Training Institute, and Exploration & Production) took part in these deliberations. Based on the internal deliberations, the list was reduced to 20 issues which were to be taken to the stakeholder groups for assessment.

Following this, a mapping of stakeholders was conducted including primary and secondary stakeholders. There were 11 stakeholders which were identified. Primary stakeholder were identified as those which have interests that are **directly linked** to the fortunes of a company including shareholders and investors, employees, customers, suppliers, and residents of the communities where the company operates whilst secondary stakeholder were identified as those which have **indirect influences** on an organization or are less directly affected by its activities. They include the media and pressure groups, and others that inhabit the business and social networks of the organization.

Six stakeholder groups were identified from whom responses were sought through focused group discussions, questionnaire surveys, and face to face interactions. In all about 1300 responses were received from interactions conducted at 10 sites and

through online survey. The respondents rated the issues are being of high, medium or low significance. These interactions led way to developing a rich repository of of qualitative and quantitative data which was used to infer the most material issues. The collation of inputs received from the stakeholders was analyzed on site level basis as well on site level. These results were discussed with the senior management of GAIL whose response was also taken into account for developing the final materiality matrix.

Besides, the final materiality matrix was prepared on the basis of the feedback received in the online survey and that during the management discussions. The materiality matrix which evolved after the analysis is presented opposite:-^{G4-27}

Material Issue for GAIL for FY 14-15



Approach Towards Material Issues^{G4-20,} G4-21, G4-23

The material issue identified through this exercise are i) Health & Safety ii) Operational Excellence iii) Skilled Manpower iv) Gas & Petrochemical Marketing v) Regulatory Issues & vi) Innovation.

In this report, we have highlighted our approach towards the identified issues & company specific aspects in detail, which have a close relationship with GAIL's Sustainability Performance. At the same time the related GRI aspects have been mapped with the identified material issues and their performance have been reported in the subsequent section of the report.

Stakeholder Engagement & Materiality (continue)

Material Issues, Boundary, Aspect and Key Stakeholders Impacted^{G4-19}

Material Issue	Aspects	Boundary	Report Section	Major Stakeholders
Health & Safety	<ul style="list-style-type: none"> » Occupational health & safety » Asset Integrity & Process Safety 	Within GAIL	<ul style="list-style-type: none"> » Safety: in our every endeavor while we grow » Employee » Community 	<ul style="list-style-type: none"> » Employees, » Communities
Operational Excellence	<ul style="list-style-type: none"> » Asset Productivity* » Material » Energy » Water » Emissions » Effluent and waste » Overall » Procurement Practice » Economic Performance » Indirect Economic Impacts » Environmental Grievance Mechanism » Anticorruption » Grievance Mechanisms For Impacts On Society » Local Community » Compliance 	Within GAIL	<ul style="list-style-type: none"> » Corporate Governance & Risk Management. » Striding towards Excellence: The way we strive to grow » Investor » Supplier » Community » Employee 	<ul style="list-style-type: none"> » Shareholders & Investors, » Employees, » Communities

Material Issue	Aspects	Boundary	Report Section	Major Stakeholders
Human capital	<ul style="list-style-type: none"> » Employment » Labor/Management relation » Talent retention & employee relations* » Diversity & equal opportunity » Equal Remuneration for Women and Men » Training & Education » Non-discrimination » Freedom of Association and Collective Bargaining » Child Labor » Forced or Compulsory Labour » Human Rights Grievance Mechanisms » Security Practices » Labour Practices Grievance Mechanisms 	Within GAIL	<ul style="list-style-type: none"> » Human Capital: at the core of our growth » Employee » Corporate Governance & Risk Management 	<ul style="list-style-type: none"> » Employees
Gas & Petrochemical Marketing	<ul style="list-style-type: none"> » Marketing of product & service* » Marketing Communication, » Product & Service Labelling » Customer Health & Safety » Compliances 	Within GAIL	<ul style="list-style-type: none"> » Transforming our business approach: Safeguarding our growth » Customer 	<ul style="list-style-type: none"> » Customers
Regulatory Issues	<ul style="list-style-type: none"> » Compliances » Public Policy » Anti-competitive Behaviour 	Within & Beyond GAIL	<ul style="list-style-type: none"> » Dynamic Regulatory Landscape: Harnessing opportunities for growth 	<ul style="list-style-type: none"> » Government & regulatory agencies
Innovation	<ul style="list-style-type: none"> » Innovation at GAIL* » Research & development* 	Within GAIL	<ul style="list-style-type: none"> » Driving Innovation: Redefining our growth 	<ul style="list-style-type: none"> » Shareholders/ Investors » Employees » Customer » Supplier

* These aspects are not included under the GRI G4 aspects but have been included in the report to provide completeness to the material issues identified.

Safety : In Our Every Endeavour while We Grow



Roll
out **Pan India**
TOLLFREE
Call 15101

for GAIL's Gas Pipeline related
incident reporting

Consolidated
Pipeline Integrity
Management
System Rolled out



for 1100 KM

Pipeline in Phase-I





GAIL has always regarded health and safety as a high priority. As an entity, we are committed to conduct business with proper safety measures. All our employees are trained in the best possible manner and are instructed to perform their duties keeping in mind safety measures and gadgets. Preparation, prevention and protection are the three keys to safety for the organization. In the past year we adopted a more pro-active and futuristic approach so as to ensure that our communities also remain safe. The Company truly believes that ensuring healthy and safe workplaces and communities is an essential part of fostering responsible growth.

Safety : In Our Every Endeavour While We Grow (continue)

Safety and health management is one of the vital constituents of Oil and Gas industry activities because of the operational conditions; hydrocarbons and other associated chemicals pose serious safety and health threats to the workers. This is reflected by industry surveys that report risk of health, safety incident as one of the top most risk for the industry. The need to protect employees, local communities and minimize social and environmental impact is always paramount, with any perceived negligence in this area is penalized heavily and the perception of the responsible organization can be irreparably damaged.

At GAIL, 'Safety First' always remains our motto and ensuring health and safety of our stakeholders remains on the top of our management's agenda. The recently conducted materiality survey also highlighted the need for GAIL to continue to update its preparedness levels and improve its safety performance.

Even though the probability of occurrence of a safety related catastrophe is low, it has always remained on GAIL's radar and we continuously assess the main contributors to this risk, which can change over time. With respect to safety, our efforts remain to be right at every time as even a single incident can lead to irreparable damage to the company and its stakeholders. The recent unfortunate incidents that happened during the year have indicated to reinforce the same to ensure complete safety.

Culture at GAIL^{G4-DMA}

GAIL's Corporate Health, Safety & Environment (HSE) Policy signed by Chairman and Managing Director accords highest priority to achieve an organizational culture of HSE excellence as an integral part of company's business that is governed by the dedicated policies and procedures. In this regard different guidelines are issued from time to time. Implementation of policies & guidelines including statutory regulations and standards is ensured across GAIL by regular monitoring and auditing system. At GAIL, HSE mission is to ensure that the risks to health and safety of workers are properly controlled. As a part of the corporate responsibility, the management encourages all units to improve management systems to reduce incidents, injuries and ill health; to progressively take preventive and protective measures for ensuring safety of employees, contractors, customers, suppliers & communities. The Management is highly committed

to the Occupational Health, Safety & Environment aspects/issues in the organization through demonstrating the importance of health and safety issues at board level. At top level HSE is reviewed by Sustainable Development Committee of Board, which is chaired by Director (Projects) and all functional directors are members to the committee. At GAIL we aspire for 'Zero Reportable Accidents' every year.

Management Systems^{G4-DMA}

GAIL has a well-established health, safety and environment management system (HSEMS), which is based on Oil Industry Safety Directorate's (OISD) Guidelines on Safety Management System in Petroleum Industry. GAIL also follows the directives of the Petroleum and Natural Gas Regulatory Board (PNGRB). Safety measures at GAIL are formulated by the elaborate & comprehensive HSE

Management System implemented at all GAIL Locations in the Country. HSE performance across operations is reviewed in every Board meeting.

Apart from monitoring performance, emergency preparedness is also reviewed by the Sub-Committee of Board.

Our HSEM system comprises of following 18 elements encompassing entire business operations and risk profiles.



Safety : In Our Every Endeavour While We Grow (continue)

The corporate HSE policy is the apex document of this system and is approved and signed by CMD. The efficacy of the implemented system is also subject to audits by reputed national and international agencies. Appropriate corrective measures are taken in time bound manner to eliminate gaps identified during such audits.

Our Employees and Contract Workers are strongly encouraged to adopt safe working culture and behaviour to ensure effective implementation of the HSE Policy. For all employees of workman category, the Company has issued Standing Orders with provisions of any conduct within Company's premises or its precincts which is likely to endanger the life or safety of any person is treated as misconduct. Where the workman is entitled for treatment and benefits under the Employees States Insurance Act, 1948 or the Workman's Compensation Act, 1923, the Company shall arrange for the treatment and compensation accordingly.

Training our employees for use of safe practices at workplace is an important part of strategy to ensure safety at GAIL. This has also been one of the parameters of the Internal MoU of

GAIL Training Institute (GTI). 300 man-days of training were imparted on health, safety and environment related programs.

"In view of the recent past incidents, which have severely impacted the company, we are learning from our past experiences, and our endeavor remains to strengthen our systems and procedures to avoid incidents in the future. We have rolled out the Behaviour Based safety programme across the organization to inculcate the behaviour of maintaining utmost safety standards."

*- Director (Human Resources)**

(* for Business Development related activities)

Behaviour Based Safety (BBS) at GAIL

BBS is an exercise and a tool to focus and address the behaviors of all personnel involved towards enhancing safety of the people, equipment, plants and community at large.

GAIL installations across India are at a certain level of Safety, which is good enough in terms of firefighting equipment, procedures, signage,

qualified people manning the concerned department etc. In order to move further towards Best in Class Safety practices, now the difficult journey is to imbibe Safety in all we think and do. Focused BBS Journey across all GAIL Locations shall help us in improving all our safety related parameters. Improvement in all these parameters will also ensure our forward step towards our overall objective of Zero Incidences.

It was felt that to build strong safety culture one needs to imbibe safety in all activities of the organization right from design stage to construction, commissioning, operation & maintenance. It is with this deep desire to eliminate incidences, GAIL embarked upon a journey of BBS to address the human element and improvise on the existing processes.

In view of above, BBS journey was started in 2013. Corporate steering Committee and task force were developed at corporate level to oversee the BBS implementation and Site steering & functional committees and lead trainer were developed for further sustaining BBS at respective sites of GAIL. Accordingly, BBS has been rolled out successfully across the GAIL installations in March 2015.



Expected Benefits of applying BBS

- ▶ Reduce injuries and modify employee behaviour by reinforcing safe work practices and eliminating at-risk behaviour.
- ▶ Reduce costs related to injuries and incidents.
- ▶ Develop communications skills.
- ▶ Develop safety culture across the organization.
- ▶ Allowing the employee to assume the principal responsibility for safety.
- ▶ Raise overall safety awareness.
- ▶ Increase observation skills.
- ▶ Develop leadership skills.
- ▶ Communicate management's commitment to safety.
- ▶ Increased productivity due to reduced injury related to absenteeism and illnesses.
- ▶ Develop Positive Reinforcement to prevent workplace injuries/accidents.

Safety of Contractual Employees

"Safety first, Safety by heart, is the motto we operate with. Hence, "Behavioral Based Safety" has been launched to develop safety as an integral part of work culture within the Organization.

We strongly believe that Safety Awareness is also required at External Stakeholder level (i.e. Authorities, General Public etc.) to achieve the Objective, for which a massive campaign in the form of "Public Awareness Programme" has been launched at all O&M Sites. Through this safety awareness is being created among the external Stakeholders."

- Director (Projects)

With respect to safety, GAIL follows the same philosophy for the permanent and contractual employees. Special efforts are made to keep the contractual workers safe. At all installations, Fire & Safety Department ensures that all contract workers use appropriate Personal Protective Equipment (PPE) through regular monitoring and surprise checks. Further, periodic safety audits are conducted by Corporate HSE Department and health and safety issues of contract workers are also addressed.



Fire and Safety Training for security employees

As a model principal employer, GAIL while awarding contracts, ensures the provision for safety kits & liveries to contract workers by engaging with the contractor.

Some other initiatives taken by GAIL specifically for contractual employees include:-

Trainings :

Induction and monthly refresher fire safety & hazards awareness training before first entry of each contract worker and on regular basis time to time. Tool box talk have been carried out by GAIL executive before commencing job, during tool box talk information regarding all the associated hazard with the work is being given to worker with their mitigation measures. Safety awareness program were conducted by management for contract employee on regular basis as per Safety Training Calendar.

Safety : In Our Every Endeavour While We Grow (continue)

Health check-ups :

Proper health check-up of the contract employee carried by registered medical officer as per factory Act before deployment of workers on the job.

The number of accidents / causalities occurred during each of the last Five years.

	Description	2014-15	2013-14	2012-13	2011-12	2010-11
O&M	Accidents (other than fire/leakage)	-	-	-	-	1
	Fire / Leakage	2	3	-	-	2
	No. of Fatal Incident (not covered above)	1	-	-	-	2
	No. of Fatalities	22	-	-	-	2
	Injured (all above incident)	18	8	-	-	1

Monitoring :

Plant safety committee consists of representative from contract employee to discuss the safety and health related issue with top management on quarterly basis.

Standard Operating Procedures (SOP) :

Standard Operating Procedures have been made available to concerned area operators for better safety during execution of jobs. Task briefings about the job are being carried out by the Engineer In charge before assigning the maintenance jobs. We have also ensured displaying MSDS boards near by the processing/handling/storage area as well as at strategic locations in local language. Dos, Don'ts & safety instructions have been displayed in process, storage and chemical handling areas.

Work Permit System :

All the jobs are carried out as per OISD-105 and are supervised by GAIL employee to ensure the safe execution of job.

During the previous reporting period we undertook major safety related initiatives such as implementation of BBS approach at GPUs and Petrochemical Plant, showcasing Standard Operating Procedures through a model film, launch of the "Life Saver Scheme" to prevent major causes of life threatening incidents, and conducting third party safety audits. Despite such structured approach there were 07 Nos. of Level I incidents and 03 Nos. of Level III incidents reported to PNGRB during the year as per ERDMP regulation of PNGRB. Out of these incidents two fatal incidents that occurred during the current reporting year. In order to ensure that no such incidents take place in future, GAIL has taken a series of steps.

Safety across Supply Chain

At GAIL we believe that there is business sense in ensuring safety of not just our operations but also that of our stakeholders. With this philosophy, Health, Environment & Safety form an integral part of tender document during tendering for procurement of goods and services. Moreover, Safety Permits, Work Permits, Visitor Entry System are being adhered with for all activities undertaken by suppliers and customers inside plant premises. Safety briefing is given to all suppliers & customers visiting the plant. Visitors are provided safety induction, training on nature of hazards with instructions to be followed in case of any emergency situation. The process plants and cross country pipelines are designed as per the best Indian

& International Standards. HAZOP study and Risk Analysis is carried out during design stage to identify the hazard risk mitigation. Further HAZOP study and Risk Analysis is also carried out in regular intervals and suitable risk mitigation measures. Permit to Work system is followed in all our installations to ensure safety during maintenance works. Emergency Response & Disaster Management Plan prepared and Quarterly Mock Drills conducted to practice emergency exercise and ensure availability of all required resources to tackle any emergency. Automated fire protection system like gas suppression system for control rooms, water spray system for pumps & piping area etc. are provided for immediate dousing of fire at its incipient stage.

An enterprise-wide Risk Based Analytic Software and state of the

art IT enabled system Software Application in the form of Centralized Pipeline Integrity management System (CPIMS) has been rolled out for 4100 km pipelines in Phase-I. The CPIMS comprises various modules viz., Data base module, Threat & Risk assessment module, Corrosion Analyst, Cathodic Protection Analyst, Geospatial Analyst, Pressure testing module, Task Manager, Reporting module, Management Dashboard, which will facilitate integrated and detailed health status and analysis.

Awareness programme is carried out for surrounding villagers along the pipeline route and they are explained not to do any digging/excavation in the ROU, inform GAIL about any gas leakage and actions to be taken in case of natural gas leakage from pipeline. Printed leaflets in the local language are distributed among the villagers.

Transportation Safety

GAIL has an established procedure with checklist for safety check of tankers and wagons before loading of hydrocarbon. All the drivers of tankers are also provided with Transport Emergency (TREM) card having details of actions to be taken in case of any emergency. All the drivers and their assistants are also provided safety training along with do's and don'ts during transportation of hydrocarbon.

Natural gas is raw material for process plants at Gandhar, Vaghodia & Vijaipur, which is transported through underground gas pipelines. These pipelines are operated & maintained by a separate GAIL Operations & Maintenance team. Cathodic Protection Monitoring (which helps in reducing corrosion of the pipelines) and intelligent pigging is done as per standard frequency to maintain integrity of pipeline. Close Interval Potential Logging (CIPL) / Direct Current Voltage Gradient (DCVG) surveys to confirm the health & integrity of external coating of the Pipeline. Patrolling is done to monitor any exposure/third party activity near pipeline.



Fire and Safety Training for drivers

Road transportation is used for transporting products like LPG, Propane, Pentane, and Naphtha. Checking of these road tankers is carried out as per the guidelines of Central Motor Vehicle Rules (CMVR) 1989, Static and Mobile Pressure Vessels rules by GAIL's designated Fire & Safety (F&S) employee. After physical checking of the road tankers, data of tanker safety checking is saved in the SAP system. For product filling, well established loading automation

/ control system and Terminal Automation System (TAS) are available for safe operations & SOPs are available for safe loading activities.

LPG is being transported to nearby bottling plant of OMC at Gandhar & Vijaipur; Foot patrolling of the pipeline is being carried out on regular intervals. All tankers are loaded only after ensuring that they are carrying the LPG emergency response kits.

Safety : In Our Every Endeavour While We Grow (continue)

After KG Basin

GAIL has an 18" (46cm) underground pipeline which transports gas from ONGC's Tatipaka refinery to Lanco's 1,466MW Kondapalli power plant near Vijayawada, Andhra Pradesh. This is a 205 km long pipeline supplying 0.5 million standard cubic metres of gas per day and passes through Nagaram which is a village in East Guntur district of Andhra Pradesh about 560kms from Hyderabad.

In the early hours of June 27, 2014, there incident of fire triggered by lighting of a stove by nearby tea vendor, due to which 22 people lost their lives and 18 were injured.

Immediate Action

Immediate action was ensured by GAIL so that the fire did not spread to cause any more damage.

The pipeline section (17 km) was isolated immediately and preliminary reports suggested damage of the pipeline to the extent of 1.5 meters length. GAIL Chairman and top officials reached the location immediately after the incident. The Crisis Management Group of GAIL immediately swung into action on receipt of information of Tatipaka Fire incident.

The Tatipaka – Dindi section was immediately isolated and the fire was controlled with the help of Fire Tenders.

Medical Assistance was provided immediately and the injured were shifted to nearby hospitals – KIMS (Amalapuram), Apollo (Kakinada) and Bollineni Hospital (Rajahmundry) for treatment.

An inquiry was also set up by the Government and GAIL. GAIL constituted an internal inquiry headed by Executive Director (Operations and Maintenance), Executive Director (Human Resources) nominated as the nodal officer for coordinating the relief and rehabilitation measures and to work closely with local authorities,

Government and villagers. GAIL also dispatched multiple teams to undertake foot-patrol of every inch of its pipeline network.

An international consultant of repute to carry out third party audit of its pipeline safety systems and other hydrocarbon installations.

Post Incident Remediation

Post incident at Nagaram Village, GAIL promised a slew of measures to ensure Relief & Rehabilitation of the affected people as well as on strengthening of Pipeline Network in KG Basin so as to prevent recurrence of such incidents in future.

A compensation of INR 25 lakhs (INR 20 lakhs by GAIL, INR 2 lakhs from Prime Ministers' National Relief Fund, INR 3 lakhs by State Govt.) was handed over to the kins of each of the deceased.

Further, ex-gratia amount of INR 5.5 lakhs (INR 5 lakhs by GAIL and INR 50,000/- from Prime Ministers' National Relief Fund) was handed over to each of the injured persons. The medical expenses were born by GAIL of all the injured persons and best possible medical care was provided. GAIL helpdesks were set up at Apollo Hospital & Trust Hospital at Kakinada, KIMS Hospital at Amlapuram and Balbolini Hospital at Rajahmundry, where the injured were being treated. All facilitation was rendered to the family members of the injured persons at these hospitals.

A total of approximately INR 10 crore towards ex-gratia, relief & rehabilitation measures and compensation for damages has already been incurred /committed by GAIL.

A series of welfare-measures have also been added as part of its Corporate Social Responsibility initiatives including providing shelter for the affected families, setting up of a skill

development centre at Nagaram under GAIL's CSR initiative – Kaushal, supply of medical equipment to Primary Health Centre (PHC) Nagaram, Mamidikuduru Mandal and Community Health Centre (CHC), Razol and provision of Mobile Medical Care Unit at Nagaram/Rajahmundry, for extending medical care to affected families due to fire and for villages along pipeline route.

Our activities in the area have not been limited to incident affected areas but have extended to other villages in the East Godavari District and West Godavari District of Andhra Pradesh. These activities include repair and renovation of 525 school toilets and providing running water facilities, skills training for Persons with Disabilities (PwDs) in partnership with National Handicapped Finance and Development Corporation, Ministry of Social Justice and Empowerment, installation of water purification plants and construction of roads.

Review of Internal Protocols

The incident also called for deep introspection within the system to relook whether we could make our systems even stronger to assure that no such incidents take place. Post incident, a senior level in-house committee has been constituted by GAIL to investigate the matter and in parallel external agencies – Engineers India Ltd., a Public Sector Engineering Company under MoPNG and Ms/. Velosi Certification Services (India) Ltd., a reputed third party inspection agency have been engaged to investigate the matter independently. Later on, the reason for the failure had been identified to be corrosion due to poor quality of gas.

Upgradation & Strengthening of Pipeline Network in KG Basin :

Various measures have been taken since then by GAIL for upgradation & strengthening of Pipeline Network. Some of these measures taken up in KG Basin are as follows:

Intelligent Pigging :

Subsequent to start of operations at safe pressure recommended by EIL as mentioned above, Intelligent Pigging had been carried out in all the lines again.

Reduction in Pipeline Pressure :

Based on the results of the Survey, repair works have been carried out and the operating pressures have been further reduced in some of the lines.

Installation of On- Line Analyzers :

As per the policy decision taken in GAIL, post Incident, On-Line Analyzers need to be installed at all places where flow of gas is more than 1 MMSCMD in case of Dry Gas and more than 0.2 MMSCMD in case of wet gas. Analysis at other locations shall be carried out through Portable Analyzers / Lab testing. Further, 11 Source Points have been identified for installation of Online Moisture and H₂S Analyzers. The Analyzers are under procurement and the delivery is expected by Oct'15.

In the meanwhile, fortnightly analysis is being carried out through Portable Analyzers at all Source Points and the presence of moisture / corrosive components beyond acceptable limits is being taken up continuously with Suppliers for corrective measures.

Implementation of GAIL Sahayogi Scheme to improve engagement with Villagers:

Intent of the Scheme is to hire services of villagers for reporting any important information about Pipeline safety, unauthorized work within RoU, attempts of any pilferage etc. to GAIL. This Scheme has been implemented by hiring approximately 50 persons from different villages with a task to cover 12 Km each day by line walk.

Public Awareness Programmes for sensitizing on Safety in and around Tatipaka Pipeline:

Community Awareness Programmes for District / Revenue Officials – The Awareness Programmes have been conducted at Rajahmundry, Kakinada, Tanuku, Vijayawada, Tadepalligudem in July 2014 for Revenue Officers of East Godavari , West Godavari and Krishna district.

Community Awareness Programmes for Villagers through Burra Katha- Around 80 Villages have been covered through these initiative. Further, printing and distribution of Safety Calendars and Do's and Don'ts in Pipeline RoU to Government Offices, Police Stations, Fire Stations, Revenue Offices and among public.

Safety : In Our Every Endeavour While We Grow (continue)

Major Initiatives taken on Pan-India Basis for Safety Excellence

As a continually improving Organization, assimilating the learning and adopting latest technological developments for improving Safety and Health & Integrity of the Assets has been one of the strong forts of GAIL since its inception. A slew of measures were taken up to enhance Health & Safety in GAIL's Operations on Pan-India Basis. These included creating a culture of safety through:-

1. Monthly Safety Day observance: All site OICs have been instructed to dedicate 10th of each month as a Safety Day where all the safety related issues will be thoroughly reviewed at the OIC level. All pending points related to Audits like OISD, PNGRB T4S, other external and Internal Audits points to be reviewed and action for fast liquidation of points to be ensured.
2. Monthly Safety Review by Director (HR) & Director (Projects).
3. Incident reporting system has been revised to improve the reporting structure where various communications of the ministry have also been incorporated.
4. Review and improvement of the existing Disaster Management system and Emergency Response & Disaster Management Plan (ERDMP) and de-briefing to all concerned.
5. Improvement in Crisis Management System - Crisis Management System, to handle crises efficiently and effectively, has been reviewed and revamped for faster and precise communication to all concern groups and Top Management, in case of emergency. A Group SMS and Voice Message Service have been implemented for this purpose. Regional Gas Management Centre (RGMCs) and National Gas Management Centre (NGMC) have been made responsible for ensuring timely communication on crises.
6. Sensitization to employees specifically posted at NGMC / RGMCs on incident reporting.
7. Roll out of Pan India Toll Free Number - A 5 digit toll free number (15101) for incident reporting has been initiated across India in place of earlier existing 11 digit number for ease in remembering the number. Calls dialled for this Number (15101) will land at RGMC of respective region or NGMC.
8. Introduction of **"Safety Score"** - A more comprehensive Safety Performance Monitoring System. This has replaced the earlier HSE Index.



9. Implementation of SAP Incident / Accident Log.
10. Formulation of Centralized Integrity Monitoring Group (CIMG) – CIMG was formed for centralised monitoring of health & integrity of Pan India Pipelines and to maintain data base. An enterprise-wide Risk Based Analytic Software and state of the art IT enabled system Software Application in the form of Centralized Pipeline Integrity Management System (CPIMS) has been rolled out for 4100 KM pipelines in Phase-I. The CPIMS comprises various modules viz., Data base module, Threat & Risk assessment module, Corrosion Analyst, Cathodic Protection Analyst, Geospatial Analyst, Pressure testing module, Task Manager, Reporting module, Management Dashboard, which will facilitate integrated and detailed health status and analysis. The CPIMS has internationally accepted data base system i.e. Pipeline Open Database (PODS) for management of all pipeline related data.

Striding Towards Excellence: The Way We Strive To Grow

**105 quality
circle projects
enabled saving of**





At GAIL we believe that to grow and outperform the standards we set in the past it is essential to continuously improve and upgrade ourselves. Our approach to excelling operationally does not remain limited to process improvements, cost reductions, better asset productivity but extends to managing resources responsibly. The greater we optimize our consumption of resources today, greater will be left for our future generations. Thus, leading to a more sustainable future.

Striding Towards Excellence: The Way We Strive To Grow (continue)

Coil & Gas sector^{G4-DMA} companies globally are facing challenges with a volatile economy, intense competition and rising energy & material costs. Global competitiveness is placing tremendous pressure on cost, quality and responsiveness to stakeholder's demands. Improving operational efficiency has become a necessity not just for short term business gains but also for long term success. Cost reduction, quality and productivity improvement in different business process has become the key instruments for gaining competitive advantage. Operational excellence is the pursuit of conducting business in a manner that continuously improves the quality of goods and services, reduces cost, increases speed and enhances flexibility to achieve competitive superiority. GAIL believes operational excellence is the systematic management of health, safety and environment; reliability and efficiency of people, systems, process, assets and supply chain.

As a Continually Improving Organization, we believe in raising the bars of performance levels for ourselves. With this objective, various initiatives have been taken during 2014-15, as below, for systematic improvement:

- ▶▶ Benchmarking Performance Indicators: A Benchmarking Study is being carried out through internationally reputed Consultant to identify the contemporary global benchmarks for performance in Project execution, Operation & Maintenance, Tendering & Ordering and Contract Management. The same will be set as performance yard sticks for performance during the next 3 years.
- ▶▶ Cardinal Rules: Expected baseline performance has been set for the core Departments through Cardinal Rules for ensuring consistency, efficiency and effectiveness in performance.
- ▶▶ Development of Systems & Procedures: To nurture the culture of system oriented functioning, a massive exercise has been taken up to develop Systems and Procedures & Standard Operating Procedures (SoP) for each activity that is taken up on regular basis. These Systems / Procedures / SoPs are then vetted by internationally reputed consultants so as to align with global best practices.
- ▶▶ (SOMES) TE – an advanced philosophy for integrity management of Pipelines: Integrity Management of Cross Country Pipelines is not a mere maintenance activity. It requires focus on various other elements also due to the direct impact these elements have on the integrity Management. (SOMES) TE is the technique thus developed to ensure focus on Safety, Operations, Maintenance, Environment, Stakeholders, Technology and Education.

- ▶ MCRAA - The foundation for functional excellence: Monitoring, Controlling, Reporting, Analyzing and Improvement Auditing is the philosophy that works as the foundation for the highest levels of functional excellence we are striving for. All the activities being executed will be monitored and controlled for timely completion. Further, the status / progress will be reported to appropriate levels of management through periodic reports as well as analyzed for identifying trends / issues etc. Further, improvement Audits will be conducted by the own team members to identify the lapses / deviations, if any, for taking corrective actions so that there will be bare minimum observation when the audits are carried out by Statutory / External Agencies.
- ▶ Competency Development: Education & Experience complement each other and education enhances experience. For sustainable performance, growth and competitive edge over peers, development of requisite competencies in the executives is essential. Hence, Competency Development through appropriate training / certification courses / field trips has been given top priority. The Competency Development Programme is being implemented in three stages. Base level education required at different levels / positions (eg. ASME certification course for Mechanical Engineers, NACE certification course for Corrosion Engineers etc.) at Level-1, specialized education required for specific job requirement at Level-2 and advance education required for cadre development for specialized jobs such as ILLI, CP, HDD etc. at Level-3.
- ▶ ABCDE - The 5 pillar approach: Attitude, Behavior, Commitment, Discipline, Efficiency, we believe are the enablers for change and we strive to build excellence in our systems, procedure, practices, policies and strategies through this approach.
- ▶ Encouragement for Open Communication through SLICE Portal: Open communication between employees and management is one of the essential parameters for employee engagement and thereby performance excellence. Hence to encourage employees sharing their views with management without any inhibitions, a web portal named SLICE (Suggestions – Lessons Learnt – Initiatives & Innovations – Case Studies – Extraordinary Efforts) has been developed and implemented. All the communications received through this portal are reviewed on monthly basis by a senior level committee and appropriate actions are taken subsequently based on recommendations of this Committee.
- ▶ Profit Maximization: With a view to maximize the Projects by reducing the wasteful expenditure, optimizing the operations and energy efficiency practices, Project Profit Maximization has been launched in the last year and the study is going on presently at various work sites of GAIL. The study and implementation of the recommendations will be completed by 2016-17.

Director (Projects)

Striding Towards Excellence: The Way We Strive To Grow (continue)

Health & Safety

At GAIL we place the highest priority on the health and safety of our workforce, process and assets. In FY 14-15 Health and Safety was considered as one of the material issues and it is covered separately in detail.

Asset Productivity^{G4-} DMA

Achieving and sustaining excellence in the Operation & Maintenance of the assets is the prime objective of the corporate philosophy. High standards of quality, application of current technologies and extreme diligence in monitoring and maintenance of the assets are some of the key elements of a successful O&M strategy. With these objectives, GAIL is continually improving with a renewed focus on high levels of system availability and reliability. In this endeavor, it is also envisaged to ensure that the various practices and procedures are streamlined with uniformity and consistency across the company.

As GAIL natural gas transmission and supply involves many high risk activities with many uncertainties that could adversely affect business. To mitigate risk, we look for maximizing asset performance as well as getting a better return on investment. GAIL has robust asset integrity monitoring and maintenance program.

Gas and pipeline asset management requires large linear networks consisting of hundreds of explicitly connected pieces of equipment that are geographically dispersed, managed, and located using various geospatial views into the system. Data integrity is crucial and downstream or across-stream integration is vital to the company's bottom line. The fundamental feature of GAIL's natural gas pipeline infrastructure is a single, traceable, geospatial network asset database for all natural gas

transmission and distribution assets (e.g., pipelines, compressor stations, valves, right-of-ways, etc.) in one continuous model. This unique feature delivers a connected network model of the entire natural gas transmission and distribution infrastructure, permitting integration with other corporate systems for true enterprise data sharing.

National Gas Management Center, which is the first of its kind for the gas business in India, encompasses management of entire GAIL's gas trading, transportation and LPG transmission business throughout India with the availability of live data at centralized location for monitoring pipeline parameters, delivery conditions at all major customer terminals, gas reconciliation and accounting for entire gas business. Seven Regional Gas Management Centers (RGMCs) at Mumbai for Maharashtra, Baroda for Gujarat, Rajahmundry for Andhra Pradesh, Pondicherry for Tamil Nadu, Agra for Agra-Firozabad network, NCR O&M for National Capital Region and Agartala for Tripura continuously monitor and control the gas supply quantities, quality and operational and safety aspects of the pipeline. These regional centers provide remote access to the consumers terminals and can remotely configure, control and monitor flow rate and volume of various consumers.

To ensure efficient real time management and gas nominations, delivery and allocation with accurate gas reconciliation, a Gas Management System (GMS) is also available in NGMC. GMS is a web enabled system, which integrates all the shippers, suppliers, customers and transporter of gas to provide better co-ordination and transparency in Gas Transportation business.

^{G4-DMA}NGMC is also equipped with live data of GAIL's LPG transmission pipelines namely JLPL and VSPL, thereby facilitating better coordination with Oil Marketing Companies

regarding LPG off-take rates and monitoring of the status of pipeline parameters at different segments.

In its endeavor to become a truly global company with state-of-the-art technology in all its operations and activities, GAIL has built a nerve-centre of technological excellence which will envelope all its business needs. This includes Network Management Centre (NMC), GAIL Polymer Technology Centre (GPTC), GIGALINK (IT & ERP Data Centre).

GAIL's gas pipeline systems are designed in accordance with ASME, OISD, PNGRB standards. Various guidelines under API, DIN, BS, Canadian Standards, NACE, NFPA, etc. are also followed.

GAIL is pioneering to create state-of-the-art Central Pipeline Integrity Management System (CPIMS) for pipeline integrity in India CPIMS is a systematic approach towards managing integrity of a pipeline system. The centralized, enterprise wide and computerized IMS aims to improve effectiveness of integrity management program where the data is geo-spatial as well as temporal in nature and it is online GIS based. The system is accessed, updated and utilized from across the various locations of the company. CPIMS helps GAIL to:

- ▶ Enable online integrity status of each pipeline.
- ▶ Enable online status of current threats & risks to pipeline.
- ▶ Enable online status of Probability of failures & Consequences of Failure.
- ▶ Make available online pipeline data in Design, Construction, Assessment.
- ▶ Standardize Integrity Assessment Processes.
- ▶ Compliance of the Statutory Regulations.

The key benefits of PIMS are:

- ▶ Reduction in risk of failures and associated costs.
- ▶ Increased asset utilization by reducing downtime.
- ▶ Reduction in insurance costs.
- ▶ Increased revenue by increasing economic life of the pipeline.
- ▶ Regulatory compliance for safety to environment, public and property.

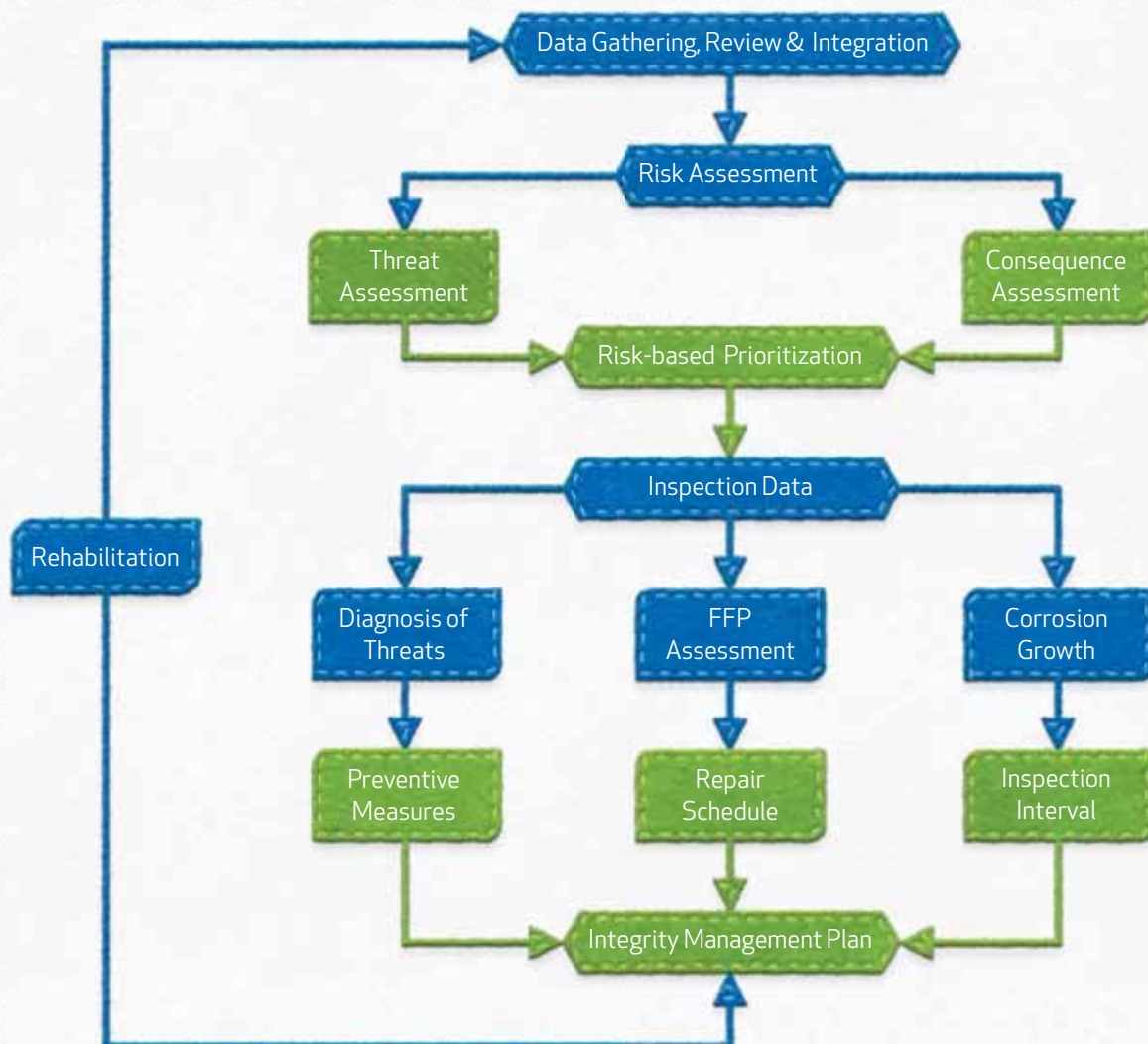
Pipeline Integrity Management System

By managing critical assets more closely, these systems are helping to improve the uptime of critical revenue-generating assets; reduce the costs of acquiring, maintaining and even disposing of assets; and ultimately increase shareholder value.

By virtue of the complexity of the process plants and a need for a better organised and streamlined production and maintenance procedures, GAIL has always put efforts to augment productivity and asset efficiency while simultaneously raising availability, reliability and safety of its asset. Efficient Asset Performance Management has always helped to meet these demands, ensuring

improved business processes and delivering value enhancement.

Some of the aspects where GAIL has taken external & internal targets in FY 2014-15 MoU and I MoU respectively, are shown below. The company periodically monitors the target parameters with respect to the achievements and for any identified gaps; the management strategies prompt actions.



Striding Towards Excellence: The Way We Strive To Grow (continue)

Petrochemical Plant Availability (Hrs)	Target in 14-15	Achievement in 14-15
GPU	8000	8598
GCU	8000	8560
HDPE-1	7500	8433
HDPE-2	7500	8754
LLDPE	7500	8077

Petrochemical Plant Capacity Utilisation (%)	Target in 14-15	Achievement in 14-15
GPU	108	113
GCU	99	103
HDPE-1	107.5	116
HDPE-2	107.5	119.5
LLDPE	102.4	101

Natural Gas Pipeline (Hrs)	Target in 14-15	Achievement in 14-15
Uninterrupted Availability of HVJ/DVPL NG Pipeline system	8751	8759.97
Uninterrupted Availability of non HVJ NG Pipeline system	8751	8759.99

LPG Pipeline (Hrs)	Target in 14-15	Achievement in 14-15
Uninterrupted Availability of JLPL LPG Pipeline system	8672	8760
Uninterrupted Availability of VSPL LPG Pipeline system	8672	8708.59



Regional Gas Management Centre for LPG Pipelines at Jaipur

Process improvement

In order to optimize processes, increase yield and reduce variability, GAIL has always been putting efforts us to optimise all our processes, identify all sources of waste, conserving resource, define the means of improvement and set a control system to maintain and sustain performance. This helps in increasing output, significant reduction in resource consumption and an increase in quality and consistency. We have developed e –sustainability module to collect and manage our sustainability related data from different units.

Business Information Systems – Towards Digital Future

GAIL as a policy matter has gone for all out Efforts on Digitization of systems much before launch of Digital India. To start with every employee has been provided with a computer. Practice of E- Tender, Introduction of E-Document Management system, E-Note sheet, Group calls & SMS, Rollout of E-Logbook, Simplification & extensive use of SAP module are in place.

e-Governance @ GAIL

- ▶ **e-Banking:** Electronic transfer of payments / receipts to / from Vendor, Customers, Employees, Govt. agencies etc. along with an e-mail Intimation.
- ▶ **e- Tender with Reverse auction:** Tenders are hosted on GAIL & NIC portals. Electronic receipt of Vendor quotations /offers for purchase of goods and services through E-Tender portal. Reverse auction also takes place for eligible tenders.
- ▶ **e-Bill tracking:** Vendor can track the status of his bill from receipt to release of payment by GAIL through GAIL website.
- ▶ **e-Ledger for Customer:** Polymer and LHC Customer can check their online statement of account through GAIL website.
- ▶ **Gas Customer Portal:** Customers can view/download their joint tickets / invoices and upload the daily nomination.
- ▶ **Customer satisfaction surveys:** Customer give their feedback on products (Polymer, LHC & Gas) bought from GAIL and their satisfaction level.
- ▶ **Employees self service Portal:** Employees self services portal for preferring and viewing various claims, applying leaves, view Salary, PF & Pension cards, loans and advances, performance planning and appraisals.
- ▶ **e-Sustainability Module:** The e-sustainability module is developed to facilitate monitoring, analysis and therefore taking measures on improving sustainability data performance of GAIL. There are three level authorization mechanisms given in the system to maintain the trail of data for entry, review & approve respectively.
- ▶ **e-Business Responsibility Reporting (BRR) Module:** The e-BRR Module is developed to capture information, case studies catering to requirements of guidelines/frameworks/ questionnaire such as GRI, CDP , DJSI, NVG etc.
- ▶ **Digital Version (Website) of GAIL Sustainability Report FY 13-14:** For first time, GAIL has developed a dedicated website for it's GAIL Sustainability Report FY 13-14 (gailsustainabilityreport.com)
- ▶ **Enterprise Business Applications running on ERP Package (SAP):** The Core business process Financials, Logistics (Sales & Purchase), Maintenance, Human Resource with Payroll are operating on SAP – ERP package.
- ▶ **Gas Management System on ERP Package (SAP):** End-to-end process for Gas business has been automated leading to transparency and avoiding manual intervention. The invoices are generated with digital signature.
- ▶ **E-Digitization system (E-Document Management System):** A centralized solution is in place for digitization of physical documents for efficient storage and retrieval.
- ▶ **GPS Based Tracking of Pipeline Patrolling:** To ensure line walk is done in intended pipeline ROU corridor only, an automated GPS & GSM based system is being implemented. Unauthorized halt, deviation from predefined route is highlighted using SMS, E-mail alerts.

Total Quality Management

In GAIL, Total Quality Management (TQM) approach has been adopted as an integrated management philosophy aimed at continuously improving the quality of products and processes to achieve customer satisfaction. At Corporate level, TQM group oversees and coordinates the quality and performance improvement activities. Major activities are:

"We understand that the focus remains towards securing energy supplies for our customers while ensuring its affordability and access"

–Director (Marketing)

Striding Towards Excellence: The Way We Strive To Grow (continue)

Customer Satisfaction and Customer Value Management:

With a view to provide a transparent and efficient system for customers' feedback and in order to evaluate GAIL's products and services for continual improvement, GAIL (India) Ltd. monitors Customer Satisfaction Index on Half-yearly basis. An online feedback system has been developed to incorporate all the performance parameters against each business area, which are considered important to our customers. During 2014-15, customer satisfaction index was ~90% against the target of 89%. As a part of Customer Value Management, 75 visits were undertaken for direct interaction with our valued customers and obtain feedback on GAIL products and services.

Quality Circle Projects

In FY 2014-15, 105 quality circle projects were completed enabling a

saving of INR 2.78 crores. Major Quality Control Projects undertaken during 2014-15 are:

- ▶ Modification in station piping at Dibiyapur compressor station to achieve fuel saving of about 2700 SCMD per day resulting in annual saving of ~INR 1.0 crore.
- ▶ HRSG drum level control at Vaghodia resulted in annual saving of ~ INR 42 lakhs.
- ▶ Cost optimization in operation of Boiler Feed Pumps for HRSG system installed at GREP-Vaghodia resulted in annual saving of ~INR 65 lakhs.
- ▶ Demand controller was installed to control KVA demand within contractual demand resulted in saving of ~INR 3.25 lakhs at investment of INR 0.5 lakhs at Hazira.

Best three Quality Circle projects each year are selected and the project proponents are suitably rewarded.

Energy Management System :

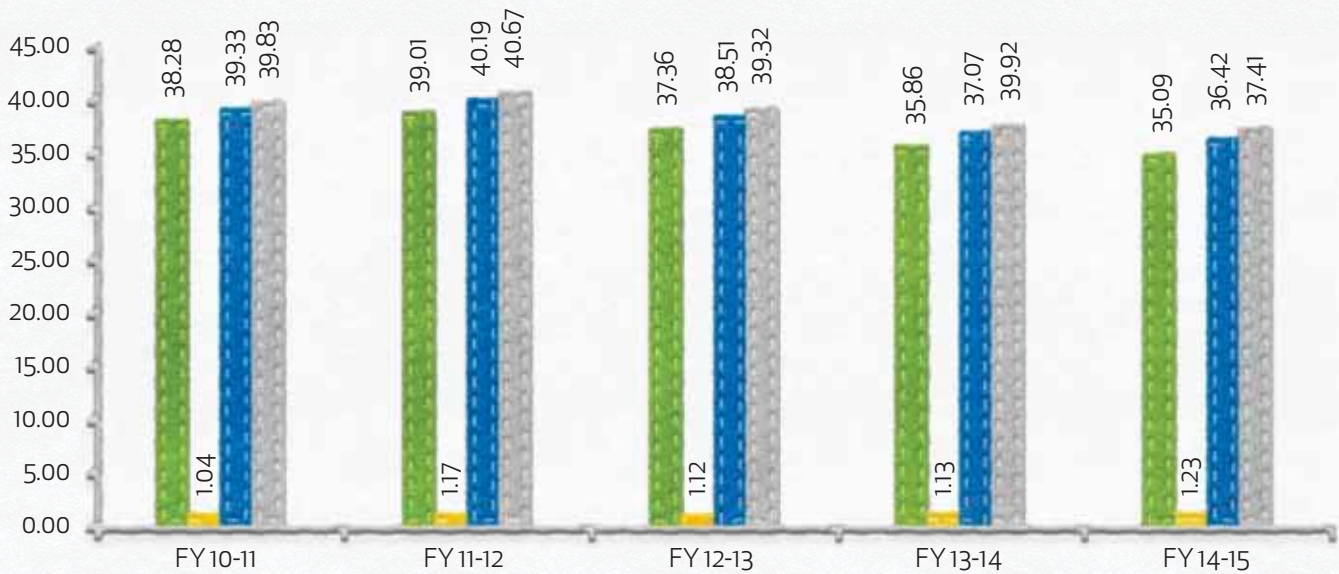
The implementation of ISO 50001 energy management system initiative was started across GAIL in a phased manner in 2013-2014. GAIL Gandhar unit received ISO 50001:2011 certification in 2013-14 and GAIL Vaghodia unit was recommended for 2nd stage certification audit in 2014-15.

Quality Management System:

TQM Department coordinates with 28 departments across Delhi, Noida and Zonal marketing offices for timely accomplishment of internal audits, certification audits, surveillance audits and effective implementation of the Quality Management System. All our major units operate with Integrated Management System philosophy and are ISO 9001, ISO 14001 and OHSAS 18001 certified.



Energy Consumption (Million GJ)



- Total direct energy consumption
- Total indirect energy consumption
- Total energy consumption (Excluding Flaring & Venting)
- Total Energy Consumption (Including Flaring & Venting)

Energy Efficiency^{G4-DMA}

For GAIL energy efficiency lies in the highest priority. This is reflected in our Sustainable development policy which focuses on improving energy efficiency across operations. We strive to capture all the opportunities to conserve energy and improve efficiency wherever possible. As we understand our responsibility to ensure supply of energy in a safe and environmentally friendly manner, we work towards increasing clean energy in the overall energy mix in our total energy consumption.

Our major thrust is on expansion of infrastructure to make cleaner and affordable energy source accessible to all consumers. We have maximized our resource value through state-of-the-art technologies, strive for energy efficiency at each level of operation and consistently deliver best-in-class performance.

In GAIL, energy conservation has been adopted as an integral part of the Operation and Maintenance philosophy. Adherence to efficient operation and quality maintenance practices in O&M has resulted in optimum energy consumption.

Additionally, it is the endeavour of O&M to constantly improve on its performance in this area. Specific energy consumption is one of the important monitoring parameters of plant performance.

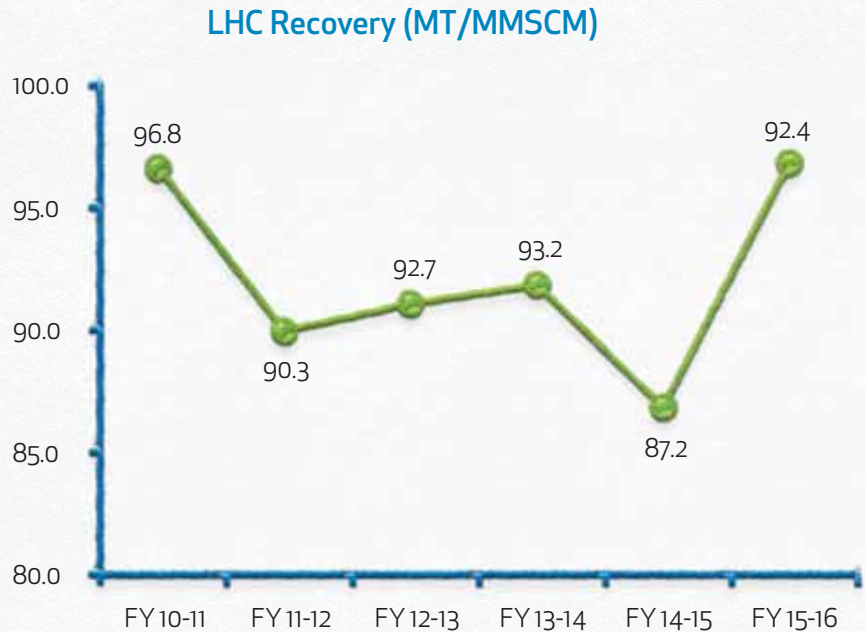
The important factors contributing to reduction in energy consumption and internal consumption are:

- ▶ Better maintenance techniques for health monitoring of the plant and equipment resulting in an increase of minimum time between failure (MTBF).

Striding Towards Excellence: The Way We Strive To Grow (continue)

- ▶ Savings in electrical energy by reducing the operation of the process gas after-cooler.
- ▶ Savings in gas consumption by using heaters (GFHs) and standby Closed Circuit Vapour Turbine (CCVT) at RR stations only when required.
- ▶ Cooling water header modification.
- ▶ Optimisation of R.G. Compressor load.
- ▶ Maximization of gas throughput and LPG recovery.
- ▶ Reduction in the number of plant interruptions due to power failure by suitably arranging power from GTG for essential loads. GTG reliability has significantly improved the plant reliability and performance.

We have also gone beyond to set voluntary energy reduction targets for



ourselves. We are committed to reduce our specific energy consumption by 5% till 2020. For achieving this target, an organization wide plan has been developed with the help of

an integrated energy management system conducting energy audits, strengthening its procedures and other technical interventions.



Natural Gas based Closed circuit Vapour Turbine replaced by Solar Power at Dibiypur Compressor Station in Uttar Pradesh

Some other energy conservation measures taken at GAIL include :

- ▶ Optimum utilization of grid power instead of captive power
- ▶ Switching over of CCVT power to Grid/Solar power
- ▶ Modification of delivery of primary compressor discharge
- ▶ PLC based burner management system in RG heater
- ▶ Optimization of purge flow to Flare
- ▶ Modification of lighting system

Each year we sign MoU with Ministry of Petroleum and Natural Gas which clearly outlines our performance goals for the next year, based on the goals we develop an internal strategy to achieve them and that calls for various process improvements to be undertaken with in the system.

Gas Processing Units	Target in 14-15	Achievement in 14-15
Weighted Average Operational Efficiency of GPU Vijaipur, Gandhar & Vaghodia	87.0	88.81

Our Initiatives

GAIL Vijaipur

- ▶ Replacement of existing air conditioners with 5 star BEE rated machine.
- ▶ Fault rectification done in power distribution feeders and motor starter feeder in VDPL sub-station and energy savings of approx. 260 kWh per year from a single feeder. Total savings achieved INR 74784.
- ▶ 80W HSPV lamps were replaced with maintenance free 43W LED lamp to save energy 37 W energy per lamp.

GAIL Dibiyapur

- ▶ Modification in compressor station piping of GTC (primary) was carried out to achieve fuel savings of about 2702 SCM per day resulting in annual savings of approximately, INR 1 crore.
- ▶ Solar power system of each 10KW rating, to replace CCTVs at 5RR stations in the pipeline system.
- ▶ Energy saving initiatives was under taken at Control & Administrative building in lighting system and replaced whole conventional tube light fittings with LED based lighting and saved approx. 3754 kWh of energy

GAIL Vaghodia

- ▶ Change in control strategy in HRSG drum level controller by considering mass instead of volume. This resulted in annual savings of INR 42.30 lakhs at zero investment.
- ▶ Cost optimization was also carried out for boiler feed pumps for HRSG system by adjusting recirculation line control valve installed at GREP-Vaghodia. This resulted in the savings of INR 65.0 lakhs at zero investment

GAIL Hazira

- ▶ Demand controller was installed to control KVA demand within contractual demand which resulted in savings of INR 0.5 lakhs.

Striding Towards Excellence: The Way We Strive To Grow (continue)

Construction of Energy Efficient Buildings for Gas Pipeline Stations

Background: GAIL (India) Ltd, in line with its vision, joined hands with IIT Delhi and has undertaken study on "Construction of Energy Efficient Buildings for Gas Pipeline Stations". Conventional design and construction approach currently utilized leads to delay and other wastages which are contrary to the stated company goals and objectives. Further, it was decided to consider innovative technologies towards design and construction of buildings, making it energy efficient. The research team envisioned the use of off-site techniques for the projects i.e. form of construction in which there is a tendency to reallocate the effort that goes into construction from the construction site into the controlled setup of a manufacturing unit.

Objectives: The project objectives are in line with the broader goal of GAIL i.e. to provide green energy throughout India. Using modelling and simulation of generic building designs and based on input received from GAIL a detailed analysis on design, construction and

operation parameters was conducted by IIT Delhi team.

The purpose of this study was to provide scientific and technical advice towards improved energy efficiency (including water) and reduced construction period for Pipeline Station Buildings (PSB) including Dispatch Terminal (DT), Receipt Terminal (RT), Intermediate Pigging Stations (IP) and Sectionalizing Valve stations (SV) for GAIL.

Research Methodology and Scope: An extensive data collection process was undertaken to develop a database of innovative technologies suitable for pipeline station buildings. Shortlisted, five technologies that were studied in comparison to the traditional load-bearing brick wall construction technique are: (a) AAC Blocks; (b) EPS panels; (c) Dry wall; (d) Solid wall panels; and (e) Rapid Wall.

These construction techniques, when utilized can significantly speed up the construction process and hence can provide an effective method for overcoming the shortfalls pertaining to the constructed buildings. Off-site construction may also avail many other advantages like better finish quality, improved construction schedule, better labor health and safety etc.

Findings: With the use of Building Information Modeling model-based constructability studies ie providing richer and more extensive as well as relevant information demanded by various stakeholders and clients and that too at a very reasonable expense of time, energy analysis, discussions with manufacturers, site visits, quantity and cost calculations, consultation with experts, and other design studies led to a detailed comparison of the technologies.

The study has reviewed several off-site technologies considering their pros and cons and after a systematic comparison between above mentioned off-site techniques, RAPID WALL technology i.e. fiber reinforced gypsum panels are pre-cut as per the design of the house so that they need to be just assembled and joined at site, found to be an eco-friendly, sustainable, cost effective and speedy construction, pertaining to prevailing conditions.

GAIL will be promoting findings of this study towards design, construction and quality norms as suggested by the manufacturer and the design consultant for their pilot project, so as to be leader amongst energy efficient companies.

Emission Management

G4-DMA, G4-EN30

Climate change^{G4-EC2} is an integral part of our Sustainability Aspirations 2020 and we are extensively focusing on managing our emissions and strive to reduce our carbon footprint. The company recognizes the significance of climate change impact on the business and monitors business risks and opportunities arising out of national and international regulations and protocols related to climate change. There is an increased thrust on using renewable energy for own operations and making it available to others as well. This is evident from our strong wind energy and a growing solar energy

portfolio. We have also set-up a Pilot Project at Ghaizpur landfill site in Delhi to capture and destroy the fugitive methane emissions for mitigating the GHG emissions. This project has also been successfully registered with UNFCCC for availing carbon credits.

GAIL R&D is also pursuing projects to reduce CO₂ emissions by utilizing the same for conversion to useful products. Three numbers of Projects are being pursued to develop catalyst for production of Syngas from CO₂ and Methane through Dry, Tri-reforming and partial oxidation route. Over 90% CO₂ conversion has been achieved with the catalysts developed in these Projects. It is planned to take up detailed analysis of these catalysts at

bench-scale to validate the results and catalyst performance. Another Project is underway to identify Algae species that can convert CO₂ to value added products.

Successful Development and adaptation of these technologies shall help in reduction of CO₂ emissions.

Promotion of Low Carbon Technology

Hydrogen is an Ultra-clean Fuel and its widespread usage shall lead to reduction of Carbon footprint. However, the advent of Hydrogen economy requires technology development efforts in its different

facets viz. Production, Transport and Storage to make it cost-effective, safe & reliable. GAIL R&D has developed a novel nano-composite material to store over 6 weight% of Hydrogen at 30 bar. The validation of the material to store and supply the desired quantities of Hydrogen is now being studied by coupling it with PEM Fuel Cell.

Another project is being pursued to develop a hybrid system for providing stand-alone power. The system comprises of a PV Cell, Electrolyzer, Hydrogen Storage and PEM Fuel Cell. The integration and testing of various components is in progress.

GAIL is also pursuing R&D projects in the area of Underground Coal Gasification (UCG) as part of Clean coal technology. UCG Technology provides various environmental benefits in converting Coal to Energy through in-situ gasification and is especially relevant for Indian Coals which are deep lying, un-mineable and of low-grade. A Modelling Framework for UCG is being developed to understand the Gasification phenomena of Indian Coal. In addition, Techno-Economic Feasibility Report (TEFR) for setting-up a Pilot Plant at Barmer, Rajasthan is being carried out.

Climate Change adaptation and mitigation is also embedded in the

company's philosophy and is an integral part of GAIL's Sustainability Policy. Climate change & environment related risks have been incorporated in GAIL's ERM framework. We have recognized climate change risks driven by changes in regulation, physical climate parameters & other climate-related developments. Every year we estimate cost of management & investments for various environment related issues appearing across our organization and substantial expenditure is incurred on Environment Protection every year. GAIL has set up portfolio of renewable businesses. Projects under clean development mechanism have been considered as climate change opportunity in GAIL. We are currently keeping a close eye on the developments in the field of climate change e.g. Intended Nationally Determined Contributions (INDC), National Regulations such as NAPCC etc. and would further evaluate its financial implications if and when found to be significant and would take definitive action on the same in years to come.

GAIL has installed state-of-the-art pollution control devices suitable for the purpose of reducing atmospheric pollution. Various technological interventions have also been installed at all our operational units for air

emissions reduction. Three continuous ambient air quality monitoring stations have been installed in Pata unit to monitor NO_x, SO_x, hydrocarbons, carbon monoxide and noise on a continuous basis. Data is continuously monitored at all stations. All emission parameters are well within the permissible limit.

GAIL has been acknowledged as one of the leaders among the CDP's India Leaders 2014 Climate Disclosure Leadership Index (CDLI). GAIL is the only Company in Utilities category among the top 22 India Leaders. This requires the organisation to disclose on the data, regarding company's carbon footprint, energy usage and climate change strategies that enables stakeholders to more easily assess the financial risks posed by climate change to companies. This further shows our commitment for effectively managing our emission portfolio.

- ▶ GAIL Hazira has initiated the process of utilizing wind energy produced by GAIL Kandla, Gujarat.
- ▶ Installation of skid for capturing seal vents gas in GTC & purchase of infrared camera at GAIL Vijaipur.
- ▶ Replacement of CFC in F&S system by aragonite at GAIL Vijaipur.

GHG Emission (MtCO₂e)



Striding Towards Excellence: The Way We Strive To Grow (continue)



Renewable Energy

GAIL transitioned from captive power producer to commercial producer of energy. As a part of GAIL's strategy 2020 initiative, out of the targeted 500 MW wind power capacity by 2020 the company has successfully set up wind power projects of 118 MW across states of Gujarat, Tamil Nadu and Karnataka.

Further, MoU has been signed between MNRE & MoP&NG for setting up for promoting development of Solar, Wind, Bio-mass, small Hydro & other renewable energy (including hybrid) projects through SPV. GAIL is one of the stakeholders in SPV, which is perusing setting up of Grid Connected Renewable Energy Power Projects.

The SPV will set-up about 1000 MW of Wind & Solar Grid Connected Renewable Energy Power Projects every year for five years.

GAIL entered into solar power generation by winning the bid to set up a 5 MW Solar Plant under the Jawaharlal Nehru National Solar Mission in Rajasthan. The project was commissioned in February 2013. GAIL also takes up various projects around solar ranging from new and innovative projects to operational excellence.

The company also forayed into the business of trading renewable energy certificates (RECs) for Tamil Nadu WEG projects where we successfully sold 10646 RECs with net revenue generation of INR 1.57 crores. These certificates have been utilised to

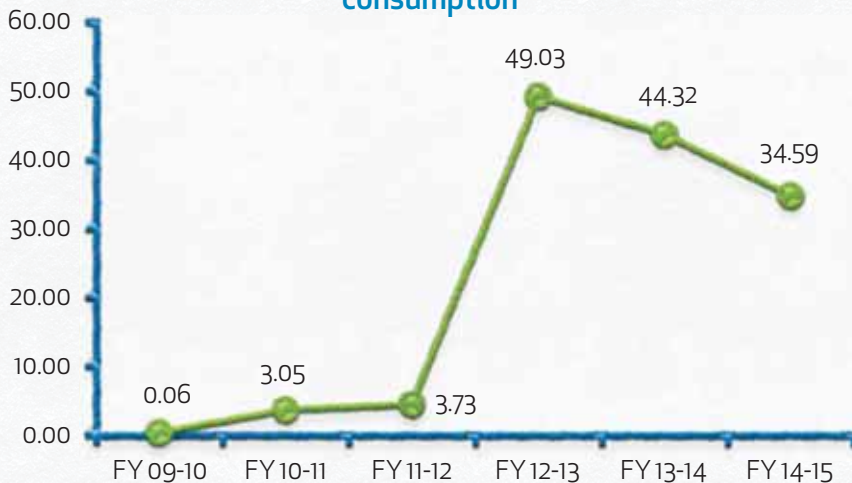
purchase renewable power obligations for 5 of its locations. 10257 non-solar certificates of worth INR 1.54 crores have been self-retained. We recognize this as a milestone in the field of renewable energy.

Further installation of a solar farm at Pata and Vijaipur is proposed with a solar developer which may reduce energy costs. The same may be developed through Energy Service Company (ESCO).

Our voluntary, 'Sustainability Aspirations 2020' have been set for reducing Specific Energy Consumption and GHG emission intensity. The revised target has been set for reducing specific GHG emission by 5% from the base year 2010-11 across our operation and progress is monitored regularly. The management is focused on the short term and long term action plan to achieve this goal. We have well established environment management systems which are dedicated to function beyond compliance levels.

G4-EN4, G4-EN17 We have estimated our Scope 3 CO₂ emissions for business travel which came out to highly insignificant as compared to Scope 1 & 2 CO₂ emissions. To further reduce our Scope 3 emissions, a total of 437 hours of video conferencing was conducted in FY 2014-15. A pilot study has been carried out to account indirect GHG emission on account of product dispatch and ~0.12 t CO₂ for FY 2014-15 has been resulted.

Renewable energy generation as % of total Grid Electricity consumption



Water Management^{G4+} DMA

Water conservation and management is described as one of the focus areas in GAIL's Sustainable Development Policy. We strive to recycle usable water with the aim to reduce fresh water intake. As a result of our efforts, units at Vijaipur and Gandhar and also NG Compressor stations, LPG pumping stations have now achieved 'zero water discharge' status.

Water intensity & fresh water consumption reduction and increase in water recycling are main focus areas of 'Sustainability Aspirations 2020'. According to the revised targets set by GAIL, we have to achieve 15% reduction in fresh water consumption

intensity. Zero water discharge at Pata is targeted to achieve by FY 2017. This would be achieved through promotion of rainwater harvesting, utilization of treated effluents within the unit premises and reduction in water losses and leakages.

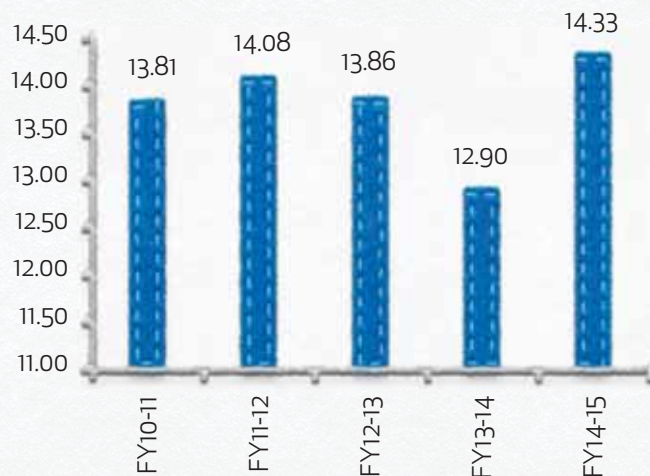
At GAIL Jhabua, challenge in maintaining sufficient greenery during summer season due to scarcity of water was faced. In order to address this challenge project '**Jalashay**' was conceptualized to collect rainwater and store it and reuse it for horticulture purpose. This was an initiative under sustainable development and was successfully completed in August, 2014. The project comprises three sections of rain water storage of capacity 0.83 million litres which is

sufficient for watering the plants and trees in the GAIL township for 90 days. It also has sprinkler setting for water the plants which saves up-to 70% of water. STP water which was earlier being used for horticulture will be conserved on use of rainwater thereby leading to electricity conservation also ultimately leading to groundwater recharging.

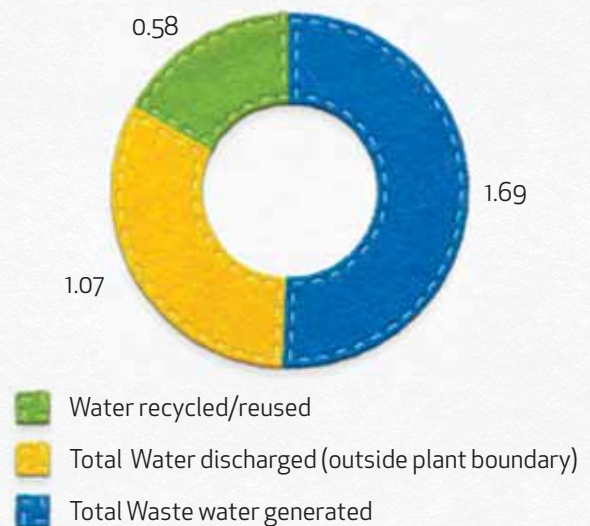
New flow meters were installed in place of non-working flow meters for better monitoring of water supply and consumption in various consuming heads and further action is taken to conserve water accordingly.

Apart from this, project 'Behti dhara' has been undertaken by GAIL at Vijaipur to capture evaporation losses and conserve water.

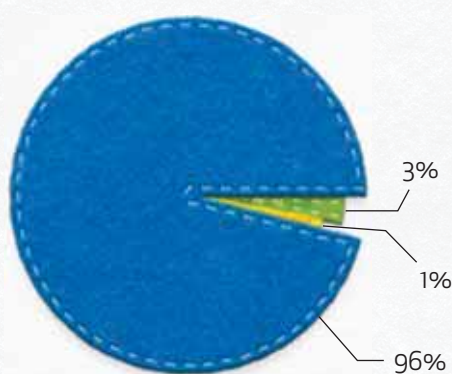
Total Water Consumption (Million m³)



Waste Water Performance FY 14-15 (Million m³)



Our Water Consumption by Source in FY 14-15



- Surface water (river, sea, lake, stream)
- Groundwater
- Rainwater
- Municipal water supply
- Water tankers and utilities

Augmentation of Existing Sewage Treatment Plant at GAIL Gaon, Pata

At GAIL Gaon Township, tertiary treatment is provided to the sewage effluents by Membrane Bio Reactor Technology. This helps in complete re-use of water for horticulture purposes in Vivekananda sports complex and green belt in GAIL Gaon. The plant is of capacity of treating 1 MLD sewage per day.

Waste Management^{G4-} DMA, G4-EN23

GAIL's commitment towards waste management is reflected in its sustainable development policy that lays much emphasis on improving waste management practices across all operations. We adhere to all statutory compliances and environmental clearances through respective pollution control boards and regular renewal of consents to operate for hazardous waste authorizations accorded. However, we also have well-established environment management systems which are dedicated to function beyond compliance levels. GAIL also represents in the FICCI Environment Committee that works on a broad spectrum of environmental issues like Municipal, Electronic and Hazardous Waste Management, Corporate Sustainability, Clean Technologies, Environment and Forest. We use knowledge and assistance from external parties like TERI for workshops and undertaking projects like that for waste management.

E-waste Management

GAIL is committed to fulfill responsibilities of bulk consumer for compliance to E-waste (Management & Handling) Rules, 2011, MoEFCC. The actions for environmentally sound disposal of E-waste generated have

to be in line with the said Rules. In this regard following systemic procedures is being implemented:

- i. All the concerned departments maintains a record of E-waste generated at site/department.
- ii. The inventory of E-waste is maintained as per E-waste Rules.
- iii. The E-waste is disposed off by
 - a. Buyback of E-waste against supply of new electrical and electronic equipment.
 - b. Return of the E-waste to the respective producers.
 - c. Sale to MoEFCC, CPCB/SPCB authorized recyclers.
- iv. E-waste management became part of safety/environmental audits.

GAIL Vijaipur enlisted the services of local treatment, storage, and disposal at Pithampur (MP) for solid hazardous waste as per industrial best practices. Temporary storage site for such waste has also been clearly demarcated. Under Plastic Waste Management Rules, GAIL Vijaipur has completely banned plastic carry bags of less than 40 microns in its facility as well as in its township. Further, a Plastic Waste Committee has been constituted to look after its effectiveness and is empowered to fine those retailers / contractors who are caught flouting this particular restriction.

Across locations we are not involved in any activities related to transporting, importing, exporting or treatment of waste deemed hazardous under Basel Convention. ^{G4-EN25}

Oily sludge management

GAIL follows an approach of reducing waste as a part of its responsibility towards environment and society. Waste management has emerged as a critical issue posing long term impacts on the environment. Also, hazardous

waste categorization in Schedule-I of The Hazardous Wastes (Management Handling and Trans-boundary Movement) Rules, 2008 clearly states that oily sludge emulsion and slop oil from waste water treatment plant are one of the hazardous wastes of a petrochemical industry.

Pata plant has a WWTP to treat industrial water in such a way that it acquires the contents within the specified limits as per legal authorities. This plant treats the industrial waste water produced from all the units and maintains the specification as prescribed by the pollution control board before it discharges the effluent into the river.

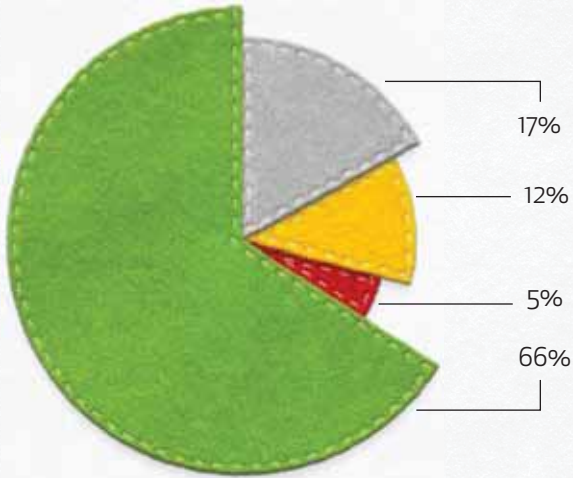
Background - With the increase of polymer production, waste water generation has also increased. These increased waste water & contaminated rainwater from different parts of plant catchment area is being collected into surge ponds through Oily Water Sludge (OWS) via MRS. This part of effluent water is then gradually & suitably treated in Wet Weather Flow (WWF) system of WWTP.

With the help of this system, major part of free oil along with the sludge is accumulated and stored in surge pond during unavoidable transfer of Oily water Sludge from MRS by intermittently running of high capacity screw pump. However the oil and sludge remained entrapped / accumulated in surge pond as a waste. This resulted into the accumulation of hazardous waste over the years.

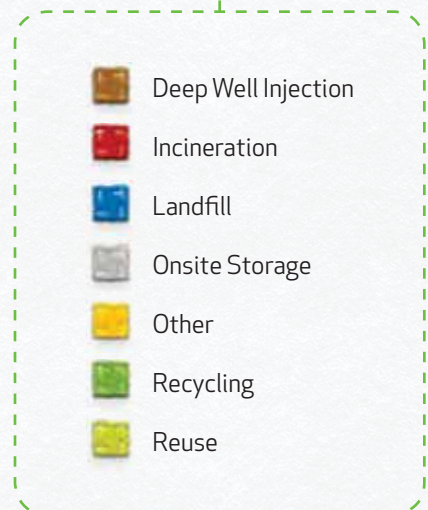
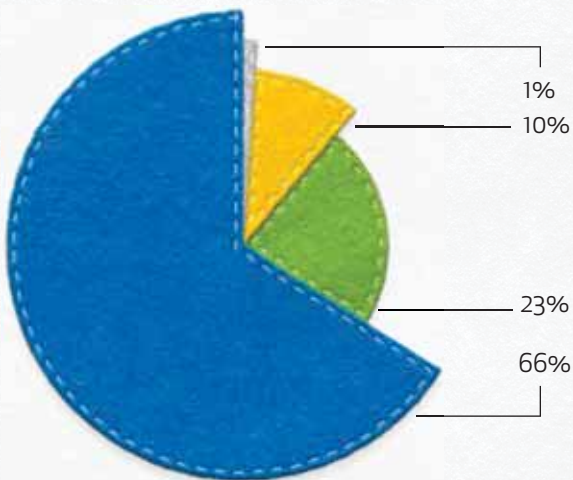
Solution - A simple technological intervention was taken to address the problem. A horizontal centrifugal pump was installed with priming arrangement the suction such that suction of proposed pump shall be lower enough to ensure that only water is drawn while the existing screw pump scraps the maximum oil along with water in its flow system. The discharge of the proposed pump is fed in the train of Wet weather System (WWS). With this modification surge pond could be spared for cleaning purpose.

Result - In the reporting year 5508 MT of oily sludge was uplifted.

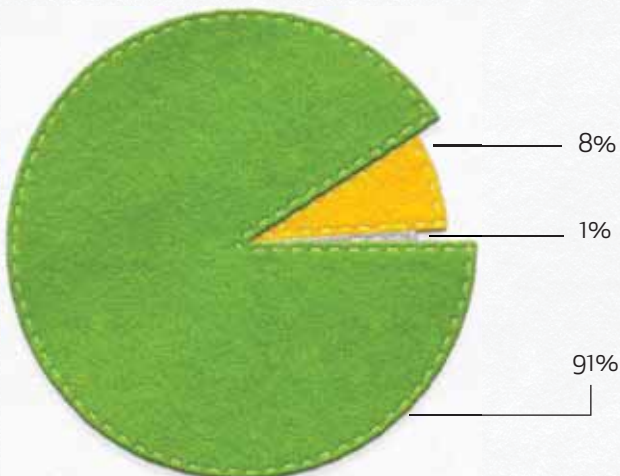
Solid Waste in Numbers by Disposal Method FY 14-15



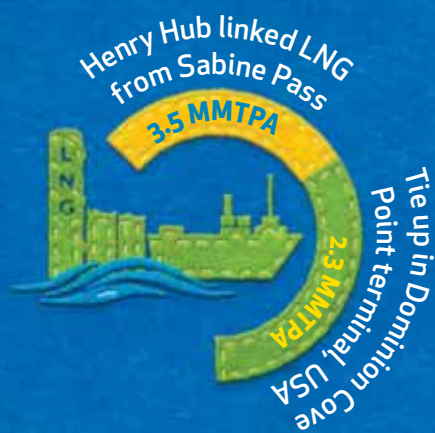
Solid Waste by Weight by Disposal Method FY 14-15



Liquid Waste by Disposal Method FY 14-15



Transforming Our Business Approach: Safeguarding Our Growth



Imported
23 LNG Cargoes



GAIL sells around

67%

Natural Gas

sold in the country





A country's economic growth is closely correlated to the energy demand. India is in transition. It is moving from a planned economy with extensive central controls, to one based increasingly on the operation of market forces. As a leading player in the gas sector in India, GAIL is well-positioned to play an important role in the fast-growing energy sector in the country.

Transforming Our Business Approach: Safeguarding Our Growth (continue)

India has emerged as one of the fast growing economies in the world wherein the energy sector holds the key in accelerating country's economic growth. By 2025, it is expected that China and India will emerge as biggest energy consumers after US. The rapidly growing industrial base, urbanization, as well as improvement in the standard of living have widened the gap between energy demand and supply.

Natural Gas Scenario and Challenges for GAIL

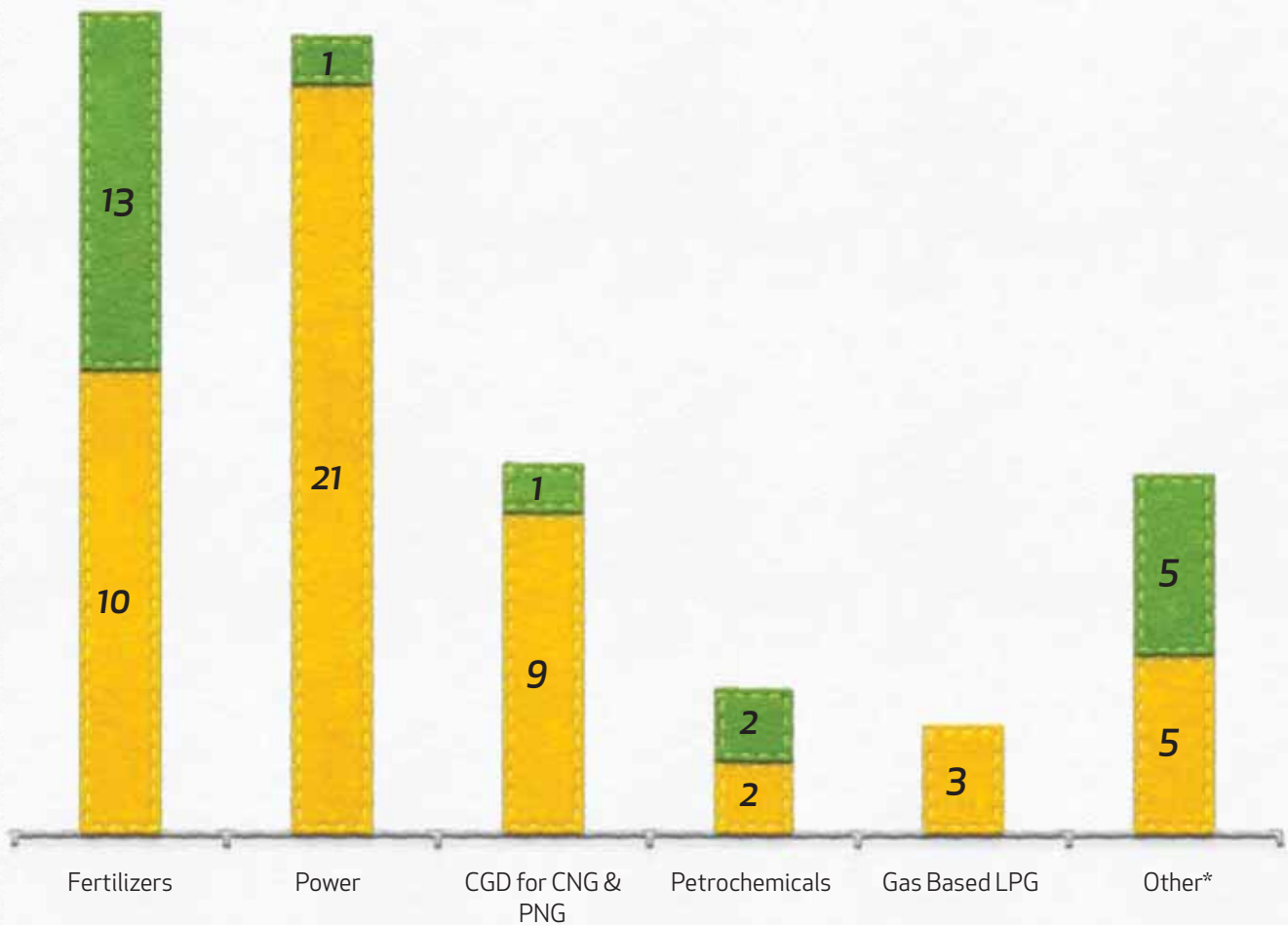
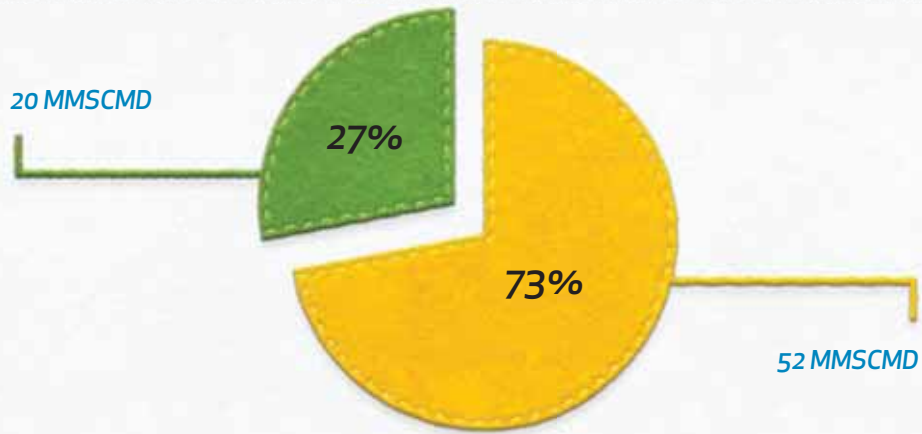
India meets its Natural gas requirement through Domestic Natural Gas and Imported Re-gasified Liquefied Natural Gas (R-LNG). Keeping in view the shortage of natural gas in the country, domestic gas is allocated to various sectors based on the Policy Guidelines issued by the Government from time to time. In case of imported gas, the marketers are free to import LNG and sell the R-LNG to customers. In recent years, Indian natural gas sector has faced significant downturn due to low availability of domestic gas. According to recent BP Statistics, India has shown decline in gas production by 5.9 % and in gas consumption 1.5 % in 2014 compared to previous year. India's production and consumption of natural gas for the year 2014 has been 31.7 and 50.6 BCM respectively. India's natural gas consumption has consistently exceeded domestic production. With sluggish domestic production and persistent demand growth, India is becoming increasingly dependent on LNG imports. Historically, LNG imports have helped to meet the rising demand supply gap. For the year 2014, India imported 37.41% of its natural gas for domestic consumption.

Indian energy sector is going through a critical phase and is facing several challenges. The industry and the nation at large would need to make choices to address key issues like volatile prices, global linkage of raw material prices, limited domestic availability of gas, LNG market dynamics including availability at affordable prices for Indian market, importance of efficiency across the value chain, alternate energy developments, evolving regulatory framework and policy guidelines, downstream market reforms, changing competitive landscape, etc. Also, globalisation has meant that our energy markets are more and more linked to global markets. The uncertainty caused by such factors in the oil and gas sector will continue to pose newer challenges. This will require significant scaling up of capabilities, and doing that in an effective and long-lasting manner will be another key challenge for GAIL.

After three years of relative stability, oil prices have fallen sharply since mid-2014. Global natural gas markets have already felt some impact from the slide of oil prices. Gas prices in some markets are contractually tied

Gas Sourcing and Sector Wise Supply

Percentage (%) share of Sectors



Domestic

R-LNG

(* Others include sectors like Steel, Refinery, sponge iron etc.)

Transforming Our Business Approach: Safeguarding Our Growth (continue)

to oil prices. India relies heavily on imports to satisfy its demand given relatively limited domestic production. To ensure security of supply, most Asian buyers relied principally on long term contracts, largely indexed to oil prices. Recent fall in oil prices directly impacts the Asian gas price pushing it significantly lower. In such a scenario, long-term contracts become uncompetitive while the spot market becomes attractive due to fall in spot LNG prices. GAIL is currently facing new challenges in growth of revenue and profitability. This year, the Gas Marketing segment registered a decrease of INR 910 Crore in profitability.

The company has also been facing headwind in terms of growth of trading and transmission volumes due to substantial fall in domestic gas, lower off take of R-LNG due to higher price and LNG regasification infrastructure constraints among other issues. There is also no visibility on the upside in availability of domestic gas volume in the near future. Also, due to declaration of geographical areas by PNGRB, GAIL is unable to extend Last mile connectivity / CGD connectivities in various areas. Tariff revisions by PNGRB on a retrospective basis have impacted GAIL by INR 440 Crore.

Our Initiatives for Natural Gas Marketing

GAIL is continuously focused in its effort to manage the risk and exploiting the opportunities from the uncertainties of the international market. GAIL has developed a Long-term Import Portfolio of 24 MMTPA. During 2011-15, 75 spot/mid-term cargos have been imported. To reduce the growing demand-supply gap of natural gas, GAIL has also signed several long-term LNG contracts, notably 3.5 MMTPA Henry Hub linked LNG from Sabine Pass, USA and 2.3 MMTPA capacity tie-up in Dominion Cove Point terminal, USA. GAIL has also tied-up 2.5 MMTPA LNG from Gazprom – Russia and is an active partner in TAPI pipeline project, wherein it has already signed the GSPA with TurkmenGaz for importing 38 MMSMCMMD of gas from Turkmenistan. GAIL has also commissioned 5 MMTPA Dabhol LNG terminal as “Owners Engineer”. Further, discussions are on with M/s Adani Ports and Special Economic Zone Ltd (APSEZ) for equity participation and booking of capacity in the proposed regasification terminal at Dhamra port in Odisha.

GAIL has also been trading some of its LNG portfolio in the international

market through its Singapore Subsidiary in line with globalization ambitions. We are also focusing on making upstream investments in gas assets, liquefaction facilities and LNG shipping to build a presence in the entire LNG value chain. We imported 23 LNG cargoes during this year from various international sources on short term as well as spot basis to meet immediate domestic gas requirement.

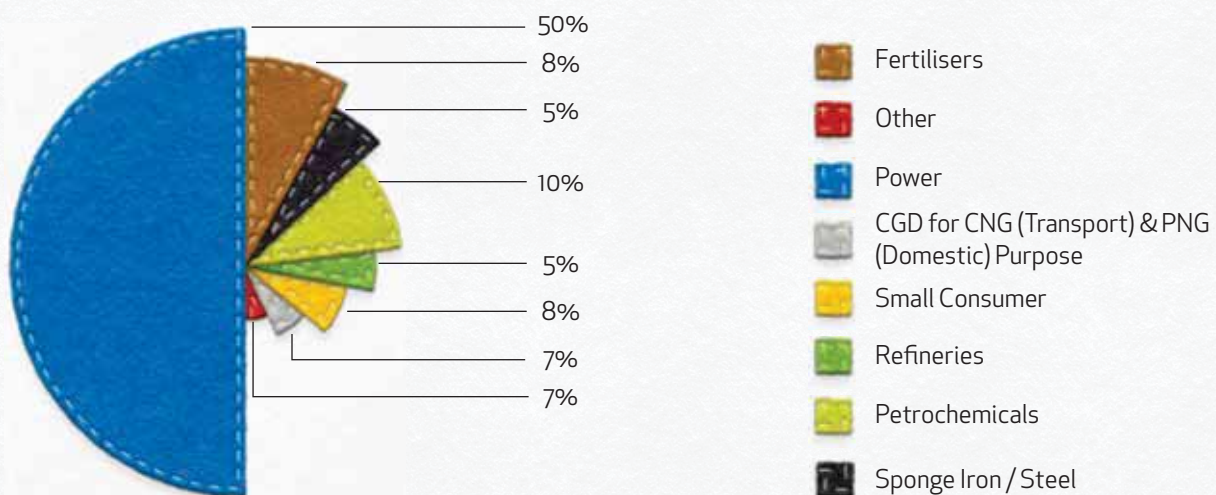
Further, with greater impetus given to the CGD sector by the Government, we are expanding our CGD and PNG network to cover various cities supplying gas for domestic consumers, public transport, and commercial/ industrial entities.

As India's leading Natural Gas major, GAIL has been instrumental in the development of the Natural Gas market in the country. Today GAIL is the flagship natural gas company of India with around 67% market share in natural gas marketing. GAIL is supplying Natural Gas to customers across India. GAIL has adopted Gas Management System to handle multiple sources of supply and delivery of gas in a co-mingled form and provide a seamless interface between shippers, customers, transporters and suppliers.

GAIL Domestic Gas Sales 2014-15 (%)



GAIL Imported Gas Sales 2014-15 (%)



The potential for growth of the natural gas market in India is tremendous. However, this is a very price sensitive market as the ability of customers to pay differs between sectors. The power generation and fertiliser sectors are the main consumers. Fertiliser producers are subsidised by the government and have limited ability to absorb higher prices. In the power generation sector, gas has to compete against coal for base-load generation. Any change in the fertilizer sector, power sector or in coal markets will have a significant impact on future gas demand.

"With growing profitability challenges with changing business dynamics, it is necessary to look within and explore opportunities to drive down the operational cost and increase system efficiency. Decreased domestic availability of gas, reduction in gas transmission volumes and tariffs, fall in commodity prices of liquid hydrocarbons and polymers has posed challenges to maintain growth in profitability levels. In such a situation, profit maximization project viz. Project 'Sanchay' is a step in this direction that aims at improving profitability across business segments."

-Director (Finance)

Transforming Our Business Approach: Safeguarding Our Growth (continue)



Petrochemicals – Scenario and Challenges for GAIL

According to a recent report by Platts, India's petrochemical demand growth is expected to register annual growth of 7.7% over next ten years. However, the per Capita consumption of plastics in India is only 9 Kgs whereas global average is 30 Kgs and China averages almost 40 Kgs. Hence, it is expected that India will witness major expansion in capacity and consumption of plastics in next four-five years.

Like Global polymer industry, Indian polymer industry is dominated by Polyolefin (Polyethylene – PE and Polypropylene - PP) which represent about 65% of the total polymer capacity and production in India. LLDPE and HDPE constitute approx. 85 % of PE consumption

and GAIL is significant player in this segment. Indian LLDPE / HDPE segment is primarily dominated by imports accounting for about 30% of total market share. In contrast to PE segment, Indian PP segment has surplus capacity and currently produces almost 4,060 KTA and exports the excess volume.

At present, GAIL is in the process of doubling the capacity of its Pata Petrochemical Plant to 810 KTA. Further, Brahmaputra Cracker and Polymer Ltd. (BCPL), a JV between GAIL, Numaligarh Refinery Limited (NRL), Oil India Limited (OIL) and Government of Assam, is setting up a plant in Lepetkata, Assam which will produce a 220 KTA PE as well as 60 KTA of PP. GAIL is also a Joint Venture partner in the Greenfield petrochemical project OPaL being set up at Dahej in Gujarat.

"The year has been challenging for the industry as well as the company. Business dynamics have changed with fall in domestic gas availability creating greater dependency on higher priced RLNG. Higher feedstock cost coupled with falling polymer prices has depressed the profitability of petrochemicals segment. As we gear up, we look forward to the continued support and trust of our stakeholders in these testing times."

- Director (Marketing)

Our Initiatives for Petrochemicals Marketing

We are working on developing our network of Consignment Stockists and empowering our Zonal offices for immediate response to market dynamics to absorb the additional capacities. Further, GAIL is also analyzing product and logistics optimization for existing capacities. We are in the process of doubling its our distribution network, going for feeder warehouse in the major consumption centers, augmenting the manpower including technical expertise, etc. for export and regularly engage with the overseas bulk buyers. In addition, Project **Sanchay** for maximization of profits for Polymer products is under progress. Steps are also being taken to develop the capabilities of the team.

In view of the drop in crude oil prices, sourcing of cheaper raw material will

be very important for which GAIL is already taken actions. GAIL is taking various actions viz. securing cheaper Spot R-LNG and long term for Ethane import to take care of this. GAIL is doing pricing of its polymer products on import parity prices in line with the industry practice. The increase in Import duty on polymer is having positive effect on domestic polymer products and also on GAIL.

Considering the growing consumption, proper disposal of plastic waste is also essential to address the environmental concerns by all the stakeholders involved such as raw material manufacturers, processors, common public, municipalities and various govt. agencies. GAIL is committed towards producing a quality product with creating, maintaining and ensuring a safe and clean environment. GAIL's polymer products are environment-friendly and fully recyclable. GAIL provides a wide choice of grades with consistent and reliable quality to its customers. Its manufacturing

processes and quality systems ensure that the products conform to the technical specifications, backed by high quality services to provide complete solution to the customers. GAIL endeavors to develop new areas of polymer application in line with government thrust areas such as to address the issue of water scarcity and its importance for agriculture, GAIL has focused in developing polymer which can be used in Drip Irrigation. It is also developing new grades in the GAIL polymer Technology Centre which will not only increase the market share of GAIL's HDPE in extrusion coating but will also protect the existing HDPE raffia market share in Domestic market.

GAIL is also under the process of conducting training of youth from under privileged background by imparting residential training through CIPET at Bhubaneswar, Ahmedabad, Hyderabad & Guwahati.



Human Capital: At the Core of Our Growth



e-Learning portal:

Association with Harvard Business Publishing with a customization of Harvard Manage Mentor



FOUNDATION DAY



GAIL (India) Limited

32nd Foundation Day

GAIL *Utsav*



At GAIL we truly believe that the employees are the pride and the strength of our organization. The employees, through their unrelenting dedication and loyalty have been instrumental in achieving and exceeding our business objectives and milestones.

Human Capital: at the Core of Our Growth (continue)

Human Resources Challenges in the Present Business Context

Energy security remains a strategic priority for India. Earlier in 2013, Petroleum Ministry unveiled its plan for to make India energy independent by 2030. India is currently the world's 9th largest economy with a US\$2.06 trillion GDP. The country's oil and gas sector has contributed significantly to the Indian GDP, and the sector is expected to become increasingly critical for India's economic development. Anticipated business growth in the sector is contingent to the availability of skilled manpower in the country. The sector is likely to require more professionals in the next couple of years due to retirement, attrition and business growth. Core functions are likely to account for major share of required manpower. The upstream sector is expected to see the maximum shortfall of Human Resource on account of high numbers of retirement. In the downstream sector like refining and petrochemical sectors are going to face strong requirement of professionals as these sectors are witnessing substantial capacity additions. Further CGD & marketing sector is also going to see additional manpower requirement due to exponential growth in pipeline infrastructure and the network. Manpower projections studies for the oil and gas industry also predict a substantial demand for skilled oil and gas professionals in near future.

The sector needs to tide over the challenges of attraction and retention efficiently to support current operations and accomplish the planned growth. Planning for the sustained availability of a competent workforce is the universal challenge faced by all sectors of the oil and gas value chain. Upstream talent shortage and ageing workforce is a critical issue presently being faced by global as well as Indian upstream industry. The industry is especially constrained with shortfall of manpower with specialized skills such as in reservoir engineering or with experience of developing unconventional gas assets.

"With the immediate challenges foreseen in Oil & Gas business, we at GAIL need to see that our valued human capital is at the core of our business growth. It has become even more imperative for us to hire, train and develop our human capital in alignment to our identified business goals, objectives and future leadership positions. It is also important to keep them in preparedness for meeting the business challenges, emerging regulatory issues, shift in national priorities and demands of new business segments."

- Director (Human Resources)

Changing Approach towards Talent Management^{G4-DMA}

At GAIL, human capital is considered to be as the most valuable asset that account for the most important reason for the success or failure of

the organization. The financial capital, technology or processes of the organizations, by themselves, cannot accomplish organizational goals as these resources depend on human resources.

The company has continued to exercise its both options i.e. to hire and train fresh graduates and to hire experienced people with required skill sets for instant capability utilization.

With the boom of unconventional methods in exploration and production, requirement of fresh competencies has arisen and it has got an edge over the conventional ones. With shale gas discoveries and production worldwide, particularly in the United States these unconventional competencies became real incentive for organizations.

The company has been carrying out regular assessment of required manpower and accordingly continued to build the capacity and capabilities in the specialized areas to tackle diverse business needs in Sourcing, Mergers and Acquisition, Trading, Power, Shale Gas, Shipping etc. Further actions are being taken to strengthen the existing capabilities in Upstream, Contract, Project, Regulatory & Risk Management, etc. Emphasis has been given to form a cross functional team for areas where multiple skillset is required. The company has rolled out Competency Mapping to benchmark and improve performance standards. Focused training programs have been planned for capability building in existing areas. Advanced training programs are to be organized for selected group of executives in strategic business areas. Several initiatives have been taken

by GAIL to strengthen its Knowledge Management System.

Recruiting Right Talent

GAIL HR Strategy is aligned with its core business objectives. The role of HR personnel is becoming increasingly challenging due to the talent-crunch in the sector. GAIL HR has deployed rotational program that includes different assignments to ensure availability of an adequate talent pool for leadership roles. Besides the focused and intense in-house training system, the company also looks toward outer world to gain new capabilities.

Transparent selections on merit basis is the hallmark of company's recruitment policy. Objective of the company's Recruitment policy are:

- ▶ To plan the manpower requirements and budget the requirement of requisite human resources with necessary qualifications, skills, aptitude and experience etc.
- ▶ To regulate and facilitate recruitment and selection of suitable human resources in the Company.

- ▶ To focus on the proper placement of employees in jobs to which they are best suited taking into account their qualification / experience, and aptitude etc.

The company has a well-planned system of Human Resource Planning (HRP) both at corporate and unit level. The non-managerial and non-supervisory level posts are normally filled at unit level, whereas the executive level posts are filled centrally. Presently the e-Recruitment system is followed wherein the posts are advertised at company's website and candidates are applying online. Further, recruiting right talent is carried out through different mediums such as open recruitment, lateral hiring in critical areas, engagement of experts / advisors, secondments/ deputation etc. in line with the HR plan. Experienced talent is targeted for mid and senior level positions through lateral hiring.

New Hires in 2014-15^{G4-LA1}

	Male	Female	Total
New Hires in 2014-15	300	14	314

Retaining talent

Human Resources' Department continuously engages with the employees through formal and informal mediums. The Company believes in philosophy of optimum utilization of manpower and the Human Resource Planning (HRP) is given attention of highest order. Company also ensures healthy work life balance. The principles of Total Quality Management (TQM) are implemented in all processes of the Company which also include the Human Resource Management (HRM).

Some key initiatives taken up by GAIL to boost employee retention includes freedom of expression of thoughts and ideas through a number of communication channels like CMD Openhouse, Online Grievance Redressal Mechanism, Suggestion Scheme; Due recognitions to Long Service and Women Employee Awards, and competitive compensation and benefits. We also aim to promote the values of diversity and inclusivity throughout our workforce. The overall success of our HR policies is evidenced by our low attrition rates.



BP Statistical Review, 2015 Presentation

Human Capital: at the Core of Our Growth (continue)

Employee Turnover in FY2014-15^{G4-LA1}

	Male	Female	Total	
Employees separated	66	3	69	
Age Profile of Employees Separated	<30	30-50	>50	Total
	34	9	26	69

Employees Returned to Work after Parental Leave (for FY 2014-15)^{G4-LA3}

	Gender	No.s
Number of employees entitled to parental leave	Male	4010
	Female	255
Number of employees that took parental leave	Male	117
	Female	14
Number of employees who returned to work after parental leave ended	Male	117
	Female	14
Employees returned to work after parental leave ended who were still employed 12 months after their return	Male	133
	Female	11
Retention rates of employees who returned to work after parental leave ended	Male	100%
	Female	93%

Performance
Appraisal^{G4-LA11}

GAIL has designed a very rational system of Performance Appraisal and Development (PAD) Reporting. An open system is followed in the Company where the employee gets a chance of self-appraisal and development. Promotion system in GAIL is based on a system which is a combination of both meritocracy and seniority. 100% of regular employees are receiving regular performance/ career development reviews.

Training &
Development<sup>G4-DMA,
G4-LA10</sup>

Training and development of human resources at GAIL is one of the primary concerns to the Company and it invest a lot of money, time and other resources to take care of this issue.

The core areas of Corporate Governance which the Company intends to follow in the modern business environment include rigorous, planned and scheduled training to its employees.

GAIL believes training and development is necessary for knowledge and skill upgradation of employees. It provides an opportunity to learn the new things and refresh the old. The company has a structured process for training and development for the employees to ensure a workforce that is suitably equipped with knowledge, skills, attitude and practical exposure to highly specialized jobs. Our GAIL Training Institute (GTI) set up in the year 1997 at Noida is an ISO 9001 certified facility that provides resources and facilities for all kinds of training to our employees. To cater to maximum employees into this process, we have increased our infrastructure by setting up another GTI in Jaipur in 2005.

In FY 14-15	Hours
Average Hours of training per year per employee -male	41
Average Hours Of training per year per employee -female	38

Other trainings are also carried out at GAIL which includes trainings on soft skills, motivation, functional aspects, health, safety, environment, human rights etc. Training on health and safety policies and procedures of the organisation has been one of the parameters of Internal MoU of GTI and 300 Man-Days were devoted for imparting training on Health, Safety & Environment related Training Programs organized at GTI and external training programs within India. An expenditure of approximately INR 8.5 lakhs was incurred for trainings with respect to environmental education.



Employees who received safety and skill up-gradation training in FY 2014-15

Permanent Employees (Total)	94.5%
Permanent Employees (Male)	95%
Permanent Employees (Female)	96%
Casual/ Temporary/ Contract Employees	25%
Disabled Employees	91%

Apart from these scheduled trainings, employees are also imparted inputs regarding Safety & Skill upgradation in functional areas and behavioral aspects through e-knowledge sharing programs, online Quizzes and Competitive events organized on various occasions.

In addition to formal and structured training, we offer on the job training to our workforce that motivates them to perform better and in turn contribute to their success and our growth. This is a major factor in retaining our talented professionals for a long duration. GAIL HR team has formulated a rigorous and effective Induction cum Orientation

Training Program for fresh recruits i.e. Executive Trainees.

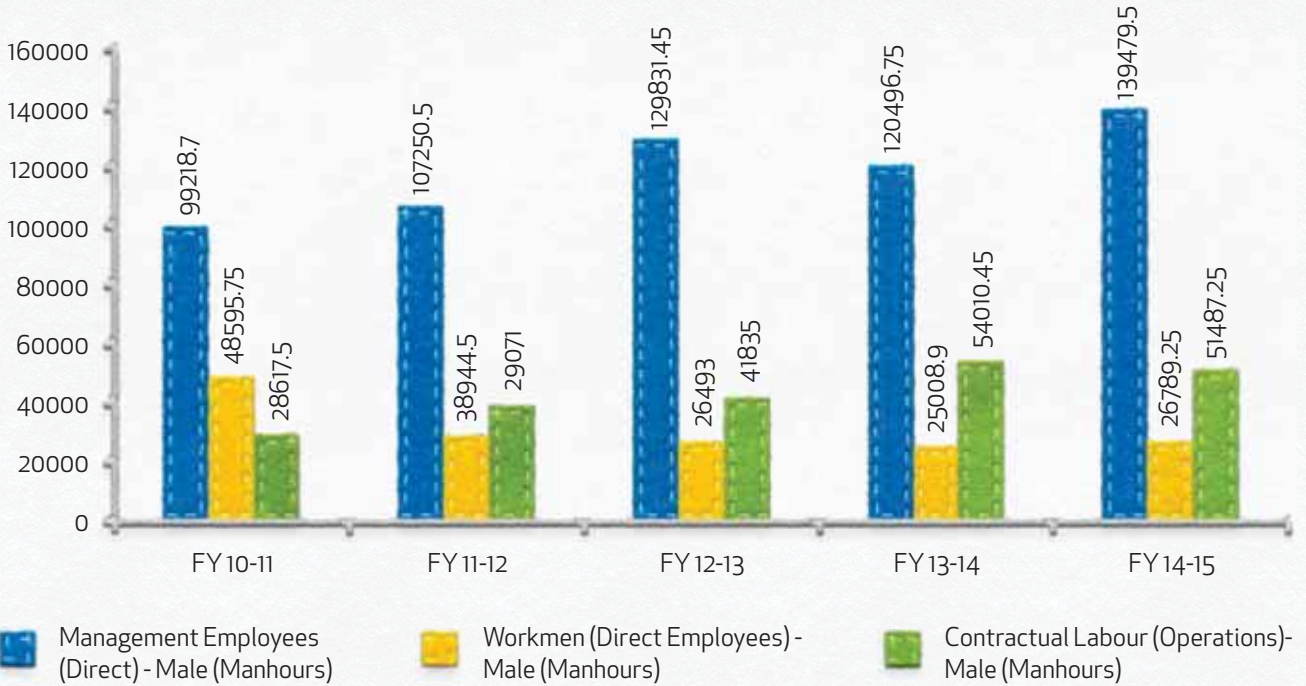
Training programs for skill management and lifelong learning that support the continued employability of employees are organized at GAIL Training Institutes. Training programs on skill enhancement and capacity building are the focus areas of top management. Skills are further sharpened through training programs designed for different levels of employees. Apart from this, cross-functional training programs are also organized as a routine wherein participants from cross-functional areas are enabled with the basic

knowledge of other functional areas. Further, for new business areas, training modules have been developed focussing on E&P activities, Hedging, Shipping among other areas.

We also realise the need to be future ready and are constantly building our succession planning. With the aim of developing leadership, programs are conducted for executives at senior levels. In order to assess the talent pool at senior level, executives are made to undergo development centres. Developmental gaps identified through this process are mitigated through executive development programs, job rotation and higher responsibilities.

Human Capital: at the Core of Our Growth (continue)

Average hours of Training

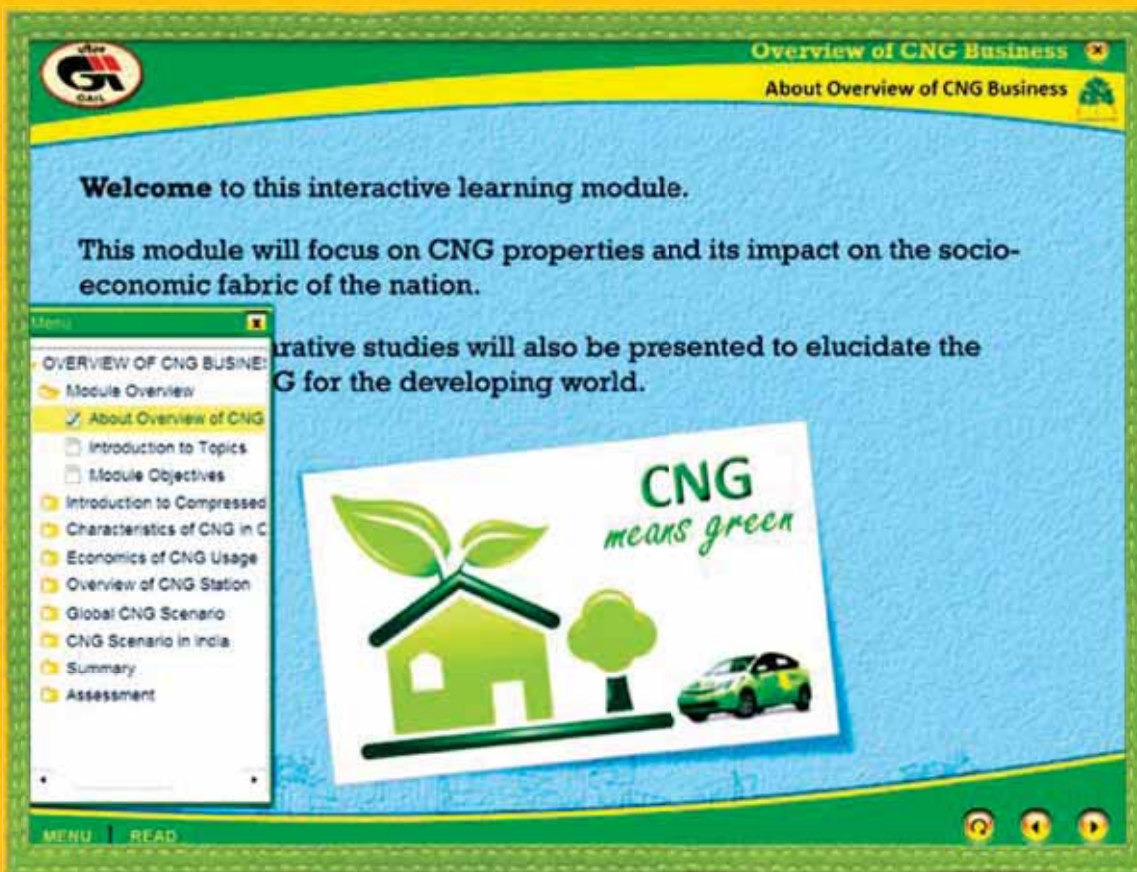


Some of the significant initiatives taken for human resource development by our company in the year 2014-15 include:

e-Learning initiatives at GAIL

e-Learning initiatives have been one of the most innovative training and development initiatives taken up at GAIL. These are available to our employees in three forms:-

1. e-Learning portal (e-Gyan Prawah): This portal has been developed in association with Harvard Business Publishing with a customization of Harvard Manage Mentor based on key areas of developments identified during Senior Management Development Centre exercise.
2. e-Learning Module on CNG Business Overview: This e-learning module is of one hour duration and uses interactive platforms and animations to keep the module interesting. At the end of the module an assessment exercise is presented to the participant.
3. Executive Trainee (ET) Online Monitoring & Assessment System: is used for tracking the progress made by the ETs.



Dynamic Regulatory Landscape: Harnessing Opportunities for Growth



Compliance of Statutory
Regulation in last
3 Years





Shri K D Tripathi, Secretary, MoPNG interacting with Top management at GAIL C.O.

Organizations across a wide spectrum of sectors are coming under the regulatory purview today more than ever before. New laws, regulations and public expectations have pushed governance and compliance even higher up the organization's agenda. We believe in adapting ourselves to the foreseen regulatory environment, strengthening our systems while we grow.

Dynamic Regulatory Landscape: Harnessing Opportunities for Growth (continue)

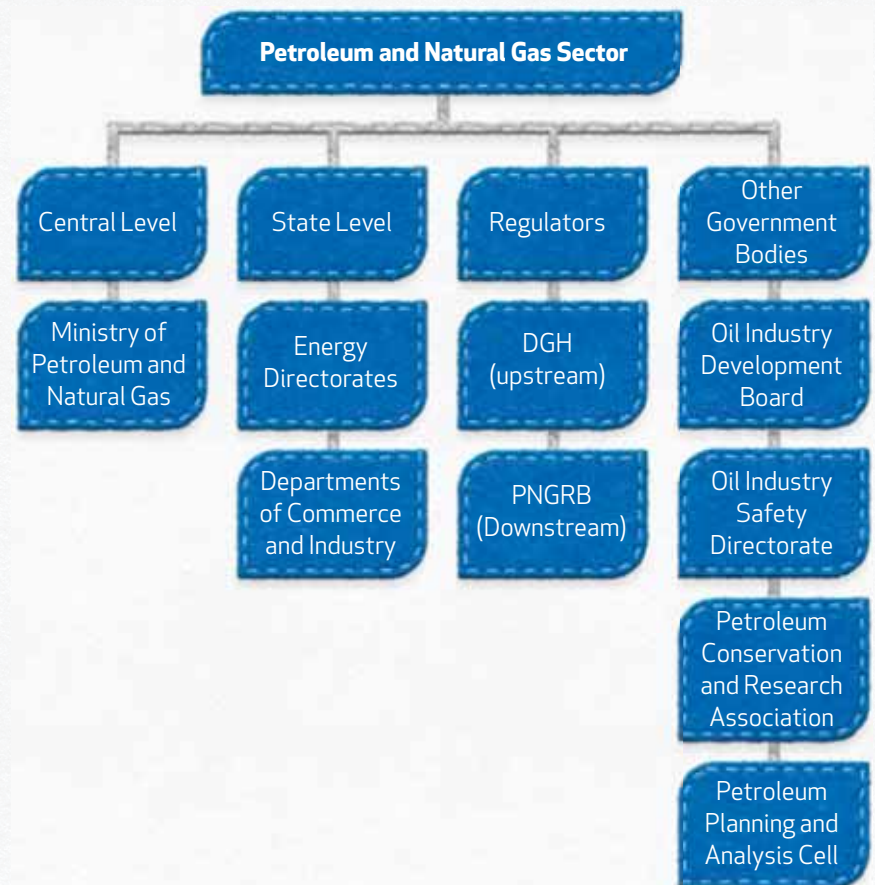
An enabling regulatory environment plays a crucial role in development of a sector while ensuring cost and time effectiveness and maximum benefits to all stakeholders. Development of competitive natural gas markets and attracting investments in development of infrastructure requires appropriate regulatory framework which supports market development. Our effective and robust governance and reliable compliance tools in the organization ensures tapping of opportunities from the changing regulatory landscape.

Aspects Pertaining to PNGRB Regulatory Framework

From a regulatory point of view, the activities of natural gas sector are broadly classified under 'Carriage' and 'Content' segments. While the 'Content' segment covers the activities of 'marketing and sale' of goods, i.e., natural gas, the 'Carriage' segment refers to transportation of gas through transmission pipelines and gas distribution networks, including City Gas Distribution networks.

In order to foster competition in the 'Content' segment, the 'Carriage' is usually subjected to open access to third parties under close regulatory oversight, including determination of transportation rates /tariffs. This aspect is fundamental to the overarching approach to regulation of the natural gas sector.

The above aspect is articulated in the Government of India Policy document (Policy for development of Natural Gas Pipelines and City or local Natural Gas Distribution Networks, 2006), under Clause no. 1.1 as follows:





Hon'ble Prime Minister of India, Shri Narendra Modi during inaugural of activities of Jagdishpur Haldia gas pipeline.

- 1.1 "Regulatory reforms permit and encourage market forces to enhance competition and produce a more competitive and efficient industry structure. While there is growing recognition that competition can reduce the need for regulation, in many areas there exist some areas of monopoly where the benefits of regulation potentially outweigh the cost. Natural gas pipelines infrastructure and City or local natural gas distribution networks (CGD networks) fall under this category."

Thus, pipeline regulation ensures a level playing field to foster a competitive environment. With greater impetus being given to increasing the pipeline infrastructure, extending reach of City Gas Distribution and Piped Natural gas networks, a conducive regulatory framework provides an enabling environment for the industry to grow and prosper.

The Petroleum & Natural Gas Regulatory Board (PNGRB) has been established by the Central Government for carrying out the various provisions of the PNGRB Act, 2006. The PNGRB

Act provides for regulating the refining, processing, storage, transportation, distribution, marketing and sale of petroleum, petroleum products and natural gas, but excluding the activities of production of crude oil and natural gas, so as to protect the interests of consumers and entities engaged in these activities. Furthermore, for the development of the gas sector in India, including the establishment of a Gas Grid with open market access for all players on a nondiscriminatory basis, PNGRB is mandated with the function of developing a comprehensive set of technical requirements and safety standards as well as a code for gas grid connectivity, so as to ensure operational compatibility. Adherence to such standards and codes are an integral condition of authorization for gas pipelines as well as city or local natural gas distribution networks.

We comply with the notified PNGRB regulatory framework in respect of applicable activities pertaining to petroleum products and natural gas. The regulations/amendments/authorizations/orders/decisions of PNGRB are appealable before PNGRB Bench/Appellate Tribunal/Courts and accordingly, some of them pertaining

to GAIL are also under various stages of appeals. Some such areas pertaining to GAIL include pipeline authorization, common carrier, tariff, unbundling of gas transportation and gas marketing activities.

The timing and content of any final changes in regulations made by the Regulator is not in the control of individual entities. However, regular participation in public consultation exercises conducted by the Regulatory Board and making submissions to the Regulator in writing helps us to anticipate or to minimize our risks associated with any sudden or unforeseen changes in regulations.

"GAIL is experiencing headwinds with increasing regulatory pressures that are building risk to the existing business. Slow rollout of CGD sector and tariff cuts on existing pipeline network is making gas transmission sector unviable and posing threat to the proposed national gas grid."

We believe in responsible growth is a prerequisite to remain sustainable & competitive while developing robust systems and practices to achieve it."

Director (Marketing)

Dynamic Regulatory Landscape: Harnessing Opportunities for Growth (continue)

Resistance in Right of Use (RoU) and delay in statutory clearances is hampering natural gas infrastructure growth. Pipeline projects get delayed and at times getting scrapped due to RoU and Land acquisition resistances and delay in clearances and permissions. The delay leads to increase in costs of the projects, sometimes making them unviable. Further, it is important to synchronize pipeline laying with downstream customer readiness. For example, in case of Jagdishpur-Haldia Pipeline, firm tie-up of volume would be important for the project to take off. Also, LNG regas infrastructure constraints are limiting R-LNG sales. The above factors have impacted the financial performance of GAIL.

^{G4-DMA}Being a Central Public Sector Enterprise (CPSE), GAIL is directly accountable to the Government of India for its performance and fulfillment of business objectives. We also engage with the Directorate-General of Hydrocarbons (DGH) for our exploration and production activities that contribute to the nation's energy security. For E&P Blocks where GAIL is the Operator, all compliances in respect of various statutory regulations related to Mines Act, Explosives Act and Rules, Environment related acts and rules, Hazardous Waste (Management, Handling & Transboundary Movement) Act and Rules and Manufacture, Storage & Import of Hazardous Chemicals Rules were complied. In addition, provisions of Production Sharing Contract signed with Government of India and other Host Government were followed for which necessary co-ordination was maintained with Directorate General of Hydrocarbons (DGH). Challenges related to obtaining timely Environment Clearances were address through mutual discussions with various agencies and regulatory bodies and also by seeking time extension to complete the activities as per provisions of Production Sharing Contracts.

We understand that the regulatory compliance continues to be complex business challenge. As new laws and regulations are introduced, their requirements challenge us to greater levels of transparency, objectivity and professionalism. With increased accountability and potential exposure to liability, we need to ensure that regulatory standards are clearly understood and adhere to robust compliance management systems. We, therefore, consider Government and other regulatory agencies a key player in influencing how businesses operate throughout the world. This is in form of taxes, regulatory and other policies and tools, providing access to capital and other related functions. We strive to achieve compliance to all national and international regulations and take it as a highest priority.

We have systems in place to ensure that technical and safety standards are given utmost priority. In addition to the PNGRB mandates, we also follow the OISD Standards. A developed framework ensures compliance with the provisions of all applicable laws and such frameworks are adequate and operating effectively. Our Risk Management Policy & Procedure protects and adds value to our organization and stakeholders to enable compliance with the relevant legal and regulatory requirements and international norms. We regularly map our legal and regulatory risks across sites through online risk register, in addition to other aspects. Risk related to gas allocation policy, gas pricing policy, PNGRB related regulations, Climate change and environment related laws / regulations and sustainability related regulations among other pertinent issues have also been included. For regulatory related issues, we engage extensively with Government and regulatory agencies. Additionally, we have regular discussions on our financial performance, gas allocation and utilization, gas pricing, Natural gas pooling and swapping mechanism, energy security, project planning,

vigilance issues, safety and security, expansion and diversification plans with the Ministry and other government bodies at regular intervals.

We are also aware about the impact of our operations on environment and, therefore, continuously work towards reducing the emissions, effluents, and waste produced. We have well established environment management systems which are dedicated to function beyond compliance levels. All statutory compliances with respect to preventive maintenance schedule and environmental clearances through respective Pollution Control Board are taken in due course, along with creation of separate budgets for compliances. Technologies and equipment like scrubber systems, effluent treatment plants have been installed at the units to control air emissions and discharged water below the prescribed limits of Pollution Control Board. The hazardous solid waste generated at our facilities is stored and disposed of as per the best available environment practices complying with applicable regulations.

Our pipeline are designed, constructed and maintained in line with the requirement of international standards like the ASME, API, DIN, ISO and national standards like the OISD. The pipeline network is designed after a detailed environmental impact assessment and series of approvals from Ministry of Environment and Forests. The pipeline alignment is selected in such a way that the length is optimized avoiding ecologically sensitive and protected areas/ geographically unstable areas/ less number of obstacle crossings like NH / SH / Railways, restricted / reserve forest area/ Coastal Regulation Zones (CRZ). All contractors involved in pipeline laying operations are mandated to limit activities only within the approved Right-of-way. We adhere to Indian regulation on Resettlement and Rehabilitation; however we have not envisaged any R&R within our projects and operations this year.

We also actively engage with several other regulatory authorities for ensuring compliance to laws & regulations. Apart from fulfilling our regulatory requirements including submitting annual reports and statutory filings as per Listing Agreement, organizing site inspections and filing compliance reports to the authorities, we are also involved with them for developing policies / regulations for Indian oil and gas industry.

We try to establish a constructive dialogue with the regulators. We also engage with industry bodies that put up the concerns of the sectors and enable a holistic and inclusive policy development. We continue to work with industry associations like FICCI, CII, International Gas Union, Petrofed, World Energy Council, TERI, on various issues in the energy sector. We initiated our association with US EPA for Global Methane Initiative to work on the challenge of fugitive emission in Natural Gas transportation. Further, we have also undertaken voluntary targets through Sustainability Aspirations 2020. The details of the same have been disclosed in the Sustainability Strategy section of this report.

Organizations have a lot to gain, both strategically and tactically, from building trust and fostering long-term cooperation with regulators not only on an individual level concerns but also on large issues with bigger socio-political implications. Where trust exists, regulation can become a mechanism for industry-wide – even global – cooperation on issues ranging from financial prudence to technical innovation and climate change. With such strong foundation for regulatory

compliance, we are confidently able to declare that there has been no instance of non-compliance with any stock exchange, SEBI on any matter relating to capital market over the last 3 years.

We always aim to establish a meaningful stakeholder engagement to maintain our “social license to operate”. Therefore, we consciously plan our CSR activities and work towards improving the societal condition of the areas we operate in, as a socially and environmentally responsible corporate citizen. FY 2013-14 also saw the passing of the landmark legislation with implications for Corporate Social Responsibility i.e. the Companies Act 2013. GAIL in order to comply with the provisions of said Section 135 and the accompanying Rules is currently in the process of revisiting and redrawing its Corporate Social Responsibility Policy as also modifications in the existing approval process, structure and CSR allocation FY 2014-15 onwards.

There have been no incidents of non-compliance with respect to regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, marketing communications, including advertising, promotion, and sponsorship by type of outcomes.

There have been no incidents of non-compliance with respect to regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, marketing communications, including advertising, promotion, and sponsorship by type of outcomes.

Anti-Competitive Behavior:^{G4-DMA, G4-S07}

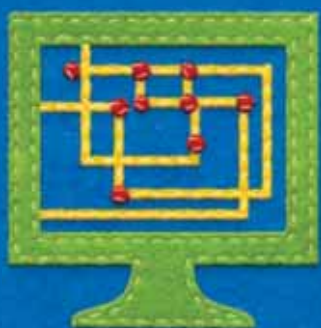
GAIL is India's largest natural gas company and understands the responsibility to function in a responsible manner. Following which, GAIL aims to work strictly according to the laws and regulations including those involving anti-competitive and ethical behaviour. GAIL works under the purview of Competition Commission of India and with high ethical and moral standards without indulging in any form of practices which restrain any competition in the market.

There have been six cases which have been filed against GAIL regarding unfair trade practices, restrictive trade practices and misuse of monopoly. Five cases were filed before PNGRB while one case was filed before Competition Commission of India. Competition Commission decided in favor of GAIL. PNGRB in 4 matters decided against GAIL which are presently pending before Hon'ble Supreme Court for adjudication. Out of the four matters decided by PNGRB, in one case the Board imposed a fine of INR 1 lakh against GAIL. PNGRB decided one case in favor of GAIL. Except for one there have been no cases where administrative or judicial sanctions have been levied against the organization for failure to comply with laws or regulations, including: international declarations / conventions / treaties, and national, sub-national, regional, and local regulations and cases brought against the organization through the use of international dispute mechanisms or national dispute mechanisms supervised by government authorities.

Driving Innovation: Redefining Our Growth



INR 50 Crores Spent on
R&D



Enhanced Security for
Pipelines and Operations



Full fledged R&D Centre
Proposed





GAIL (India) Limited

Innovation Workshop

14th January 2014



Innovation is a critical component in improving individual and organizational performance. With challenging times, we understand there is a need to adapt to radical changes, which call for out-of-the-box thinking. Inspiration for innovation usually stems from a combination of need to bring about a change; how people perceive and pursue that change till the end; and a congenial environment to accomplish that change. It is only through innovation that we can bring about such avant-garde transformation.

Driving Innovation: Redefining Our Growth (continue)

An expanding economy and a growing population have resulted in increased consumption of primary energy resources, such as coal, oil and natural gas, in India. Energy consumption in India has nearly trebled over the past 20 years and is likely to be more than double over the next 20 years. Oil and gas industry players face challenges on its increasing growth and scale, capturing mid- to long-term business opportunities, the flexibility to address market dynamics and changing business needs. Technology challenges are ever present as resource declines, recovery increases, and difficult-to-explore resources become more prevalent, including limited accessibility and the need for new production technologies.



GAIL has been a dominant player in the gas markets, of late it has been facing competition from other players, making it imperative for us to ideate and develop new business models to minimize the business risks and grow in competitive market. We believe that innovation and competitiveness have a dynamic, mutual relationship. In order to prosper in a competitive environment, we have always relied on innovation as a vital parameter in the achievement of such an environment that will not only reduce the gap between demand and supply but also generate economic value, new jobs in the economy and cultures of entrepreneurship.

With our core business of natural gas pipelines facing challenge due to low utilisation, domestic gas shortage

and expansion hurdles, we are shifting our focus to boosting last-mile connectivity (LMC) to provide linkage for city gas distribution and compressed natural gas distribution outlets. We also intend to focus on establishing connectivity between our trunk pipelines and 40-60 cities in the near-to-medium term. Looking at the potential opportunities in our sector, some of the major initiatives that have been undertaken as a part of innovation management includes pilot project on landfill gas (LFG) recovery, installation of pipeline intrusion and leak detection systems (PID), bench scale study of waste plastics to hydrocarbon, new polymer development, e-tendering and reverse auction schemes, switching to renewable energy, investment in cleaner technology etc.



Steering Innovation

Innovation has always served as an undoubted success key for the growth of businesses. Its importance becomes more critical owing to cut throat competition prevailing in the industry. Therefore, for us, it becomes more important to develop scientific approach among our employees to face challenging business environment in uncertain times.

The Government of India has also considered innovation as a significant driver for growth of prosperity and competitiveness in 21st Century and the Hon'ble President of India declared 2011-21 as the "Decade of Innovation". Taking cognizance of the importance of innovation, the former Prime Minister set up the National Innovation Council (NInC) to discuss, analyse and help implement strategies for inclusive innovation in India and prepare a Roadmap for Innovation 2010-2020. In order to drive innovations in the petroleum and natural gas sector and to provide executable and implementable policy inputs and initiatives, three sub-groups for the SIC for P&NG sector have been formed, i.e. Upstream, Downstream and Midstream under the Chairmanship of respective Joint

Secretary (MOP&NG) for preparing the road maps for innovations in their respective streams.

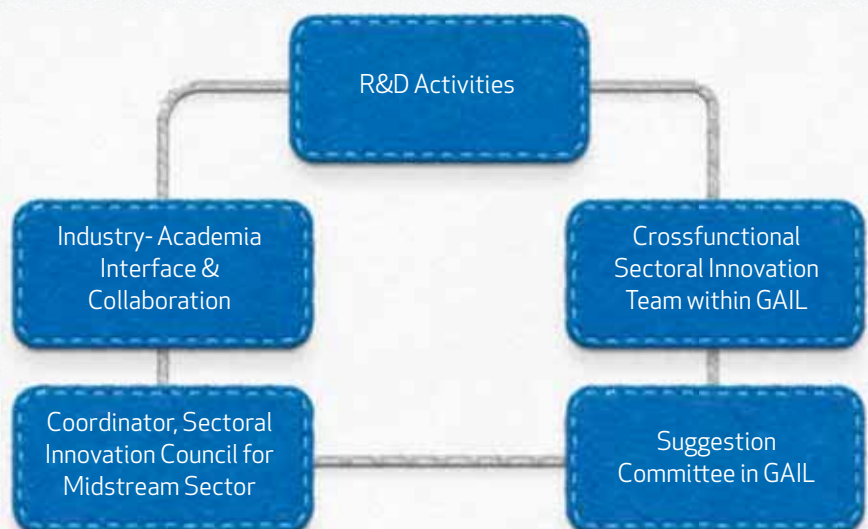
Innovation Process at GAIL

"As the torchbearer for the Sectoral Innovation Council in the Hydrocarbon sector, we believe that innovation not only promotes out of box thinking within individuals but also results in bringing out solutions to pushes the economic growth to new horizons."

*-Director (Human Resources)**

(* for Business Development related activities)

To drive this initiative, we have been acknowledged as a major stakeholder for implementation of SIC recommendation for the midstream sector in the country to drive innovation in this sector. We recognize the significance of innovation and shall continue to put our sincere efforts for it. A team comprising of R&D and Corporate Planning was nominated from our company for Sectoral Innovation activities. To drive ahead innovation activities within the company, Innovation Workshops were conducted during the reporting period.



Driving Innovation: Redefining Our Growth (continue)

Research & Development at GAIL

We have intensified our focus on Research & Development (R&D) activities and put in place a R&D Policy



Vision

To be a leading R&D establishment in Natural gas, its derivatives & beyond, driven by values of Innovation, Integrity, Customer centricity with focus on Technology assimilation and Talent nurturing.



Mission

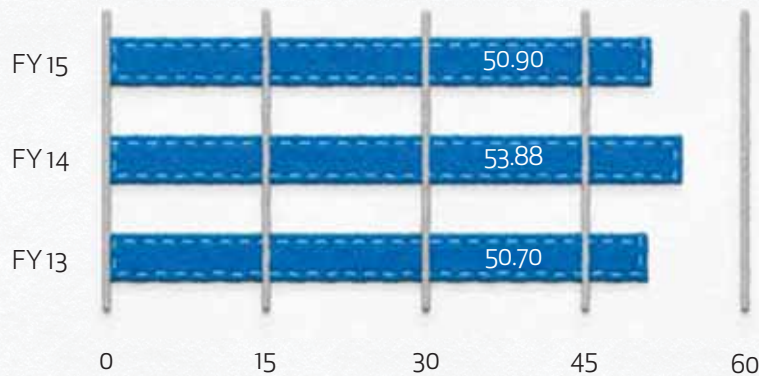
Strive to develop and assimilate Innovative and Cutting-edge technologies to meet the Business requirements of GAIL.



Policy Statement

R&D department is committed to development of new or improved materials, fuels, products, processes, systems or devices through research findings. Design, construct and test through Pilots & models the new technologies prior to their commercialization. Provide information on latest technological advancement to maintain the technological edge of GAIL in all its businesses.

Our total Spending on R & D (in INR crore)



Policy and Manual that streamlines the Selection, Award and Monitoring of R&D projects. We recognize the importance of R&D to remain at the forefront of technology and, hence, have set a goal to spend at least 1% of previous year's PAT on R&D every year. The DPE has mandated all PSUs to spend over 1% of PAT on R&D activities. Accordingly, GAIL's R&D expenditure in FY 2014-15 was required to be over INR 43.47 crores. GAIL has spent over INR 50 crores in FY 2014-15 which is substantially higher than the mandated value.

Through our streamlined innovation process, we have pursued various R&D projects in identified thrust areas with an aim to develop high-impact innovative technologies that unlock new energy sources, improve efficiency of existing operations and add value to the products. Our judicious mix of R&D portfolio comprises of various Basic/Applied/Pilot & Technology development projects encompassing the natural gas value chain.

We have also deployed an intranet R&D Portal where detailed information on its R&D projects is disseminated. The employees and other stakeholders can provide suggestions and feedback on the R&D projects to carry out any improvement or midcourse correction. In addition to this, our external stakeholders can also submit

their suggestions Innovative ideas that should be pursued as R&D. The Suggestions can be submitted through our website. http://gailonline.com/final_site/R&D-12/Suggestion.html

Our Efforts

GAIL firmly believes that innovation can lead to multiple benefits for the organization therefore makes a constant effort to create a culture that supports innovation in all its business verticals.

Encouragement for Open Communication through SLICE Portal

Open communication between employees and management is one of the essential parameters for employee engagement and thereby performance excellence. Hence to encourage employees sharing their views with management without any inhibitions, a web portal named SLICE (Suggestions – Lessons Learnt – Initiatives & Innovations – Case Studies – Extraordinary Efforts) has been developed and implemented. The objective of this scheme is to promote Teamwork, Ownership and Accountability at all levels by evolving an organized channel leading to improvements in work place and recognize employees with

creative SLICE, and motivate them to contribute for the growth and prosperity of the organization. All employees are eligible to give SLICE. There is no restriction in the number of SLICE that an employee can give.

In order to facilitate above, an application (SLICE) has been developed & hosted on the home page of GAIL Intranet for submitting SLICE. All the communications received through this portal are reviewed on monthly basis by a senior level committee and appropriate actions are taken subsequently based on recommendations of this Committee.

We have also introduced and implemented a reward-based Suggestion Scheme for the employees to promote organization-wide idea generation for incremental innovation. Such scheme provides an apt environment for stimulation of positive thinking and creativity among our employees to come-up with innovative suggestions for bringing about more Economy, Efficiency and Effectiveness – the '3E's essential for survival and growth – of the company in liberalized market scenario. The suggestions are evaluated in a time bound manner for implementation and the best suggestion is awarded with the CMD trophy.

Driving Innovation: Redefining Our Growth (continue)

Revised Suggestion Scheme

In the light of what has been stated above, and the fact that the existing suggestion scheme has been perceived to be not sensitive enough to attract qualitative suggestions from the employees to bring about tangible improvements in the functioning of the company, a need has been felt to review the suggestion scheme currently prevailing in GAIL and make it more effective and broad based in tune with the best practices prevailing within India so that all the employees of the company are motivated to come up with suggestions for improvements in all spheres of work in GAIL and inculcate a spirit of proactive collaboration with the company's objectives and goals.

Accordingly, a revised and more comprehensive suggestion scheme has been formulated which is expected to provide immediate impetus to the employees to start the process of thinking and come up, within a reasonably short span of time, with suggestions for bringing about all round development and progress of the company.

The revised scheme, as enunciated in the succeeding paragraph, encompasses, inter-alia, the following:-

- ▶▶ Direct submission of suggestion through GAIL Intranet;
- ▶▶ Global viewing to bring about more transparency;
- ▶▶ Immediate monetary reward of INR 2000/- and an appreciation letter on acceptance of a suggestion for consideration;
- ▶▶ Time bound evaluation of the suggestions and declaration of results;
- ▶▶ Liberal monetary rewards where tangible monetary savings are established and accepted - enhancement of the ceiling of the amount of reward to INR 1,00,000/-;
- ▶▶ Ceremonial presentation of cheque, CMD's trophy, and a merit certificate for the best suggestion(s); and
- ▶▶ Endorsement of a copy of the merit certificate in the personal file and ACR of the employee for the relevant year.

To take forward innovation activities within the company, we organised a workshop to provide a platform to address challenges including knowledge forum, developing an innovative culture, dedicated group / department etc. a total of 15 presentations were conducted from various departments like – Business Information System, Contracts & Procurement, Corporate Planning, Corporate Communication, Exploration & Production, GAIL Training Institute, Health Safety & Environment, Project Development, Projects, Operation and Management (Pata & NCR), Polymer Marketing, Research & Development and Total Quality Management in respect of various Innovative initiatives either implemented /

being implemented or have potential for implementation in Business areas of GAIL. It was attended by Senior Officials, Cross Functional Team Members and Presenters who deliberated, discussed & debated on various Innovative initiatives either implemented / being implemented or have potential for implementation in Business areas of GAIL.

Our online hot work permit system as per OISD 105 is implemented through SAP to carry out hot jobs. It contains details of work to be carried out, time duration of work authorization; a checklist is filled up by issuer, explanatory note, general instructions and necessary remarks etc. Additional innovative improvements are also

undertaken as and when required / observed to enhance the effectiveness of HWP System.

We have also implemented security tracking system for our pipeline along with SCADA system for on line monitoring of operating conditions. It also ensures the health of the pipeline Gas Transportation System: Monitoring system through existing SCADA in Gas Management Centre through which the line pack, pressure, temperature, flow, Cathodic Protection status etc. are monitored online. The existing system is upgraded to New SCADA which will also feature online leak detection system for pipelines.

Under our Project TRANSCAP, we have deployed a web platform for online data acquisition and make the system robust which not only eases to collate data and avoid follow-ups but also alerts user through notifications. As a result, the manual intervention is reduced and data management becomes easier.

As an initiative to convert waste plastic to diesel GAIL collaborated with CSIR-IIP (Council for Scientific and Industrial Research – Indian Institute of Petroleum) and have been able to convert polyolefin products into the cleanest grade of diesel. We are the first to have the capability to convert 1 tonne of plastic and other polyolefin products into 850 litres of the cleanest grade of diesel.

GAIL has implemented a pilot Landfill Gas (LFG) Project at Ghazipur Landfill site. Currently, 125 M³/Hr of LFG with Methane content of about 25 vol% is being captured and safely destroyed in an enclosed flare system. Methane is a GHG and 25 times more potent than CO₂ in causing Global Warming. Therefore destruction of Methane helps in the efforts towards reduction of GHG emissions. Accordingly, the LFG Project has been successfully validated and registered with UNFCCC in Sep'2014 for availing carbon credits under CDM mechanism. In 2014-15, about 200 MT of fugitive Methane emissions going into the atmosphere have been destroyed which is a reduction of 5000 Tonnes of CO₂ equivalent.

Currently, GAIL is pursuing sponsored and collaborative R&D work at various research Institutes and Laboratories in India. Few of these R&D Projects have led to creation of novel Processes. GAIL has filed for Patents to secure the Intellectual Property in such Projects.

Future Plans

We have also identified the thrust areas of R&D in line with our business areas and follows a focused strategy to take up R&D projects in these areas. The thrust areas include energy efficiency, development of new catalysts and new polymer grades, CO₂ conversion, micro & nano material/ fuel cells, renewable energy and unconventional energy sources. We also plan to set-up of Pilot Project on 'Waste Plastics to Hydrocarbons' for validating the bench-scale results for eventual commercial-scale operations. Some of our planned initiatives that are under consideration for coming years includes national gas management and control systems, development of new solvents for gas sweetening, development of low cost sensor for CNG/PNG etc.

Recently, there has been a major breakthrough in policy approval of an innovative mechanism to revive and improve utilization of the stranded gas based power generation capacity in the country by supplying imported Regasified Liquefied Natural Gas (R-LNG). Such mechanism will ensure environmental friendly power generation as compared to coal based and will also provide ample opportunities for optimal use of gas infrastructure like gas pipelines and re-gasification capacities in the country, which are currently underutilized.

In addition, we are also looking forward to pursue projects in upcoming areas like Underground Coal Gasification, Fuel cells, Hydrogen and Gas Hydrates in line with the Company's aspiration to emerge as an integrated hydrocarbon major by 2020.

Many Projects have been taken up in all these areas and GAIL is actively

pursuing collaborative and sponsored R&D work with institutes like IIT, CSIR labs etc. GAIL is also in the process of seeking collaborations with world renowned institutions to take up R&D in niche areas. Accordingly, a proposal for setting-up of full-fledged R&D Centre has been taken up. In the coming decade, GAIL shall have a dedicated R&D Center to carry out research works in our Core and Emerging Areas to address the nation's energy and environmental challenges to enable a secure, abundant, reliable, renewable and affordable energy.

Our Stakeholders

Investment of **700 Crores** in 118 MW Wind & 5 MW Solar Energy



Total Commitment 118.07 Crores



Customer Satisfaction



Continuing with our commitments – Our Stakeholder centric Approach



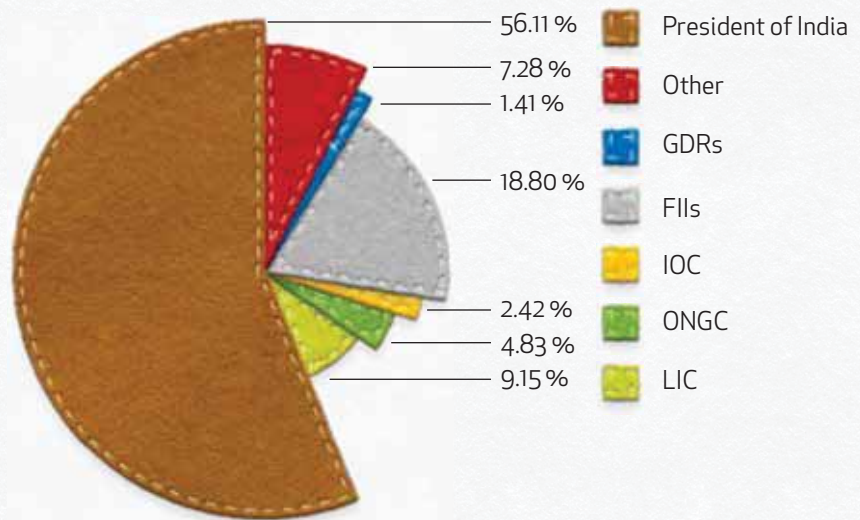
Engaging with stakeholders is relevant for any type of organization, especially in context of running an organization responsibly. Building trust with stakeholders is very important, aided by understanding their viewpoints and motivations. Engaging with stakeholders helps ensure potential problems are addressed, or changes communicated and understood. For these reasons it is important for companies to find ways and means of engaging with all their stakeholders.

Shareholders / Investors

Our Stakeholders (continue)

We are committed to ensure long-term profitability of our businesses and contribute to the wealth of our shareholders and investors. GAIL being a Central Public Sector Enterprise is accountable to the Government of India which is our major shareholder.

GAIL's Shareholding Pattern



Retaining our Commitment Towards Stakeholders- A Dedicated Stakeholders Wise Section is Developed

^{G4-DMA}Our belief of ensuring sound value creation and building trust by upholding high level of transparency for all our stakeholders is guided by our Vision statement.

GAIL came a long way from being known as a "Natural Gas transmission company" to now pursuing a vision of securing access energy for generations to come.

Further, aligned with Government's vision to create National Gas Grid and provide access of Natural Gas as cleaner fossil fuel, we have identified focus areas for new future investments as part of our business strategy. These also serve as our way towards achieving economic sustainability including:

- ▶ Increasing our Natural Gas pipeline network presence across India

- ▶ Expanding City Gas Distribution (CGD) through JVs / subsidiaries to 40-60 cities
- ▶ Significantly enhancing petrochemical production and marketing capacity
- ▶ Improving gas sourcing through LNG imports and cross border pipeline networks
- ▶ Strengthening our foothold in E&P operations and acquiring hydrocarbon assets
- ▶ Set up LNG regasification terminals & book re-gas capacities
- ▶ Unlock demand across customer segments
- ▶ Focus on Last Mile Connectivity

Investor Management and Engagement

"We consistently endeavor to create a transparent and lasting relationship with our investors and analysts with whom we engage on a regular basis. In addition to conducting and participating in investors meet, this year we also conducted an Investor Relation Survey as a proactive approach to investor relations management."

Director (Finance)

We keep our investors informed about all our endeavors as well as achievements on a regular basis. Transparency and information sharing is important for us to keep our investors aware about our business, governance, financial / non-financial performance and prospects.

GAIL has been for engaging with its investors by through its top management and investor relation function. These communications are made through various channels like news releases, press meetings of senior management, annual report and website.

During 2014-15, to pursue the objective of effective communication with investors, GAIL organized Analyst Meet and Conference call immediately after the announcement of Annual and Quarterly Financial results for Half year ended September, 14 and Third Quarter ended December, 14.

In addition to the regular meetings held with investors on one to one basis, we engage with investors through public platforms such as investor conferences and meets. Top management / Senior Executives from Finance, Marketing, and Business Development and Projects besides executives from site offices attended 4 Domestic Investor conferences organized by top brokerage houses of the country and 1 international meet each in Hong-Kong and Singapore.

Further, GAIL seeks feedback from Investors & Analysts; Investor Relation Survey was conducted to determine their expectations from the company in terms of Investor Relations (IR) and to ascertain areas of improvement in IR management at GAIL. Analysts have appreciated the improvement made by GAIL in the IR management in the survey and given some valuable suggestions for making improvements in the Investor relations in GAIL.

Company will continue to provide best possible investor relations services in disseminating information to Investors and Analysts at right time and from the right people. In view of the above, Investor Zone section of corporate website has been reviewed during FY 14-15 and made more informative and investor friendly. Further, shareholders/ Investors Grievance

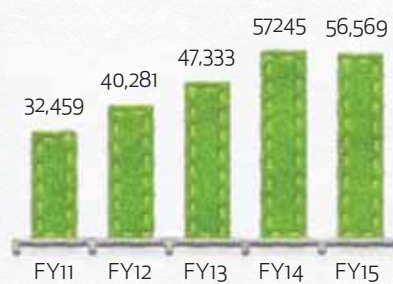
Redressal Committee has been formed for looking into investor's Grievances and matters relating to Registrar & Share Transfer Agent.

GAIL's Economic Performance Overview

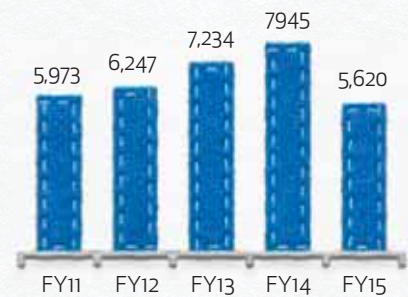
^{G4-ECB}In financial year 2014-15, GAIL (India) Limited registered a Turnover (net of excise duty) of INR 56,569 crore as against INR 57,245 crore in the previous fiscal. The Gross Margin during 2014-15 stood at INR 5,557 crore as against INR 7,599 crore last year. The Profit Before Tax during the year was INR 4,284 crore as against INR 6,402 crore in the previous year. The Profit After Tax in 2014-15 was INR 3,039 crore while it was INR 4,375 crore in the previous year.

Financial Performance (Standalone)

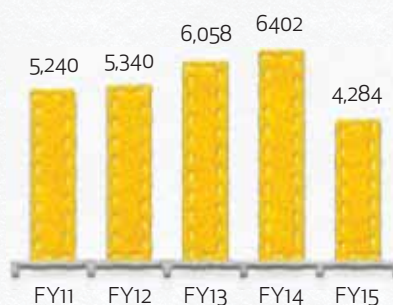
Sales (net of ED, in ₹ Cr.)



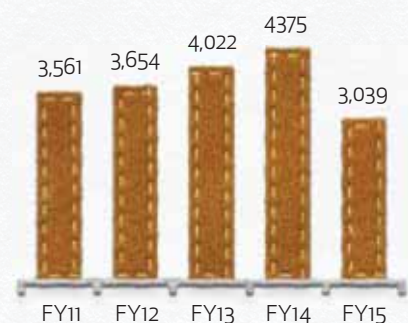
Gross Margin (PBDIT, in ₹ Cr.)



PBT (in ₹ Cr.)



PAT (in ₹ Cr.)



Our Stakeholders (continue)

Economic Value Generated^{G4-EC1}

(INR Million)

Parameter	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	2014-15
Revenues ^{G4-9}	3,29,837	4,11,745	4,83,572	5,88,153	5,78,555

Economic Value Distributed

Parameter	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	2014-15
Operating Cost	2,70,115	3,54,441	4,10,649	5,17,214	5,18,284
Employee wages and benefits	7,527	7,208	10,674	9,082	10,608
Payments to providers of capital	10,700	14,352	17,240	20,368	14,983
Payment to Government	18,342	18,652	22,386	22,513	13,988

^{G4-EC4, G4-S06}No Financial Assistance received from Government of India in FY 14-15. GAIL did not make any financial or in-kind contribution to political parties, politicians or related institutions.

In FY 14-15 GAIL's Profitability reduced by 31% in comparison with FY13-14. The Major reasons for this reduction are given below:

Under capacity utilization of Natural Gas pipelines

The company has also been facing headwind in terms of growth of Trading and Transmission volumes due to substantial fall in domestic gas from 66 MMSCMD in FY14 to 59 MMSCMD in FY15. The capacity utilization of Natural Gas pipelines is only 45%. Lower gas transmission / low pipeline capacity utilization and thereby low revenue is unable to cover fixed cost such as Depreciation & Interest leading to stressed returns from new pipelines such as Dabhol Bangalore Pipeline, Dadri Bawana Nangal Pipeline, Chhainsa-Jhajjar Pipeline etc.

Decrease in availability of Domestic Gas

In recent years due to decrease in availability of Domestic Gas for Petrochemical production in FY15 to the level of 17% of total gas consumption as against 63% in FY14, higher level of expensive imported LNG is being used for polymer production. In comparison to FY14, Gas cost for Production of Petrochemicals has increased. This has led to decrease in profitability from Petrochemical business segment during FY15.

Rapid fall in crude prices

With rapid fall in crude prices during FY15, there was a significant fall in average Price realization from sale of Liquid Hydrocarbons by 16% leading to negative impact in FY15.

High prices of imported LNG

Fall in Domestic gas coupled with Consumer resistance to buy high priced LNG, particularly by Power & Fertilizer companies, led to decrease in Gas Marketing volumes by 7 MMSCMD (decrease by 9%) compared to FY14.

Tariff Reduction

The negative impact on profitability of FY15 on account of reduction in Natural Gas pipeline network tariffs by PNGRB is INR 449 Crore.

Our Initiatives for Business Growth

"Energy is considered as catalysts for economic growth. While three-fourth of the hydrocarbon energy requirements are met through imports in India, our endeavor remains to explore sustainable opportunities by securing cleaner, accessible and affordable energy to fuel nation's growth story."

*Director (Human Resources)**

(* for Business Development related activities)

GAIL has been working rigorously to create maximum returns for its investors. This is possible only through sustained business growth. Some of these initiatives are discussed below:-

Gas sourcing and supply

GAIL today focuses on developing pursuing new business opportunities

worldwide registering its presence across the gas value chain. In April 2013, GAIL through its indirect wholly owned subsidiary, namely, GAIL Global (USA) LNG LLC (GGULL) had signed a Terminal Service Agreement (TSA) with Dominion Cove Point LNG, LP for booking 2.3 MMTPA liquefaction capacity in the Cove Point LNG liquefaction terminal project located in Maryland. The terminal has received both Non-FTA authorization and FERC approval and is currently under construction. The expected date for commencement of supplies is January 2018. In order to tie up gas for liquefaction at the terminal, The company got into an agreement in November'14 with WGL Midstream Inc (WGLM). WGLM is a part of a group having a rich history of over 160 years in natural gas supply business in the mid-Atlantic region.

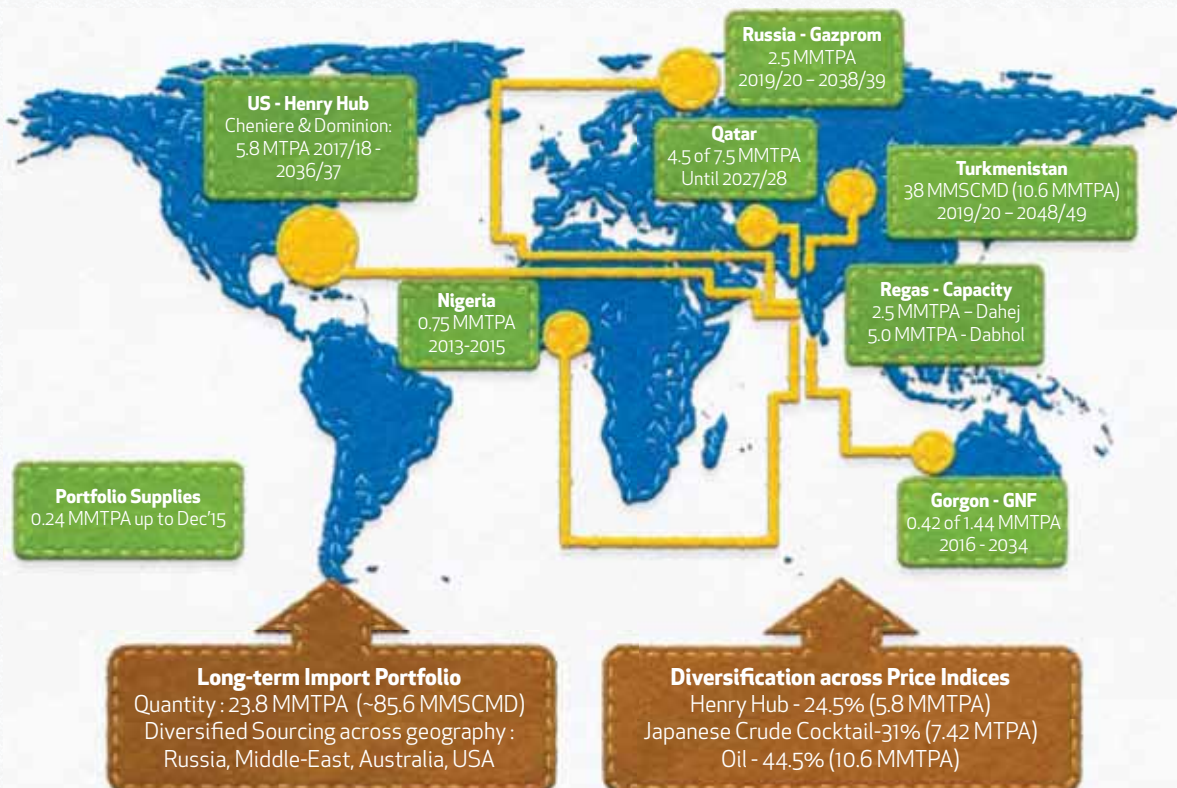
This year we successfully formed SPV of GAIL (India) Ltd. ISGS (Pakistan), AGE (Afghanistan) and Turkmengas (Turkmenistan) incorporated in 'Isle of

Man'. This will bring 38 MMSCMD of natural gas from Turkmenistan to India via 1814 Km TAPI pipeline.

LNG Regasification Terminals and Shipping

GAIL is also focusing on making investments in gas assets, liquefaction facilities and LNG shipping to have presence in entire LNG value chain to achieve the twin objectives of enhancing India's energy security and providing better value to our customers. As the lead company in natural gas, GAIL has contracted gas supplies to put in place a diversified long-term import portfolio of approx. 86 MMSCMD of gas from Qatar, Australia, USA, Russia and Turkmenistan through multiple LNG and transnational pipeline deals to meet the ever increasing demand for natural gas in India. These deals were a testimony to the Company's commitment towards developing the Indian Gas market and helping India to achieve energy security in the long run.

Diversified Gas Sourcing



Our Stakeholders (continue)

Petrochemicals and LHC

GAIL is one of the leading players in Indian Petrochemical market with 810 KTA capacity and over 15% market share. Apart from that, GAIL also produces almost 10% of the total LPG produced in India (~1040 KTA) and over 240 KTA of other liquid hydrocarbon.

With the aim to become a leading petrochemical segment company, we are increasing our existing capacities, setting up new plants, and acquiring equity stakes in the upcoming projects.

Natural Gas and LPG Pipelines

Since inception, GAIL has laid over 11,000 Kms of natural gas pipeline network which is the backbone of natural gas transmission in India. Apart from gas pipeline, GAIL has also laid over 2000 Km of LPG transmission pipelines to ensure safe, economical and easy transmission of LPG. The pipeline infrastructure has increased by about 5000 km during the last seven fiscal years. On the anvil are projects that shall add about 5000 kms of natural gas pipelines which will give us access to more customers and newer markets.

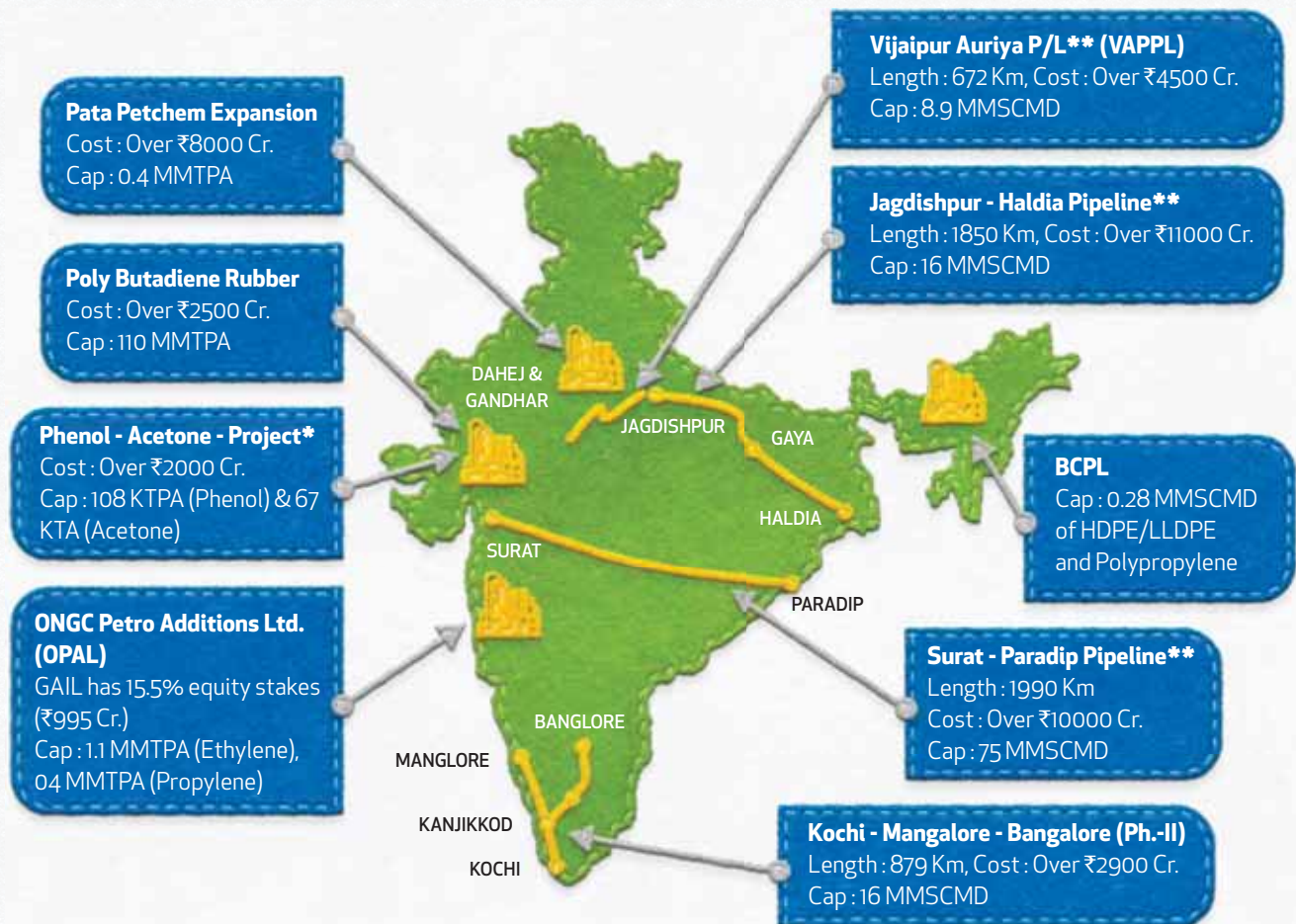
City Gas Distribution

GAIL is a pioneer in City Gas Distribution business in India with 8 JVs, notably IGL Delhi and MGL Mumbai and a subsidiary GAIL Gas Ltd.

Focus on renewables

Since 2010, GAIL is progressively creating a portfolio of renewable businesses (solar, wind, etc.). Currently GAIL has a renewable portfolio of 118 MW wind and 5 MW solar with total investment of over INR 700 crores.

Major Projects (On-going & Upcoming)



*Map Not to Scale
 *Phenol - Acetone - Project, VAPPL is under consideration
 **To be commissioned in synchronization with anchor load customers

Research & development

At GAIL huge emphasis is laid on research and innovation. Thrust areas of GAIL's R&D involve Energy efficiency and conservation, development of new catalysts, development of new polymer grades, CO₂ conversion / utilization, micro and nano-materials / Fuel cells, renewable energy and unconventional energy sources. Currently 25 R&D projects are being pursued and many developmental projects are being undertaken at sites. We also follow the mandate to spend 1% of PAT every year on research and innovation.

Declaration on compliance^{G4-EN29, G4-DMA}

We ensure all our operations comply with national and international regulations applicable to us along with achieving our business excellence goals. There have been no significant fine or non-monetary sanctions were imposed for non-compliances with laws and regulations in the year.

Our MoU

Being a Central Public sector Enterprise sign an External Memorandum of understanding (MoU) document with the government. The MoU specifies the objectives of the agreement and obligations of both parties. It has mutually agreed targets on both financial (50%) and non-financial parameters (50%).

Some of the non-financial parameters of the MoU in FY 2014-15 are shown as under:

Performance Report of Some of the non-financial performance of MOU in FY 2014-2015 is shown here:

Criteria	Unit	Excellent Target	Achievement
PAT per Employee	INR Lakhs	92.78	71.22
Job Linked Vocational Skill training to youth of underprivileged rural/ semi-rural families under Project 'GAIL - IL&FS SKILL SCHOOLS' at 3 locations (Continued Flagship Programme)	No. of Youth trained	2800	3382
Project Jaldhara - Integrated Watershed Management Project in villages of District Jhabua, MP	No. of Milestones achieved	Six Milestone	Six Milestone
Skills Training for employability of women in North East States of India	No.	360	480
Development of New Solvent for Gas Sweetening	No. of Milestones achieved	Five Milestone	Five Milestones
Development of Metal Oxide thin-film based Low cost Sensor for CNG/PNG	No. of Milestones achieved	Seven Milestone	Seven Milestone
% of targeted senior level executives covered in career development training in order to equip them for future leadership roles as well as in Succession Planning	% of target group	90	96.4
Training Days per employee per year	No. of Training Days per employee	2	5.07

Employees

Our Stakeholders (continue)

Employees- our human capital forms the core of our business. With the foundation laid through superlative skill deployment, development of employee competencies, and a culture of innovation and collaboration, our employees act as one of our pillars for a successful road ahead. We believe that our employees are highly productive assets for the organization and it is our prime responsibility to cater to their needs and take care of them. With this strategy, we are sure to achieve the goal of fostering responsible growth.

GAIL's employees drive the organization to new heights through their unrelenting hard work and dedication. GAIL's Human Resources (HR) function has worked towards developing a strong bond with our employees based on mutual trust and respect.

In an effort to support our human resources in an agile and effective

manner, GAIL has implemented and revised its HR policies, procedures from time to time. Overall HR function is headed by Director (HR) supported by a HR team at Corporate and site locations. Apart from these systems we have also been the first PSU to implement SAP ERP Human Capital Management (HCM) application, including SAP Employee Self-Service (ESS) application.

"Our strength lies in our most valued asset i.e. our Human Capital. At GAIL, the mission of human resource management is to create a resourceful environment which facilitates sustainable growth of organization through synergistic development of HR & Technology coupled with strong emphasis on team excellence and employee-development."

Director (Human Resources)

Employee Relations and Welfare^{G4-EC3, G4-LA2}

We believe that inclusion and empowerment of people will make them more creative and productive. We lay strong emphasis on understanding our employees' concerns and their expectations to increase their motivation levels and keep them efficient at all times.

A major thrust area of the organization has been to provide our employees with a conducive working atmosphere, especially in the remote locations where access to high quality living is low. For this we have developed residential and commercial areas, sports facilities, clubs, schools and

medical facilities in such regions.

We have also undertaken several initiatives to boost the employee morale by organizing events and activities during important festivals and other significant occasions for employees and their families. Some important initiatives taken up by GAIL as a part of our retention strategy are presented below:-

- ▶ **Attractive compensation and benefit package:** GAIL offers attractive compensation package to its employees. We provide several other benefits such as advances in form of house building advance, conveyance advance among others. GAIL also provides a two year child care paid leave



Independence Day Celebration

to female employees. Apart from these GAIL provides other benefit plans to employees that include Gratuity, Post-Retirement Medical Benefits, Earned Leave Benefits, Terminal Benefits, Half Pay Leave and recognitions to Long Service.

- ▶ **Superannuation benefits:** GAIL makes a provision for 30% of Basic pay and Dearness allowance as Superannuation benefits which includes Contributory Provident Fund (CPF), Gratuity, Pension and Post Superannuation medical benefits.
- ▶▶ **Rewards and recognition:** Since rewards and recognitions are key to improving employees' motivational levels, institutionalized mechanisms exist in GAIL to ensure that employees are adequately recognized for their contributions. These include the following:
 - ▶ **Suggestion Scheme:** To create a participative work culture and driving innovation GAIL initiated "suggestion scheme" under which employees can directly submit their

suggestions through the GAIL intranet.

- ▶ **Promoting Sports:** We encourage them to participate in sporting events such as Inter Regional Sports Meet (IRSM) and Petroleum Sports Promotion Board (PSPB).
- ▶ **Quality of life:** GAIL townships built with facilities such as sports club, gym, swimming pool, library, etc. are aimed at improving the quality of life of our employees and their family members even in remote locations where our facilities are situated.
- ▶▶ **Grievance redressal:** In order to ensure speedy disposal of employee grievances, GAIL has established an Online Grievance Redressal System and the same is monitored by Corporate HR. The aggrieved employee registers his/her grievance in the system and the concerned HR-In-Charge has to redress the grievance within stipulated time period. The system has auto-escalation feature and in case grievance is not redressed within stipulated time period, the

grievance escalates from HR-In-Charge to GM(HR), Corporate Office and finally to Director (HR). Further, the system has also provision for appeal to next level in case the aggrieved employee is not satisfied with the replies / relief provided.

Developing a Culture of Innovation and Collaboration

It is our endeavor to inculcate a participative work culture in the organization, which is conducive to the phase of transition with the changing business scenario. The work ethics supports horizontal cooperation as well as vertical integration in each function.

Our business context has evolved rapidly in the past few years. In order to help our employees to stay in sync with the dynamic environment, GAIL recognizes that innovation, creativity and initiatives are crucial determining factors and needs to be channelized in an organized way backed by appropriate incentives so that each

Our Stakeholders (continue)

employee would be encouraged and motivated to put forward his suggestion for achieving organizational excellence.

Development of our Human Capital^{G4-DMA}

Executive trainees recruited by GAIL are subject to a rigorous and effective Induction cum Orientation Training Program. The training lasts for two and a half months and the training plan is prepared in consultation with the Steering Committee. Further, yearly Training Need Assessment exercise is conducted for development need of our employees. The details of the training plan are discussed in the section on human capital.

Occupational, Health and Safety^{G4-DMA, G4-LA5}

At GAIL we believe that employees are the most critical part of the GAIL family. It is of utmost importance to us to ensure that our employees stay in the best of the health and are safe and secure. We have taken preventive and protective measures to ensure safety of our employees and other stakeholders. Health & safety has also emerged as a material issue for GAIL and has been addressed separately in the section on health & safety. GAIL has 100% representation of its workforce in formal joint management-worker health and safety committees that help monitor and advise on occupation health and safety program.

Diversity, Equal Opportunity and Non-discrimination^{G4-DMA, G4-LA3, G4-LA13, G4-HR3}

In line with the philosophy to promote diversity, GAIL Management has instituted three awards for GAIL women employees for their commendable services and

contribution to the overall growth of the organization. The awards aim at recognizing and encouraging the outstanding women employees of GAIL for their services in the fields of Functional Management, Corporate Social Initiatives and Corporate Cultural Initiatives.

GAIL is proud to be an Equal Opportunity employer and promotes diversity and inclusivity at workplace. It does not discriminate amongst its employees on the basis of gender, cast, creed, or religion or on any such basis and provides equal pay for equal work. GAIL complies with Equal Remuneration Act, 1976 and there is no discrimination in wages based on gender. The Company also ensures that no discrimination is practiced during the recruitment / career development / appraisal process processes and for compensation in any work center. No incident of discrimination was reported during FY 14-15.

Human Rights^{G4-DMA, G4-HR2}

GAIL not only complies with the laws of the land (such as laws relating to labour practices, child labor, forced labour, working conditions etc.) but also commits itself to other voluntary agreements under International bills and treaties. GAIL is also a signatory to the United Nations Global Compact which has specific focus towards human rights.

These policies and voluntary commitments of GAIL towards human rights are upheld and implemented with the right spirit. Training Programs on labour laws and outsourcing are such programs conducted by GAIL Training Institute which cover almost majority of aspects of Human Rights. Such programs are conducted as a part of annual training plan and In-Charges of outsourcing contracts are imparted training on the subject aspect every year. A two-day training program on the subject topic was conducted during the

current reporting period and 27 (432 Man-hours) executives were imparted training on labour laws and outsourcing with elements of Human Rights.

The issue of human rights is central to good corporate citizenship and to a healthy bottom line. All employees during induction are trained on GAIL's Conduct, Discipline and Appeal (CDA) rules to develop their understanding on these aspects.

GAIL has created a Women Cell which is responsible for reviewing the planned schemes and other programmes centered on Women development. GAIL Women Cell also liaison with National Commission for Women; SCOPE and Women in Public Sector (WIPS) forums for the cause of Women's development. Further, GAIL has a well-defined policy for prevention of sexual harassment at the work place.

Child, Forced and Compulsory Labour^{G4-DMA, G4-HR5, G4-HR6}

GAIL follows a zero-tolerance policy for Child & forced Labour and ensures that no such employment occurs at any of our operations. In order to guarantee this, every new recruit is required to submit a proof of age. Further, the Company is committed to eradicate child labor by actively contributing to the improvement of children's social situation. To promote this, we encourage our suppliers also to work towards a no child-labour policy.

Though there has not been a formal / specific initiative to identify operations which face the threat of child labor or forced and compulsory labour, no incident of engagement of child or forced or compulsory labor has been reported in the reporting year. The concerned executive at every location ensures relevant statutes are complied with.

Freedom of Association & Collective Bargaining^{G4-LA4, G4-DMA, G4-HR4}

The Company recognizes Unions representing the interests of their respective workmen / staff. GAIL Employees Association (GEA) is a representative body of non-executives posted at various Field Offices / Plants / Installations across the Country except Corporate Office. Non-executives posted at Corporate Office are represented by GAIL Karamchari Sangh (GKS).

A Committee consisting of senior level executives nominated from various groups, functions and work centres looks after various ongoing issues with Association at the Corporate Level while at the Work Centre level, the Committee consists of an Officer In-charge, Heads of HR and other Departments. 100 Percentage of permanent Non-Executives are members of the GAIL Employees Association (GEA) and GAIL Karamchari Sangh (GKS) which are covered under the collective bargaining agreements. In all, there are 911 (i.e. 21% of total employees) regular employees who are members of these recognized unions.^{G4-11}

Discussions with employee collectives are held through Monthly / Bi-Monthly / Quarterly Meetings, both at Work Centre and Corporate levels. The record notes of discussions held at various Work Centres are collated at the Corporate Office on a monthly basis for effective monitoring by the Director (HR). There is no operation

which runs with risk related to violation of right to exercise freedom of association and collective bargaining during FY 14-15.

We adhere to Section 9A of Industrial Dispute Act 1947 & Schedule 4 for providing notice period regarding significant operational changes. There is no operation which runs with risk related to violation of right to exercise freedom of association and collective bargaining during FY 14-15.

Security Practices^{G4-DMA, G4-HR7, G4-HR9}

GAIL's assets can face threats of protests, sabotage and even potential terror attacks. These assets are of national significance and any incident related to these assets is bound to have social, environmental and economic ramifications.

Considering this scenario GAIL management is receptive of these threats and has responded through initiatives listed below:-

- ▶ Achieved zero breach of security during the year.
- ▶ Out of 401 recommendations made by Industrial Security Team of Intelligence Bureau during their visit to GAIL installations, 384 recommendations have been implemented (95.76%), including recommendations that were dropped by I.B. and only 17 are under progress and are under implementation.
- ▶ Advisory issued to all EDs (O&M) and concerned OICs to expedite declaration of Prohibitive Area for all pending installations under their jurisdiction.

- ▶ Frequency of foot patrolling has been increased on the basis of vulnerability.
- ▶ Foot patrolling allowance has been increased.
- ▶ Approximately 5000 km pipeline network has been mapped in the system and in use.
- ▶ GPS / GIS based foot patrolling implemented in Mumbai, Vijaipur, JLPL, NCR, Lakwa etc.,
- ▶ Pipeline foot patrolling "Exception Report" is being prepared and forwarded to all concerned.
- ▶ Attended On-shore Security Coordination Committee (OSCC) Meetings. Minutes of Meetings of OSCC were shared, followed up with work centres.
- ▶ The events such as Security Awareness Week, Security Emergency Response Drill etc., were organized in the Department / in GAIL .

Bio-metric Access Control System have been installed in plants, compressor stations, intermediate pumping stations and GAIL owned offices and issue of ID cards and its dispatch and receipt / return procedure has been streamlined.

Community / Society

Our Stakeholders (continue)

Cur operations are mostly situated around remote dwellings that lack basic utilities and infrastructure. GAIL believes in the concept of sharing value and has taken upon itself to bring infrastructure, modern amenities, provide skills for increased employability and encourage local prosperity amongst these local communities. Through these efforts we are fostering responsible growth in our own way for our communities.



Observance of Swachh Bharat, Swachh Vidyalaya at school in GAIL Pata

With 11,000 Km network of natural gas pipeline spread across India, we operate in some of the most remote locations of the country. We understand the importance of the communities we operate in and try to put in our best effort for addressing their concerns. We have a structured framework to address the needs and concerns of the communities through our corporate social responsibility programs. This consists of our policy document which provides procedures and focus areas for our CSR initiatives.

Our CSR policy was revised according to the provisions under section 135 of the Companies Act 2013 and DPE guidelines, 2014. The policy also allocates 2% of our average net profits made during the three immediately preceding financial years for the CSR spent. Board of Directors have constituted a Corporate Social Responsibility (CSR) Committee (Sub-Committee of the Board) with our C&MD as chairman of the committee and Director (HR), Joint

Secretary (MoPNG) as members of the committee. Our annual report on CSR policy and programmes implemented will be included in the Board of Directors' report and information on GAIL CSR committee will be also be presented in the company's annual report as well as on the website.

In line with the new policy, 75% of all our CSR initiatives will be implemented in and around the 'local areas' within 100 Km radius mostly in the remote areas. These local communities also include indigenous people located around our operations. Indigenous people are present at our Jhabua location in state of Madhya Pradesh but no incidents of any conflict have appeared during the reporting period. Being a PSU, our primary aim remains as that of serving people and we partner with these local and indigenous communities to create win-win situations for all stakeholders. Need assessment surveys are carried out to evaluate needs of these communities and also assess baseline scenarios.



Construction of Toilet under Swach Bharat Swach Vidyalaya

Based on these assessments, data and information through community interactions, activities are planned and implemented.

These activities will be carried out with the help of registered trusts, societies, autonomous bodies, government department, NGOs etc. if required. To ensure transparency and effective management, a robust monitoring framework will be instituted by the company providing for periodic monitoring at different levels.

With 'Hriday' at core of our CSR philosophy, community projects are now designed separately and are titled by the objective they seek to achieve. GAIL is working on the following focus areas under the CSR program as described below:

- ▶ GAIL Arogya – (wellness); nutrition, health, sanitation and drinking water
- ▶ GAIL Ujjwal - (Towards bright future); education initiatives
- ▶ GAIL Kaushal – (Skill); livelihood generation and skill development
- ▶ GAIL Unnati – (Progress); rural development
- ▶ GAIL Sashakt – (Empowerment); women empowerment initiative
- ▶ GAIL Saksham – (Capable); Care of the elderly and differently abled
- ▶ GAIL Harit –(Green); environmental centric initiatives

Through these cross-sectional community development programs, we ensure holistic development of the communities, thereby ensuring sustainable dimension to the CSR programmes.

We at GAIL believe that sustainability of our business growth is inherent in responding to the needs of the people, in benefiting communities, in protecting our environment and upliftment of the marginalized sections of the community. As part of our CSR campaign towards providing hygienic sanitation facilities, GAIL is supporting and constructing nearly 3500 toilets under "Swachh Bharat,

Swachh Vidyalaya" program. In essence, GAIL's interventions have endeavoured to provide greater impetus to inclusive and equitable social development.

-Director (Human Resources)

Focus Area-wise CSR spent FY 14-15

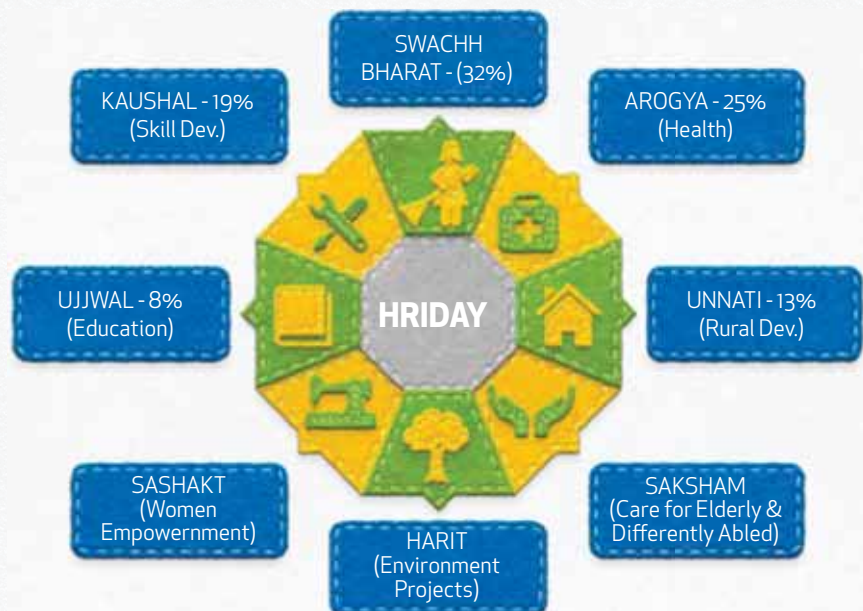
In alignment with the company's vision, our CSR performance indices are also included in our yearly MoU signed with MoPNG. For the reporting year the MoU focused majorly on three programs;

- ▶ Job linked vocational training to youth of under privileged rural / semi-rural families under project GAIL – IL & FS skills school (Continued flagship program)
- ▶ Project Jaldhara – Integrated watershed management project in villages of district Jhabua
- ▶ Skills training for employability of the women in the North East states of India.

Engaging Local Communities

Communities are our very important stakeholders and we engage continuously with them through various community development initiatives. Our CSR policy covers our entire area of operation. All community development initiatives try and incorporate a dimension of community involvement/interaction, awareness generation, engagement, stakeholder interaction and capacity building. The initiatives are taken up through a collaborative effort and a process of engagement with the local community, including local governance structures and institutions. The company also insists on the implementing agency participating in the community in a phase wise manner, while simultaneously building the community motivation and capability to operate the programme or the service on their own. During our engagement with local communities for impacts, programs and assessments we have not come across any significant negative impacts on the community due to our presence in the area.

Our Total Commitment for these initiatives in the year 2014-15 is INR 118.07 crores.



Our Stakeholders (continue)

Engaging with NGOs/ Charitable Trusts

As an effort to attain its social commitments GAIL has adopted multi-stakeholder approach for implementing its interventions collaborating with communities, governmental and NGOs, academic institutions and others to identify emerging issues, develop projects and effectively respond to challenges. Once interventions/initiatives are identified, they are closely monitored by dedicated CSR professionals of GAIL both at the corporate and on site level.

Impact Assessment^{G4-} DMA, G4-EC7, G4-EC8, G4-S01,

G4-S02

We carry out an annual exercise of third party impact assessment study of CSR projects which included in the MoU signed with Ministry of Petroleum and Natural Gas. Other than these Annual Studies for specific flagship long-term projects, GAIL has conducted three Independent Impact Assessment Studies for its CSR Projects in the last decade from Institutes and Consultancies of repute which include Tata Institute of Social Sciences (Mumbai, Maharashtra), Soul Ace Consultants (Gurgaon, Haryana), Delhi School of Social Work and Jamia Millia Islamia (Delhi). The CSR projects are evaluated on milestones achieved by the Cross Functional CSR Committee formulated at every work centre of GAIL. At the end of the project, a report pertaining to the impact of the programme, is submitted by the implementing partner specifically highlighting the project milestones achieved and the quantitative and qualitative benefits generated.

Highlights from some of our Community /

Social Initiatives

1. GAIL Arogya - wellness; nutrition, health, sanitation and drinking water

Under project Arogya, we have started 18 Mobile Medical units (MMUs) across the states of Madhya Pradesh, Uttar Pradesh, Gujarat, Haryana, Uttarakhand, Andhra Pradesh and Punjab covering around 374 villages and serving population of almost 3,20,000. Free medications and pathology services are also provided by these MMUs in the form of **'Swasthya Jaanch Machine'**. Understanding the role and significance of Transporters/Drivers/Truckers in furthering the business operation and to address the problem of HIV/AIDS associated with this segment, GAIL has been running STI clinic in Uttar Pradesh.

'Swachh Bharat Swachh Vidyalaya' (Clean India, Clean School)

This is another initiative taken up by GAIL to support Swachh Bharat Abhiyaan's commitment towards providing hygienic sanitation facilities, GAIL is constructing and supporting construction and functionality of nearly 3500 toilets under 'Swachh Bharat Swachh Vidyalaya' program over FY 2014-15 and FY 2015-16.

2. GAIL Ujjwal - (Towards bright future); education initiatives

Project Utkarsh

This pioneering project provides all-expenses paid, specialised residential coaching/intensive mentoring so that bright children of underprivileged families can compete for engineering entrance examinations such as the Indian Institutes of Technology Joint Entrance Examination (IIT-JEE). Beneficiaries are selected through a stringent written examination. Once these children qualify, GAIL also subsidises their academic expenses for the engineering course. Thus, not

only does GAIL put these deserving students on the path to sustainable professional and personal success, but also creates human assets for the nation. This flagship programme has enabled a record 92 students from disadvantaged backgrounds to qualify IIT- Mains exams and 50 of them have cleared the advanced level as well in the year 2014-15. Over the years, more than 90% of the beneficiaries have successfully secured admissions in premier engineering colleges of India.

GAIL has also set up the GAIL Charitable and Education Trust to extend financial assistance to needy children on merit basis, some of these are as follows:

- ▶ Project Assist- to provide financial assistance to 600 violence affected children in districts of Assam and Jammu & Kashmir in partnership with National Foundation for Communal Harmony.
 - ▶ Scholarship to 281 beneficiaries of Project Utkarsh admitted to various Engineering Institutions across India in FY 14-15.
 - ▶ Scholarships extended to 370 children from various schools across GAIL work centres under GAIL Scholarship Scheme.
- ### 3. GAIL Kaushal - Skill; livelihood generation and skill development

Job linked Vocational skill training to youth of under privileged rural / semi-rural families under project 'GAIL-IL&FS skill schools' is a continued flagship program of GAIL. As this program has been very successful in providing vocational training and livelihood opportunities to the youth of under privileged families by creating sustainable job opportunities, GAIL decided to implement this program on a long term basis. The programme is designed in such a way that it makes a significant impact on the targeted segment and attempts for self-

sustainability of these programs at the point of exit. For the reporting year this program was developed in three regions across India as follows:

- ▶ Guna (Madhya Pradesh), 881 students trained in FY 2014-15
- ▶ Dediapada (Narmada, Gujarat), 1500 students trained in FY 2014-15
- ▶ Tandur (Rangareddy, Telangana), 1001 students trained in FY 2014-15

Further trainings were given to 60 beneficiaries from the underprivileged community in the plastic industry related skills from CIPET, Ahmedabad. As mentioned above at Dediapada, Trainings were provided to 1500 persons with disability in collaboration with National Handicapped Finance and Development Corporation under the realm of project Swadheen.

4. **GAIL Unnati – (Progress); rural development**

Project Srijan (Creation)

Project Srijan (creation), undertaken post the devastating floods in the state of Uttarakhand, has provided training for alternate livelihood generation to nearly 1000 women, training to masons for disaster proof construction, and facilitated formation of 36 Self Help Groups and Farmer Interest Groups. Efforts toward rehabilitation of the people of the region have also been made through construction of households using Disaster Proof Technology.

5. **GAIL Sashakt – (Empowerment); women empowerment initiative**

Skills training for employability of the women in the North East states of India

According to the MoU signed between GAIL and government of India, the skills training program was designed to focus on the states of Assam and Tripura where we have our operating

units. The program was to extend training to young unemployed or under-employed in the trades pertaining to service sector and other trades identified as per the needs of the region.

Training and placement support was provided to 480 Safai Karamchari women from the states of Assam and Tripura in in BPO, Personality Development, Call Centre related skills etc. in partnership with National Safai Karamcharis Finance and Development Corporation.

6. **GAIL Saksham – (Capable); Care of the elderly and differently abled**

To address the issue of Elderly abuse Project Return of a Million Smiles was launched which is a holistic media campaign targeted at the young generation to raise awareness.

7. **GAIL Harit –(Green); environment centric initiatives**

GAIL's commitment towards the Environment forms an implicit part of its Vision statement and through its CSR initiatives it has promoted this cause through specific environment-friendly programmes. Projects related to Rain water harvesting, water Recharging and Ground water reuse system have been supported aptly

by GAIL. Environment conservation initiatives include a Gas based Crematorium at New Delhi, Bio Gas Plants and development of Environment Parks for thousands of poor labourers' living in slums.

Various initiatives were also taken at the organization for managing flora and fauna around our operational units at Vaghodia approximately 34.7% of the total plant area is covered under green belt and continuous efforts are in place to increase the green belt area. Indigenous species of trees and shrubs are planted for better suitability to the local climatic conditions.

At Vijaipur according to the targets of Sustainable Development and those of IMoU, a massive green belt development exercise in reporting period was undertaken that involved the plan of planting 10000 trees along with their maintenance at the plant complex. The focus of this exercise included the plantation of saplings that are local and indigenous to the local population such as Sesame, Mango, Neem, Jamun etc.

CSR Expenditure (in INR Crores)- GAIL's CSR Expenditure for FY 14-15 is INR 71.89 Crore much higher compared to FY 13-14 CSR expenditure of INR 62.57 Crore.



Customers

Our Stakeholders (continue)

Fostering responsible growth cannot be complete if it is not empathic towards the needs and demands of our customers. At GAIL, we aim to provide superior quality products with last mile connectivity for uninterrupted supply for their operations. Our customers, also, benefit through use of cleaner fuel provided by us to reduce their emissions. By delivering this enhanced value to our customers we have been able to create a large customer base. It must be noted that with these customers, our financial performance is strengthened, eventually helping us in fostering growth.

Customers^{G4-DMA}

GAIL initially started as a natural gas transmission but has diversified businesses in liquid hydrocarbons, petrochemicals, LPG transmission, city gas distribution, exploration & production, telecom & telemetry services, and power generation.

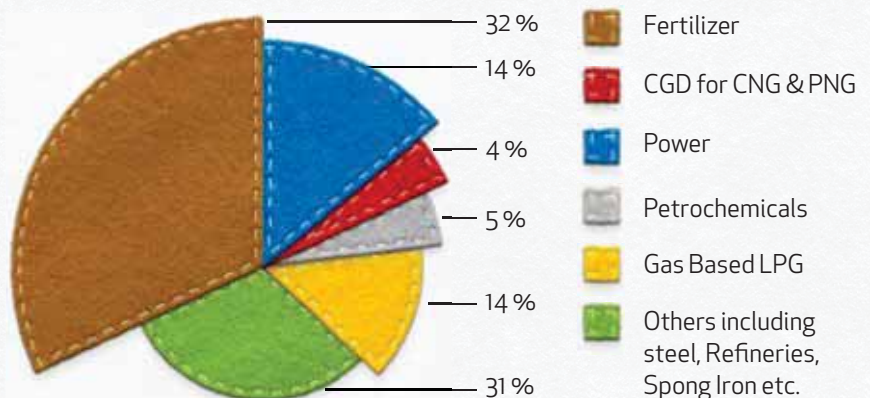
Today GAIL, is no longer remains only in B2B segment. Its ventures in City Gas Distribution (CGD) include eight joint venture and one nine subsidiary which operates 631 CNG stations, including 111 daughter stations, 403 online stations, and 117 mother stations. These joint venture and subsidiary companies also cater to over 14 lakhs domestic, 4700 commercial, and 1400 industrial consumers. Our management has responded to changing consumer dynamics through greater consumer centricity which has helped GAIL

gain consumer base even in the times of growing competition. In order to increase its customer base in all areas of operation CGD JV/Subsidiary companies of GAIL are providing easy access to customers with the help of innovative digital technology. Some of the examples are installation of Kiosk by IGL and Android based mobile application by MGL (MGL Connect).

In line with the target given by Hon'ble Prime Minister, GAIL and its JV/ Subsidiary Companies are making all out efforts to reach the domestic customers in their areas of operation for which various innovative schemes are being implemented and awareness program are being carried out.

Further, for improvement of environment, efforts are being made by CGD JVs/Subsidiary companies of GAIL in coordination with GAIL JV Group for the development of green corridor in the Country.

Sector wise Gas Supply - FY



Customer Satisfaction Index (CSI) (%)



During the year, we employed various initiatives to engage with our customers. Some of the common methods of engagement are customer meets across business segments, personal interactions with customers by the respective account managers as mapped in CAMS, customer visits being made to customer's premises on regular basis, bi-annual Customer Satisfaction Index (CSI) campaigns, stakeholder engagement surveys, online suggestion box, online customer complaint portal and third party CVM visits. Business segment wise summary of interaction with customers is captured under CAMS.

The strategic intent for regular customer engagement is to get first-hand information of market intelligence, build and strengthen customer relationships to augment sales, address customer's concern & issues to top management / other departments, resolve customer's grievances, build personal rapport with customers, technical trouble shooting. These interactions are also critical in determining the key issues faced by the customers.

Our focus is to work with major power and fertilizer companies and also smaller consumers using costlier liquid fuels. To serve the growth in petrochemicals, we intend to increase our capacities and have been investing in expansion activities. This would result quadrupling of our installed capacities and an increase in our market share from 15% (in FY15) to 30% by FY18.

Driving Customer Satisfaction at GAIL^{G4-PR5}

"While the major focus remains on maintaining its dominant position in the gas business, we understand that can only be achieved by upholding a cordial relationship with customers. Regular customer meets ensure exchange of information, ideas and concerns for mutual benefit. This year our customer satisfaction index stood at 89.72%."- Director (Marketing)

GAIL (India) Limited aims to be the first choice of its customers. GAIL's commitment towards customers

is reflected in its vision statement. Evaluation of Customer Satisfaction Index (CSI) helps us to know how well we serve our customers. Every year, we conduct business-wide customer satisfaction survey to gauge their satisfaction levels on a number of well-defined parameters such as product quality, usability of product, technical support, delivery of material, packaging, service quality, customer concerns and suggestions for improvement.

TQM Department is coordinating customer feedback through online feedback system on half yearly basis. The overall CSI for FY 2014-15 was 90%. Further, as part of customer value management, direct interaction is made with customers by visiting their premises. In FY 2014-15, 75 visits were conducted for interacting with NG, PC and LHC customers. During the year, 58 complaints were received from the customers, all except one were resolved by the end of the reporting period.

In addition to seeking our customers' feedback, we realized that it is important to create a platform where one way communication with stakeholders can give way to a two-way dialogue and this communication to happen on a real time basis.

Taking cognizance of this, we launched the official blog site GAIL Voice.com that will be the first among any energy company in India. GAIL Voice.com along with our other social media pages is aimed to create that platform where our customers, our beneficiaries, employees, people at large can come share their views, share our content and make an all-out attempt to help us create a better tomorrow together.

Responsible Stewardship^{G4-PR1, G4-PR2, G4-PR6, G4-DMA}

Being a responsible organization, we are also committed towards developing safe, environment friendly

Our Stakeholders (continue)

and economical products. We pursue this vision through an organization wide Total Quality Management (TQM) system. Our approach embeds a comprehensive look into the life cycle impacts of our products in terms of safety and environmental impacts and to seek technologically and commercially viable solutions to mitigate them. On the petrochemical side G-LEX (brand name for HDPE) and G-LENE (brand name for HDPE and LLDPE) are our major products.

While plastics have been traditionally considered as environmental pollutants, we perceive them as eco-friendly due to their high recyclability. Plastics can be recycled back into the system, thereby reducing the need to extract virgin natural resources. We have partnered with Indian Centre for Plastic in the Environment (ICPE) on educating and building awareness of consumers on the benefits of plastic products and the need to – create a secure plastic waste management system and maximize recycling of plastic waste back into the system. We continue to keep track of our customer satisfaction index across our businesses and hone ways and means to engage and work closely with our customers towards addressing any areas of concern.

For our Petrochemical products apart from the statutory requirements of furnishing the product details on the Polymer bags, we also provide the Test report to conform the parameters of quality of the product being supplied for each batch of product dispatched. Food grade certificates and BIS standard conformity certificates are also issued to customers on demand. GAIL adheres to the various codes or standards like ISO 9001:2008 standards, Solvent Control Order, PNGRB codes, applicable BIS standards, OISD guidelines, PESO standards and regulations, Weights and Measurements Code related to marketing communications for all its products. There have been no incidents of non-compliance with respect to

regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes. All the major installations of GAIL are accredited with OHSAS 18001 and committed towards assessment of health and safety impacts of products for improvement.

Through our Gas Management System (GMS) we are able to handle multiple sources of supply and delivery of gas in a co-mingled form and provide a seamless interface between shippers, customers, transporters and suppliers. Under the GMS, the entire order-to-cash cycle has been automated and is available on real time basis from upstream gas supply, gas transportation to billing, payment and final receipt of payments. This system helps in monitoring vital aspects of the pipeline network on a real time basis including information regarding network utilization, gas sales, volume transferred, revenue generation and price variations. The system thus ensures higher transparency and objectivity, besides improving efficiency through central aggregation of all information and data. Information is made available to customers directly through the GMS portal facility, thus empowering them to better plan and utilize the gas supply.

Along with this, we also have focused approach towards executing spur-lines connectivity to the last mile consumer. The focus has essentially shifted from sourcing to efficiently and effectively market the sourced gas at a desirable level of profitability and ensuring last mile connectivity. Till a year back, only gas sourcing was major issue across GAIL's operations. However, based on the recent developments viz. signing of long term contracts with several international operators, it was realized that Gas sourcing & marketing becomes a material issue for GAIL. To improve our reach, this year we extended last mile connectivity to 66 members of consumers supplying around 5.55 MMSCMD of Natural gas.

It is noteworthy that these consumers are in medium and small manufacturing enterprise category which was earlier dependent on costlier and more polluting liquid fuels, leading into less GHG Emissions after switching to natural gas.

There has been a global movement amongst industries to slowly graduate towards products and services that minimize impacts on environment and societal resources and we have been a part of this journey since inception. Natural Gas, our prime product, is a cleaner alternative to polluting fossil fuels such as coal and crude oil. We have developed adequate systems to ensure that the benefits of this essential fuel reach the society without compromising on safe use. Over the last 10 years we have established a firm footing in City Gas Distribution (CGD) to ensure energy access even to the marginalized section of consumers.

Labelling and Marketing Codes^{G4-PR3, G4-PR4, G4-PR7}

GAIL follows all applicable local and international standards such as HazChem codes, GHS etc. with respect to labelling. For petrochemicals, apart from the statutory requirements of furnishing the product details on the polymer bags, we also provide the test report to conform the parameters of quality of the product being supplied for each batch of product dispatched. Further, food grade certificates and BIS standard conformity certificates are also issued to customers on demand. GAIL being a government organization is not involved into the sale of banned or disputed products.

Codes or standards relating to marketing communications applied across the organization. These include ISO 9001:2008 standard, solvent control order, PNGRB codes, applicable BIS standards, OISD guidelines, PESO standards and regulations, Weights and Measurements Code.

Strategic development of New Grade by GAIL Polymer Technology Centre -EC52A110 in FY 2014-15

At present, HDPE fertilizer bags are laminated inside with LLDPE/LDPE material to protect the content from moisture/air ingress. This inside lamination process is a labour intensive activity – as, reverse lamination of the bags are carried out manually. This increases the processing cost of the bag. In case of PP bags lamination is kept outside because it has good abrasive strength. Also the outside lamination improves the printing and the overall aesthetics of the bag.

In order to address the problem in HDPE bags a new HDPE lamination grade has been developed to match the properties of outside lamination of PP. Another purpose of this development

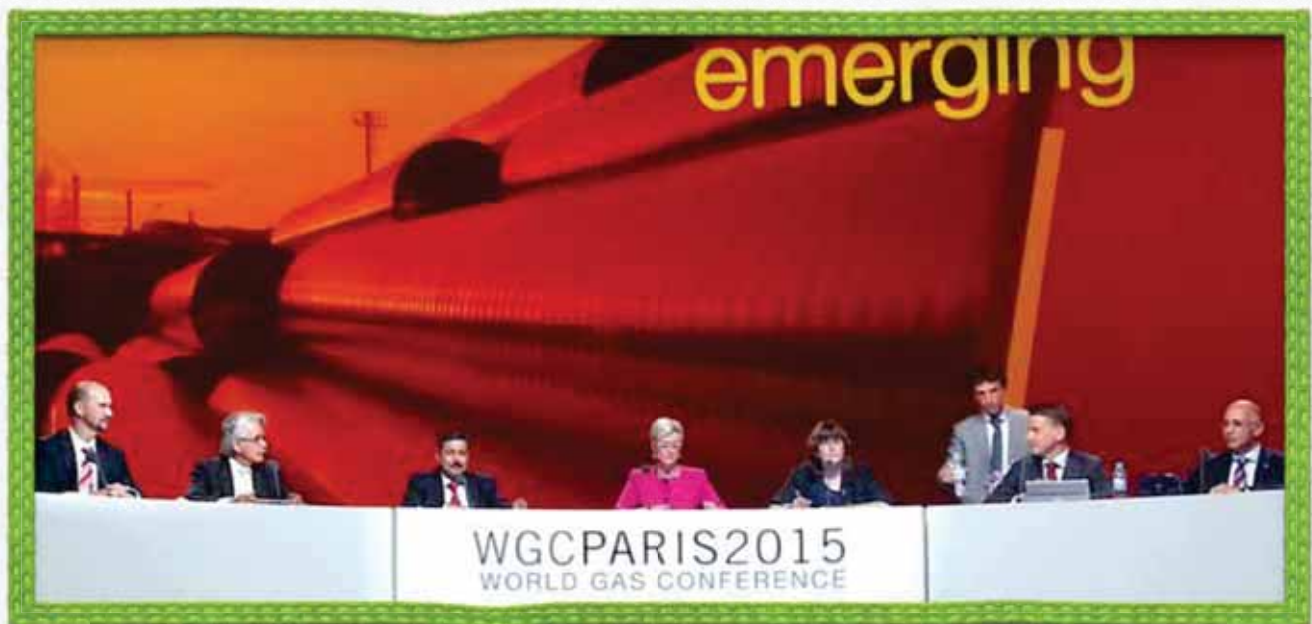
was to (i) improve the aesthetics of the HDPE bags and (ii) to reduce the processing cost of HDPE bags. Certain features of this grade are enhanced like physical strength of lamination, adhesion strength with HDPE bag, peel strength and compatibility with LDPE for ease of processing.

This is a strategically targeted grade with reference to upcoming GAIL's expansion in petrochemicals as the development of this grade will not only increase the market share of GAIL's HDPE in extrusion coating but will also protect the existing HDPE raffia market share in Domestic market.

Further, we are taking proactive steps for advocacy on plastic recycling and plastic parks. We developed a film "Say YES to Plastics" which has been shown at various forums such as PlastIndia, Indiachem, IPLEX etc. exhibitions, Customer Meets, govt. officials, etc. GAIL is jointly working

with Industry associations viz Indian Centre for Plastics in Environment (ICPE) & Chemicals & Petrochemicals Manufacturers Association (CPMA) for propagating proper disposal of plastic waste and it's recycling. Recently, ICPE has setup a plant in New Delhi for conversion of waste plastic into oil. In

plastic parks, GAIL will ensure regular availability of its products by opening CS stock point. GAIL is also under the process of conducting training of youth from under privileged background by imparting residential training through CIPET at Bhubaneswar, Ahmedabad, Hyderabad & Guwahati.



3rd from Left: Director Marketing, GAIL during WGC, Paris 2015

Suppliers

Our Stakeholders (continue)

GAIL's supply chain involves a mix of global and local suppliers who are indispensable of conducting our day to day activities. We work with these suppliers to foster responsible growth by creating a symbiotic partnership with our suppliers to ensure constant raw material availability and other products and services for our operations. In this two-way partnership we have learnt much from some of our suppliers and have also passed on our learnings to the smaller / newer / upcoming suppliers with special efforts for the MSMEs.

"GAIL is constantly expanding its global presence through its participation along the natural gas value chain. It is also evaluating various global opportunities with the prime objective of securing gas supplies for the energy security of the country. We are securing imported LNG to reduce demand-supply gap of natural gas"

-Director (Marketing)

^{G4-DMA}GAIL in the conduct of its business has to deal with number of contractors, vendors and suppliers. It is our constant endeavor to maintain and foster most ethical and corruption free business environment where complaints from the contractors and suppliers are dealt in a just, fair and transparent manner. Thus, our relationship with our suppliers is based on transparency and fairness. GAIL

believes in giving equal opportunity to all and has policy in place which has no discrimination in identification of supplier on the basis of caste, colour, gender, religion or region. We host our tenders on our website which is available in public domain and whosoever is interested can participate in those tenders without even visiting the tender issuing site.

"We view Suppliers / Contractors / Consultants as critical partners in our growth. A symbiotic relationship with these key Stakeholders not only ensures economic gains, higher quality, improved planning and timeliness of project but also ensures greater long term support and value. We have developed an effective Stakeholder Management Mechanism wherein regular meetings are held with key Suppliers / Contractors / Consultants to understand their issues / concerns and address them appropriately in time-bound manner. Further, we are in the process of developing a pre-dispute resolution mechanism, through which we are aiming to minimize the post closure legal disputes / arbitrations. This Mechanism is expected to be implemented from 3rd Quarter of 2015-16 onwards."

-Director (Projects)

Some of our initiatives towards ensuring transparency and fairness include e-tendering and reverse auctioning. These are discussed in detail below:

e-Tendering

GAIL has introduced e-tendering which is based on the principle of competitiveness and such procurement practices are executed in a manner that is transparent, fair, competitive and cost effective. This process also contributes towards saving of paper and is a green initiative of the organisation. Our IT team continuously works with various departments to provide solutions and extend IT enabled services across the entire process.

Electronic tendering ("e-Tendering") (on SAP-SRM platform) a process on a secure platform for sending and receiving tenders by electronic means, rather than the old paper based method was implemented.

Initially, e-Tendering was made mandatory for tenders beyond estimated value of INR 50 lakhs. However after witnessing the positive response ceiling was further lowered down to INR 25 lakhs.

This e-tendering process has resulted in better security as:-

- ▶ Tender documents can only be accessed by authorized parties.
- ▶ Neither party can deny sending or receiving documents.
- ▶ Alteration of tender documents is either impossible or easy to detect whilst also allowing the tenderers to insert their rates and prices.

Reverse Auction

Online procurement tool to obtain competitive price; online negotiation

among short-listed bidders; RA System introduced for tenders above INR 50 Crore

Short-listed bidders get an opportunity to reduce their prices online in a transparent and fair manner; identity of bidder(s) not disclosed.

Major Benefits:

- ▶ Less time is spent in arriving at final prices.
- ▶ Minimizes human involvement.
- ▶ System offers greater insights into the current market pricing.
- ▶ Gives equal opportunity to all short listed suppliers to be most competitive.
- ▶ To help bidders to know their price / position dynamically vis-à-vis the other suppliers and provide them an opportunity to react to it.

Policy Level Initiatives

GAIL has signed a MoU with Transparency International India (TII) to ensure that all our activities / transactions and complaints emerging during tendering process are handled in fair and transparent manner. As a part of this MoU, Integrity Pact is incorporated in the tender with value INR 1 crore and above. A copy of MoU and Integrity Pact Program has been uploaded on our website for the reference of all relevant stakeholders. As a part of Integrity Pact Program, GAIL has appointed Independent External Monitors who are responsible for overseeing the implementation of Integrity Pact Program and address the grievances of vendors / contractors.

Encouraging Local and Micro and Small scale Suppliers

In line with the "Public Procurement Policy" for Micro, Small & Medium Enterprises (MSMEs) GAIL procures 20% of its supplies from MSMEs with 4% from MSMEs owned by the scheduled caste or the scheduled tribe entrepreneurs for the goods and services rendered by such organizations. These industries are generally local & small producers from the surrounding communities near the place of work.

Under this policy, benefits like waiver from tender fee and EMD, Purchase Preference etc. are available. This reduces the transaction cost of the suppliers / vendors involved in the tendering process.

Further, GAIL has already introduced e-procurement that also helps out the local and small vendors to quote in large numbers with ease and reduces their tendering cost. In all tenders pre-tender/pre-bid meeting are conducted to ensure wider participation and to educate vendors on the tendering process. GAIL also interacts with the small and local vendors at various forums like vendors meet / MSMEs meet / Industry Conclave etc. In the reporting period, vendor development program for MSMEs have been conducted at Pata, Vijaipur, Jaipur, Corporate Office, Mumbai, Jhabua, Rajahmundry & Vadodara.

Our Stakeholders (continue)

Vendor Development
by GAIL

Vendor development programs are organized by GAIL to improve the suppliers' performance and capabilities to meet our needs and expected value. During the reporting year, vendor development programs were taken up at Pata, Vijaipur, and GTI Noida.

GAIL Pata initiated action for enrolment of service providers as MSE keeping in view of their long term association with GAIL. GAIL, Pata in association with District Industries Centre (DIC), Auraiya, organized a camp in May, 2014 to facilitate on-line registration of eligible service providers as MSME by DIC, Auraiya. Overall, 48 service providers participated in the camp. Due to aforesaid initiative of C&P – Pata,

59 probable Service Providers have been registered with DIC, Auraiya and have been provided Entrepreneurs Memorandum Part II certificate

A Vendor Development Program for MSEs was held in December, 2014 at GTI-Noida. Director (MSME-DI) and Zonal General Manager, NSIC attended the program. Further, 70 participants from 44 Micro and Small Enterprises attended the program.

An awareness programme on Vendor Development / MSME was conducted at Vijaipur, Guna. The programme was conducted in association with MSME, Indore and vendors from Bhopal, Indore and Guna participated in the programme.



Interactive Session with MSMEs

With these efforts and regular interaction with local MSEs by site offices with a view to enhance the participation of MSME's in various tenders, GAIL has been successful in increasing the participation of MSME and the same is reflected in the Y-O-Y growth in procurement from MSME.

Responsible Supply Chain G4-DMA, G4-HR5, G4-HR10

We believe we can have a positive influence on our suppliers by engaging with them on the social, ethical and environmental aspects of their business. All our vendors and suppliers have to comply with General Conditions of Contract (GCC) which covers provisions relating to impact on compliances, society, environment, labour practice, and human rights aspects. As per provisions of GCC, the supplier engaged with GAIL is required to follow all government / statutory policies / rules which provide various aspects like separate toilets, washing places for men and women, compulsory canteen facilities and medical services for all employees. Further, no grievances related to human rights were filed against the organization during the reporting period. GAIL does not allow child labor to work in any of our establishments.

Expenditure of Procurement from MSMEs



We have prescribed the minimum age limit of 18 years for employment / contract labour. As per provisions of contract, the contractor is required to obtain labour permission from authority / GAIL, wherein they have to confirm that they do not engage child labor. All contracts placed by GAIL

contain 'Health, Safety & Environment Policy' approved by GAIL. Apart from this we also treat transporter safety as an important aspect of our supply chain, details for which have been discussed in the operational excellence section.

Head <small>G4-EC9, G4-LA14, G4-HR1</small>	Units	2014-15
Total Procurement Of Goods & Supplies	INR Million	27700
Total Procurement Of Goods & Supplies From Local Suppliers	INR Million	25400
% Of New Suppliers That Has Been Screened Through Environmental Criteria	%	100
% Of New Suppliers That Has Been Screened Through Labour Practice Criteria	%	100
% Of New Suppliers That Has Been Screened Through Human Rights Criteria	%	100
% Of New Suppliers That Has Been Screened Through Criteria For Impacts On Society	%	100
% Of Suppliers Identified Having Significant Actual & Potential Negative Impacts On Society.	%	0
% Of Suppliers Identified Having Significant Actual & Potential Negative Impacts On Society With Which Relationship Has Been Terminated	%	0

Our Performance Snapshot

Environmental Performance G4-EN1, G4-EN2, G4-EN3, G4-EN4, G4-EN6, G4-EN8, G4-EN10, G4-EN15, G4-EN16, G4-EN19, G4-E20, G4-EN21, G4-EN22, G4-EN23, G4-EN29, G4-EN31, G4-S08, G4-PR9

Material Consumption	Unit	2010-11	2011-12	2012-13	2013-14	2014-15
NG Processed	MMSCM	14849	15120	14373	14529	13584
NG To Product	MMSCM	1060	1137	1080	1058	1112
Lean NG To P/L	MMSCM	13342	13419	12944	13203	12044
Associated Material	MT	10412	9916	10631	10563	11350
Packaging Material	MT	2112	2249	2208	2090	2228
Recycled Material	MT	0	0	0	0	0

Energy Consumption (GJ)	2010-11	2011-12	2012-13	2013-14	2014-15
Direct Energy	38281008	39012486	37359156	35859826	35088263
Indirect Energy	1039694	1166546	1118455	1126035	1233894
Renewable Energy	9755	12156	27980	88274	95944
Energy From NG Flaring	379338	337453	367375	347921	355781
Energy From LPG Flaring	987	4923	2472	2889	3035
Energy From NG Venting	115026	133305	444484	490193	626991
Energy From LPG Venting	2789	3739	2619	4744	5626

Energy Consumption by Source (GJ)	2010-11	2011-12	2012-13	2013-14	2014-15
Diesel	19294	19666	20093	20330	18628
Natural Gas	30790595	31033613	30056464	28988285	28163438
Residual Fuel	7465046	7956762	7279523	6849248	6906178
LPG	6073	2444	3076	1963	18
Total Direct Energy	38281008	39012486	37359156	35859826	35088264

Energy Saving (GJ)	2010-11	2011-12	2012-13	2013-14	2014-15
Total Energy Saved	672232	1174650	152061	55967	575362

Renewable Energy Generation (GJ)	2010-11	2011-12	2012-13	2013-14	2014-15
Wind Energy	31715	43414	545124	464398	404929
Solar Energy	35	75	3262	34621	31553
Total Renewable Energy	31750	43489	548386	499018	436481

Emissions (tCO ₂ eq)	2010-11	2011-12	2012-13	2013-14	2014-15
Scope 1 Emissions	2261535	2363624	2381898	2285196	2252649
Scope 2 Emissions	233261	256278	256781	258538	280981
Total GHG Emissions	2494796	2619902	2638679	2543735	2533629

GHG Saving (GJ)	2010-11	2011-12	2012-13	2013-14	2014-15
Total GHG Saved	39402	66159	8805	4225	33253

Air Emissions (Tons/Annum)	2010-11	2011-12	2012-13	2013-14	2014-15
SPM	906	1012	912	815	491
NO _x	710	695	848	968	1482
CO	0.04	0.03	0	668	607
SO _x	260	193	178	304	216
VOC	0.01	0.01	0.02	2.25	18
R-134a	44	169	0	226	226

ODS Gas Consumption	Unit	2010-11	2011-12	2012-13	2013-14	2014-15
R22	Kg/Annum	2393	2299	2778	1951	2428
ODP	CFC-11	131.63	126.44	152.77	107.33	133.54

Water (Million M ³)	2010-11	2011-12	2012-13	2013-14	2014-15
Total Water Consumption	13.8	14.1	13.9	12.9	14.3
Total Waste Water Generated	1.6	2.3	2.4	2.0	1.7
Total Waste Water Discharged	0.04	0.03	0	668	607
Water Recycled/ Reused	0.9	1.3	1.2	1.2	1.1
	0.7	0.9	1.1	0.8	0.6

Our Performance Snapshot (continue)

Waste Disposal Method*	Waste Category (Unit)		
	Solid (MT)	Liquid (Litres)	Miscellaneous (Numbers)
Deep Well Injection	0.4	0	0
Incineration	3	0	461
Landfill	5538	0	0
Onsite Storage	57	13532	1456
Other	865	78014	1055
Recycling	1953	965924	5636
Reuse	0	0	14

* In line with requirements of GRI G4 guidelines Waste data has been provided by Waste Disposal Method

Environmental Expenditure (in INR Million)	2010-11	2011-12	2012-13	2013-14	2014-15
Treatment and Disposal of Waste	5	7	8	4	10
Depreciation and Maintenance Cost of Equipment Used In Pollution Control	16	16	16	16	85
External Services for Environmental Management	3	4	5	5	9
External Certification of Management Systems	1	1	1	1	2
Personnel For General Environmental Management Activities	17	20	18	17	18
Extra Expenditures for Installing Cleaner Technologies	0	10	1	0	29
Other Environmental Costs	17	6	5	3	7
Total Environmental Expenditures	5	7	8	4	10

Environmental Fine	Unit	2010-11	2011-12	2012-13	2013-14	2014-15
Show Cause Notices Received	Numbers	0	1	0	0	0
Environmental Fines	INR	0	0	0	0	0

Social Performance G4-LA5, G4-LA6, G4-LA7, G4-LA9, G4-LA12, G4-10

Health and Safety of Permanent Employees	Unit	2010-11	2011-12	2012-13	2013-14	2014-15
Management Representatives in Safety Committees	Numbers	235	245	247	290	301
Non-Management Representatives in Safety Committees	Numbers	170	172	182	189	166
Near Miss Cases - Male	Numbers	179	156	156	217	316
Near Miss Cases - Female	Numbers	0	0	1	2	2
Minor Injuries - Male	Numbers	2	0	0	0	3
Minor Injuries - Female	Numbers	0	0	0	0	0
Reportable Injuries - Male	Numbers	2	0	0	4	0
Reportable Injuries - Female	Numbers	0	0	0	0	0
Lost Days Due To Reportable Injuries - Male	Numbers	115	0	0	0	0
Lost Days Due To Reportable Injuries - Female	Numbers	0	0	0	0	0
Fatalities - Male	Numbers	1	0	0	0	0
Fatalities - Female	Numbers	0	0	0	0	0
First Aid Cases - Male	Numbers	20	17	11	1	3
First Aid Cases - Female	Numbers	0	0	0	0	0
Manhours Worked - Male	Million Manhours	6.4	6.6	5.6	7.5	6.3
Manhours Worked - Female	Million Manhours	0	0	0.2	0.3	0.2
Occupational Diseases - Permanent Employee - Male	Numbers	0	0	0	0	0

Our Performance Snapshot (continue)

Occupational Diseases-Permanent Employee-Female	Numbers	0	0	0	0	0
LTIFR - Male	Reportable Injuries Per Million Manhours Worked	0	0	0	0.54	0
LTIFR - Female	Reportable Injuries Per Million Manhours Worked	-	-	0	0	0
Severity Rate - Total	Lost Days Per Million Manhours Worked	18	0	0	0	0
Fatality Rate - Male	Fatalities Per Million Manhours Worked	0	0	0	0	0
Fatality Rate - Female	Fatalities Per Million Manhours Worked	-	-	0	0	0

Health And Safety Of Contract Employees	Unit	2010-11	2011-12	2012-13	2013-14	2014-15
Near Miss Cases - Male	Numbers	189	208	184	229	207
Near Miss Cases - Female	Numbers	0	0	0	0	2
Minor Injuries - Male	Numbers	28	3	3	4	9
Minor Injuries - Female	Numbers	0	0	0	0	0
Reportable Injuries - Male	Numbers	1	0	0	6	8
Reportable Injuries - Female	Numbers	0	0	0	0	0
Lost Days Due To Reportable Injuries - Male	Numbers	0	0	0	12	16
Lost Days Due To Reportable Injuries- Female	Numbers	0	0	0	0	0
Fatalities - Male	Numbers	2	0	0	0	0
Fatalities - Female	Numbers	0	0	0	0	0
First Aid Cases - Male	Numbers	110	73	57	8	73
First Aid Cases - Female	Numbers	0	0	0	0	0
Manhours Worked - Male	Million Manhours	20.1	30.7	16.7	19.7	19.8
Manhours Worked - Female	Million Manhours	0	0	0.4	1	0.5
Occupational Diseases-Permanent Employee-Male	Numbers	0	0	0	0	0
Occupational Diseases-Permanent Employee-Female	Numbers	0	0	0	0	0
LTIFR - Male	Reportable Injuries Per Million Manhours Worked	0.05	0	0	0.31	0.4
LTIFR - Female	Reportable Injuries Per Million Manhours Worked	-	-	0	0	0
Severity Rate - Total	Lost Days Per Million Manhours Worked	0	0	0	9.29	2.31
Fatality Rate - Male	Fatalities Per Million Manhours Worked	0.1	0	0	0	0
Fatality Rate - Female	Fatalities Per Million Manhours Worked	-	-	0	0	0

Our Performance Snapshot (continue)

Contract Employee Distribution (Numbers)	2014-15
Security Staff Male	1935
Security Staff Female	0
Regular Contract Worker Male*	13135
Regular Contract Worker Female*	265

*Number keeps on changing due to start and completion of activities

Permanent Employee Distribution	2014-15
Senior Management (E7-E9) - Male	256
Senior Management (E7-E9) - Female	6
Middle Management (E4-E6) - Male	1358
Middle Management (E4-E6) - Female	49
Junior Management (E0-E3) - Male	1520
Junior Management (E0-E3) - Female	159
Non-Management (S0-S7) - Male	871
Non-Management (S0-S7) - Female	41
Senior Management (E7-E9) : <30 Years Age	0
Senior Management (E7-E9) : 30 To 50 Years Age	60
Senior Management (E7-E9) : >50 Years Age	202
Middle Management (E4-E6) : <30 Years Age	0
Middle Management (E4-E6) : 30 To 50 Years Age	1105
Middle Management (E4-E6) : >50 Years Age	302
Junior Management (E0-E3) : <30 Years Age	552
Junior Management (E0-E3) : 30 To 50 Years Age	852
Junior Management (E0-E3) : >50 Years Age	275
Non-Management (S0-S7) : <30 Years Age	78
Non-Management (S0-S7) : 30 To 50 Years Age	716
Non-Management (S0-S7) : >50 Years Age	118
Employee Turnover - Management	61
Employee Turnover - Non Management	8
Employee Turnover - Age<30-Male	34
Employee Turnover - Age<30-Female	0
Employee Turnover - Age:30-50 - Male	7
Employee Turnover - Age:30-50 - Female	2
Employee Turnover - Age>50-Male	25
Employee Turnover - Age>50-Female	1
New Employees Hired During FY: Male	300
New Employees Hired During FY: Female	14
New Employees Hired Who Resigned In The Same FY: Male	10
New Employees Hired Who Resigned In The Same FY: Female	0

Training	2010-11	2011-12	2012-13	2013-14	2014-15
Management Employees (Direct) - Male	99219	107250	129831	120497	139647
Management Employees (Direct) - Female	5974	5445	7211	6856	9256
Workmen (Direct Employees) - Male	48596	29071	26493	25009	26541
Workmen (Direct Employees) - Female	1392	1520	1268.6	875	1191
Contractual Labour (Operations) - Male	28617	38944	41835	53878	45767
Contractual Labour (Operations) - Female	0	0	670	983	7199
Permanent Employee- Physically Disabled	0	0	0	1007	2652
Contract Worker -Physically Disabled	0	0	0	0	4
Total Training For Direct Employees (Site-Based)	155180	143286	164804	153237	176636

Emission Calculation Methodology

- ▶ Total Scope-1 Emissions has been calculated based on the IPCC Emission Factors and internal Process Calculations. Emissions have been identified from different sources of fuel and direct CO₂ emissions.
- ▶ Total Scope-2 Emissions has been calculated by weighted average grid Emission factors given by Central Electricity Authority, Government of India for NEWNE (covering former Northern, Eastern, Western and North-Eastern regions) and South Grid. The Guidelines used are GHG Protocol, ISO 14064.
- ▶ Direct & Indirect Energy from different fuels, renewables and electricity has been calculated by the corresponding calorific value of the fuel and theoretical thermal equivalence respectively.
- ▶ NO_x, SO_x, SPM, CO, VOC have been reported by Test Report data and standard calculation formula.

Independent Assurance Statement



Introduction

DNVGL represented by DNVGL Business Assurance India Private Limited ('DNVGL') has been commissioned by the management of GAIL (India) Limited (or 'the Company') to carry out an independent assurance engagement on the Company's Sustainability Report 2014-15 ('the Report') in its printed format. The verification was conducted during June-July 2015, for the year of activities covered in the Report i.e. 1st April 2014 to 31st March 2015.

The intended users of this Assurance Statement are the management of the Company. The management of the Company is responsible for all information provided in the Report as well as the processes for collecting, analysing and reporting the information presented in the printed reports. Our responsibility in performing this work is regarding verification of Sustainability performance disclosed in the Report and in accordance with the agreed scope of work with the management of the Company. The assurance engagement is based on the assumption that the data and information provided to us is complete and true. We expressly disclaim any liability or co-responsibility for any decision a person or entity would make based on this assurance statement.

Scope, Boundary and Limitations of Assurance

The scope of work agreed upon with the Company includes verification of the following:

- ▶ The verification of the qualitative and quantitative information on sustainability performance disclosed in the report covering Economic, Environmental and Social performance of the activities undertaken by the Company over the Reporting period 1st April 2014 to 31st March 2015 and based on the Global Reporting Initiative G4 Sustainability Reporting Guidelines (GRI G4) and Oil and Gas Sector Supplement (OGSS);
- ▶ Review of the policies, initiatives, practices and performance described in the Report including external references;
- ▶ Evaluation of the AccountAbility principles and specified performance information, described below, for a Type 2, Moderate Level of assurance, in accordance with the requirements of AA1000AS (2008) detailed below:
 - ▶ Information related to the Company's Sustainability Issues, responses, performance data, case studies and underlying systems for the management of such information and data;
 - ▶ Information relating to the Company's materiality assessment and stakeholder engagement processes;
- ▶ Evaluation of the disclosed General and Specific Standard Disclosures for 'in accordance'-Core reporting requirements covering the systems, and the processes which Company has in place for adherence to the Reporting Principles set out in GRI G4;
- ▶ Confirmation of Sustainability Disclosures related to GRI G4 - 'in accordance'-Core as declared by GAIL.

The aspect boundary is based on the internal materiality assessment conducted across six stakeholder groups predominantly covering GAIL 'Indian Operations', and excludes the key supply chain activities, Joint Ventures and Subsidiaries as set out in the report. During the assurance process, we did not come across limitations to the scope of the agreed assurance engagement. The reported data on economic performance is based on audited financial statements by the Company's statutory auditors. No external stakeholders were interviewed as part of this assurance engagement.

Verification Methodology

This assurance engagement was planned and carried out in accordance with AccountAbility's AA1000 Assurance Standard 2008 (AA1000AS (2008)) and DNVGL Protocol for Verification of Sustainability Reporting ('VeriSustain' - available on request from www.dnvgl.com). The Report has been evaluated against the principles of **Inclusivity, Materiality and Responsiveness** as set out in AA1000AS (2008) and the **Reliability** of specified sustainability performance information, as required for a Type 2, moderate level assurance engagement, and adherence to the additional principles of **Completeness and Neutrality** as set out in VeriSustain.

During the Assurance Engagement, we adopted a risk based approach, i.e. we concentrated our verification efforts on the issues of high material relevance to GAIL business and its key stakeholders. As part of verification, we visited GAIL Corporate Office at New Delhi, GAIL Training Institute (GTI) & Jubilee Tower at Noida and five operational sites located in India i.e. Pata (U.P.), Vijayapur & Khera (M.P.), Mansarampura & JLPL pipelines HQ, Jaipur and Vaghodia (Gujarat).

As part of the engagement, we have verified the statements and claims made in the Report. In doing so, we have:

- ▶ Reviewed the Company's approach to stakeholder engagement and its materiality determination process;
- ▶ Verified the sustainability-related statements and claims made in the Report and assessed the robustness of the data management system, data accuracy, information flow and controls;
- ▶ Examined and reviewed documents, data and other information made available by the Company;
- ▶ Conducted in-person interviews with middle and senior management team and other representatives, including data owners and decision-makers from different functions of the Company during corporate and site visits;
- ▶ Performed sample-based reviews of the mechanisms for implementing the Company's sustainability related policies, as described in the Report;
- ▶ Performed sample-based checks of the processes for generating, gathering and managing the quantitative data and qualitative information included in the Report.

Conclusions

The Sustainability Report 2014-15 is prepared based on GRI G4 Reporting Principles and Standard Disclosures for 'in accordance'-Core. In our opinion, based on the scope of this assurance engagement, the disclosures on sustainability performance reported in the Report along with the referenced information provides a fair representation of the key material aspects, related strategies, disclosure on management approach and performance indicators and meets the general content and quality requirements of GRI G4 i.e.,

- ▶ **General Standard Disclosures:** The reported information under this section generally meets the disclosure requirements for 'in accordance' - Core reporting.

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- ▶ **Specific Standard Disclosures:** The reported information under this section generally meets the disclosure requirements for 'in accordance' – Core based on GRI G4 covering generic Disclosures on Management Approach (DMAs) and Performance Indicators for identified material Aspects as below:

Economic

- ▶ Economic Performance – G4-EC1, EC3, EC4;
- ▶ Indirect Economic Aspects – G4- EC7;
- ▶ Procurement Practices – G4-EC9;

Environmental

- ▶ Materials- G4 -EN1;
- ▶ Energy – G4-EN3,5, 6;OG2 & OG3;
- ▶ Water – G4- EN8 &10;
- ▶ Emissions – G4-EN15,16,18 to 21;OG6
- ▶ Effluents and Waste – G4-EN22 to 26;
- ▶ Compliance – G4-EN29;
- ▶ Overall- G4-EN31;
- ▶ Environmental Grievance Mechanisms – G4-EN34;

Social

Labour Practices and Decent Work

- ▶ Employment – G4-LA1 to 3;
- ▶ Labor/Management Relations – G4-LA4;
- ▶ Occupational Health and Safety – G4-LA5 to 7;
- ▶ Training and Education – G4-LA9 to 11;
- ▶ Diversity and Equal Opportunity – G4-LA12;
- ▶ Equal Remuneration for Women and Men – G4-LA13;
- ▶ Labour Practices Grievance Mechanisms – G4-LA16;

Human Rights

- ▶ Non-discrimination – G4-HR3;
- ▶ Freedom of Association and Collective Bargaining – G4-HR4;
- ▶ Child Labor – G4-HR5;
- ▶ Forced and Compulsory Labor – G4-HR6;
- ▶ Security Practices – G4-HR7;
- ▶ Human Rights Grievance Mechanisms – G4-HR12;

Society

- ▶ Local Communities –G4-SO1,SO2;
- ▶ Anti-corruption – G4-SO4,,SO5;
- ▶ Public Policy- G4-SO6;
- ▶ Anti-Competitive Behaviour- G4-SO7;
- ▶ Compliance – G4-SO8;
- ▶ Grievance Mechanisms for Impacts on Society – G4-SO11;OG10;
- ▶ Asset Integrity and Process Safety – OG13;

Product Responsibility

- ▶ Customer Health & Safety – G4-PR2;
- ▶ Product and Service Labelling – G4-PR3,PR4,PR5;
- ▶ Marketing Communications – G4-PR6,PR7;
- ▶ Compliance – G4-PR9.

Independent Assurance Statement (continue)

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We have evaluated the Report's adherence to the following principles on a scale of 'Good', 'Acceptable' and 'Needs Improvement': **AA1000AS (2008) Principles**

Inclusivity: The stakeholder identification and engagement process includes engagement with key stakeholders to identify key sustainability challenges and concerns through different channels and the process is documented. The material issues emerging from the stakeholder engagement were collected and prioritized, and the results are fairly reflected in the Report. In our view, the level at which the Report adheres to this principle is 'Good'.

Materiality: The materiality determination process was revalidated based on inputs from key stakeholders including employees, customers, suppliers, NGOs, governments, regulatory bodies, local communities and senior management of GAIL. The Report focusses its disclosures on key material aspects at macro level and has not missed out any known material aspects for the Oil and Gas Sector. The management of Company has established internal process for monitoring and management on a continual basis for their long term organisational sustainability. In our opinion, the level at which the Report adheres to this principle is 'Acceptable'.

Responsiveness: We consider that the Report has adequately disclosed the strategies and management approach related to identified key sustainability aspects and challenges considering the overall sustainability context of the Oil & gas sector, within the identified aspect boundary. In our view, the level at which the Report adheres to this principle is 'Acceptable'.

Reliability: The majority of data and information verified at the Corporate Office, Jubilee Tower and GTI Noida, five operational sites were found to be accurate. Some of the data inaccuracies identified during the verification process were found to be attributable to transcription, interpretation and aggregation errors and the errors have been communicated for correction. Hence in accordance with AA1000AS (2008) requirements for a Type 2, moderate level assurance engagement, we conclude that the specified sustainability data and information presented in the Report is generally reliable. In our view, the level at which the Report adheres to this principle is 'Good'.

Specific Evaluation of the information on Sustainability Performances

We consider the methodology and process for gathering information developed by the Company for its sustainability performance reporting to be appropriate and the qualitative and quantitative data include in the Report was found to be identifiable and traceable; the personnel responsible were able to demonstrate the origin and interpretation of the data and its reliability. We observed that the report presents a faithful description of the Company's sustainability activities.

Additional parameters as per DNVGL's Protocol

Completeness: The Report has fairly reported the General and Specific Standard Disclosures including the management approach, monitoring systems and sustainability performances indicators against GRI G4 requirements corresponding to the 'in accordance' - Core option. The Company has confirmed that the systems for aggregating data for these disclosures are being developed and set the internal time lines for disclosure. In our view, the level at which the Report adheres to this principle is 'Acceptable'.

Neutrality: The disclosures related to sustainability issues and performances are reported in a neutral tone, in terms of content and presentation. In our view, the level at which the Report adheres to this principle is 'Good'.

Opportunities for Improvement


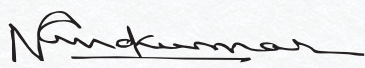
The following is an excerpt from the observations and opportunities for improvement reported to the management of the Company and are not considered for drawing our conclusions on the Report; however they are generally consistent with the management's objectives:

- » The company may expand the boundary of material aspects in the supply chain, Joint Ventures and Subsidiaries within its sphere of control and influence.
- » The disclosure on management approach could consider disclosure on Aspect-specific DMA guidance to further explain the management approach with respect to material aspects of the O&G sector industry.
- » The future Report may expand disclosure on organisational sustainability impacts, and process of consultation between stakeholder and highest governance bodies on environment and social topics, and its outcome.

DNV GL's Competence and Independence

DNV GL is a global provider of sustainability services, with qualified environmental and social assurance specialists working in over 100 countries. DNV GL states its independence and impartiality with regard to this assurance engagement. While we did conduct other third party audits work with GAIL (India) Limited in 2014-15, in our judgement this does not compromise the independence or impartiality of our assurance engagement or associated findings, conclusions and recommendations. We were not involved in the preparation of any statements or data included in the Report, with the exception of this Assurance Statement. We maintain complete impartiality toward any people interviewed.

For DNV GL,

 <p>Ramesh RAJAMANI Project Manager, DNV GL Business Assurance India Private Limited India.</p>	 <p>Vadakepath Nandkumar Assurance Reviewer, Regional Sustainability Manager, DNV GL Business Assurance India Private Limited, India.</p>
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New Delhi, India, 15th July 2015.



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Glossary

API	American Petroleum Institute	INR	Indian National Rupee	OBC	Other Backward Classes
ASME	American Society of Mechanical Engineers	IT	Information Technology	NOx	Oxides of Nitrogen
CPCB	Central Pollution Control Board	IL&FS	Infrastructure Leasing and Financial Services	SOx	Oxides of Sulphur
CPSE	Central Public Sector Enterprise	IMS	Integrated Management System	ODS	Ozone Depleting Substances
CVC	Central Vigilance Commission	ISO	International Organization for Standardization	PNGRB	Petroleum and Natural Gas Regulatory Board
CMD	Chairman and Managing Director	IPIECA	Formerly - International Petroleum Industry Environmental Conservation Association	PPAC	Petroleum Planning and Analysis Cell
CFC	Chlorofluoro Carbon	JLPL	Jamnagar Loni Pipeline	PNG	Piped Natural Gas
CGD	City Gas Distribution	JV	Joint Ventures	PCB	Pollution Control Board
CRZ	Coastal Regulation Zone	KG	Krishna-Godavari	PUC	Pollution Under Control
CAGR	Compounded Annual Growth Rate	LPG	Liquefied Petroleum Gas	PE	Poly-Ethylene
CNG	Compressed Natural Gas	LHC	Liquid Hydrocarbon	PAT	Profit After Tax
CSR	Corporate Social Responsibility	LP	Low Polymer	PPP	Public Private Partnership
CSI	Customer Satisfaction Index	MDG	Millennium Development Goals	RGPP	Ratnagiri Gas and Power Private Limited
DVPL	Dahej-Vijaipur Pipeline	MBA	Masters of Business Administration	RLNG	Re-gasified Liquid Natural Gas
DGM	Deputy-General Manager	MoU	Memorandum of Understanding	R&D	Research and Development
DGH	Directorate-General of Hydrocarbons	MT	Metric Tons	RTI	Right To Information
DIN	Dutch Institute fur Normung	MMSCMD	Million Metric Standard Cubic Meter per Day	SC	Scheduled Castes
EPA	Environmental Protection Agency	MoEF&CC	Ministry of Environment, Forests & Climate Change	ST	Scheduled Tribes
ED	Executive Director	MoP&NG	Ministry of Petroleum and Natural Gas	SPM	Suspended Particulate Matter
E&P	Exploration and Production	MoRD	Ministry of Rural Development	SD	Sustainable Development
FY	Financial Year	MFO	Mixed Fuel Oil	TERI	The Energy and Resources Institute

GTI	GAIL Training Institute	NCR	National Capital Region	TMT	Thousand Metric Tons
GPU	Gas Processing Unit	NH	National Highways	tCO ₂ e	Tons of Carbon Dioxide equivalent
GREP	Gas Rehabilitation and Expansion Project	NIT	National Institute of Technology	TPA	Tons per Annum
GJ	Giga-Joule	NG	Natural Gas	TDS	Total Dissolved Solids
GRI	Global Reporting Initiative	NGO	Non-Government Organizations	TI	Transparency International
GHG	Greenhouse Gas	NoC	No objection Certificate	TAPI	Turkmenistan-Afghanistan-Pakistan- India
HVJ	Hazira-Vijaipur-Jagdishpur	OHSAS	Occupational Health and Safety Assessment Series	UNGC	United Nations Global Compact
HSE	Health, Safety and Environment	OIC	Officer-in-Charge	UNFCCC	United Nations Framework Convention on Climate Change
HSEMS	Health, safety and environment management system	ONGC	Oil and Natural Gas Corporation	US	United States
HRSG	Heat recovery steam Generator	OISD	Oil Industry Safety Directorate	UP	Uttar Pradesh
HDPE	High Density Poly-Ethylene	OMC	Oil Marketing Companies	UPTU	Uttar Pradesh Technical University
HR	Human Resources	O&M	Operation and Maintenance	VSPL	Vizag-Secundrabad Pipe Line
HRD	Human Resources Development	OFC	Optical Fibre Cable		
HoD	Head of Department				

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GENERAL STANDARD DISCLOSURES			
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G4-4	10 - About GAIL,		
G4-5	New Delhi, India		
G4-6	10 - About GAIL, 7 - GAIL Annual Report FY 14-15 http://www.gailonline.com/final_site/pdf/AR2014-15/GAIL-AR2014-15.pdf		
G4-7	GAIL is a Central Public Sector Enterprise, listed on BSE, NSE and Global depository receipt (GDR) on London Stock Exchange		
G4-8	10 - About GAIL, 23 to 27 - GAIL Annual Report FY 14 -15		
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G4-29	This is GAIL's 5 th Sustainability Report and the 4 th Sustainability Report was released on 17.09.2014	
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SPECIFIC STANDARD DISCLOSURE				
Material Aspect	DMA and Indicators	Page Number	Omission	External Assurance
CATEGORY: ECONOMIC				
Economic Performance	G4-DMA	114 - Investors	-	Yes; 145- External Assurance Statement
	G4-EC1	116 - Investors	-	Yes; 145- External Assurance Statement
	G4-EC2	76 - Striding towards Excellence: the way we strive to grow	-	No
	G4-EC3	120 - Employees	-	Yes; 145- External Assurance Statement
	G4-EC4	Nil, 116- Investors	-	Yes; 145- External Assurance Statement
Indirect Economic Impacts	G4-DMA	114 - Communities	-	Yes; 145- External Assurance Statement
	G4-EC7	126 - Communities	-	Yes; 145- External Assurance Statement
	G4-EC8	126 - Communities	-	
Procurement Practices	G4-DMA	134 - Suppliers	-	Yes; 145- External Assurance Statement
	G4-EC9	We consider India as local. 135 - Suppliers	-	Yes; 145- External Assurance Statement
CATEGORY: ENVIRONMENTAL				
Materials	G4-DMA	82 - Transforming our business approach: safeguarding our growth	-	Yes; 145- External Assurance Statement
	G4-EN1	136 - Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-EN2	136 - Our Performance Snapshot	-	No
Energy	G4-DMA	73 - Striding towards Excellence: the way we strive to grow	-	Yes; 145- External Assurance Statement
	OG2	118 - Investors	-	Yes; 145- External Assurance Statement
	OG3	136 - Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-EN3	136 - Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-EN4	78 - Striding towards Excellence: the way we strive to grow, 136 - Our Performance Snapshot	-	No
	G4-EN5	36 - Sustainability Strategy	-	Yes; 145- External Assurance Statement
	OG5	Not Applicable	-	No
	G4-EN6	136 - Our Performance Snapshot	-	Yes; 145- External Assurance Statement

Water	G4-DMA	79 - Striding towards Excellence: the way we strive to grow	-	Yes; 145- External Assurance Statement
	G4-EN8	136 – Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-EN10	136 – Our Performance Snapshot	-	Yes; 145- External Assurance Statement
Emissions	G4-DMA	76 - Striding towards Excellence: the way we strive to grow	-	No
	G4-EN15	136 – Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-EN16	136 – Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-EN17	78 - Striding towards Excellence: the way we strive to grow	-	No
	G4-EN18	36 - Sustainability Strategy	-	Yes; 145- External Assurance Statement
	G4-EN19	136 – Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-EN20	136 – Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-EN21	136 – Our Performance Snapshot	-	Yes; 145- External Assurance Statement
Effluents And Waste	G4-DMA	71-Striding towards Excellence: the way we strive to grow	-	Yes; 145- External Assurance Statement
	G4-EN22	136 – Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-EN23	136 – Our Performance Snapshot 71-Striding towards Excellence: the way we strive to grow	-	Yes; 145- External Assurance Statement
	OG6	136 – Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-EN24	No significant spills	-	Yes; 145- External Assurance Statement
	G4-EN25	Not Applicable	Page 80	Yes; 145- External Assurance Statement
	G4-EN26	There is no significant impact of our wastewater discharges and run-offs to water bodies located in the vicinity of our operations	-	Yes; 145- External Assurance Statement
Compliance	G4-DMA	102 - Dynamic Regulatory Landscape: harnessing opportunities for growth, 119 - Investors	-	Yes; 145- External Assurance Statement
	G4-EN29	119 - Investors, 136 – Our Performance Snapshot	-	Yes; 145- External Assurance Statement
Transport	G4-DMA	68 - Striding towards Excellence: the way we strive to grow	-	No

	G4-EN30	We have estimated our Scope 3 CO ₂ emissions for business travel which came out to highly insignificant as compared to Scope 1 & 2 CO ₂ 76 - Striding towards Excellence: the way we strive to grow	-	No
Overall	G4-DMA	68 - Striding towards Excellence: the way we strive to grow	-	Yes; 145- External Assurance Statement
	G4-EN31	136 – Our Performance Snapshot	-	Yes; 145- External Assurance Statement
Environmental Grievance Mechanisms	G4-DMA	30 - Corporate Governance & Risk Management	-	Yes; 145- External Assurance Statement
	G4-EN34	30 - Corporate Governance & Risk Management	-	Yes; 145- External Assurance Statement
CATEGORY: SOCIAL				
SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK				
Employment	G4-DMA	92 - Human Capital: at the core of our growth	-	Yes; 145- External Assurance Statement
	G4-LA1	93 - Human Capital: at the core of our growth	-	Yes; 145- External Assurance Statement
	G4-LA2	120 - Employees	-	Yes; 145- External Assurance Statement
	G4-LA3	83-Human Capital: at the core of our growth	-	Yes; 145- External Assurance Statement
Labor/Management Relations	G4-DMA	122 - Employees	-	Yes; 145- External Assurance Statement
	G4-LA4	122 - Employees	-	Yes; 145- External Assurance Statement
Occupational Health and Safety	G4-DMA	54 - Safety: in our every endeavour while we grow, 121 - Employees	-	Yes; 145- External Assurance Statement
	G4-LA5	121 – Employees 139 - Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-LA6	139 - Our Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-LA7	139 - Our Performance Snapshot	-	Yes; 145- External Assurance Statement
Training and Education	G4-DMA	94 - Human Capital: at the core of our growth; 121 - Employees	-	Yes; 145- External Assurance Statement
	G4-LA9	139 - Performance Snapshot	-	Yes; 145- External Assurance Statement
	G4-LA10	94 - Human Capital: at the core of our growth	-	Yes; 145- External Assurance Statement
	G4-LA11	94 - Human Capital: at the core of our growth	-	Yes; 145- External Assurance Statement

Diversity and Equal Opportunity	G4-DMA	122 - Employees	-	Yes; 145- External Assurance Statement
	G4-LA12	139 - Performance Snapshot	-	Yes; 145- External Assurance Statement
Equal Remuneration for Women and Men	G4-DMA	122 - Employees	-	Yes; 145- External Assurance Statement
	G4-LA13	122 - Employees	-	Yes; 145- External Assurance Statement
Supplier Assessment for Labor Practices	G4-DMA	132 - Suppliers	-	No
	G4-LA14	135 - Suppliers	-	No
Labour Practices Grievance Mechanisms	G4-DMA	30 - Corporate Governance & Risk Management	-	Yes; 145- External Assurance Statement
	G4-LA16	30 - Corporate Governance & Risk Management	-	Yes; 145- External Assurance Statement
SUB-CATEGORY: HUMAN RIGHTS				
Investment	G4-DMA	122 - Suppliers	-	No
	G4-HR1	135 - Suppliers	-	No
	G4-HR2	122 - Employees	-	No
Non-discrimination	G4-DMA	122 - Employees	-	Yes; 145- External Assurance Statement
	G4-HR3	122 - Employees	-	Yes; 145- External Assurance Statement
Freedom of Association and Collective Bargaining	G4-DMA	122 - Employees	-	Yes; 145- External Assurance Statement
	G4-HR4	122 - Employees	-	Yes; 145- External Assurance Statement
Child Labor	G4-DMA	122 - Employees	-	Yes; 145- External Assurance Statement
	G4-HR5	122 - Employees	-	Yes; 145- External Assurance Statement
Forced or Compulsory Labor	G4-DMA	122 - Employees	-	Yes; 145- External Assurance Statement
	G4-HR6	122 - Employees	-	Yes; 145- External Assurance Statement
Security Practices	G4-DMA	123 - Employees	-	Yes; 145- External Assurance Statement
	G4-HR7	123 - Employees	-	Yes; 145- External Assurance Statement
Assessment	G4-DMA	123 - Employees	-	No
	G4-HR9	123 - Employees	-	No
Supplier Human Rights Assessment	G4-DMA	134 - Suppliers	-	No
	G4-HR10	134 - Suppliers	-	No
Human Rights Grievance Mechanisms	G4-DMA	30 - Corporate Governance & Risk Management	-	Yes; 145- External Assurance Statement

	G4-HR12	30 - Corporate Governance & Risk Management	-	Yes; 145- External Assurance Statement
SUB-CATEGORY: SOCIETY				
Local Communities	G4-DMA	113-Communities	-	Yes; 145- External Assurance Statement
	G4-SO1	126 - Communities	-	Yes; 145- External Assurance Statement
	G4-SO2	126 - Communities	-	Yes; 145- External Assurance Statement
	OG10	We did not have any incidents of significant disputes with local communities and indigenous people	-	No
	OG11	Nil	-	No
Anti-corruption	G4-DMA	28 - Corporate Governance & Risk Management	-	Yes; 145- External Assurance Statement
	G4-SO3	28 - Corporate Governance & Risk Management	-	No
	G4-SO4	28 - Corporate Governance & Risk Management	-	Yes; 145- External Assurance Statement
	G4-SO5	28 - Corporate Governance & Risk Management	-	Yes; 145- External Assurance Statement
Public Policy	G4-DMA	102 - Dynamic Regulatory Landscape: harnessing opportunities for growth	-	Yes; 145- External Assurance Statement
	G4-SO6	116 - Investors	-	Yes; 145- External Assurance Statement
Anti-competitive Behavior	G4-DMA	103 - Dynamic Regulatory Landscape: harnessing opportunities for growth	-	Yes; 145- External Assurance Statement
	G4-SO7	103 - Dynamic Regulatory Landscape: harnessing opportunities for growth	-	Yes; 145- External Assurance Statement
Compliance	G4-DMA	103 - Dynamic Regulatory Landscape: harnessing opportunities for growth, 119 - Investors	-	Yes; 145- External Assurance Statement
	G4-SO8	136 - Our Performance Snapshot	-	Yes; 145- External Assurance Statement
Grievance Mechanisms for Impacts on Society	G4-DMA	30 - Corporate Governance & Risk Management	-	Yes; 145- External Assurance Statement
	G4-SO11	30 - Corporate Governance & Risk Management	-	Yes; 145- External Assurance Statement
Asset Integrity And Process Safety	G4-DMA	68 - Striding towards Excellence: the way we strive to grow; 54 - Safety: in our every endeavour while we grow	-	Yes; 145- External Assurance Statement
	OG13	58 - Safety: in our every endeavour while we grow	-	Yes; 145- External Assurance Statement

SUB-CATEGORY: PRODUCT RESPONSIBILITY				
Customer Health & Safety	G4-DMA	128 - Customers	-	Yes; 145- External Assurance Statement
	G4-PR1	129 - Customers	-	No
	G4-PR2	129 - Customers	-	Yes; 145- External Assurance Statement
Product and Service Labeling	G4-DMA	130 - Customers	-	Yes; 145- External Assurance Statement
	G4-PR3	130 - Customers	-	Yes; 145- External Assurance Statement
	G4-PR4	130 - Customers	-	Yes; 145- External Assurance Statement
	G4-PR5	129 - Customers	-	Yes; 145- External Assurance Statement
Marketing Communications	G4-DMA	129 - Customers	-	Yes; 145- External Assurance Statement
	G4-PR6	129 - Customers	-	Yes; 145- External Assurance Statement
	G4-PR7	129 - Customers	-	Yes; 145- External Assurance Statement
Compliance	G4-DMA	102 - Dynamic Regulatory Landscape: harnessing opportunities for growth, 119-Investors	-	Yes; 145- External Assurance Statement
	G4-PR9	136 - Our Performance Snapshot	-	Yes; 145- External Assurance Statement

Linkages with API/IPIECA and UNGC Guidelines

Section	API / IPIECA Guidelines	UNGC Principles
Governance and Strategy	SE11, SE12, SE14	Principle 10
Sustainability Governance	E1, E2, E6	Principle 7, Principle 8, Principle 9
Stakeholder Engagement & Materiality	E6	
Health & Safety	HS1, HS2, HS3, HS5	
Operational Excellence	E1, E2, E3, E4, E6, E7, E8, E9, E10, SE7, SE9,	
Human capital	SE6, SE8, SE10, SE15, SE16, SE17, SE18	
Gas & Petrochemical marketing	HS4	
Regulatory issues		
Innovation		
Shareholders / Investors	E1, E2, E3, E6, E8, E10, SE13	Principle 7, Principle 8, Principle 9
Employees	HS1, HS2, HS3, SE6, SE8, SE10, SE15, SE16, SE17, SE18	Principle 1, Principle 2, Principle 3, Principle 4, Principle 5, Principle 6
Community / Society	E5, E7, E8, SE1, SE2, SE4	Principle 7, Principle 8, Principle 9
Customers	HS4	
Suppliers	SE5, SE7	
Performance Snapshot	E1, E2, E3, E4, E6, E7, E8, E10, HS3	Principle 7, Principle 8, Principle 9

Linkages with NVG-SEE Principles

Principle No	NVG-SEE Principles	Linkage with Sustainability Report FY 14-15 Sections
1	Businesses should conduct and govern themselves with Ethics, Transparency and Accountability	Governance and Strategy
2	Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle	Sustainability Governance, Customers
3	Businesses should promote the well being of all employees	Human Capital – core of our success Employees
4	Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.	Employees, Communities
5	Businesses should respect and promote human rights	Human Capital – core of our success Employees
6	Business should respect, protect, and make efforts to restore the environment	Operational Excellence, Communities
7	Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner	Corporate Governance, Stakeholder Engagement & Materiality, Regulatory issues
8	Businesses should support inclusive growth and equitable development	Employees, Communities, Innovation
9	Businesses should engage with and provide value to their customers and consumers in a responsible manner	Customers

Our Participations



We are a registered Organizational Stakeholder of the Global Reporting Initiative (GRI) and support the mission of the GRI to develop globally accepted sustainability reporting guidelines through a global, multi-stakeholder process.



GAIL acknowledged among the CDP's India Leaders 2014 Climate Disclosure Leadership Index (CDLI).



WAY FORWARD

Cur sustainability journey of the past half a decade has been both challenging as well as exciting for us. From taking small steps with our first report to today being one of the most well-known organizations in the domain of sustainability – GAIL has come a long way. We have developed in-house online sustainability data collection module which is indigenous and customised for our reporting framework and operations. This report is also a reflection of the different best practices that we have developed.

This year was eventful and made us rethink our approach on a lot of factors ranging from business continuity, financial planning, and safety related issues. These challenging times taught us to identify opportunity even in the midst of chaos. As a result, opportunities we identified and we embarked upon various initiatives such as reinventing our competitiveness, securing raw material supply, marketing of our products, and exploring various pipeline intrusion detection and leak detection systems available which would be implemented in a phased manner to name a few. While we continue to identify and mitigate the range of risks that change dynamically, we are also upgrading ourselves with the latest set of technologies and innovate further.

While we upgrade our processes, we have also upgraded our sustainability communications. This report is GAIL's 1st Sustainability Report based on GRI G4 guidelines, which is the latest set of sustainability reporting guidelines available. In this context, we conducted a much detailed stakeholder engagement and materiality exercise which has also been discussed in the report.

As we move ahead in our sustainability journey, we would aim to fulfil not only to comply with regulatory requirements but also other voluntary initiatives such as those of UNGC and our revised Sustainability Aspirations 2020. We are also committed to all our stakeholders and also seek their support in this journey.

We value for constructive feedback.

Your queries can be directed to : ^{G4-31}

Mr. Santanu Roy,
General Manager (Corporate Planning)
sroy@gail.co.in

Mr. M. K. Biswas
Deputy General Manager (Corporate Planning)
mkbiswas@gail.co.in



GAIL (India) Limited

Regd. Off. :

16, Bhikaiji Cama Place,
R.K. Puram, New Delhi-110066
Website : gailonline.com

Follow us : [in](#) [f](#) [t](#) gailvoice.com

