





# Fulfilling India's Aspirations. with Innovation and Enterprise.

India continues to be one of the fastest growing economies of the world. More than 50% of its population is less than 25 years of age. The aspirations of the youth and the rising middle class indicate tremendous opportunities of growth in several sectors. The key to transforming the demographic dividend into economic growth lies in enhancing the capabilities of people, so that they are better trained, healthier and more productive. Innovations in technology, health care and education, coupled with an entrepreneurial outlook to create jobs are also the key levers that will help India fulfil its growth aspirations.

At RIL, we firmly believe that innovation will be the key to India's success. We are investing in new technologies in our upstream and downstream businesses that will help us seize growth opportunities, provide safe products, enhance energy security, make our processes more efficient and propel our country's growth aspirations. Our upcoming ventures such as the new telecom business (4G) are aimed at enhancing productivity at all levels and creating meaningful employment opportunities for India's youth.

We are also investing in education and talent development in rural areas to empower people with the necessary skills for growth. We have already made a significant difference in the health and well-being of thousands by setting up primary health care centres in a number of villages.

Our Reliance Drishti initiative helps in enhancing the quality of life of the visually-impaired people. Our 'Bharat- India-Jodo' programme is working to bridge the gap between rural and urban India by strengthening sustainable agriculture practices among small and marginal farmers and creates sustained entrepreneurial opportunities for them.

We have built our enterprise on a foundation of skilled employees and robust management systems. We are inspired by the power of innovation and the spirit of inclusion and we endeavour to shape an equitable and holistically progressive India.

We believe that each aspiration propels growth; as 'Growth is Life'.

# Fulfilling India's Aspirations. With Innovation and Enterprise.

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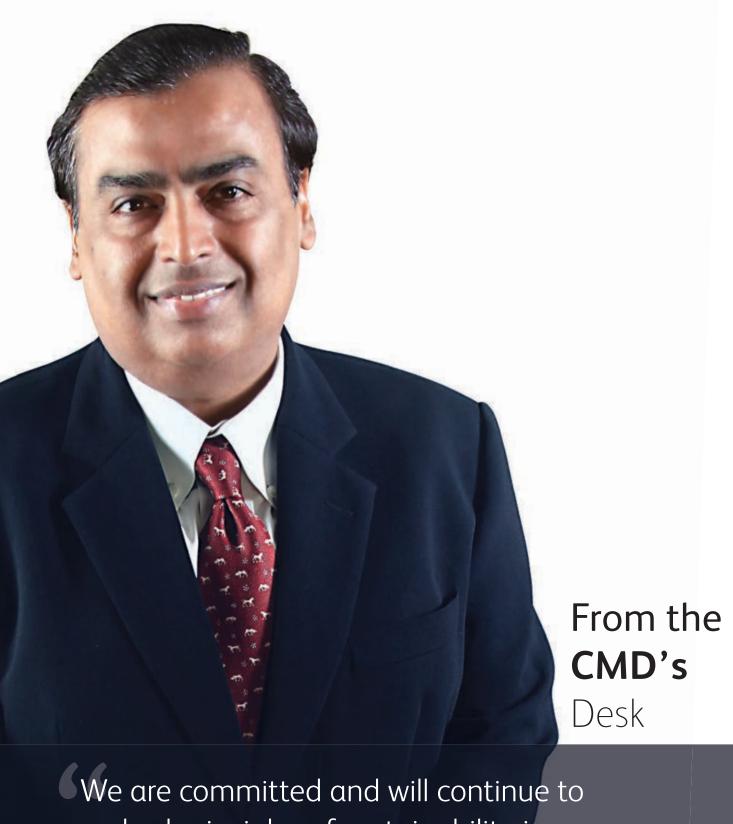
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We are committed and will continue to embed principles of sustainability in our growth model

Dear Stakeholders,

I am delighted to present to you RIL's ninth Sustainability Report articulating our focus on fulfilling India's aspirations with innovation and enterprise.

The global economic scenario in FY 2012-13 continued to be fraught with challenges. Major economies witnessed slower growth and the Eurozone was full of uncertainty. As the year progressed, the overall business environment remained difficult and operating in such a testing environment proved challenging.

Amidst this backdrop, we have performed well with record revenues of INR 3711.19 billion and record net profit of INR 210.03 billion. We achieved this by combining the strength of our portfolio and integrated business model together with prudent management. We also registered our highest ever exports of INR 2392.26 billion, representing 14% of India's total exports during the year. Our refining business achieved record performance with Gross Refining Margin averaging \$ 9.2/bbl during the year. This was also an important year for the Company's North American Shale Gas business. Revenues and EBITDA more than doubled compared to the last financial year, and proved reserves improved by 135%.

Our focus is to maximise the benefit of being an integrated energy Company. As such, our major investments during the year were mainly concentrated on expanding capacity and boosting production capability. Our new cracker at Jamnagar, will source the feedstock from complex refineries and build world-scale globally competitive cracker capacity.

We are also setting up the world's largest petcoke gasification facility at Jamnagar. On completion, this project will provide long-term sustainable energy security for the entire Jamnagar complex at a globally competitive cost.

To make ourselves "Future Ready", we have also embarked on one of the largest business transformation projects titled 'Smart Transformation at Reliance' (STAR). The objective of STAR is to institutionalise a robust business process framework, supplemented with best-in-class IT solutions that will ensure our leadership position. It will also enhance organisational entrepreneurship and create a world class human resource framework to fulfill our mission of being an "Employer of Choice".

Our sustainability agenda focuses on five strategic pillars – Energy Management, Environment Responsibility, Product Stewardship, Occupational Health and Safety and Social Institution Building. During the FY 2012–13, we have continued to build sustainable practices into every aspect of our business to create long-term value for our stakeholders. We continue to adhere to internationally recognised Management Systems Certifications across all our manufacturing divisions/locations. We have also initiated integration of Management Systems at key locations this year. At Hazira, our Energy Management System has been certified against ISO 50001:2011 Standard. Five Star Environmental Audits have been conducted by the British Safety Council at all of our manufacturing divisions / locations.

Our focus on energy conservation initiatives has resulted in energy savings of 4.31 million GJ across our manufacturing sites this year. We have undertaken installation of solar photovoltaic panels, utilisation of daylight through 'light pipes' and generation of biogas and organic manure through anaerobic digestion of

food and garden waste this year at our corporate office. We have recently concluded successful demonstration of the PEM fuel cell technology in the lab as part of the New Millennium Indian Technology Leadership Initiative (NMITLI), extending our commitment to embrace technologies that will drive the future.

The year also saw the unveiling of RIL's "Employee Value Proposition" (EVP), which will become the foundation for our people management practices. EVP is aligned to our vision of being an 'Employer of Choice' and encompasses key aspects of growth, empowerment, meritocracy, learning environment, innovation & creativity, trust & respect and diversity. We have launched dedicated functional academies in several areas, including HR, Civil, Mechanical, Health, Safety & Environment, Procurement & Contracting and Leadership, to enhance the skills and competencies of our employees.

In the area of Health, Safety & Environment, we have continued our strides in support of our sustainability commitments. We have adopted the goal of Zero Incidents and Injuries. We are committed to the highest global standards at the workplace and employee safety.

We firmly believe that our activities should support inclusive growth. Through Reliance Foundation's Bharat India Jodo (BIJ) programme, we have taken various initiatives to bridge the gap between rural Bharat and urban India. This programme aims to support small and marginal farmers across the value chain and has reached nearly 300 villages while engaging with over 100,000 villagers. The Reliance Nutritive Garden programme is one such initiative under BIJ, which has helped in enhancing the nutritional intake of over 4000 rural households.

Additionally, Research and technological innovation continues to be our focus to reap benefits across the value chain. Our Innovation Council actively nurtures innovation across the organisation to build RIL as one of the most innovative companies in the world, while fulfilling India's aspirations.

You will be delighted to know that RIL has recently received the 'International Refiner of the Year 2013' award at HART Energy, USA. RIL has received the award for producing cleaner, high-quality gasoline and diesel fuel, operating with the highest international refining standards and innovative use of resources in diverse environments, innovation, global vision and ability to chart future changes.

We have been on a transforming path over the last nine years in our sustainability journey. We are committed and will continue to embed principles of sustainability in our growth model. I invite you to read our report, learn about what we are doing and join us in creating a sustainable future.

Yours sincerely,

Mukesh D. Ambani Chairman & Managing Director June 5<sup>th</sup>, 2013

# Highlights

Record crude processing 68.5 MMT

at Jamnagar refinery

Record turnover of INR 3,711.19 billion (Increase of 9.2 %)

Record net profit of INR 210.03 billion (Increase by 4.8 %)

Highest Gross Refining Margin from \$8.6/bbl to \$9.2/bbl in last 4 years

Employee pay-out of INR 33.54 billion (Increase of 17.1 %)

Highest ever exports of INR 2392.26 (14% of India's exports)

Planted more than

1.2 million saplings

at manufacturing divisions

Overall increase of water recycled from 54.52% to 55.05% at manufacturing divisions

Hazardous waste disposal reduced by 19.86% at our manufacturing divisions

Hoshiarpur Manufacturing Division
Global Recycle Standard for manufacturing
Polyester Staple Fibre

**Energy conservation initiatives** resulting in increased annual energy savings **4.31** million GJ from **2.22** million GJ



Vessels 'Dhirubhai-1' and 'Olympic Canyon', rated as

Best Safety Conscious Ships in Indian waters

**Lost time injury rate** at manufacturing divisions reduced by 4% & at E&P locations reduced by 75%

### Unveiled Employee Value Proposition

towards efficient people management practices

Launched dedicated functional academies including HR, Civil, Mechanical, Health, Safety & Environment, Procurement & Contracting and Leadership

Reliance HIV & TB Control Centre at Hazira catered to more than **78,000** patients.

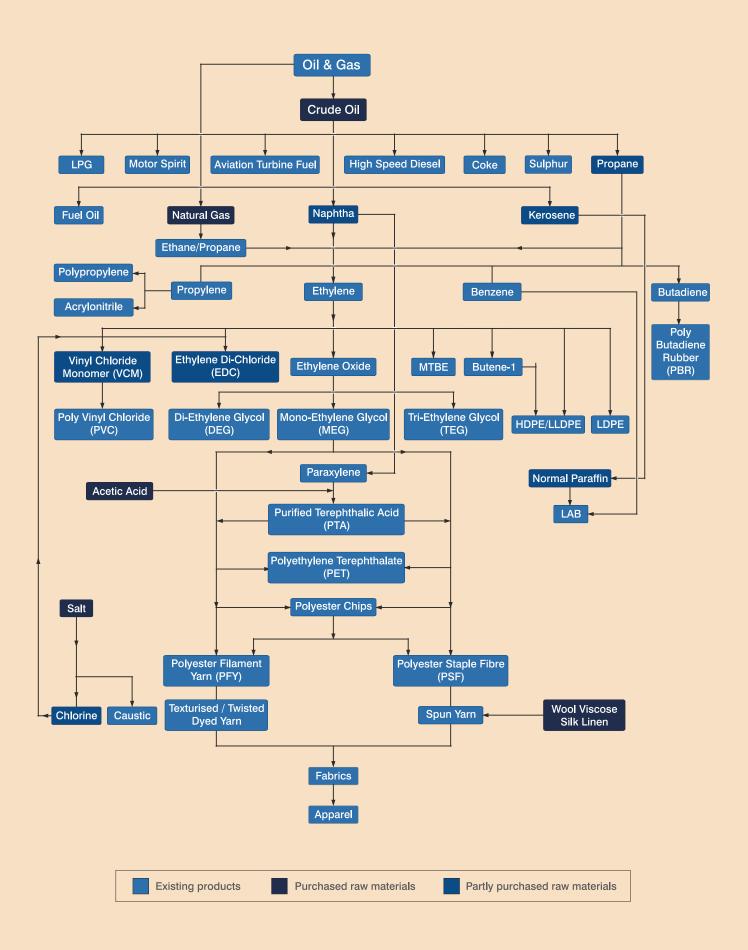
**Training manhours** per employee for **Management staff** increased by **14%** 

**Training manhours** per employee for **Non Management staff** increased by **22%** 

More than **32,000** drivers trained at RIL Hazira's Truckers' **Safety Training Centre** 

RRDT activities taken up in 266 villages

# Product flow





### About Reliance Industries Limited

RIL is a conglomerate headquartered in Mumbai, India and has businesses in the energy and material value chain. It is the first private sector Company from India to feature in Fortune's Global 500 list of 'World's Largest Corporations' and currently ranks 107th in terms of revenues. Our activities span across the exploration and production of oil and gas, petroleum refining and marketing, petrochemicals (polyester, fibre intermediates, plastics and chemicals), textiles, retail, telecommunication and special economic zone. Our three key products are transportation fuels, polymers and polyester fibre. RIL conducts its business activity in more than 50 domestic locations, with manufacturing facilities at Allahabad, Barabanki, Dahej, Hazira, Hoshiarpur, Jamnagar, Nagothane, Nagpur, Naroda,

Patalganga, Silvassa and Vadodara. Our exploration and production facilities are located at KGD6 – Gadimoga, Panna Mukta Tapti and CBM Blocks at Sohagpur (East and West). We are also supported by various other regional marketing offices. Our international presence, through our subsidiaries and associate companies, extend across North America, Australia, Europe, East Africa, Middle East and Asia. We undertake business activity in more than 16 international locations and the major ones are USA, Malaysia, Kenya, Uganda, Rwanda and Tanzania. In addition to serving the Indian markets, we exported petroleum and petrochemical products to 116 countries worldwide during the FY 2012-13.



#### Upstream Business:

We completed four years of operations at our KG-D6 production facility. Production from KG-D6 was 3.31 million barrels (MMBL) of crude oil and condensate and 336 billion cubic feet (BCF) of natural gas during the financial year. The average production during the year stood at 26 MMSCMD of natural gas and 9,225 BOPD of crude oil. This year, there was a fall in production which is attributed to geological complexity, natural decline in the fields and higher than envisaged water ingress.

Our PMT JV achieved a significant milestone of 500 MMBOE of oil and gas production during the year. The Panna-Mukta

fields produced 8.2 MMBBL of crude oil and 71 BCF of natural gas in the current financial year, while the Tapti field produced 0.54 MMBBL of condensate and 43.9 BCF of natural gas in the current financial year.

Our conventional upstream business portfolio includes 13 Production Sharing Contract (PSC) blocks in India, of which 9 are in active exploration / appraisal phase. The remaining 4 are under development and production including KG-D6 in Krishna Godavari offshore basin, Panna-Mukta and Tapti in Mumbai offshore basin and NEC-25 in the Mahanadi basin. Additionally, there are 4 international PSC blocks, 2 each in Yemen and Peru. The CBM blocks in India (Sohagpur East and Sohagpur West) are in early stages of development.



We are into the second year of the partnership with BP and this year we have worked together in deepwater exploration and development and operations in India. The teams have also closely worked to understand the complex geology of the east-coast of India, including the KG-D6 block. Under the block's enhancement plan, we aim to invest in a series of projects to develop around 4 trillion cubic feet (TCF) of discovered natural gas resources over the next 3-5 years. For NEC 25 block we have submitted an Integrated Block Development Plan (IBDP) for four discoveries (D-32, D-40, D-9 and D-10) proposing phased development.

FY 2012-13 has been a vital year for our North American Shale Gas business. Successful joint ventures with Pioneer, Carrizo and Chevron have enabled us to be among significant players in these chosen shale plays. Proved reserves grew by 135% from 788 BCFe in 2011 to 1.86 TCFe by 2012. Our share of gross production grew by 166% Y-o-Y to 101 BCFe. Benefiting from continued focus on drilling of liquid-rich wells, share of liquids in overall production stood at an impressive 43% and accounted for 76% of revenues in 2012.

During 2012, our joint ventures with Pioneer, Carrizo and Chevron, drilled 255 wells and put 228 wells on production, taking the cumulative number of producing wells to 385 at the year end, as compared to 157 producing wells at the end of 2011. We also signed a memorandum of understanding with PDVSA, Venezuela for exploring joint participation options in upstream heavy oil projects of the Orinoco oil belt. Cooperation with PDVSA includes providing technical assistance and sharing our experience of executing large scale projects in areas such as offshore upstream, refining and other downstream projects.

# Jetty facility - Hazira

#### Downstream Business:

In the downstream segments, we maintained operating rates of more than 100% in the refining business. We processed 68.5 million tonnes (MMT) of crude, the highest ever, at the Jamnagar refinery complex. The refining business had a strong financial performance for FY 2012-13 with Gross Refining Margin (GRM) averaging \$9.2/ bbl, as against \$8.6/ bbl in the last financial year. Total exports of refined products from both refineries reached \$39.3 billion during the year, as compared to \$36.0 billion in the previous year. Exports of refined products were 41.2 MMT, as compared to 39.6 MMT during the same period last year. This year, our Jamnagar refinery produced 7 new product grades, catering to specific needs, helping us penetrate high value niche markets.

Our marine facilities provide access to the world's largest crude and product vessels. The facility is capable of handling the largest oil tankers, VLCC sized vessels to offload crude at the Single Point Mooring facilities. This allows refineries to competitively access all major markets across the world, including Sao Paulo, New York Harbour, Rotterdam and Singapore.

We maintained our leadership position in the polymer industry with a domestic market share of 41% and a commodity polymer production share of 62%. We achieved a cracker operating rate of 91% and produced 4.4 MMT of total polymers, including PP, PE and PVC. We exported 0.8 MMT of total polymers. We are the world's 5th largest PP producer, having installed capacity of 2.8 MMT. We continue to lead the domestic PP market with 64% market share. We continue to introduce new PP grades of our products to enhance our share and counter imports.

We have total PE capacity of 1.1 MMT, with production locations at Hazira, Nagothane, Vadodara and Dahej. Our market share is 18% in HDPE, 37% in LLDPE and 42% in LDPE. We have increased our market share in high-value sectors in HDPE (such as pipe, rotomolding and high flow). With a 28% market share, our PVC capacity is 0.65 MMT, with facilities at Hazira, Dahej and Vadodara. During the year, we introduced a new PVC grade with a medium porosity resin 67GER01F to capture the aesthetically-inclined customer.

The petcoke gasification project, which is under progress at Jamnagar, will put our energy and hydrogen costs at par or better than those of the refineries in the US, where natural gas prices have dramatically fallen with the shale revolution.

In our chemical business, we are the leading producer of Linear Alkyl Benzene, Butadiene and the only producer of Polybutadiene Rubber and Acrylonitrile in India. We also enjoy leadership position in the aromatics segment, constituting Benzene, Toluene and Xylene. We are also the largest LAB producer in India, with installed capacity of 182 KTA. We have also planned investments at Hazira for setting up a world scale SBR plant and a unique nickel/neodymium catalyst-based swing PBR plant, which will be operational in the next financial year. These investments will help us in maintaining the leading position in the elastomers sector in the Indian sub-continent. Reliance Sibur Elastomers Private Limited is a JV formed between SIBUR and RIL for setting up butyl rubber production facility at Jamnagar. The plant with 100,000 tonnes of initial capacity of butyl rubber is currently under execution.

We are the world's largest polyester fibre and yarn producer, with a capacity of nearly 2.4 MMT across nine sites in India and Malaysia. We are also the world's 5<sup>th</sup> largest PX producer, 8<sup>th</sup> largest MEG producer and the 9<sup>th</sup> largest PTA producer.

#### **Business Transformation**

We have demonstrated exponential growth over the last several years. To get "Future Ready", we have embarked on one of the largest business transformation project – STAR. The rationale behind STAR is to enable the institutionalisation of our DNA. Powerful project management skills have been one of our biggest strength. Supplementing these through robust business process framework and best-in-class IT solutions will allow us to retain and extend our cutting-edge over the competition.

#### Major Subsidiaries and New Businesses

As on March 31, 2013, the number of our subsidiary companies stood at 121. The major subsidiaries and new businesses are listed below:

#### Reliance Retail

Our retail business continued its growth journey during the year with new store launches as well as strong same store sales growth. During the last financial year, the retail business strengthened its backend operations and store expansion capability by successfully adding 184 stores across format sectors and it now operates 1,466 stores spanning 129 cities across India, covering an area of over 9 million square feet.

The milestone of crossing INR 100 billion revenue and reaching cash breakeven at EBDIT level is a significant step in retail business journey towards attaining market leadership.

#### Reliance Jio Infocomm Limited (RJIL)

We are making a foray to provide a new generation of broadband services through our Reliance Jio Infocomm. Currently, we are the only private player with Broadband Wireless Access spectrum in all 22 telecom circles of India. In addition to connectivity, RJIL also has plans to enable end-to-end solutions that address the entire value chain across various digital services in key domains of national interests, such as education, healthcare, security, financial services, government-citizen interfaces and entertainment. RJIL has completed the detailed planning for pan-India implementation of the infrastructure needed for the project.

#### Reliance Haryana SEZ Limited

Reliance Haryana SEZ Limited has initiated development of a Model Economic Township (MET). The MET has been envisioned to be developed as an industrial infrastructure to support economic growth in a public-private partnership framework with the Government of Haryana, through HSIIDC Limited (a Government of Haryana company). The Company is engaged in the process of land consolidation with the support of the Government of Haryana. The start-up phase of operationalization of the MET in the district Jhajjar of Haryana commenced during the year.





# Report adheres to GRI Oil & Gas Sector Supplement

# Report aligned with NVG-SEE

# Published Our first Business Responsibility Report

The report boundary includes our manufacturing divisions at Allahabad, Barabanki, Dahej, Hazira, Hoshiarpur, Jamnagar, Nagothane, Nagpur, Naroda, Patalganga, Silvassa and Vadodara. It also covers our oil and gas exploration and production units at Gadimoga, Shahdol (Sohagpur East and Sohagpur West) and our joint venture operations at PMT (Panna-Mukta and Tapti) blocks. The boundary covers our businesses in Chemicals, Fibre Intermediates, Polyester, Polymers, Petroleum, Supply & Procurement, and other entities: Reliance Foundation, Dhirubhai Ambani Foundation, Reliance Rural Development Trust and Reliance Corporate Park (RCP). This report, the ninth in our journey, presents the key highlights of our performance for the FY 2012-13 as well as our future action plans.

### Standards and guidelines used to develop this report

This report has been developed according to national and internationally recognised guidelines and is aligned to the 5 strategic pillars which form the core of our Sustainability Strategy. The materiality of specific topics and indicators has been determined by using internal and external protocols/frameworks including:

- GRI G3.1 Guidelines, including the Oil & Gas Sector Supplement
- National Voluntary Guidelines on Social Environmental and Economic responsibilities of business (NVG-SEE)
- United Nations Global Compact Principles on Environment, Human Rights, Labour and Corruption
- Industry standards, such as those promoted by the American Petroleum Institute (API) / International Petroleum Industry Environmental Conservation Association (IPIECA)
- Focus areas of World Business Council for Sustainable Development (WBCSD)
- Sustainability challenges facing our business identified through our risk management processes

#### Global Reporting Initiative (GRI) guidelines

The report has been developed according to the GRI G3.1 guidelines (including the Oil and Gas Sector Supplement which was released last financial year) and conforms to GRI A+ application level check criteria. The report has been independently assured by KPMG, India.

#### National Voluntary Guidelines for Social, Environmental and Economic Responsibilities of Business (NVG-SEE)

We continue to align the report to the 9 core principles<sup>1</sup> detailed in the NVG-SEE released by Ministry of Corporate Affairs, Government of India. We have also formally published our first Business Responsibility Report, as per SEBI's mandate (Clause 55 of listing agreement), as part of our Annual Report this year.

# United Nations Global Compact (UNGC) principles on Human Rights, Labour, Environment and Anti-Corruption

We continue to report on our progress against the 10 principles of UNGC in our sustainability report.

### Oil and Gas industry guidance on voluntary sustainability reporting by IPIECA/API and OGP

The second version of API/IPIECA/OGP's Oil and Gas Industry Guidance on Voluntary Sustainability Reporting was released in 2010. Our report adheres to the requirements of this new guidance and provides necessary linkages with respect to GRI Guidelines

#### World Business Council for Sustainable Development (WBCSD) focus areas

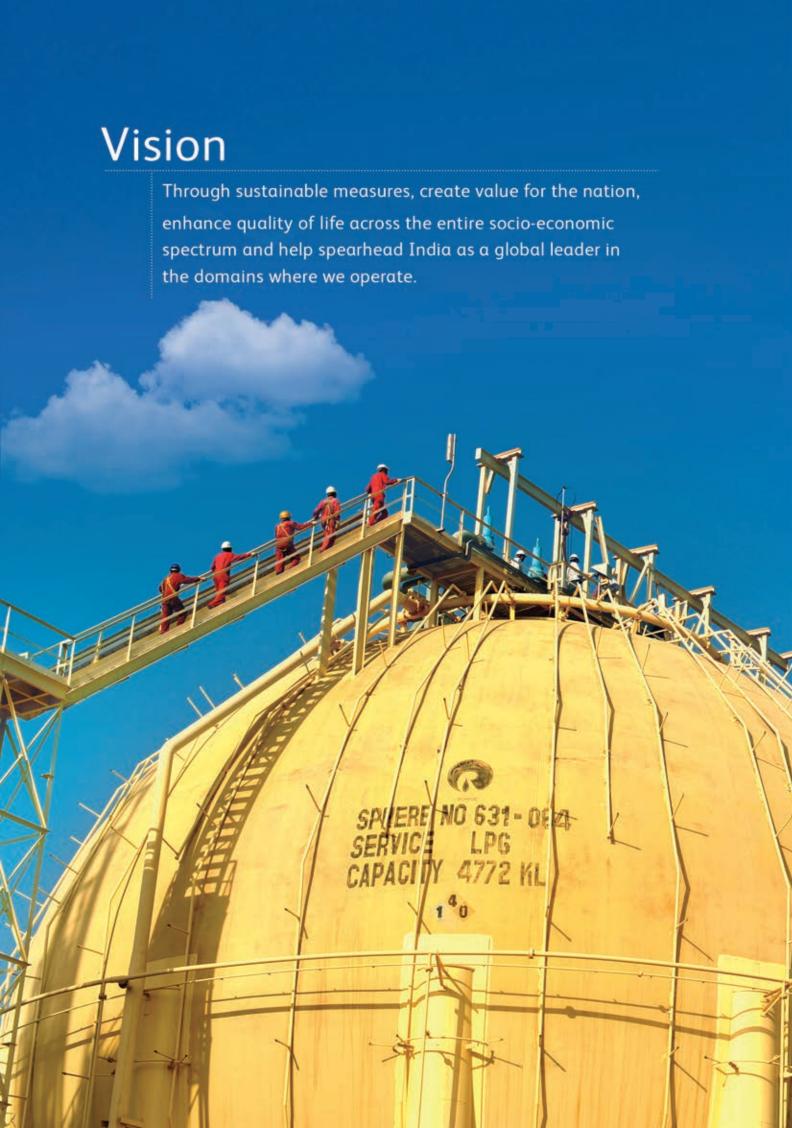
We are one of the four companies from India who are members of the WBCSD, reflecting our commitment to play an active role in transforming business and shaping society. The report refers to the WBCSD four focus areas viz. Energy & Climate, Development, Business Role and Ecosystems.

Our vision of transformation and growth mirrors WBCSD's position-"Business is good for development and development is good for business".

#### Forward-looking statements

This report contains forward-looking statements, which may be identified by their use of words like 'plans', 'expects', 'will', 'anticipates', 'believes', 'intends', 'projects', 'estimates' or other words of similar meaning. All statements that address expectations or projections about the future, including, but not limited to statements about the Company's strategy for growth, product development, market position, expenditures and financial results, are forward-looking statements. Forward-looking statements are based on certain assumptions and expectations of future events. The Company cannot guarantee that these assumptions and expectations are accurate or will be realised. The Company's actual results, performance or achievements could thus differ materially from those projected in any such forward-looking statements. The Company assumes no responsibility to publicly amend, modify or revise any forward-looking statements, on the basis of any subsequent developments, information or events.

<sup>1</sup>http://www.mca.gov.in/Ministry/latestnews/National\_Voluntary\_ Guidelines\_2011\_12jul2011.pdf



# Mission

- · Create value for all stakeholders
- Grow through innovation
- Lead in good governance practices
- Use sustainability to drive product development and enhance operational efficiencies
- Ensure energy security of the nation
- Foster rural prosperity

# Values

Our growth and success are based on the ten core values of Care, Citizenship, Fairness, Honesty, Integrity, Purposefulness, Respect, Responsibility, Safety and Trust.

# Awards and Recognition



Some of the major awards and recognitions conferred on RIL during the reporting period are, as follows:

#### Leadership

• "Mark of Excellence Award" (Hazira Manufacturing Division) at the IST Convention on Leadership Excellence organised by India's Greatest Corporate Leaders Forum powered by DNA (a leading newspaper)

#### Corporate Rankings and Ratings

- "International Refiner of the Year 2013" Award at HART Energy's 27th World Refining & Fuel Conference held at San Antonio, Texas, USA
- Appreciation Plaque by ASSOCHAM in recognition for the Company's outstanding CSR activities in 2012

#### Quality

- Three Star (Highest award) at International Convention on Quality Control Circle at Kuala Lumpur, Malaysia (Dahej Manufacturing Division and Hazira Manufacturing Division).
- Golden Peacock National Quality Award 2012 (Nagothane Manufacturing Division)
- IMC Ramkrishna Bajaj National Quality Award under the manufacturing category for the year 2012
- ASQ's International Team Excellence Award from American Society for Quality at the World Conference on Quality & Improvement at USA (Hazira Manufacturing Division)

#### Project

• Best Viewer's Choice Award (Dahej Manufacturing Division) for implementing Six Sigma project in "Improving productivity of Gas Cracker Plant by resolving propylene compressor discharge pressure issue" from American Society for Quality at California, USA



- PLATINUM AWARD for the Six Sigma Project, CBE-2012 from Concept Business Excellence (Hazira Manufacturing Division)
- The 1st Prize Trophy for Best Business Process Excellence Program implemented in Manufacturing Industries over 2 years from International Quality Productivity Centre (IQPC) (Jamnagar Manufacturing Division)
- Winner of QualTech Prize for Improvement (Manufacturing Process Excellence) for the project "Significant Yield improvement ex DTA FCC" from QIMPRO (Jamnagar Manufacturing Division)
- CII-Six Sigma National Award for 2012 (Vadodara Manufacturing Division)

#### Health, Safety and Environment

- ICC Award for Management of Health, Safety and Environment from Indian Chemical Council
- The Sword of Honour from British Safety Council, U.K., for Excellence in Health, Safety and Welfare (Barabanki Manufacturing Division)
- The Golden Peacock Environment Management Award for 2012 (Dahej Manufacturing Division)
- 'Golden Peacock Occupational Health & Safety Award' for 2012 (Hazira Manufacturing Division)
- The BSC Sword of Honour in Occupational Health & Safety Management by British Safety Council (BSC), UK (Jamnagar Manufacturing Division)
- The BSC Globe of Honour in Environmental Management System by British Safety Council, U.K. (Jamnagar Manufacturing Division)
- The CII Environment Best Practices Award 2012, rated as "Most Innovative Environmental Project" for "Reduction of Colour in Acrylonitrile Effluent" (Vadodara Manufacturing Division)
- Winner of Eleventh Green Tech Safety Award 2012 in Petrochemicals Sector (Vadodara Manufacturing Division).
- International Safety Award by British Safety Council, U.K. (Barabanki Manufacturing Division)
- State-level 'Dr. R.J.Rathi Award' for Green Initiatives in Industries in Maharashtra for 2012 from Mahratta Chamber of Commerce, Industries & Agriculture, Pune (Nagothane Manufacturing Division)

# received International Safety Award

Bestowed with
"International
Refiner of the
Year 2013"

# Received CII-ITC Sustainability Awards 2012 HMD

- The "International Safety Award" with distinction for 2012 from British Safety Council (KG-D6 operations)
- The Safety Innovation Award 2012 from Institution of Engineers, New Delhi for the third consecutive year in a row (Jamnagar Manufacturing Division)

#### Energy & Water Conservation / Efficiency

- Jawaharlal Nehru Centenary Award from the Ministry of Petroleum & Natural Gas for being among the three refineries which have achieved the lowest specific energy consumption among Indian refineries (Jamnagar Manufacturing Division -DTA refinery)
- Indian Chemical Council Award for Excellence in Energy Conservation and Management for 2011 (Hazira Manufacturing Division)
- Excellent Energy Efficient Unit Award by CII for 9th consecutive time (Hazira Manufacturing Division)
- The National Award for Excellence in Energy Management
   2012 from CII and declared as Excellent Energy Efficient
   Unit (Jamnagar Manufacturing Division DTA Refinery)
- Innovative Project award from Bureau of Energy Efficiency (BEE), Ministry of Power, Government of India (Jamnagar Manufacturing Division)
- Federation of Gujarat Industries Award 2011 for Excellence in Energy Conservation and Best Utilization of Alternative Energy (Vadodara Manufacturing Division)
- Adjudged by CII as a National Energy-efficient Unit in India (Reliance Corporate IT Park Ltd., Navi Mumbai)

#### Technology, R & D and Innovation

- Shri Ratilal Tribhovandas Nanavati Award for outstanding work in Research & Development for 2009-11 by The Southern Gujarat Chamber of Commerce & Industries, Surat (Hazira Manufacturing Division –RTG)
- The Best Prax Prize for Innovation—2012 for the project
   Reduction in packaging consumables (paper-based) in
   Polyester POY plant by QIMPRO (Hazira Manufacturing Division)

#### Corporate Social Responsibility

- Trophy for its work done under the National AIDS Control Program phase-III from Population Foundation of India (Hazira Manufacturing Division Reliance Community Care Centre)
- The Golden Peacock Award 2012 for Corporate Social Responsibility by Institute of Directors (IOD) (Vadodara Manufacturing Division)
- Red Cross Gold Medal for the "Reliance Dhirubhai Ambani Protsahan" Educational initiative from Governor of Andhra Pradesh for FY 2011-12
- Golden Peacock National Training Award 2012 (Patalganga Manufacturing Division)
- The National Award for Innovative Training Practices for security training practices by Indian Society for Training and Development (Nagothane Manufacturing Division)
- The Greentech Gold Award for HR Excellence (Dahej Manufacturing Division)

#### Sustainability

- CII-ITC Sustainability Awards 2012 (Hazira Manufacturing Division)
- Certificate of Commendation for Significant Achievement in the area of Sustainable Development (Hazira Manufacturing Division)



# Corporate Governance

Corporate Governance is a set of systems and practices to ensure that the affairs of the Company are being managed in a way which ensures accountability, transparency, fairness in all its transactions in the widest sense and meet its stakeholders' aspirations and societal expectations. Good governance practices stem from the culture and mindset of the organisation and at our Company we are committed to meet the aspirations of all our stakeholders. This is demonstrated in shareholder returns, high credit ratings, governance processes and an entrepreneurial performance focused work environment.

As we move closer towards our aspirations of becoming

a global corporation, our corporate governance standards must be globally benchmarked. This gives us the confidence of having put in the right building blocks for future growth and ensuring that we achieve our ambitions in a prudent and sustainable manner. We not only adhere to the prescribed corporate governance norms but are also committed to sound corporate governance principles and practices and constantly strive to adopt emerging best practices being followed worldwide. At Reliance, stakeholders' interests are taken into account before making any business decision and Reliance has the distinction of consistently rewarding its shareholders over 35 eventful years from its first IPO.



#### **Promoter Director**

Mukesh D. Ambani (Chairman and Managing Director)

#### **Executive Directors**

Nikhil R. Meswani Hital R. Meswani P.M.S. Prasad Pawan Kumar Kapil

#### Non-Executive Non-Independent Director

Ramniklal H. Ambani

Our Company's interests are aligned with the direction of the Board's leadership to provide a long-term vision and policy thinking in order to improve the quality of governance. The Board critically evaluates the strategic direction of the organisation, management policies and their effectiveness. Our Board consists of 13 directors, 7 of whom are Independent Directors.

#### **Board Composition and Category of Directors**

The Company's policy is to maintain optimum combination of Executive and Non-Executive Directors. The composition of the Board and category of Directors is as follows:



#### **Independent Directors**

Mansingh L. Bhakta Yogendra P. Trivedi Dr. Dharam Vir Kapur Mahesh P. Modi Prof. Ashok Misra Prof. Dipak C. Jain Dr. Raghunath A. Mashelkar All the Independent Directors of the Company at the time of their first appointment to the Board and thereafter at the first meeting of the Board in every financial year, give a declaration that they meet with the criteria of independence as laid down under clause 49 of the listing agreement with stock exchanges.

This year, we have held at least one Board meeting every three months and a total of five Board Meetings were held. The Board has constituted seven standing committees to provide direction and facilitate the decision-making process at the meetings of the Board in an informed and efficient manner. These are:

- 1 Audit Committee
- 2 Corporate Governance and Stakeholders' Interface Committee
- 3 Employees' Stock Compensation Committee
- 4 Finance Committee
- 5 Health, Safety and Environment Committee
- 6 Remuneration Committee
- 7 Shareholders' / Investors' Grievance Committee

#### Policy Framework

We adhere to ethical standards to ensure integrity, transparency, independence and accountability in dealing with all stakeholders. In this direction, we have adopted various codes and policies which act as enablers to carry out our duties in an ethical way.

We have in place a comprehensive 'Corporate Governance Manual' and 'Business Responsibility Policy Manual'. These manuals inter-alia cover the following policies:

- Code for Board of Directors and Board Committees
- Code of Business Conduct and Ethics for Directors / Management Personnel
- Code of Ethics and Business Policies
- Code of Conduct for Prohibition of Insider Trading
- Health, Safety and Environment (HSE) Policy
- Code of Financial Reporting, Disclosure and Transparency
- Policy document on Values and Commitments
- Human Rights
- Stakeholders' Policy
- Business Communication
- Personnel and Employee Benefits

#### Transformation for better governance

We apply a common and systematic approach to the management of risk, controls and compliances in an integrated manner. We are in the process of developing a world-class integrated compliance framework to provide reasonable assurance to the Management and the Board of Directors regarding design and effectiveness of the internal control framework of the Company.

We constantly endeavour to enhance our processes and systems through technological intervention. We use technology widely to ensure robustness and integrity of financial reporting, internal controls, optimal use and protection of assets, accurate and timely compilation of financial statements and preparation of management reports and ensures compliance with statutory laws, regulations and Company policies.

#### Handling investor grievances

While we continue to create shared value for our investors, we believe that it is also important for us to understand their concerns and handle their grievances on priority. We have a dedicated Shareholders' / Investors' Grievance Committee which looks into these aspects. We received a total of 2,826 investor complaints during the reporting period, all of which were fully resolved.

#### Business responsibility report

To strengthen our commitment towards responsible business, the Board has adopted a 'Business Responsibility (BR) Policy Manual' based on the principles of National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business as issued by the Ministry of Corporate Affairs, Government of India. In sync with the same, as well as Clause 55 of SEBI's listing agreement, a Business Responsibility Report<sup>2</sup> (BRR) was attached, forming part of our Annual Report for FY 2012-13. The Corporate Governance and Stakeholders Interface Committee of the Board of Directors is responsible for the implementation of the BR policies at RIL. This committee, comprising Mr Yogendra P. Trivedi (Chairman, Independent Director & BR Head), Mr Mahesh P. Modi (Independent Director & Member) and Dr. Dharam Vir Kapur (Independent Director & Member) periodically assesses our BR performance. Additionally, Corporate Governance and Stakeholders Interface Committee of the Board of Directors undertakes the responsibility of addressing stakeholder concerns related to the BR policies.

<sup>&</sup>lt;sup>2</sup>The linkage of the NVG-SEE principles to the content of the sustainability report can be found at NVG-SEE content index on page 88

Adopted a
'Business
Responsibility
Policy manual'

Work closely
with
ICPE
on a
voluntary basis

#### Responsible Liasioning

We collaborate with academia and industry bodies to participate in the policy-making process and engage in dialogue on public policy issues to make the communities we serve, better places to live, work and do business. We closely work with the Indian Centre for Plastics in the Environment (ICPE) on a voluntary basis and provide technical and financial support to help the organisation plan and implement initiatives identified by chemical and petrochemical industries. We are a member of The World Economic Forum, The American Chemistry Council (ACC), Indian Chemical Council (ICC), The Chemicals and Petroleum Manufacturers Association (CPMA), Gulf Petrochemicals & Chemicals Association (GPCA), European Petrochemicals Association (EPCA), Association of Oil and Gas Operators in India (AOGO) and the World Business Council for Sustainable Development (WBCSD).



We have an approved set of Management Systems that are structured to provide an effective balance between quality management, risk management, environment and safety management. The primary philosophy and objective of our systems is to continually achieve the highest possible level of integrity and professional standards, while creating value for our stakeholders.

#### Making management systems future ready

To make ourselves future ready, we embarked on one of the largest business transformation projects (STAR) during the year. Key state-of-the-art solutions benefitting the Company in the areas of advanced planning, plant data reconciliation and validation, operational performance management & analysis and quality management are a part of this transformation. A repository of around 40,000 process models will be developed as a part of this exercise and will be interlinked with the solution landscape to ensure integrated process change management. The solutions will be rolled out in phases starting April 2013. STAR covers three businesses, Exploration & Production, Refining & Marketing and Petrochemicals and support functions such as manufacturing, projects, procurement & contracting, logistics, human resources, finance, shared services, IT, R&D and security. The Company has completed basic and detailed design including business blueprinting for 265 end-to-end business processes.

#### Risk management

We have instituted a business continuity and risk management framework across our operations. This framework ensures that we can recover from a serious incident in the most effective way possible, thereby:

- Protecting the assets and reputation of Reliance;
- Being able to maximise continuity of supply to our customers both locally and internationally;
- Safeguarding the welfare and livelihood of our employees and the people we interact with; and
- Protecting the environment in which we all work and live. Our Risk Management policy seeks to adopt the best practices which are appropriate for the identification, evaluation and cost effective control of risks to ensure they are eliminated or managed down to an acceptable level. As an integral part of our Corporate Governance structure, it ensures that internal controls are continuously aligned with increasingly stringent

Our policies, compliance levels and core values are reviewed by an Independent audit committee supported by internal audit team responsible for inspecting and improving the efficacy of our risk management and governance processes.

#### Audit and Controls

regulatory requirements.

We have effective mechanisms to review our financial, health, safety, environment and social performance. During the year, the project STAR has gathered steam, which will provide us

with a roadmap for the implementation of an integrated system-based process transformation for risk management. We have internal controls to maintain quality of data and information, and an appropriate governance structure to ensure effective implementation. Our internal audit function conducts regular internal audits to examine the adequacy and compliance with policies, plans and statutory requirements. These audits are led by professional audit managers and supported by experienced personnel drawn from across the organisation. We take up the recommendations made by the statutory auditors, internal auditors and the Independent Audit Committee of the Board of Directors with utmost priority and take appropriate actions.

#### Environment, Health and Safety

As a signatory to the 'Responsible Care ®' programme, we initiated an external third party audit of our HSE Management System as per the requirements of the RC 14001 specifications. The audit was successfully completed and the Company was certified to RC14001:2008. We have engaged world renowned third party resources for assessing our Crisis Management and Emergency Response systems and for providing guidance for improvement. All our manufacturing divisions and E&P Gadimoga operations have received certification for adherence to ISO 14001:2004 environmental management systems and OHSAS 18001:2007 certified for safety management systems. We conducted first party audits and second party audits, in line with RIL Group Standards, in areas of process safety management, workplace safety, contractor safety management, as well as fire and distribution safety. With the conduct of environment five-star audit by BSC-UK for our onshore and offshore Exploration and Production operations at Gadimoga, all manufacturing divisions/locations have now been covered for this audit.

We conduct environmental impact and risk assessment of all new and proposed projects and ensure adequate measures are implemented to protect the environment and preserve the biodiversity of the region. All our manufacturing locations follow a well-mapped procedure to select projects, assess impact on society and environment and mitigate any adverse impacts. We have instituted a compliance management system which, mandates undertaking impact analysis and risk analysis study of potential projects prior to commissioning.

#### Quality Management

Our Six Sigma process has been standardised, and has been classified into three sub-processes namely:

- a) Performance Benchmarking and Gap Analysis;
- b) Idea Management;
- c) Knowledge Management.

In the current financial year, 173 employees underwent Six Sigma Green Belt training amounting to 12,948 man-hours of awareness this year. Besides, 68 Six Sigma projects were completed during the year resulting in cost savings of INR 1,123 million.

# Disclosure on Management Approach



#### **Economic Indicators**

Our strong performance against key economic parameters year-on-year is a testimony to our robust systems and review mechanisms, coupled with innovation and planning. We continue to create value for our internal and external stakeholders through our partnerships and aim to realise the importance of the impacts of natural capital on our economic growth. Our economic policies are formulated based on a number of factors, including market conditions, consumer preferences, our past performance, government regulations and our corporate governance ethics, amongst others. We have demonstrated the ability to generate direct and indirect employment opportunities for thousands across our existing operations and businesses. Making India 'energy secure' is the goal towards which we work through our strategic partnerships and investments. We realise the importance of giving back to society and have supported initiatives that uplift the community at large and enhance the quality of life of our stakeholders through our structured community development programmes.

#### **Environmental Indicators**

We maintain operational integrity and the highest standards of Health, Safety and Environment (HSE) performance through well-established systems and policies. The boardconstituted HSE committee is responsible for reviewing and monitoring the implementation of HSE management systems. All our manufacturing divisions and E&P Gadimoga operations have received certification for adherence to ISO 14001:2004 environmental management systems. As we have aligned our reporting to new guidelines, we have increased disclosure to include critical data points such as hydrocarbon flaring and discharge, produced water and drilling waste. To establish a baseline and identify mitigation measures, we have incorporated a group GHG protocol this year and built capacity to start adherence from the next year. We have laid emphasis on conservation initiatives, especially on aspects of energy, water and materials. Additionally, we encourage our manufacturing locations to adopt renewable and alternative sources of energy for their operations. We have put in biodiversity management plans for locations which are sensitive and we have also taken efforts to use materials that are environmentally benign in our processes and products. We follow environmental laws of countries to which we export our products.

#### Labour Practices & Decent Work Indicators

We have created policies and procedures to strive towards being an 'Employer of Choice'. We comply with the best international practices for the welfare of our employees and promote workers' rights to a decent workplace, as we recognise that our employees are our biggest asset. We have a whistle-blower policy, which empowers employees to report any wrongdoings without the fear of reprisal .We also ensure that these practices are reflected across the entire value chain. Focussed training efforts including focus on lifelong learning have resulted in improving the skill sets of employees across all levels. We have specialised career development and succession planning systems and amply reward employees with performance incentives and recognition. We believe in freedom of association and accord the highest priority to the safety of our people. Our Process Safety Management

(PSM) approach has enabled us to adopt best-in-class safety practices and management systems. We have also established consistent audit protocols for our safety management. Our manufacturing divisions and E&P Gadimoga operations have received OHSAS 18001:2007 certification.

#### **Human Rights Indicators**

We believe that a sustainable organisation rests on a foundation of ethics and respect for human rights and that all our stakeholders must live with social and economic dignity and freedom, regardless of nationality, gender, race, economic status or religion. Our codes of conduct and ethics policies cover issues such as bribery and corruption, fraud, insider trading, human rights and discrimination. They include a commitment to conducting our business in an ethical manner with due regard to the interests of our stakeholders and the environment. We respect human rights at the workplace and follow leading international practices, which ensure the freedom of association, prohibition of child labour, protection of indigenous rights and prohibition of forced and compulsory labour.

#### Society Indicators

Our contribution towards community development is in the domains of health, education, infrastructure development (drinking water, improving village infrastructure, construction of schools etc.), environment, relief and assistance in the event of a natural disaster, arts and culture and rural transformation, besides contributing to other social development organisations. Our social initiatives programme is in sync with the goals and vision of the organisation. Our well-defined CSR execution process demonstrates our approach towards the needs of communities. We uphold the laws of the land and lay emphasis on ethical business conduct through policies and awareness to our stakeholders. Investment in technology and innovation to benefit the consumers has been a cornerstone of our business journey. We collaborate with academia and industry bodies to participate in the policymaking process and engage in dialogue on public policy issues to promote the well-being of the communities we serve, better places to live, work and do business.

#### **Product Responsibility Indicators**

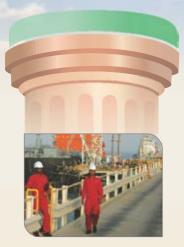
Research & Development (R&D), technology development and innovation continue to be an integral part of our business agenda. "Reliance Technology Group" (RTG) is working as a focal point to integrate Research and Technology (R&T) initiatives across the organisation. We have leveraged diverse skills and competencies available across functions. It is our constant endeayour to minimise the health, safety and environmental impacts of our products across our supply chain. We partner with various agencies to promote endof-life recycling and reuse of our products. Our R&D efforts are directed towards developing cleaner and safer products and alternatives. The Reliance Innovation Leadership Centre (RIL-C), implements our innovation agenda throughout the organisation. Its primary focus is to design and deploy innovation programmes that would help make us one of the most innovative companies in the world. We adhere to the Indian laws related to marketing communications, including advertising, product labelling, promotion and sponsorship.

# Strategy and Roadmap

Our commitment to sustainable development goes beyond our operating boundaries, as we continuously aim to add value to our stakeholders by advancing knowledge and improving lives. We seek internal and external perspectives to identify and help us better understand and consider the risks and opportunities associated with new and emerging issues. The issues identified are evaluated for their relevance to RIL and the impact on economic, environmental and social aspects. This exercise is performed annually to ensure its relevance to the changing business environment and the disclosure through this report is aimed at our stakeholders like investors, customers, employees, JV partners, business partners and the community. We have worked with key stakeholders and focussed our efforts towards our strategic pillars for sustainable development: Energy management, environment, product stewardship, occupational health and safety and social institution building. While, we had identified innovation as  $\boldsymbol{\alpha}$ separate pillar till last year, taking feedback from our key stakeholders and looking at the growing role of innovation in all aspects of sustainable development, we feel it forms an integral part of all our strategic pillars.

Our focus on the five strategic pillars ensures we grow our business while responding to global trends and stakeholder needs. The key activities undertaken against each of the strategic pillars this year, build on the progress we have already made in order to reduce our environmental impacts, benefit our employees and contribute to society by investing in meaningful endeayours.

### Energy Management



- In September 2012, RIL and the Venezuelan state oil company, Petroleos de Venezuela, SA (PDVSA) signed a 15 year heavy crude oil supply contract and an MoU to further develop Venezuelan heavy oil fields
- NEC 25: RIL submitted an Integrated Block Development Plan (IBDP) for four discoveries (D-32, D-40, D-9 and D-10) proposing for a phased manner development
- RIL has made significant investments in shale gas exploration in USA to unlock huge potential in the context of unconventional hydrocarbons

### Enviroment Responsibility



- Manufacturing divisions consumed 0.48 million GJ of renewable energy (wind and biomass)
- Recycled material use of 63,220 tonnes at the manufacturing divisions
- Recycled water as a percentage of total water consumed was 55.05% for the year at the manufacturing divisions



### Product Stewardship

# Stewardship



- Introduced several innovations in packaging (green polymer packaging bags, PTA bulk transport, fabric pallet for PET chips, aseptic packaging of milk)
- Under pipeline integrity management, initiated a unique concept 'Reliance Mitr' where the local community is encouraged to act as extended eyes and ears of the Company who in turn inform the control room in case of any mishaps
- During FY 2012-13, we received 7 patents
- The Company has joined an industry programme at Tulsa University for a 3-year period which will provide valuable information for enhancing and trouble-shooting operations
- Hoshiarpur Manufacturing
   Division was certified under the
   'Global Recycle Standard' for
   manufacturing Polyester Staple
   Fibre made with 100% recycled
   PET flakes using post-consumer
   raw material only

# Occupational Health and Safety



- Our operations at Dahej, Nagothane and Vadodara are equipped with a state-of-theart Special Burns Treatment Unit. The medical facilities extended by our OHCs are also applicable for our contractual workforce
- A dedicated HSE learning academy was established to ensure safe work place conditions
- Life Protection Rules (LPR) were introduced with the aim to focus on 10 high risk activities across the organisation.
   Complying with the LPR is mandatory for all our employees as well as contractual workforce
- During the FY 2012-13, the Company's Multi Chemical Terminal at Bhopal received BSC five star rating for Occupational Health & Safety by British Safety Council.
- An ambitious programme titled 'Work Life Project' has been undertaken across the sites including the Polyester sites, with focus on Emotional Health as a part of Resilience Management

### Social Institution Building





- Reliance Foundation's Bharat India Jodo (BIJ) programme has reached nearly 300 villages while engaging with over one lakh villagers
- During the year 32,000 drivers were trained at RIL Hazira's Truckers' Safety Training Centre on safety rules and efficient driving techniques
- Reliance Foundation's Drishti
  programme, which is run in
  association with the National
  Association for the Blind, has
  helped complete over 11,000
  corneal transplants across
  India since inception
- During the year, the Reliance
  Rural Development Trust
  activities were taken up in 266
  villages

# Partnering With Our Stakeholders

We at RIL envisage a future of inclusive growth by engaging in a constructive dialogue with all our stakeholder groups. We have identified eight key stakeholder groups with whom we discuss common solutions through a strategic dialogue.

How do we When do we What are their Report Reference engage with them? Section (Page nos.) engage them? key priorities? Regulatory filings Regulatory compliance Corporate Governance Enhancing energy • Participation in policy development Energy Management (Pg 44) discussions on various Requirement based; Shaping up India's Annual (filings) energy policies and About Reliance Industries Limited business environment in the oil and gas sector (Pg 12) Community initiatives Community Development (Pg 65) Government and Regulatory Authorities Employee satisfaction Skill development Human Resource Development (Pg 63) survey Workplace satisfaction Annual; Departmental Occupational Health • Healthy and safe Quarterly; and Safety (Pg 58) committee meetings operations Publication of internal Monthly; • Employee engagement magazines Weekly; and involvement Annual online performance management dialogue **Employees**  Staff welfare activities Product Customer satisfaction Product availability survey Stewardship (Pg 52) • Product quality Customer/dealer meets • Information on safe called 'Rishta use of products • As per requirement Product information Timely delivery of through appropriate product labelling Customers Community needs • Impact of RIL's Community assessment activities operations on Development (Pg 65) undertaken in livelihoods and social collaboration with infrastructure independent parties · Quarterly; • Local socio - economic Activities undertaken Daily; issues(like employment, as part of our CSR programme Requirement based health, education, sanitation, etc.) Activities undertaken by our trust and foundations

Public hearings during

expansion projects

Local community

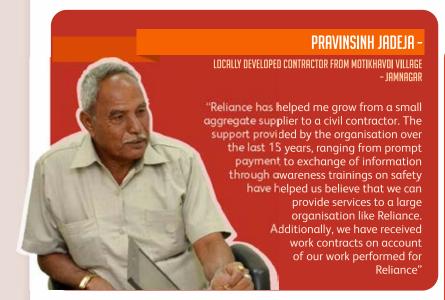
We have devised appropriate mechanisms for each of these stakeholder groups. The engagement is aimed at capturing stakeholders expectations and working with them to find acceptable solutions through constructive criticism. The result of this dialogue links into materiality definition which then rolls into our sustainability strategy.

During the FY 2012-13, we reached out to our stakeholders for their inputs on how to better meet their expectations. The following table presents excerpts of their feedback and references to our approach to meet these expectations.

	How do we engage them?	When do we engage with them?	What are their key priorities?	Report Reference Section (Page nos.)
Investors and shareholders	<ul> <li>Investor meetings on business strategy and performance review</li> <li>Analyst meets</li> <li>Contact through Investor service centres</li> <li>Annual General Meetings</li> <li>Dissemination of RIL's business performance and outlook through annual reports</li> </ul>	• Annual; Quarterly;	<ul> <li>Business growth</li> <li>Sectoral policies</li> <li>RIL's business strategy</li> <li>Transparency</li> <li>Good governance practices</li> </ul>	<ul> <li>About Reliance Industries Limited (Pg 12)</li> <li>Economic Performance (Pg 40)</li> <li>Corporate Governance (Pg 22)</li> </ul>
Suppliers	<ul> <li>Supplier meetings on technical considerations and quality</li> <li>Supplier development programmes</li> </ul>	• Annual; Quarterly; Monthly	Timely payments  Knowledge and infrastructure support  Regular communication and updates on business plans	• Product Stewardship (Pg 52)
Trade Unions	Meetings with trade unions on collective bargaining issues, health and safety and other operational matters	• Requirement based	Regular communication Involvement in Company initiatives	• Human Resource Development (Pg 63)
	<ul> <li>Partnership in programmes</li> <li>Discussions on community issues</li> </ul>	• Requirement based	Financial support for community programmes     Managerial support     Evaluation of effectiveness of social programmes	Community     Development (Pg 65)

**NGOs** 

### **Stakeholder Quotes**



#### RAJESH PATIDAR

NGO REPRESENTATIVE FROM NAGPUR ( NATIONAL INSTITUTE FOR ENVIRONMENT AND AGRICULTURE )

#### NIYATHA RAO -

**EMPLOYEE FROM PATALGANGA** 



"In spite of being such a big organisation, the communication of grievances and the sensitivity shown towards managing grievances is worth a mention. In addition, the adoption of Information Technology in managing employee grievances reflects the organisation's effectiveness with regards to understanding employee needs since this mechanism enables even the senior management to become aware on the concerns faced even at the shop floor level"

#### VIJAY PRATAP SINGH -

CONTRACT ENGINEER, RCP

"Safety is given utmost priority at Reliance. The intent of 'Safety first, Work next' is exhibited by workers while carrying out their respective jobs. The importance given to safety is reflected in the various initiatives taken by RIL, like regular trainings on various aspects of safety, strict supervision to ensure adherence to safety standards and procedures and mock drills to ensure workers are well aware of the necessary precautions to be taken during emergency situations. It feels good to work in an organisation where focus is given not only on usage of Personal Protective Equipment, but also on why to use them. Aspects like these differentiate them from the other organisations.'

#### **ASHOK BHUTA** -

VENDOR (M.K ENGINEERS PVT. CONTROLS LTD.)

"In my association with Reliance for two decades, I've seen the Company transform and grow owing to their efficient project management capabilities and alignment to their vision. Although, they have grown exponentially, they have also enabled us to grow and included us in their growth story. Their approach towards engaging with us especially in terms of resolving issues reduces complexities in doing business with them. A lot of guidance is given by Reliance on technical and commercial aspects of our business, which increases our knowledge on the technology as well as order execution front



# Performance on Commitments

We track the performance on our commitments on a periodic basis. The table below shows the progress made on our commitments.

Commitment	Performance		
Controlling GHG emissions	<ul> <li>During the year we executed energy saving initiatives that amounted to savings of 4.31 million GJ, an increase of approximately 93 % from last year</li> <li>Our total Greenhouse Gas (GHG) emissions stands at 25.63 million tonnes of CO<sub>2</sub> equivalent at our manufacturing divisions</li> <li>34,692 CERs issued during this year for 3 projects which were registered in FY 2011-12</li> </ul>		
Ensuring safety of people and assets	<ul> <li>The number of lost days at manufacturing divisions increased by 2,468 over last year while it increased by 2,455 at E&amp;P locations</li> <li>Lost time injury rate at manufacturing divisions reduced by 4% compared to last year while at E&amp;P locations it reduced by 75% compared to last year</li> <li>There were 4 fatalities during the year compared to 2 in the last financial year</li> <li>During the year, we undertook a drive to reduce the inventories of hazardous chemicals to improve efficiency and enhance safety of operations</li> <li>We successfully completed the scheduled surveillance audit of the RC 14001 certification requirement.</li> <li>The Rotary Wing Society of India rated RIL's vessels 'Dhirubhai-1' and 'Olympic Canyon', as the 'Best Safety Conscious Ships' in the Indian waters, with no complaints of non-compliance to any of the established international and national safety standards</li> <li>Benchmarking of Process Safety Management was undertaken during the year across six petrochemical manufacturing sites vis-àvis the global best-practices to identify potential improvement areas in capacities and systems</li> </ul>		
Attracting and retaining talented professionals	<ul> <li>Attrition rate increased marginally this year to 8.06% from 7.57% in the last financial year</li> <li>Reliance Learning &amp; Development Academies with a focus on talent development across business were launched during the year.</li> <li>State-of-the-art 'Learning Centre' developed at Nagothane</li> </ul>		
Training of our supervisory staff in Six Sigma	<ul> <li>173 people have undergone Six Sigma Green Belt training amounting to 12,948 man-hours</li> </ul>		
Contributing to the clean energy mix of the nation	<ul> <li>By the end of 2012, fields in the KG-D6 block had produced 2 TCF of gas and 22 million barrels of oil, creating unprecedented value for the Nation through nearly \$ 35 billion in energy import savings</li> <li>Chevron JV drilled 85 wells and put 63 wells on production during the year</li> </ul>		

# Performance Review

#### Environmental

Manufacturing Divisions	2012-13	2011-12	2010-11
Material consumption			
Raw materials ('000 tonnes)	77,774.37	76,159.78	74,086.83
Associated materials ('000 tonnes)	505.69	546.13	508.70
Intermediates ('000 tonnes)	32.84	39.21	44.44
Packaging materials ('000 tonnes)	65.26	64.61	97.54
Materials recycled ('000 tonnes)	63.22	64.90	73.43
Material recycled (%)	0.08	0.08	0.10
Energy			
Direct energy consumption ('000 GJ)	391,675	391,603	382,917
Indirect energy consumption ('000 GJ)	1,920	1,351	1,378
Total energy consumption (Direct and Indirect) ('000 GJ)	393,595	392,954	384,295
Energy saved due to conservation ('000 GJ)	4,307.09	2,227.76	2,431.33
Renewable ('000 GJ)	481.71	483.18	463.48
Water			
Total water withdrawal ('000 Cu.M)	118,884.54	120,127.44	120,302.41
Percentage of water recycled (%)	55.05	54.52	50.46
Total effluent discharge ('000 Cu.M)	21,227.12	21,977.98	22,390.69
GHG and Air Emissions			
Direct emissions ('000 tonnes of CO <sub>2</sub> e)	25,084.85	24,702.94	23,647.65
Indirect emissions ('000 tonnes of CO <sub>2</sub> e)	547.42	387.88	391.50
Total emissions (Direct and Indirect) ('000 tonnes of CO <sub>2</sub> e)	25,632.27	25,090.82	24,039.15
Reduction in GHGs due to energy conservation ('000 tonnes of CO <sub>2</sub> e)	281.25	129.00	172.42
CERs due to CDM projects <sup>3</sup> ('000 tonnes of CO <sub>2</sub> e)	121.60	306.27	223.04
SPM ('000 tonnes per year)	2.86	2.61	2.69
SOx ('000 tonnes per year)	10.84	10.14	11.39
NOx ('000 tonnes per year)	28.80	28.93	29.42
VOCs ('000 tonnes per year)	42.77	42.88	40.34
Waste disposed			
Hazardous waste ('000 tonnes)	47.07	58.74	51.34
Non-hazardous waste ('000 tonnes)	75.87	49.89	59.34

#### Social

Manufacturing Divisions	2012-13	2011-12	2010-11
Safety Performance			
Injuries <sup>4</sup> (nos.)	81	73	64

	2012-13	2011-12	2010-11
Injury rate <sup>5</sup> (per 100 workforce)	0.095	0.099	0.090
Lost days <sup>6</sup> (nos.)	5,822	3,354	4,112
Lost day rate (per 100 workforce)	6.82	4.54	5.73
Man-hours worked (Million hours)	170.82	147.47	143.58
Fatalities <sup>7</sup> (nos.)	3	2	2

<sup>&</sup>lt;sup>3</sup> Includes CERs for registered projects as well as projects under validation/verification. The CERs reduction achieved due to CDM projects depends on the business decisions for making investments in such projects

### Environmental

E&P8	2012-13	2011-12	2010-11
Associated materials (MT)	1,852.33	2,278.00	1,098.00
Casings and tubulars ('000 meters)	81.29	96.85	66.11
Chemicals - solid ('000 tonnes)	6.40	12.38	2.15
Chemicals - liquid ('000 KL)	4.60	15.90	43.54
Energy			
Diesel ('000 GJ)	297.01	10.34	2,466.44
Gas <sup>9</sup> ('000 GJ)	9,171.27	10,804.01	8,544.13
HFO ('000 GJ)	0.12	0.10	1.66
Total direct energy consumption ('000 GJ)	9,468.4	10,814.45	11,012.23
Indirect energy consumption (GJ)	4,227.34	4,525.00	5,413.00
Total energy consumption (Direct and Indirect) ('000 GJ)	9,472.627	10,818.98	11,017.64
Water			
Water consumption <sup>10</sup> ('000 Cu.M)	690.55	421.58	461.87
Produced water ('000 Cu.M)	6,457.15	6,169.72	-
GHG and Air Emissions			
Direct emissions ('000 tonnes of CO <sub>2</sub> e)	552.90	606.76	682.04
Indirect emissions (tonnes of CO <sub>2</sub> e)	868.77	942.70	1,128.00
SPM (tonnes per year)	0.56	0.20	16.63
SOx (tonnes per year)	295.20	446.58	319.25
NOx (tonnes per year)	1,877.1	1,466.15	1,253.92
VOCs ( tonnes per year)	916.65	977.05	536.41
Waste			
Hazardous waste <sup>11</sup> (tonnes)	279.29	506.24	1,329.92
Non-hazardous waste (tonnes)	806.97	1,733.70	413.75

<sup>&</sup>lt;sup>4</sup> There were no reportable injuries or fatalities for female employees or contract workforce at any of the manufacturing divisions in FY 2012-13

 $<sup>^{\</sup>rm 5}$  The injury rate and lost day rate have been calculated as per the methodology prescribed by GRI

 $<sup>^6</sup>$  As per global reporting practice, we have reported the number of lost days sans fatalities. As per Indian regulations, each fatality is equivalent to 6000 lost days

<sup>&</sup>lt;sup>7</sup> Two fatalities occurred at Jamnagar DTA refinery due to a process fire at the Crude column over-head exchanger inlet during de-blinding of condenser. The other fatality occurred at Hoshiarpur manufacturing division when a contract worker suffered burns due to PTA dust explosion.

### Social

E&P	2012-13	2011-12	2010-11
Safety Performance			
Injuries <sup>12</sup> (nos.)	5	13	5
Injury rate <sup>13</sup> (per 100 workforce)	0.05	0.21	0.06
Lost days (nos.)	2,472	17	80
Lost day rate (per 100 workforce)	25.307	0.278	0.990
Man-hours worked (Million hours)	19.536	12.220	16.100
Fatalities (nos.)	0	0	1

<sup>&</sup>lt;sup>8</sup> RIL is a joint operator with BG Exploration and Production India Limited (BG) and Oil & Natural Gas Corporation of India (ONGC) having a 30 % interest in Panna-Mukta-Tapti (PMT) and in-line with the best global sustainability reporting practice. We continue to report the data from FPSO (floating production storage and offloading) and CRP (control riser platform) at Gadimoga for the environmental and social performance data for E&P

Social Across RIL

Workforce breakdown	2012-13	2011-12	2010-11
Leader (nos.)	1,159	1,094	901
Manager (nos.)	8,236	7,937	7,624
Executive (nos.)	5,211	4,795	4,832
Trainees (nos.)	401	357	140
Apprentice (nos)	567	527	352
Retainers/Consultants <sup>14</sup> (nos.)	-	-	-
Workers (nos.)	7,945	8,456	8,812
Total number of employees (nos.)	23,519	23,166	22,661
Attrition rate <sup>15</sup> (%)	8.06	7.57	7.91
HSE expenses <sup>16</sup> (million INR)	2,819.03	2,471.34	2,019.61
Benefits provided to employees (Million INR)	4,286	4,284	4,449.60
Number of employees availing maternity leave (nos)	46	43	
Number of employees availing maternity leave and completing 12 months after returning to work (nos)	42	37	-

 $<sup>^{\</sup>rm 14}$  In FY2012-13, we had no retainers or consultants on the Company rolls

 $<sup>^{\</sup>rm 9}$  The values are related to BG PMT operations and steady state operations facility at Gadimoga

 $<sup>^{10}</sup>$  The values refers to increase in ground water consumption at Gadimoga  $\,$  as per demand of horticulture

<sup>&</sup>lt;sup>11</sup> The Hazardous Wastes (Management, Handling and Trans-boundary Movement) Rules 2008, Schedule 1, item 2.1, 2.2 and 2.3 classifies drill cuttings containing oil, drill mud and other wastes and sludge containing oil as Hazardous waste. As such, the total mud (sludge and slurry form) needs to be reported as Hazardous Waste

<sup>12</sup> There were no reportable injuries for female employees or contract workforce at any of the E&P locations in FY 2012-13

 $<sup>^{13}</sup>$  The injury rate and lost day rate have been calculated as per the methodology prescribed by GRI

 $<sup>^{15}</sup>$  In FY2012-13, there were a total of 2363 new joiners out of which 91 left the organisation within the same year

 $<sup>^{16}</sup>$  The HSE expenses for FY 2010-11 and FY 2011-12 have been restated post inclusion of ETP expenditure at all the sites

<sup>&</sup>lt;sup>17</sup> Education includes all education related aid, donations, scholarships across RIL including Jamnaben Hirachand Ambani Foundation, Hirachand Goverdhandas Ambani Charitable Trust and Dhirubhai Ambani Foundation

Training	2012-13	2011-12	2010-11
Leader (hours)	24,388	14,336	13,566
Manager (hours)	526,757	444,796	372,817
Executive (hours)	261,188	215,953	223,402
Non-supervisory (hours)	228,921	199,518	166,228
Contract Labour (hours)	262,808	298,001	410,291

Social Expenditure (INR Million)	2012-13	2011-12	2010-11
Education <sup>17</sup>	667.13	750.62	910.10
Health <sup>18</sup>	1,407.16	910.30	469.90
Community Development	731.04	216.88	283.47
Environment (Greening activities)	12.01	21.50	7.64
Others <sup>19</sup>	692.65	613.39	342.30
Total	3,510.00	2,512.68	2,013.41

### Environmental

Reliance Corporate Park	2012-13	2011-12
Total energy consumption (Direct and indirect) (000' GJ)	207.36	169.86
Energy saved due to conservation (000' GJ)	0.26	2.94
Total water withdrawal ('000 Cu.M)	789.52	621.82
Percentage of water recycled (%)	30.56	38.75
Total GHG emissions (Direct and indirect) (000' tCO <sub>2</sub> e)	45.77	37.75
Hazardous waste (MT)	4.98	8.03
Non-hazardous waste <sup>20</sup> (MT)	1,139.85	35.82

### Social

Safety Performance	2012-13
Injuries <sup>21</sup> (nos.)	7
Injury rate (per 100 workforce)	0.042
Lost days (nos.)	103
Lost day rate (per 100 workforce)	0.621
Manhours worked (Million hours)	33.19
Fatalities <sup>22</sup>	1

<sup>18</sup> Health includes medical aid & benefits extended across RIL including Sir H.N. Medical Research Centre, Drishti and Dhirubhai Ambani Foundation

<sup>19</sup> Others include donations, sponsorship and awards instituted across RIL including Dhirubhai Ambani Foundation, UAA – Dhirubhai Lifetime Achievement

<sup>&</sup>lt;sup>20</sup> This year we have improved our monitoring and reporting systems for non-hazardous waste at RCP and have included new categories which were not reported till last year

 $<sup>^{21}</sup>$  There was one injury to a female permanent employee out of the 7 injuries at RCP resulting in 9 lost days

<sup>&</sup>lt;sup>22</sup> The fatality at RCP occurred due to a falling object resulting in a head injury to a contract worker at the construction site



Record turnover of INR 3,711.19

(Increase of 9.2 %)

Record net profit of INR 210.03 billion

(Increase by **4.8 %**)

Highest Gross
Refining Margin
from \$ 8.6 / bbl
to \$ 9.2 / bbl
in last 4 years

### Financial Performance

This year, our turnover touched a record INR 3,711.19 billion (\$ 68.4 billion), a growth of  $9.2\,\%$  over the previous year. Our operating and financial results from each of the three core segments – Oil & Gas, Refining and Marketing and Petrochemicals – were outstanding. Of the  $9.2\,\%$  increase, higher prices accounted for  $11.0\,\%$  growth in revenue, which was partly offset by the decrease in volumes by  $1.8\,\%$ . The net profit achieved for the year was INR 210.03 billion (\$ 3.9 billion)

During the year, we maintained our status quo as India's largest exporter accounting for 14% of the country's total exports, with the quantum touching INR 2,392.26 billion (\$ 44.1 billion). Our exports this year increased by 15% as opposed to the year ended March 31, 2012. In this financial year, we exported petroleum and petrochemical products to 116 countries around the globe.

Refining business revenues increased by 11.6%, Petrochemicals by 9.3% while Oil & Gas revenues decreased by 35.2% on account of lower production. The total economic value generated by RIL increased by 9.6% to INR 37,911.67 billion, while the total economic value distributed by us also increased by more than 10.97% to INR 35,170.31 billion. We have contributed INR 289.50 billion (\$ 5.3 billion) to the national exchequer in the form of various taxes and duties. Our Jamnagar refinery complex created a new record by processing 68.5 MMT of crude at an average capacity utilisation of 110%, surpassing the global peers.

We maintained our leadership position in the polymer industry with a domestic market share of 41% and a commodity polymer production share of 62%. Cracker operating rate was at 91%. We produced 4.4 MMT of total polymers including PP, PE and PVC. RIL exported 0.8 MMT of total polymer products.

We completed four years of operations of our KG-D6 production facility. The KG-D6 fields produced 336 BCF of natural gas and 3.31 MMBL of crude oil and condensate in FY 2012-13, a reduction of 41% in case of liquid portion and 39% in case of natural gas on Y-o-Y basis. The average production during the year was 26 MMSCMD of natural gas

and 9,225 BOPD of crude oil. The fall in production is mainly attributed to geological complexity, natural decline in the fields and higher than envisaged water ingress.

### Key Financial Indicators

- Total Assets: INR 3,185.11 billion (US \$ 58.7 billion)
- PBDIT: INR 387.85 billion (US \$ 7.1 billion)
- Cash Profit: INR 305.05 billion (US \$ 5.6 billion)
- Net Profit: INR 210.03 billion (US \$ 3.9 billion)
- Net Debt / Equity Ratio: Nil
- Market Capitalisation is 4% of the total market capitalisation of India.
- Contribution of 4.8 % of the Government of India's indirect tax revenues.
- Weightage in BSE Sensex: 8.6 %.
- Weightage in NSE Nifty Index: 7.0%.
- Dividend of 90%, payout of INR 30.92 billion (\$ 570 million)
- Operating costs: INR 3,134.15 billion

### Our future endeavours

We are in the process of setting up a Refinery Off-gas Cracker (ROGC) at Jamnagar. This cracker will be amongst the largest ethylene crackers in the world, using refinery off-gas as feedstock. Products from the cracker will be utilised for the new downstream petrochemical facilities being built at Jamnagar. The facility will have an installed capacity of 1.4 MMTPA of Ethylene, 0.2 MMTPA of propylene and its downstream capacities for polyethylene and polypropylene.

### Share buyback programme

We announced India's largest share buy-back programme in January 2012. The Board of Directors had approved buyback of up to twelve crore fully paid-up equity shares of INR 10 each, at a price not exceeding INR 870 per equity share, payable in cash, up to an aggregate amount not exceeding

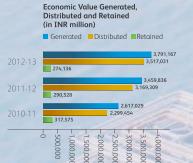
INR 104.4 billion from the open market through stock exchanges. During the buy-back programme which ended in January 2013, we bought and extinguished 46,246,280 equity shares of INR 10 each. It was 38.54% of the total buy-back offer quantity of 120,000,000 equity shares.

### **Employee benefits**

During the year, we increased employee pay-out by 17.1 % to INR 33.54 billion (\$ 618 million) vis-à-vis INR 28.62 billion for the year ended March 31, 2012. Our basic Earnings Per Share (EPS) for the year ended March 31, 2013 was pegged at INR 64.8 as opposed to INR 61.2 for the last financial year.

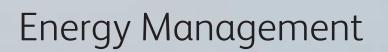
### Ratings

Our financial discipline and prudence continues to get reflected in the strong credit ratings attributed by rating agencies. Moody's has rated the Company's international debt at investment grade Baa2, with 'positive' outlook (local currency issuer rating). S&P has rated the Company's international debt as BBB+ with a 'negative' outlook. These rating agencies continue to provide a rating to RIL, in which Moody is a notch above and S&P is two notches above India's sovereign rating. The Company's long-term debt is rated AAA by CRISIL and 'Ind AAA' by Fitch, the highest rating awarded by both these agencies. The Company's short-term debt is rated P1+ by CRISIL, the highest credit rating assigned in this category. Our superior credit profile is reflected in our relationships with over 100 banks and financial institutions having commitments with the Company.











34,692 CERs issued during

HMD Certified to ISO 50001:2011 Savings of
4.31 million GJ
through energy conservation

The availability of energy sources at an affordable price on a sustainable basis is defining global economics and the threat of declining energy resources is looming large. For a developing country like India, the continuous availability of energy sources is of paramount importance to meet the development imperative.

We are one of the leading energy companies in India and therefore have a significant role to play in enhancing the country's energy security. The challenge of meeting the country's energy demand has presented us with a significant business opportunity. This has led us to an increased focus on energy security through backward integration into exploration and production of petroleum products. At the same time, we are also harnessing renewable sources of energy to minimise the impact on fossil fuel reserves.

### Investing in upstream opportunities

Exploring opportunities in upstream presents us with business opportunities against the backdrop of India's increasing energy import bill. The regulatory environment has also shown a positive trend in recent months with the government allowing exploration in production areas.

During FY 2012-13, there was an increased alignment with partners as carry obligations were completed in Pioneer and Carrizo JVs. These JVs, for shale gas exploration are focussed on improving operational and capital efficiency along with various on-going cost reduction initiatives. Strategic initiatives include prioritising liquid rich areas while ensuring prudent lease hold strategy and longer lateral wells on multi-well pads to lower unit development cost. Fortifying our relationship with BP, under the KG-D6 block enhancement plan, BP and RIL are planning to invest in a series of projects to develop

around 4 trillion cubic feet of discovered natural gas resources from the block.

Table 1: Total production over the last two years

	Units	FY 2011-12	FY 2012-13
Crude oil	Million MT	0.93	0.602
Natural gas	Million m <sup>3</sup>	12,824	6,732

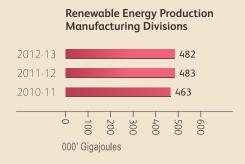
### Exploring alternative energy avenues

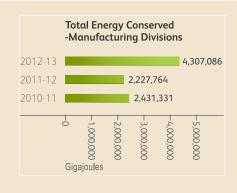
Our corporate office has been taken up as a demonstration site for deployment of renewable energy. Installation of solar photovoltaic panels on rooftop, utilisation of daylight through "light pipes", generation of biogas and organic manure by anaerobic digestion of food and garden waste are some of the measures initiated during this year. We have also initiated a feasibility study for assessing the potential of increasing the power generation capacity of our existing wind power generating facility in Upleta (Gujarat). During FY 2012-13, our manufacturing divisions consumed 0.48 million GJ of renewable energy (wind and biomass). Assuming replacement of grid-based power, this renewable energy consumption has led to a reduction of approximately 0.11 million tCO<sub>4</sub>e.

At our Hoshiarpur manufacturing division, this year, with the objective of promoting clean energy, we eliminated the use of Furnace Oil for steam generation and entered into a contract for sourcing steam generated through biomass (Rice husk).

### The Jamnagar Gasification Project

Our constant endeavour is to focus our efforts in implementing new technologies which help us maximise our





productivity, while minimising our impact on the environment. One such initiative is the 'Jamnagar Gasification Project'. This is a transformational energy initiative of the refinery and petro-chemical business at Jamnagar, by achieving captive consumption of Petcoke resulting in lower price volatility for energy consumption and ensuring low operating cost.

The salient features of the gasification project are:

- The largest petcoke gasification project in the world
- · Almost complete sulphur recovery from the feed
- CO<sub>2</sub> capture enabled and ready for future use
- Value addition by recovery of NH, as a by-product

### Investing in energy conservation

Optimisation of energy use makes great business sense for us and at the same time helps reduce our environmental burden. During FY 2012-13, our energy efficiency improvement efforts led to energy savings of 4.31 million GJ, subsequently leading to GHG emission reduction of 0.28 million tCO<sub>3</sub>e on account of these savings.

We are continuing our drive to reduce energy intensity in our manufactured products. We have installed a real time optimizer in the Jamnagar refinery to minimize fuel consumed for meeting the power and steam requirements of the refinery. We have also implemented several schemes that exchange heat between process streams, resulting in reduced utilities consumption. Our other areas of energy efficiency improvement include augmenting hot insulation in steam and process pipelines, and reducing fouling in furnace convection sections. We carried out intersite audits on fouling heat exchangers, process furnaces, steam management systems and hot oil systems to identify additional opportunities for reducing energy consumption. Some of the key energy conservation measures carried out during the FY 2012-13 are listed in Annexure I of the report.

### Pioneering effort

During the year, our Hazira Manufacturing Division (HMD) became ISO 50001:2011 certified, the first such honour within RIL's manufacturing divisions. As a first step, the existing practices of Environment Management System at HMD were benchmarked with the globally recognised Energy Management System Standard (ISO 50001: 2011). Post document adequacy and final audits in December 2012, the division was certified under the standard.

### Tackling climate change

GHG management forms an integral part of annual plans across our Company. During FY 2012-13, our manufacturing divisions emitted 25.63 million tCO<sub>2</sub>e of GHG (direct and indirect). There is an increase in total emissions of 2.16 % over last year. Increased production this year has contributed to increase in GHG emissions. Through optimization of dispatch of bulk chemicals across the organisation, we have reduced the distance travelled by our carriers/containers, thereby reducing the emissions due to transportation.

We have eight CDM projects registered at the UNFCCC till date. Additionally, 86,912 CERs for one more CDM project at Jamnagar were under verification as on March 31, 2013. The following is the break-up of CERs issued for CDM projects across RIL during FY 2012-13:

Table 3: CERs issued during FY 2012-13

Site name	Description of CDM project	CERs issued
Dahej	Demand side energy conservation and reduction	21,216
Patalganga	Demand side Energy Efficiency Projects	7,748
Allahabad	Improvement in energy efficiency of steam generation and power consumption	5,728

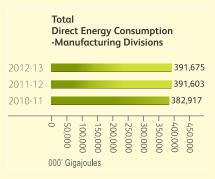
25,632

25,091

30,000

24 039

25,000









55.05%

of
water recycled
at manufacturing
divisions

More than

1.2 million
saplings planted at manufacturing divisions

Consumed
63,220 tonnes
of recycled materials
at manufacturing
divisions

We give utmost importance to conservation of the natural capital at our operations. We are committed to responsible stewardship of the natural resources we use and manage to conduct our operations in a sustainable manner. We strive to instil the responsibility of environmental preservation among our stakeholders as well. We ensure adherence to our group standards on environment through regular audits and training. Improvement in resource productivity, increased water efficiency, controlling air emissions, proactive waste management and biodiversity preservation are a few of the areas where we encourage our manufacturing divisions and E&P locations to take up initiatives.

### Material stewardship

We lay emphasis on process and product improvements that result in resource and product efficiency. This could be through reduction in use of primary materials or increasing the use of recycled material. We continue to use recycled materials in our production processes. In FY 2012-13, we consumed 63,220 tonnes of recycled materials which amounts to less than 1% of our total material consumption.

### Water conservation

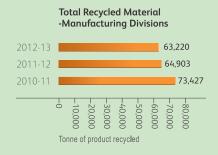
Water is one of the important elements for the survival of life and hence is central in our sustainability efforts. Availability of water is indispensable for carrying out our operations. Our endeavour is to ensure that no water sources are adversely affected due to withdrawal for our operations. In FY 2012-13, our total water consumption stood at 118.88 million Cu.M as compared to 120.13 million Cu.M in FY 2011-12 at our manufacturing operations. This is 1.04 % lower than the

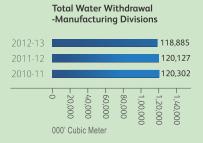
previous year and is attributed to our water conservation and higher water recycling initiatives. The total amount of hydrocarbon discharged in the wastewater stream at our manufacturing operations during FY 2012-13 was 23.61 tonnes. At our E&P operations, the specific water consumption was 0.122 Cu.M per tonne of product in FY 2012-13, as compared to 0.042 Cu.M per tonne of product in FY 2011-12, due to increased consumption for offshore activities at BG PMT and increased requirement for horticulture at Gadimoga. In FY 2012-13, we increased our use of recycled water to 55.05 % from 54.52 % in FY 2011-12 at our manufacturing locations, doing our bit to reduce consumption of fresh water. At Jamnagar, substantial quantity of water required for Jamnagar refinery is obtained by desalination of sea water, thereby saving the fresh water resources of the area which is generally arid. All the water after industrial use is recycled and used in the greenbelt. While some of our manufacturing divisions are already zero discharge sites, through treatment and total recycle of effluents, our aim is to ensure zero discharge at all sites.

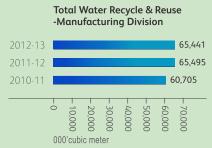
During FY 2012-13, our E&P operations generated 6.46 Million Cu.M of produced water as a result of exploration activities. Our exploration activities also resulted in the generation of 3,545 tonnes of drill mud and cuttings due to the use of aqueous and non-aqueous drilling fluid.

### Conserving water through process improvement

Grey Polyester (colourless) fibres are dyed through wet processing to obtain a final coloured fabric. The dyeing process is highly water intensive and results in effluent generation as well. To reduce our water footprint, we have







introduced a master batch dope dyed system, in which measured quantity of melted black master batch chips are injected in the main polymer to have inherent black colour fibre. Yarn is then made from these fibres and subsequently coloured fabric is made without any further wet processing. This new process eliminates the use of water. For dyeing of fibre, average water requirement is 10 Cu.M per ton and effluent generated per ton of fibre is also close to 10 Cu.M.

Thus, in FY 2012-13, this green innovation has contributed towards saving of about 0.45 million Cu.M of water based on 45000 tonnes of black fibre production. In addition, the generation of effluent was avoided, resulting in economic gain to the processor and less pollutant discharge.

### A little step towards sustainable farming

Since the project phase of the Jamnagar refinery, we have put in efforts to develop an extensive green cover which also includes mango plantation. The scale of the plantation requires regular source of water supply. However, due to extremely low rainfall, absence of perennial irrigation resources such as rivers, dams etc. and self-imposed restraint of not using ground water for commercial exploitation, we have faced challenges for the sustenance of the plantation. Hence, it was imperative to increase the water efficiency of the available water sources for growing mangoes. Arresting evaporative loss is one of the ways to improve water efficiency. We applied green technologies, such as using 125 micron black polythene sheets as mulch for the plantation. This mulching has helped in reducing losses of water through evaporation by 30 %, has improved microbial activities in the root zone of mangoes leading to better performance and has reduced weed population thereby reducing water and nutrient loss from the soil. In order to gain further benefits in terms of labour reduction and better efficiency, we have developed

 $\alpha$  system of entire row mulching instead of individual tree mulching.

### Focus on biodiversity

Activities related to biodiversity conservation form an integral part of the way we function. We take up various initiatives for preservation of biodiversity such as plantation and maintenance of mangroves in the coastal areas. During the financial year, we have carried out mangrove plantations on over 28 hectares of land at Jamnagar. A lush green cover is a common feature in all our manufacturing divisions and E&P operations. In FY 2012-13, we planted more than 1.2 million saplings at our manufacturing divisions, with an average survival rate of 80%.

Eleven of our manufacturing divisions are located either in declared industrial development areas or environmentally non-sensitive areas. Local and national laws guide us with respect to fulfilling regulatory requirements and managing bio-diversity in our areas of operation, including those located in environmentally sensitive zones. We conduct environment impact assessments for all new and expansion projects and engage external experts to undertake periodic monitoring of our impacts on bio-diversity. Based on the recommendations, we review our biodiversity management plans.

The right of way (ROW) for pipelines and the marine facilities at our Jamnagar refinery complex are located between 'intertidal mudflats', a protected marine ecosystem under national legislation. We have taken several measures to mitigate our impacts on marine biodiversity including:

• Discharge of desalinated brine water in the sea, away from the Marine National Park and Marine Sanctuary through a scientifically designed diffuser, which ensures that the brine attains ambient temperature within 100 m from diffuser.



# Associated with National Institute of Oceanography

Total
effluent discharge
reduced by
3.4%
at manufacturing
divisions

Hazardous
waste disposal
reduced by
19.86%
at manufacturing
divisions

- Only segregated ballast tank (SBT) vessels are chartered for trading to the marine terminal that is located away from the Marine National Park and Marine Sanctuary.
- Pumping of bilge water is strictly prohibited for ships that arrive for loading.

### Waste handling

We focussed on reducing waste generation at the source. It is our effort to maximise recycle and reuse waste generated at our facilities. The remaining waste is disposed of in a scientific way through authorised agencies. At the Naroda manufacturing unit, the industrial waste is converted into manure through vermi-composting, significantly reducing the waste discharged from the plant. The Effluent Treatment Plant (ETP) sludge is now utilised to generate 'bio-manure' through this vermi-composting method.

This year, we have exported a total of 728.50 tonnes of spent hydro treating catalyst to two overseas countries (Singapore and Saudi Arabia) for reprocessing/ regeneration while fulfilling all requirements of the Basel Convention. Of this 241.05 MT of regenerated spent catalyst has been received back.

We treat the effluent generated from our manufacturing processes to meet statutory norms and strive to minimise the amount of effluent discharged. In FY 2012-13, we discharged a total of 21.23 million Cu.M of treated effluent from our manufacturing divisions.

### Controlling air emissions

Our operations monitor on a continuous basis, emission of Suspended Particulate Matter (SPM), Oxides of Sulphur (SOx) and Oxides of Nitrogen (NOx). In addition to these, our refinery at Jamnagar also monitors the generation of Volatile Organic Compounds (VOCs). At manufacturing divisions, the SPM, SOx and NOx emissions for the year were 2.86, 10.84 and 28.80 thousand tonnes, respectively and VOC emissions were 42.77 thousand tonnes. For our E&P business, during the year SPM, SOx and NOx emissions were 0.56, 295.2 and 1,877.1 tonnes and the VOC emissions for the year were 916.65 tonnes.

In our manufacturing divisions the total amount of flared and vented hydrocarbons during FY 2012-13 was 35,733 tonnes while the corresponding figure for E&P locations was 126,437 tonnes.

### Spill management

We take adequate measures and strive to avoid spills during handling and transportation of materials. In the event of any spill, we take appropriate action to contain and recover the same. We monitor the spills at our manufacturing divisions through an online incident reporting system. This year, there were no significant spills or leaks at our manufacturing divisions or E&P locations.

### Initiatives taken to minimise/avoid spills

We associated ourselves with National Institute of Oceanography to conduct a study on marine environment and subsequent business impacts on the Company in the Gulf of Kutch covering about 180 sq. km. We take into consideration aspects in our infrastructure planning & operations to ensure that the ecology of the Gulf is preserved.

# Product Stewardship DHIRUBHAI.1 RIL's vessel Dhirubhai - 1

At RIL, we believe in an integrated approach to product stewardship and assess Health, Safety and Environment (HSE) impacts of our products and processes. Our product stewardship initiatives are integrated with our Responsible Care ®program. We disseminate product related HSE information across our value chain and share 'Product Risk Assessments' through our website to enhance transparency and impart awareness about our products to our stakeholders.

We follow the Globally Harmonized System for classification, labelling of chemicals and preparation of Material Safety Data Sheets (MSDS). All MSDS are readily available on our intranet for ready reference of employees and are also shared with our customers. We also share information with our customers on safe handling of products during distribution and their use. Assessment of our suppliers and customers is a key step in our endeavour towards establishing a robust product stewardship program. Prior to the sale of any hazardous product, the customer's facilities and their ability to handle the product is assessed in order to ensure safe handling and use of the product.

With focus on product design and innovation, we aim to make our products more safe and environment friendly. Some of our products like Recron® Green- (made from processing of post-consumer waste) are a result of our efforts to develop green products. Recron® Green has been granted the "Global Recycle standard" from the internationally recognized Control Union Certifications, Netherlands.

We aim to standardise the product safety and product stewardship across our operations. As part of our commitment to sustainability, we strive to ensure that our products, processes and raw materials are managed responsibly. Our spirit of product stewardship involves an integrated approach to products, materials and process management designed to assess, minimise and eliminate the environmental and health-related impacts of products and services.

### PTA product bulk dispatch at Hazira

At Hazira, we started a project to shift to bulk dispatching of PTA product to our customers to reduce our resource consumption and benefit from savings. Traditionally, the product was dispatched through jumbo bags. The current dispatch levels have reached to about 70-75% of PTA through bulk tankers post successful communication to our customers on the overall benefits. The higher dispatch volume in the tanks (32MT/truck when compared to jumbo bags 16.5MT/truck) has resulted in emission reduction due to decreased number of trips and has helped customers reduce their overall transportation costs. Further, chances of spillage during bagging, handling and storage leading to PTA dust hazard have been reduced through this process. Annual savings from this initiative are to the tune of INR 172 Million. The above mentioned initiatives can be replicated at the

existing PTA units at Patalganga and forthcoming units at Dahej, where it is being planned to be implemented from the design stage.

### Green Polymer Packaging Bags

Under the aegis of Product Application and Research Centre (PARC), we have started a unique project of "green" polymer packaging bags which are fully recyclable and used in the packaging of polyester and polymer products. By modifying the process and without compromising on the mechanical properties of the packaging bags, we were able to achieve a weight reduction of 3.5 % to 12 % in the packaging bags. The lower bag weight has enabled projected savings of around 1,250 metric tonnes of packaging material annually, including 4% processing wastage during bag manufacturing process. Due to reduced weight, around 5% to 9% extra packaging bags can now be loaded per truck. This translates to reduction of 75 truck trips from Daman (where packaging bags are produced) to various manufacturing locations such as Jamnagar, Nagothane, Hazira and Vadodara for transportation of these packaging bags. This has resulted in substantial fuel saving and emission reduction.

Our Hazira manufacturing division has developed a fabric pallet for packing of PET Chips for export thereby eliminating use of wood. The pallet has been made of fabric with the arrangement of tubular channels to facilitate easy lifting and handling. The new packaging also occupies less space than the wooden pallets and hence height optimisation, as per the container is possible resulting in more efficient transportation.



### International recognition for vessels

The Rotary Wing Society of India rated RIL's vessels 'Dhirubhai-1' and 'Olympic Canyon', as the 'Best Safety Conscious Ships' in the Indian waters, with no complaints of non-compliance to any of the established international and national safety standards. These two vessels, being operated by Norwegian companies for our operations in the east coast of India, have received the honour for having attained international best safety standards in Heli-deck operations.

### Ensuring safety for the community

We constantly review the operations and maintenance practices to face the challenges posed in managing our vast network of pipelines in a sustainable manner. Our continuous focus is to maintain incident free pipelines which run across difficult terrains; a few of them partly subsea and at a few places in close proximity to habitation which has mushroomed with passage of time.

Our 'Pipeline Integrity Management Group' (PIMG) works on a structured approach for managing pipeline integrity, ensuring safety and security. Audits and periodic reviews are carried out across the pipeline network and the performance is communicated to the top management.

While managing risk, we also engage with local communities by involving them in community awareness programmes, to inform them about the hazards associated with pipelines and safety precautions to be taken. We have initiated a unique concept 'Reliance Mitr' where the local community is encouraged to act as extended eyes and ears of RIL, and who in turn inform the control room in case any unauthorised activity is observed in Right of Usage.

### Hazardous Material Management (HMM)

During this year, we undertook a drive to reduce the inventories of hazardous material to improve efficiency and enhance safety of operations. The hazardous material

Product display gallary at Hazira

management was stabilized last year through the preparation of a manual, initiating procedures, establishing audit schedules and formation of a guardian committee. Considerable reduction in inventories of these materials was achieved through process improvements.

### Putting customers first

We conduct third-party mystery customer audits, customer satisfaction index and call centre evaluation studies periodically to ensure fulfilment of the service delivery promise, conformance to internal standards and to understand customer attitude and behaviour. After every financial year, customer feedback formats are sent to customers and based on the score received from the customers, a customer satisfaction index is plotted for specific products. Other modes of tapping customer feedback are web-based customer experience surveys, factory visits for customers and direct one-to-one meeting with the plant personnel. We take cognizance of the fact that aspects such as availability of product and timely delivery are of paramount importance for our customers and our focus lies in addressing these concerns. Customer feedback on these aspects also helps us consolidate our position in the market. We consider customer complaint rederessal as an integral part of customer care. We conduct regular Customer Relation Meets (CRM) to educate and apprise customers about all aspects of our products and take their feedback in addition to understanding their concerns. The Company has a welldefined framework to deal with customer complaints. As on March 31, 2013, 98.8% of the customer complaints were resolved.

### Encouraging local entrepreneurship

Through financial assistance and encouragement, we have supported many small suppliers, predominantly civil contractors and transport suppliers, some of whom have now been providing services to us for the past two generations. In Jamnagar alone, we currently employ around 48 local vendors, a number which has steadily grown over the years.

### Developing local vendors for specialised products

Certain specialised raw materials such as Ester based lubricity improver (additive) for ULSD (Ultra low sulphur diesel) were imported from Singapore with longer lead-time and at a higher cost. This meant that in case of any significant increase in consumption, we had to airfreight the material with huge costs and related logistics footprint. Considering the challenges, we decided to develop a local vendor. Through this effort, we have been able to provide employment and a constant source of business to a local vendor and have derisked the availability of raw material for our operations, apart from significant savings in cost and travel related emissions.

# PIMG intiated 'Reliance Mitr'

'Green
Packaging
Bags'
for polyester &
polymer products

Vessels 'Dhirubhai-1 & 'Olympic Canyon', rated as 'Best Safety Conscious Ships' in Indian waters

A similar step was taken to source Cetane Number Improver (CNI) for all grades of diesel locally, which were earlier being imported from Europe.

### Grievance mechanism for business partners

To ensure our business partners (suppliers, vendors and contractors) are heard and their expectations are met, we have adopted a formal grievance resolution mechanism. This system is used by the business partners to raise their concerns. Issues such as availability of product, timely delivery, and infrastructure inadequacy can be highlighted through this mechanism. A dedicated email id (EProcurement.Helpdesk@ ril.com) is also in place for them to direct their queries. The online system has comprehensive information on how to log incidents, and track the status of pending queries categorised by nature of complaints.

### New technology for low benzene gasoline

This year in September, we successfully commissioned the facility in the FCC complex of the DTA refinery at Jamnagar that has the capability to produce gasoline with low benzene content (0.62% Vol). The facility was set up to meet the requirement of certain export markets. The lower benzene content in the gasoline will lead to reduction of MSAT (Mobile Source Air Toxics). The entire system was designed and engineered in-house.

All marketing communication efforts of the Company adhere to the brand standards/ guidelines with regard to visual manifestation, brand promise and relevancy and saliency of the target group. We follow applicable legal statutes with respect to product labelling and display of product information.





Research & Technology and Innovation continue to be the major focus areas to help us in creating value and providing a competitive advantage to meet our current and future needs. During FY 2012-13, we were granted 7 patents. The details of the granted patents are listed below:

Country	Title of Patent
Europe	Propylene polymerisation catalyst system
India	Process for synthesis of alkyl alkoxy benzoates
India	A process for the synthesis of alpha-olefin polymerisation procatalysts (Process for synthesis of Ziegler-Natta procatalyst for alpha-olefin polymerisation)
USA	A process for the synthesis of alpha-olefin polymerisation procatalysts
Europe	A process for the synthesis of alpha-olefin polymerisation procatalysts
India	A catalyst system for polymerisation of olefins
India	Polyolefin resin compositions with low haze and reduced shrinkage anisotropy

"Reliance Technology Group" (RTG), RIL's Centre of Research and Technology, through its activities contributes to the growth of the Company by buying/customising/ developing the right technology, at a right cost, and at the right time. RTG consists of two types of technical teams: a.) Technology groups focussing primarily on advanced troubleshooting, support to capital projects, profit and reliability improvement in our manufacturing plants; and b.) R&D groups focussing mainly on new product, process and catalyst development to support existing business, and also creating breakthrough technologies for new businesses.

The coking process research at the Company is expected to get a major boost with the soon to be commissioned state-of-the-art Coker pilot plant. This facility will be used to carry out research projects for upgrading refinery residue streams into value-added products like needle coke, middle distillates, additives etc.

A new area of research being actively pursued is  $\mathrm{CO}_2$  capture from the refinery flue gas. New adsorbents for efficient removal of  $\mathrm{CO}_2$  are being identified and developed. This work supports RIL's commitment to ameliorating long-term environment issues.

We undertake collaborative research projects with reputed institutes to jointly develop new breakthrough technologies and to establish synergy between academia and industrial technology. RIL has joined an industry programme at Tulsa University for a 3-year period which will provide valuable information for enhancing and trouble-shooting operations.

Details on the key areas of research and development (R&D) can be referred to in Annexure II of the report.

### Protection of intellectual property

The Central Intellectual Property team (CIPT) plays a

supporting role in protecting, utilising and optimising innovations created by our scientists and technologists, by converting them into intellectual property (IP) assets. It also spreads IP awareness amongst employees to underscore the criticality of IP in the organisation's journey from being an IP buyer to becoming an IP creator.

# New generation synthetic fibre for replacement of asbestos

We have engineered a new generation synthetic fibre that can be used as a substitute for asbestos fibres. The synthetic fibre is doubly advantageous, as it is both cost-effective and environment-friendly. While asbestos needs to be milled before use, the new-generation fibre has been customised for asbestos sheet manufacturers and hence can be straight away added in the mix tank without milling. The fibre has excellent dispersion and affinity with materials like cement. These properties results in an increase in flexural strength and durability of the end product.

# New generation synthetic fibre for replacement of pulp

We have engineered a new generation synthetic fibre 'Recron 3S' which can replace pulp (wood) in the paper industry. This fibre can be used as a substitute for pulp by manufacturers of wallpaper and other specialty papers. The use of these fibres adds strength and flexibility to the paper providing other advantages over traditional paper products such as increase in tear and burst factor; possibility to emboss, laminate and bond the paper and enhanced softness. The consumption of Recron 3S for paper reinforcement can be to the extent of 30 % and the remaining quantity can be pulp, depending on the end application. The current global consumption of Recron 3S for pulp replacement is approximately 3600 TPA.

### Hoshiarpur site certified on Global Recycle

During the year, Hoshiarpur manufacturing division was certified under the 'Global Recycle Standard' for manufacturing Polyester Staple Fibre made with 100% recycled PET flakes using post-consumer raw material only. The certification is intended for companies that are making and/or selling products with recycled content and it recognises RIL as one of the few organisations worldwide that support the growth of sustainable practices in the textile value chain.

Further, we have invested over the years in product innovation and thereby aim to reduce the adverse impact of our operations on the environment by producing socially relevant products. Some of our products that have created positive impact include Recron FR, - Flame fibres and yarn aimed at improving the safety of the user, and Recron 3S - used in the construction and paper industry. It can replace pulp (wood) in the paper industry and can also be used as a substitute for hazardous asbestos fibre in asbestos cement production. It is also being used to reinforce concrete in various airports, roads, defence establishments, etc. helping to provide better and safer infrastructure. Recron Green Polyester fibres of superior and consistent quality using post-consumer PET Bottles is another example of our green products.



It has always been our goal to ensure a zero accident workplace and further to create an environment that ensures the well-being our employees. Safety is given the utmost priority in all our operations.

### Employee health and well-being

Our aim of maintaining a safe workplace extends to ensure the wellness of our workforce and continue the 'Mission Wellness' at our Manufacturing Sites, and Exploration and Production locations as well as office locations. Our occupational health centres at manufacturing locations, and E&P locations, as well as major offices, are well equipped and manned by qualified specialists. An automated 'High Alert' system has been implemented to prevent any medical complications.

All our OHCs are also equipped with 24×7 ambulance service to ensure quick transport to the nearby hospitals in case of a medical emergency. Our operations at Dahej, Nagothane and Vadodara sites are equipped with a state-of-the-art Special Burns Treatment unit. The medical facilities extended by our OHCs are also available to our contract workforce.

Apart from emergency health services, the OHC's provide preventive as well as curative health services to all our employees. Health awareness sessions and diagnostic camps are carried out regularly at the OHC's with an aim to ensure a healthy living for all our employees. Additionally, they also share health tips through emails. The centres have been upgraded to provide on-line X-Ray reporting.

All our employees undergo periodical medical examination irrespective of the nature of their work. The results are analysed to provide targeted interventions at individual and group levels. We monitor the health of employees, especially those working in designated hazardous areas on an on-going basis, for exposure to hazardous chemicals and processes to prevent occupational diseases. At our offices, health check-ups are conducted for our employees for any indications of lifestyle or work-style related diseases, such as hypertension, heart problems and diabetes. With a view to increase the awareness of Occupational Health, OH week was celebrated across all sites based on the theme of 'Exercise and Ergonomics for health' which showed an active participation from employees and their families as well as contract workmen. In addition to this, our medical teams conducted a number of awareness programmes across sites on 'Awareness about Chemicals & Indoor Air Quality' which included training on chemical hazard and safety, industrial hygiene talks and awareness lectures on occupational health and industrial hygiene. Training on maintaining hygiene is conducted regularly for food handlers. Regular audits, analysis of water samples and coli form testing are also carried out in our canteens/food courts to ascertain the highest quality of food.

We conduct regular awareness sessions to prevent and manage diseases such as heart problems, hypertension, diabetes and communicable diseases such as malaria, tuberculosis and HIV/AIDS for our employees. These sessions are also extended to employees' family members. We have full-fledged hospitals at our townships at Jamnagar, Vadodara, Nagothane and Patalganga. Our 'Work Life Project' is an initiative that has been undertaken across the sites, with focus on Emotional Health as a part of Resilience Management wherein awareness is provided on emotional health and psychological well-being. This is also extended to the families of employees to ensure work life balance is maintained.

### Managing Health, Safety and Environment

Safe operations is embedded in our ways of working, driven by management commitment and made functional through the twenty six elements of our Health, Safety and Environment Management system.

### HSE management system

We have begun to weave sustainability in our business processes, following a "1-Reliance" concept across our businesses and the entire value chain, by integrating Health, Safety and Environment processes with the business processes. Working together with our stakeholders and partners we endeavour to have the best health and safety standards. We are committed to ensuring that everyone working for us returns home safe and healthy. We are also committed to environmental stewardship ensuring that we eliminate or minimise any impact of our operations on the environment by focussing on reducing greenhouse gas emissions and improving energy usage and efficiency.

We continue to focus and prioritise our key risks identifying issues early on, especially in upcoming projects and construction activities, and have put in place Health, Safety and Environment Management systems and augmented the resources to mitigate these risks. As RIL forays into new businesses, our focus is to integrate them from the early stages implementing the Health, Safety and Environment Management systems and building the safety performance culture across these new businesses. Reliance has announced a number of major expansions of refinery and petrochemical operations. As part of these projects, we continue to focus on understanding and mitigating HSE risks in the design, engineering, construction and commissioning phases.

Capability building of personnel and manning key positions with competent personnel has been the key to managing our operations efficiently. The key is empowering the operating people with knowledge and also decision making authority, so that roles and responsibilities are clearly defined and operating personnel are able to take timely decisions for safe operations. Central to driving this has been the establishment

of a dedicated Health, Safety and Environment Learning Academy. The academy has provided the impetus with focussed programmes to enhance competency and embed the elements of our Health, Safety and Environment Management system in all our operations.

We continually improve our oversight through various assurance teams by strengthening the audit system. Our system of internal and independent assurance confirms the effective implementation of stakeholder expectations, Health, Safety and Environment Policy and the Health, Safety and Environment Management System across the organisation. The assurance process also facilitates identification of best practices that can be shared across locations.

We partner and collaborate with the best-in-class global industry institutions and bodies such as Centre for Chemical Process Safety, the American Institute of Chemical Engineers, American Chemical Council, and British Safety Council to share and access the best industry practices. This also helps in benchmarking our processes and identifying improvement opportunities.

### Safety performance

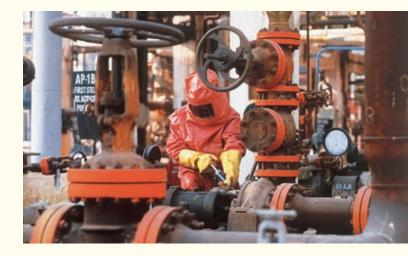
During the FY 2012-13, at our manufacturing divisions, we recorded an injury rate of 0.095 per 100 workers, while our lost day rate increased to 6.82 as compared to 4.54 in FY 2011-12. For our E&P business, the injury rate was 0.051 per 100 workers while the lost day rate<sup>23</sup> was 25.31 as compared to 0.278 in FY 2011-12. We had four fatalities during this year and we will continue to put in efforts to avoid any such occurrences in the future.

We have a robust mechanism of monitoring process related incidents and ensure necessary measures are undertaken to prevent reoccurrence. In FY 2012-13, there were 6 Tier 1 Process safety events and 28 Tier 2 Process safety events classified under American Petroleum Institute's API 754 standard.



### Ensuring a safe workplace

We have an elaborate incident monitoring mechanism for all incidents across our operations. We have a robust safety management system for recording, investigating and tracking corrective and preventive actions. Qualified teams are formed to investigate, analyse and arrive at the contributing factors using the state-of-the-art web based IT platform. Recommendations based on the contributing factors are



monitored till completion through an action tracking system. The learning from such incidents is shared across sites to enable preventive actions. This is done through a specially designed tool on 'Learning from Incidents' (LFI), enabling sites to prepare related documents for sharing and future reference.

Periodic performance reviews at the apex level by board-level HSE committee ensure the efficient functioning of the HSE-MS systems.

This year reflected an increase in the severity rate at both manufacturing divisions and E&P locations and to this effect, we put in increased focus on preventive actions towards ensuring utmost safety at workplace. As a first step, month long safety awareness campaign was carried out across all sites that consisted of awareness activities such as road shows, mock drills, safety quizzes, banner displays, educative talks by prominent advocates of safety and security, sensitisation of employees and traffic awareness. Further focused programmes to address the underlying causes in these incidents have been designed and are being implemented after involvement of key stakeholders.

 $<sup>^{23}</sup>$  This significant increase in lost day rate is on account of a single incident at Shahdol which resulted in the loss of an eye. This resulted in a loss of 2400 man-hours as per BIS guideline IS: 3786 - 1983.



# Undertaken 'Work life Project

across the sites

MCT at Bhopal received
BSC five star rating
for Occupational Health & Safety

Established a dedicated HSE learning academy

### Project Amrita: Minimising inventory risk

As part of our business chain, we control a large number of tank farms and storage terminals across our manufacturing sites. As part of our process safety management and emergency response control procedure exercise we regularly evaluate various risks at our sites. During one such evaluation of a scenario of tank fire, we realised that we might not be able to empty our complete inventory, on account of it being dead stock (un-pumpable) which would eventually result in the stock being burned out. This presented us with an opportunity to improve our inventory management as well as enhance our emergency preparedness for safety incidents related to our storage. 'Project Amrita' was initiated to this effect, where data was collected from six of our major sites. The project team studied the inventory levels and came out with the following suggestions:

- Installing pumps with lower Net Positive Suction Head in large tanks
- Adjusting leg settings wherever possible
- Direct run down with online analysers instead of blending tanks
- Sludge breaking solutions
- Changing nozzle height on opportunity

With right efforts and support from top management, the nominated teams at the sites were successful in bringing down the inventories.

### Securing our operations

The nature of our business and the current state of affairs in the world necessitate the need for a robust security set-up at our operations. Our security policy was formulated to ensure our preparedness to protect our people and assets. All our security professionals are trained through basic officer training, as well as, on-the-job training. The basic officer

training is aimed at training security professionals on human rights, industrial and labour laws etc. This year, we imparted 1,760 man-hours of training to our security personnel. Our security team also imparts awareness training to employee and contractors to create a culture of individual responsibility in the prevention, detection and mitigation of security events.

Our policy entails adherence to applicable laws and Company's best practices to ensure a secure working environment and sustainable growth. We also encourage prompt reporting and investigations of any security breaches and irregularities observed from our employees and contractors that might result in personal injury, monetary loss, theft or damage to property, harm to Company's reputation or interruption of business operations. Our Global Corporate security team, assisted by Security Advisory Council, advises the management and employees on all aspects of security, including global threats and where appropriate, evacuation planning. We have deployed a Security Risk assessment programme to ensure that effective security practices are in place in keeping with the current security environment. This year, we also conducted a safety and security month at our corporate office to create awareness on security and give out key messages.

# Social Institution Building



Our ability to succeed mainly depends on our people, their capabilities, knowledge and their unique skill sets. Our goal is to have the right capabilities, in the right places, to support our future growth and we strive to provide our employees with resources to help them achieve their full potential. Social institution building is an on-going journey for us and we are committed to making a sustainable difference to the world in which we work and live. We further extend support to our neighbouring communities and are sensitive to their basic needs of food, education, health and infrastructure.

### Human Resources Development

Our total permanent workforce as on March 31, 2013 stands at 23,519 comprising 95.16% of male employees and 4.84% female employees. Additionally we also employed 29,462 temporary workforce during the year. During the year we saw an attrition rate of 8.06% for our permanent workforce. We believe in excelling in what we do and have big plans for the future in terms of transformation of our HR processes through our Business Transformation initiative. In the year 2010, we initiated the Business Transformation exercise which was aimed at transforming Reliance to meet the challenges of the future.

With the vision to be an "Employer of Choice", our focus for the FY 2012-13 was the creation of building blocks for a World Class HR Organisation. We undertook several projects in this direction. Some of the key initiatives are:

- Creation of a world class HR academy for development of the existing HR team
- Hiring of high calibre professionals to augment the current team to lead HR management for the future, by building grounds-up cadres, as well as, induction of the leaders in senior leadership positions
- A robust HCM System roll out to support the global, multi geography and multi-business organisation
- Review and revision of all HR policies and programmes
- Unveiling RIL's "Employee Value Proposition", this will become the foundational block for the people management practices.
- More than 100 new HR professionals, including Senior Management personnel, were added to the HR team across the group and across several locations.

### ECHO – Engage, Connect, Harness, and Orient

With the objective of better engagement with our employees, we initiated 'People Connect'. This programme was designed to increase awareness on the various initiatives taken by the Human Resource Department among employees, to understand employee perception about the organisation as a whole, to understand employee views on the HR processes, policies and current practices and to foster communication with employee. A pre-test and post training test was conducted to understand the impact created by the training programme. The outcome of the programme was envisaged by lesser number of queries raised on the query redressal portal.

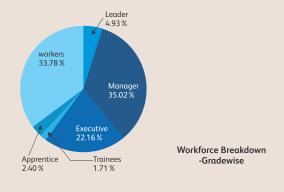
### Focus on diversity

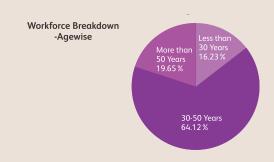
We promote diversity in five different dimensions: skills, nationality/race, qualifications, age and gender. Towards our goal of creating a gender diverse workforce, we encourage our women employees to take up challenging roles. One day training-cum-awareness programme to promote gender diversity is an initiative which is in its early stages of development. This initiative will be rolled out across the Company in the month of May'2013. Additionally, we believe that different-abled people should get equal employment opportunities and we have 82 differently-abled employees.

### Learning and development

To meet the future as well as the present needs of the business, we deepen the knowledge of our people by imparting to them right skill sets that will help them excel in their field of work. To meet the development needs of our employees, we have invested in Reliance Learning Academies. They are the central repositories of the curriculum, course content and learning solutions relating to the relevant group of competencies (Behavioural, Functional/Domain, Technical). These academies are responsible for providing innovative learning solutions via virtual classrooms, online experiences, use of CD-ROMS and through multimedia such as videos and webinars.

The Learning Academies at RIL have placed more than 1000 courses and training materials on RIL's Learning Management System, available at any time to our employees.





Currently, 7 Academies are functioning at RIL:

- 1. Manufacturing Academy (consist of 8 sub-academies)
- 2. IT Academy
- 3. HR Academy
- 4. Finance, Compliance and Accounting (FC&A) Academy
- 5. Procurement & Contracting (P&C) Academy (consist of 2 sub-academies)
- 6. Security Academy
- 7. Reliance Institute of Leadership (consist of 2 sub-academies)

These academies deliver learning / training in various modes — Self learning e-module (rich in multimedia and developed by internal Subject Matter Experts / world leaders in their respective domains), followed by Classroom training by the SME / internal faculty, webinars, on the job training, special assignments etc.

Our training man-hours have significantly increased this year due to the introduction of various Learning Academies. In our continuous endeavour to improve our training facilities, this year we have built a state-of-the-art training centre at Nagothane that can accommodate 200 learners. It has facilities such as modular classrooms, library with an e-learning set-up and an open air amphi-theatre. We imparted 1.30 million man-hours of learning to our employees in the current year. From the total training hours<sup>24</sup>, our male employees received 12.61 lakh man-hours of training and our female employees received a total of 0.427 lakh man-hours of training. The trainings imparted to employees are based on the roles and responsibilities assigned to employees. The training provided comprised of internal trainings as well as trainings from reputed institutions. Our trainings broadly comprise of:

- Health, Safety and Environment training
- Function-specific Technical training
- Cross-functional training
- Soft-skills training
- Site-specific training
- Others

We also provide trainings to our contract workforce with a view to develop their capacity for handling semi-skilled & skilled jobs.

### Investing in skill development

We partner with leading institutions and professional bodies across the globe in pursuit of knowledge building to bring in world class experience and expertise. The Reliance Accelerated Leadership Program (RALP), institutionalised two years ago continues to be our flagship programme for leadership development. This year, 25 talented professionals were added to this programme. RALP has now been expanded to include businesses such as Refining and Marketing, Exploration and Production, Petrochemicals and Telecom, in addition to IT, HR, F&A and P&C. Our campus recruitment initiatives, continue to grow. During the current financial year, we hired 75 Management Graduates and 436 Graduate Engineers from leading institutes across the country.

### Training programme for spouses

Going by our functions philosophy of "Beyond learning and development", one of our initiatives is to extend learning and development opportunities to spouses of our employees working at our sites at Jamnagar and Hazira. We want to make sure that the impact of our learning and development initiatives is not restricted to training rooms at our offices. Programmes for spouses include parenting, goal setting and management of time. There has been an encouraging response to this initiative by way of participation and it has helped us establish a better connect with our employees.

### Lifelong learning at RIL

Lifelong learning is one of our five core competencies, which has led us to become one of the Fortune 100 companies today. We have created dedicated awareness and training sessions to talk about this competency at length. Titled 'Foundations of Leadership', this year the session was conducted for more than 650 leaders and managers across RIL. There are few initiatives, both functional and behavioural which currently form part of the training with the objective of entrenching the competency 'Lifelong Learning' in the DNA of each and every employee. On the functional side, one of the most favoured initiatives is recording the 'Learning from Incidents' or LFIs. Another notable focus area is "Managers as Mentors", where people managers are taken through a session on how to mentor your subordinates.

 $<sup>^{\</sup>rm 24}$  Trainees are not considered as part of total training hours imparted



# RRDT activities taken up in 266 villages

1.30 million manhours of training imparted

Bharat India Jodo
(BIJ)
programme
reached nearly
300 villages

### FC&A Academy

The FC&A Academy was launched in the last financial year. The coming year will see us partner with leading institutes across the world to establish the Leadership Academy, the Manufacturing Academy and other Functional Academies.

### Performance management and compensation

We have transparent performance appraisal system that is applicable to all our employees at all levels. The performance review is designed in a way that demonstrates the level of potential and competency. The rewards and compensation are purely based on employee performance and their job role requirements.

### Respecting human rights

Our respect towards ethics and human rights are demonstrated in our rich culture. We ensure that no child labour is employed in any of our facilities. We comply with India's Factories Act, which embodies human rights principles on child labour, forced labour and compulsory labour. We respect freedom of collective bargaining and almost 100% of our non-supervisory permanent employees at our manufacturing locations are members of unions and are governed by wage agreements. We periodically interact with these unions on matters pertaining to health and safety, employee benefits, wage settlements etc. We extend several benefits to our contract employees, including canteens, access to health centres and various avenues for skill development.

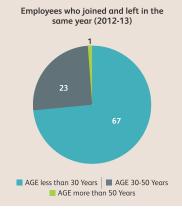
### Community Development

We believe that serving communities and fostering their development is integral to our business. We have a CSR policy that reflects our objective of economic and social development to create a positive impact. Towards our increasing commitment towards community development, we have built a comprehensive community development programme to support initiatives in the field of education, healthcare, infrastructure development, disaster relief, sports and skills training that are implemented in and around our manufacturing units and E&P locations. A snapshot of our programmes during the year is, as follows:

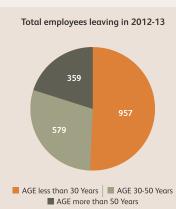
### Adding value through education

Our educational initiatives are aligned to the goal of providing better learning opportunities and enabling possibilities for a better life. In order to keep lecturers at MSBTE (Maharashtra State Board for Technical Education) abreast with the latest industrial technology, we provided IIPC trainings in association with MSBTE. We have developed a network of 12 schools in and around our manufacturing operations at Jamnagar, Surat Vadodara, Patalganga, Nagothane and Nagpur that have benefited more than 15,000 students. These schools aid in educating children belonging to the underprivileged communities. We understand that children in rural areas lack access to educational assistance. We have conducted workshops on effective techniques of memorising and developing a mind that fosters better academic performance.

We have provided infrastructure support, such as construction of a school building at Meghpar village in Jamnagar; construction of exclusive girls school at Motikhavdi; distribution









"Sound and progressive social institutions are the touchstones of any vibrant society, which in turn play a catalytic role in accelerating and sustaining economic development. At Reliance Foundation, we are committed to invest our resources and capabilities in reinventing the role of these institutions in the nation building process."

Nita M. Ambani Chairperson, Reliance Foundation of school benches at Nagothane; providing school kits at Jamnagar; distributing school bags to children at Nagpur and Silvassa and providing notebooks and uniforms to schoolchildren of Gadimoga and Bhairavapalem Panchayat. At Ahmedabad we provided financial support to 'Bruhad Gujarat Sanskrit Parishad' for imparting knowledge on Sanskrit, Karmakand and Astrology. Additionally, the Company extended huge financial support to re-build the premises of 'Bruhad Gujarat Sanskrit Parishad'. At Jamnagar, focus is also given to encourage education for the girl child with initiatives such as provision of school kits during exams.

We carried out maintenance work in Government schools in the Gadimoga panchayat region wherein we provided classrooms with ceiling fans, tube lights and compound walls, wherever required. To address issues relating to learning disability and dyslexia in children, we run a school at Surat for differently-abled children that provides focussed attention through special tutors for such students.

### A step towards making education more accessible

The Reliance Dhirubhai Ambani Protsahan Scheme, was started with the aim of encouraging the meritorious poor students to pursue higher studies. We provide learning opportunities to underprivileged children, especially to those who perform well in the SSC (State level) examination. Assistance is provided for free education by securing admissions to intermediate courses in leading residential colleges for these students. This initiative has benefited 1,134 students so far, who, but for this scheme, would have discontinued their education.

### Transforming learning through a holistic approach

To cater to the all-round development of children as well as provide academic excellence, the Dhirubhai Ambani International School (DAIS), Mumbai, was established in 2003. Over the years, the school has laid emphasis on transforming learning. It was ranked No.1 school in Mumbai by the Hindustan Times Top Schools Survey, 2012. The students earned impressive results in the examination held in 2012, comprising streams such as ICSE, IGCSE and IB Diploma. With a view to instil in children, the feeling of being sensitive to community needs, the school ensures that they actively participate in service to the local community. Students from Class III onward are given an opportunity to work with old age homes, orphanages, underprivileged and mentally challenged children, while senior students work with NGOs such as Advitya, Akanksha, Muktangan, Pratham, Aarambh and Aseema. In addition, they also focus on providing education to children and enhancing livelihood opportunities for villagers through microfinance. The Dhirubhai Ambani International School Akanksha Centre, started in 2003, has till date educated 58 children from the low-income communities and in 2013, for the first time, 8 children have appeared for their Class 10 Board examinations from such communities.

### Investing in community healthcare

We aim to improve health conditions of the communities in which we operate. Towards this end, we provide curative and preventive healthcare services by constructing and operating health centres, providing roadside assistance in case of accidents, running mobile medical clinics, organising health awareness programmes, catering to sanitation needs and providing clean drinking water to communities. Curative healthcare is provided through mobile medical vans across our manufacturing sites. To cater to emergencies caused by accidents, RIL has provided a 24x7 ambulance service from the borders areas of Himachal to Hoshiarpur.

# Commitment towards serious disease management

We continue our commitment towards raising awareness of and providing treatment for HIV/AIDS. A clinic 'Hamrahi' operating in Allahabad, provided voluntary testing and counselling for HIV/AIDS, primarily for truckers and nearby residents. Similarly, Khushi Clinic for HIV prevention, treatment, care and counselling support to truckers and cleaners, was started at Jamnagar this year. The Reliance HIV & TB Control Centre (NACO Designated ART centre) at Hazira has catered to more than 78,000 patients. Out of which more than 2,900 HIV positive patients have been enrolled under clinical monitoring; and more than 525 patients have received DOT therapy for tuberculosis including 52 in the FY 2012-13. The 32-bedded Community Care Centre & Reliance AIDS Care Hospital at Hazira has catered to more than 3,150 patients. In addition, employees at E&P sites and the Reliance Ladies Club (an association of spouses of RIL managerial employees) at Hazira have undertaken initiatives "Chirudeepam" and "Project Hope" respectively with the aim to support children affected by AIDS and supply them with nutritive kits every month. At Hazira, we have started sewing classes for women affected by HIV, thus enabling them to generate income. Another unique project in the name of 'Gift' was initiated at Jamnagar, wherein employees get an opportunity to adopt HIV-infected children for providing care and contribution through nutritional kits.

### Extending responsibility: Ensuring well-being

During the year, medical camps were organised by all sites benefitting patients from nearby villages and tribal areas wherein patients were provided medicines free of cost. Our manufacturing sites provide ambulance support to roadside accident victims to shift them to hospitals/clinics for such emergencies. Many manufacturing sites have also conducted health awareness programmes in local schools and nearby small scale industries. Sishu-mangalam project at Jamnagar was undertaken during the year to check malnutrition in children from BPL families. We also provided financial aid to Shree Vallabhacharya Kalyan Krupa Trust for artificial limbs and callipers for people suffering from loco-motor disabilities.

We conducted trainings for Anganwadi care-takers and mothers on child care at Gadimoga covering various aspects including women's health, hygiene, awareness on breast cancer, requirement of nutrition during pregnancy, family planning, etc. A new PHC at Gadimoga was constructed with in-patient facilities and can comfortably accommodate 30 beds. It is equipped with an operation theatre, labour room, pathology laboratory, doctor consultation rooms and rest rooms with elaborate medical waste disposal facility. Further, we ran two sub-centres of the PHC at Bhairavapalem and Laxmipathipuram during the year. The PHCs at Dahej adopted by us, catered to community needs covering 23 nearby villages under the National Rural Health Mission programme.

### Arresting maternal mortality

At Jamnagar, we observed that there were inadequacies in the field of maternal care, which led to high maternal mortality and morbidity at Motikhavdi and other surrounding villages. This was mainly due to age old family traditions and social norms such as child marriages and gender bias, which led to female foeticide. Additionally, child deliveries by local villagers who lacked medical knowledge and inadequate medical facilities such as antenatal check-ups resulted in more maternal mortality. To tackle these issues, we started several initiatives such as couple counselling that imparted awareness on family planning; counselling for mothers-in-law to give them an understanding of gender equality; antenatal check-ups and quiz completion's for all expectant mothers to make them aware on antenatal care; mobile van clinics for easy access to villages; and 24x7 ambulance services. We also provided fully sterilised and disposable delivery kits and further imparted knowledge of child delivery in cases of emergency.

### Providing affordable healthcare

With an objective to provide healthcare and improve the quality of life in surrounding communities, Dhirubhai Ambani Hospital at Lodhivali continued its initiatives to provide free medical care to trauma victims of Road Traffic Accidents, subsidised medical facilities to economically weaker persons of society in surrounding areas and conducted medical diagnostic camps in surrounding areas. This year, 56 RTA patients were provided with free medicines. It also provided free consultation, counselling, investigation and treatment to HIV/AIDs patients.

The hospital organised 18 Medical diagnostic camps for free medical consultation and diagnosis during the year. These were attended by around 1,900 patients who received free medicines. In February 2013, 114 patients were operated for cataract at the cataract surgery camp, which was conducted with the help of Lions Club, Mumbai and Khopoli. Free or highly subsidised medical care was provided to residents of surrounding villages and more than 1,600 patients

were treated during the year. In its ART Clinic, more than 3,800 HIV/AIDs patients were provided free consultation, counselling, investigation and treatment.

### Enhancing skills and building capacities

We believe in enabling economic prosperity for the communities around us through our initiatives. For enhancing skills to generate income among local communities, various vocational and technical skills upgradation programmes are conducted in various trades including refrigerator and air conditioner repairing, electrician, light motor vehicle driving, basic computers, dress making, designing and embroidery, jewellery article making, plumbing & hand pump repairing, helpers for hospitals & nursing homes, agarbati making, construction skills and skills on aquaculture. This year at Nagothane we helped the SHGs to market their products by imparting knowledge on the techniques of marketing and through participation in fairs held at Panvel and Pune. In addition, we encouraged our township employees to purchase products made by these SHGs, giving them a platform to expand their business opportunities.

### Developing community infrastructure

We understand the importance of availability of water in the role for survival. We provided drinking water supply to villages at Nagpur, Naroda, Nagothane, Dahej and Gadimoga. At Hazira, we replaced a 1,000 Meters potable water pipeline to fulfil the requirement of water for villagers at Mora. At Jamnagar, we took a major initiative to support conservation of water by active participation in the dredging and deepening of Ranjit Sagar Dam. A habitat of about 100 dwellings, was provided with solar-power connections, by setting up a mini solar power plant. A solar power run TV at a Panchayat at Jamnagar proved a useful tool to bring the tribal-lot into main-stream India. With a view to encourage social gatherings that instil a sense of togetherness, we constructed community halls at various locations. We constructed a community hall at Motikhavdi to cater to the needs of the local villagers. A Jamatkhana, for the fishermen community at Sikka was also constructed which facilitated the villagers to organise social, cultural and religious gatherings. At Gadimoga, we provided infrastructure support, as well as livelihood training, for villagers affected by the fire in Pallam.

### Promoting Sports and Sportsmen

We instituted the IMG-Reliance 'Scholarship for India Programme' to promote sports and the spirit of sportsmanship. These scholarships were awarded to 29 aspiring Indian Sportspersons from the fields of Tennis, Basketball, and Football for full time training and coaching at one of the best sports training facilities in the world – The IMG Academies, Florida. Fourteen of these scholars have become part of under-17 Indian National football team and represented India in the AFC Cup during the FY 2012-13. To

More than 78,000 patient

catered at Reliance HIV & TB control centre at Hazira More than
32,000 drivers
trained at RIL
Hazira's Truckers'
Safety Training Centre

'Green
Hoshiarpur
Project' taken up
at Hoshiarpur
manufacturing
division

encourage young talent in the field of tennis, we organised a tennis tournament at Jamnagar for children under the age of 16 years. At Nagothane, we organised a cricket tournament for the youth in association with the cricket board. RIL during the year supported cricket, billiards, snooker, football, chess, hockey, badminton, tennis, kabaddi etc. in various towns and villages across the country including partnering with the Ahmedabad Municipal Corporation in organising the 'Sabarmati Marathon'.

### Preserving Arts, Culture and Heritage

India possesses a priceless heritage and culture and we endeavour through our initiatives to promote the same and encourage the younger generation to preserve it. We carried out development work on heritage conservation at Dwarka and Nathdwara during the year. Various organisations conducting classic Navaratri Garba and dances were given liberal financial support, as they furthered and strengthened the cultural heritage of Gujarat during the Navaratri festival of 2012. Durga Puja celebrations are also held with great enthusiasm at various manufacturing sites. We also provided support to Bharatiya Vidya Bhavan for arranging a drama competition to promote the art of acting among youth. We also conducted 'Drishti' competition at Nagpur with the objective of spreading awareness through the medium of arts and sensitising the masses with regards to providing aid to the visually impaired.

# Safety and enviro.nment initiatives for the community

We are aware of the risks related to the safety of truck drivers and have established a Truckers' Safety Training Centre at Hazira. This centre is fully equipped with air conditioning and audio-video equipment. The driver trainings imparted consist of safety rules, efficient driving techniques, understanding hazards associated with various materials and responses in case of emergencies. More than 200,000 drivers have been trained through this initiative since its inception in 2005, of which more than 32,000 drivers were trained during this year. We observed the security month in July at Reliance Corporate Park, and conducted various initiatives such as creating awareness on security and safety at the Rabale railway station and imparting awareness on road safety. The manufacturing sites also provided fire tender services to local villages. At some

of our manufacturing sites, we provided training to girls on self-defence techniques.

During the year, various manufacturing divisions and business units observed the World Environment Day, Earth Day, Water Day and Ozone Day etc. to propagate environmental awareness among employees, communities and in schools from neighbouring regions. With the objective to spread awareness on environmental conservation among children, we conducted essay writing and painting competitions at Dahej and Naroda. In partnership with the Gujarat Pollution Control Board, we organised a cycle rally in Naroda on World Environment Day. With a view to create awareness of water conservation techniques we carried out rainwater harvesting initiatives for the nearby village of Hazira to increase the availability of groundwater through groundwater conservation techniques.

To spread the importance of renewable energy we installed solar PV panel system at J H Ambani School, Hazira and solar lighting installed in nearby villages of Barabanki In addition, we also provided solar lamps to the underprivileged people at Ranchi. The Hoshiarpur Manufacturing Division collaborated with local industry and forest department under "Green Hoshiarpur Project". Under this project, we planted trees in various areas of Hoshiarpur city. Similarly, at Vadodara, we carried out waste land development through tree plantation and distributed fruit saplings, in association with the Gram Panchayat and the Forest Department.



### Trusts and foundations: Honouring our responsibilities

We have instituted registered Trusts and Foundations to cater to the pressing developmental needs of the country at large. A snapshot of the work under different focus areas and national footprint of these Trusts and Foundations is summarised in the table below:

### Institution

### Description

### Reliance Foundation (RF)

Incorporated in 2010, RF focusses on Rural Transformation, Education, Health, Urban Renewal and Arts, Culture & Heritage. The Foundation's activities covered over 2,500 villages and various urban locations in India, benefiting over 1,000,000 underprivileged persons during the year. An overview of the Foundation's programmes and their impact is given below:

**BIJ:** BIJ is aligned to the vision of our Chairman of making farming a first choice profession. It was initiated by the Foundation mainly to bridge the developmental gap between rural Bharat and urban India. This programme aims to support small and marginal farmers along the value chain through input provision and technical help, as well as post-harvest marketing support. Till date, the Foundation has catalysed formation of farmers' institutions across nearly 300 villages and has engaged with over 100,000 villagers through the Reliance Foundation BIJ programme. The Foundation aims at working with the small and marginal farmers to promote sustainable agriculture and further enhancing the nutritional intake of over 4,000 rural households through Reliance Nutrition Gardens.

**Drishti:** Reliance Foundation works towards improving the quality of life of the visually impaired through its Reliance Foundation Drishti programme, which is run in association with the National Association for the Blind (NAB). Having completed over 11,000 corneal transplants across India, Reliance Foundation Drishti has today become the largest cornea transplant drive in India, supported by a corporate.

In 2012, Reliance Foundation Drishti launched India's first registered national Braille newspaper in Hindi, marking an important milestone of this exemplary initiative. This newspaper is made available to over 32,000 visually impaired people, educating and empowering them with information and knowledge

**Information Services:** Villages in India lack access of obtaining knowledge, which has led to the initiative of 'Participatory Knowledge Management' by the Foundation. The information provided is based on the community needs identified and aims at capacity building of farmers, fisher-folk and livestock owners that would enable better livelihood security. It currently reaches to over 1,400 villages through multiple mediums including field demonstrations, local cable TV programmes, advisories, bulletins and live phone-in programmes.

Community Services: Reliance Foundation has initiated its Community Services programme and initiatives such as addressing the prioritised needs of the community through healthcare, educational and livelihood training programmes in Shahdol district in Madhya Pradesh. These programmes directly reach out to over 5,000 villagers from across 20 villages in Shahdol. The Foundation has also impacted communities of over 25 villages in Gujarat and Maharashtra by providing hospital and school improvement materials, including infrastructural and facility support.

**Health Programmes:** With the objective of providing primary and preventive health care to the underprivileged, Reliance Foundation launched the community health outreach programme as part of its 'Health for All' initiative in December 2012. As a part of this programme, mobile medical units equipped with state-of-the-art technology for biometric mapping and electronic health records were started. Currently operating in Mumbai city, these units cater to health needs of over 40,000 individuals.

With the focus on women's health, Reliance Foundation launched a menstrual hygiene programme in Kheda district, Gujarat on the occasion of International Women's Day 2013. Through this initiative, Reliance Foundation aims to raise awareness regarding menstrual hygiene by working with village based volunteers. The Foundation is also addressing this critical gap by introducing an affordable brand of high quality sanitary napkins, 'Meeta', through a partnership with an NGO. In the first phase, the Foundation will reach out to 500,000 women in over 850 villages in Anand and Kheda districts of Gujarat.

**H N Hospital:** Reliance Foundation is revamping Sir H N Hospital into a 19 storey, 800,000 square feet world class tertiary health care facility.

**Recognition:** Reliance Foundation has also instituted "Real Heroes", an award that recognises and acknowledges ordinary Indians who are making a difference to people's lives. In its 5th edition held in March 2012, this annual felicitation honoured 24 unsung heroes of India. The efforts of these 24 Real Heroes, selected from across the country and working in diverse fields of Women Empowerment, Environment, Youth, Social Welfare, Health & Disability, Education & Children and Sports, have significantly contributed to the betterment of their communities.

Arts, Culture & Heritage: With the view to promote and preserve the priceless heritage of India, Reliance Foundation has carried out various initiatives to make art and culture relevant to the younger generations. In the FY 2012-13, Reliance Foundation paid tribute to the great artist of yesteryears during Abbaji concert, lent support to great living treasures during the Elephanta estival 2013, connected with the youth through its collaboration with A.R. Rehman to create a music video, 'Infinite Love' and further supported research on India's intangible culture. The Foundation, in partnership with BP and in association with Chhatrapati Shivaji Maharaj Vastu Sangrahalaya (CSMVS), Mumbai and British Museum, brought 'Mummy: The Inside Story' to India. This unique exhibition helped to increase footfalls of CSMVS, which received over 450,000 visitors including over 100,000 children from 300 schools.

### Reliance Rural Development Trust (RRDT)

During the year the RRDT activities were taken up in 266 villages. Additionally, 173 Anganwadi buildings, 88 cement concrete roads and other village facilities were completed during the year.

Various initiatives completed by RRDT consist of Anganwadi buildings, Panchayat Office buildings, Community Halls, cement concreted roads, water storage tanks, check dams etc.

### Dhirubhai Ambani Foundation (DAF)

Dhirubhai Ambani Foundation (DAF) focusses mainly on education and public healthcare. The Foundation's "Dhirubhai Ambani Undergraduate Scholarship Scheme" and "Dhirubhai Ambani SSC Merit Reward Scheme" has been recognising the board toppers at the +2 level and Std X exams respectively through a one time reward. Both the Schemes are in implementation in Maharashtra, Goa, Gujarat and Daman, Diu and Dadra Nagar Haveli, on a district-wise basis for the State Education Boards and state-wise basis for CBSE.

To provide assistance to the physically challenged students, DAF has introduced a special scheme that enables them to study graduate courses. As per the scheme, the top five physically challenged students, as certified by the State Boards, from each state are eligible for scholarships and rewards. During the FY 2012-13, DAF conferred 395 Rewards and 393 Scholarships. Of these 149 rewards and 128 scholarships went to the physically challenged category. Till date the Schemes have benefited 9665 students, of whom 1893 students are physically challenged.

## Independent Assurance Statement



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### To the Management of Reliance Industries Limited

### Introduction

We were engaged by Reliance Industries Limited (RIL) to provide independent assurance on the Sustainability Report ('the Report') for the Financial Year (FY) 2012-13. Our responsibility is to provide "limited assurance" on the report contents as described in the assurance scope.

### Assurance scope

Our scope of assurance included data and information provided for the period 01 April 2012 to 31 March 2013 based on Global Reporting Initiative's (GRI) G3.1 Guidelines. RIL has referred to other national and international guidelines as mentioned in 'Report scope and Boundary' section of the Report. The data and information for the Report includes RIL's Manufacturing Divisions and Exploration and Production in India; Business Divisions such as Chemicals; Fibre Intermediates; Petroleum; Polyester; Polymers; Dhirubhai Ambani Foundation; Reliance Rural Development Trust; Reliance Foundation and Corporate Office at Reliance Corporate Park

### Specific limitations and exclusions

Our assurance process was subject to the following limitations as we have not been engaged to:

- Determine which, if any, recommendations should be implemented
- Develop/ prepare of source documents
- Verify the Company's statements that describe expression of opinion, belief, aspiration, expectation, aim or future intention provided by the Company;

### Standards and reporting criteria

We conducted our engagement in accordance with International Standard on Assurance Engagements ISAE 3000, Assurance Engagements Other Than Audits or Reviews of Historical Financial Information by International Federation of Accountants' (IFAC) and in compliance with the requirements of IFAC Code of Ethics for Professional Accountants. The code requires, among other requirements, that the members of the assurance team (practitioners) as well as the assurance firm (assurance provider) be independent of the assurance client. The Code also includes detailed requirements for practitioners regarding integrity, objectivity, professional competence and due care, confidentiality and professional behavior. KPMG has systems and processes in place to monitor compliance with the Code and to prevent conflicts regarding independence.

RIL applies its own sustainability performance reporting criteria, derived from the Sustainability Reporting Guidelines (G3.1) of the Global Reporting Initiative including the oil and gas sector supplement, API/IPIECA guidelines, UNGC principles, WBCSD focus areas and National Voluntary Guidelines on Social Economic and Environmental responsibilities of business, as detailed in the 'Report scope and boundary'.

### Work undertaken

Our procedures, includes assessment of the risks due to material misstatements of selected performance indicators and disclosures and underlying internal controls relevant to the information published in the Report. Our procedures were designed to gather sufficient and appropriate evidence to determine that the selected performance information is not materially misstated.

We have undertaken:

- Assessment and review of materiality and stakeholder engagement framework deployed at RIL
- Review of sustainability governance framework at RIL
- Assessment of the systems used for data collection and reporting for the selected social and environmental performance indicators
- Verification visits to manufacturing divisions at Allahabad, Barabanki, Dahej, Hazira, Hoshiarpur, Jamnagar DTA, Jamnagar SEZ, Nagothane, Nagpur, Naroda, Patalganga, Silvassa and Vadodara, Exploration and Production of Oil & Gas site at



Gadimoga, reliance corporate park and review of data of Shahdol, Panna, Mukta and Tapti at corporate office to verify sample data

- Interviews with RIL personnel responsible for data collection, collation and reporting
- Testing of the sample data and the supporting evidences through a risk based approach
- Assessment of the consistency between the data for the selected social and environmental performance indicators and the related written comments in the narrative of the Report
- Evaluation of the Report's content to ascertain its application level as per the criterion mentioned in the Global Reporting Initiative's G3.1 Guidelines
- Review of the Report to ensure that there is no misrepresentation of disclosures as per scope of assurance and our findings
- We have relied on the data and information related to RIL's financial performance, sourced from its audited annual report for the FY 2012-13 and included in the Report

#### Conclusion

Based on our assurance process, as described above, nothing has come to our attention to suggest that the information in The Report is unfairly presented in accordance with the criteria as outlined above.

#### **Key observations**

Without affecting the conclusion presented above, we would like to draw readers' attention to the following

- RIL has decided to integrate innovation across all its strategic pillars taking into considering that the sustainability challenges
  provides opportunities for innovation
- The methodology of materiality determination used for the Report considers the perspectives of senior representatives from various functions at RIL. RIL has responded to the material issues through the disclosure of performance in the report,
- RIL is in the process of implementing project STAR ( Smart Transformation at Reliance) that will strengthen the management systems
- RIL has self declared GRI G3.1 A+ application level and based on our review the report meets the A+ application level criteria of GRI G3.1 guidelines

#### Management's responsibility

The Management of RIL is responsible for developing the Report and the information and statements within it. This responsibility includes designing, implementing and maintaining systems and processes relevant for the development of the report.

#### Our responsibility

Our responsibility is to express our conclusions in relation to the assurance scope listed above. We conducted our engagement with a multidisciplinary team which included professionals with suitable skills and experience in auditing environmental, social and economic information in line with the requirements of ISAE 300 standard and with experience on similar engagements in the Oil and Gas sector.

This report is made solely to RIL in accordance with the terms of our engagement. Our work has been undertaken so that we might state to RIL those matters we have been engaged for. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than RIL for our work, for this report, or for the conclusions we have reached.

Raajeev B. Batra Authorised Signatory, KPMG May 27, 2013

## **GRI Application Level**



To indicate that a report is GRI-based, report developer declares the level to which they have applied the GRI Reporting Framework via the "Application Levels" system.

To meet the needs of beginners, those somewhere in between, and advanced reporters, there are three levels in the system. They are titled C, B, and A. The reporting criteria at each level reflect a measure of the extent of application or coverage of the GRI Reporting Framework.

Report Application Level	С	C+	В	B+	Α	A+
Profile disclosures IndIno	Report on: 1.1 2.1 – 2.10 3.1 – 3.8, 3.10 – 3.12 4.1 – 4.4, 4.14 – 415	pe	Report on all criteria listed for Level C plus: 1.2 3.9, 3.13 4.5 – 4.13, 4.16 – 4.17	pe	Same as requirement for Level B	pa
Disclosures on management approach	Not Required	Report Externally Assured	Management Approach Disclosures for each Indicator Category	Report Externally Assured	Management Approach disclosed for each Indicator Category	Report Externally Assured
Performance indicators & Sector Supplement Performance Indicators	Report fully on a minimum of any 10 Performance Indicators, including at least one from each of: social, economic, and environment.**	, a	Report fully on a minimum of any 20 Performance Indicators, at least one from each of: economic, environment, human rights, labor, society, product responsibility.***	Re	Respond on each core and Sector Supplement* indicator with due regard to the materiality Principle by either: a) reporting on the indicator or b) explaining the reason for its omission.	Re

<sup>\*</sup>Sector supplement in final version

The RIL Sustainability Report for FY 2012-13,

'Fulfilling India's Aspirations. With Innovation and Enterprise.' is a 'GRI Checked' Application Level A+ Report

To know more about GRI, please visit http://www.globalreporting.org

<sup>\*\*</sup>Performance Indicators may be selected from any finalized Sector Supplement, but 7 of the 10 must be from the original GRI Guidelines

<sup>\*\*\*</sup>Performance Indicators may be selected from any finalized Sector Supplement, but 14 of the 20 must be from the original GRI Guidelines



# Statement GRI Application Level Check

GRI hereby states that **Reliance Industries Limited** has presented its report "Fulfilling India's Aspirations. With Innovation and Enterprise" (2013) to GRI's Report Services which have concluded that the report fulfills the requirement of Application Level A+.

GRI Application Levels communicate the extent to which the content of the G3.1 Guidelines has been used in the submitted sustainability reporting. The Check confirms that the required set and number of disclosures for that Application Level have been addressed in the reporting and that the GRI disclosures for that Application Level have been addressed in the required disclosures, as described in the Content Index demonstrates a valid representation of the required disclosures, as described in the GRI G3.1 Guidelines. For methodology, see www.globalreporting.org/SiteCollectionDocuments/ALC-Methodology.pdf

Application Levels do not provide an opinion on the sustainability performance of the reporter nor the quality of the information in the report.

Amsterdam, 7 August 2013

Nelmara Arbex
Deputy Chief Executive
Global Reporting Initiative



The "+" has been added to this Application Level because Reliance Industries Limited has submitted (part of) this report for external assurance. GRI accepts the reporter's own criteria for choosing the relevant assurance provider.

The Global Reporting Initiative (GRI) is a network-based organization that has pioneered the development of the world's most widely used sustainability reporting framework and is committed to its continuous improvement and application worldwide. The GRI Guidelines set out the principles and indicators that organizations can use to measure and report their economic, environmental, and social performance. www.globalreporting.org

**Disclaimer:** Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 31 July 2013. GRI explicitly excludes the statement being applied to any later changes to such material.

## STANDARD DISCLOSURES PART I: Profile Disclosures

## 1. Strategy and Analysis

	Description	Reference	Extent of reporting	Explanation
1.1	Statement from the most senior decision-maker of the organisation	06-07	Full	
1.2	Description of key impacts, risks, and opportunities.	30-31	Full	RIL Annual Report FY 2012-13 (Pg 37-39) http://ril.com/rportal1/DownloadLibUploads /1368015904301_AR08052013.pdf
2. Org	anisational Profile			
2.1	Name of the organisation.	98	Full	
2.2	Primary brands, products, and/or services.		Full	RIL Annual Report FY 2012-13 (Pg 9-12) Additional information is available of RIL Annual Report FY 2012-13 is available at http://ril.com/rportal1/DownloadLibUploads /1368015904301_AR08052013.pdf
2.3	Operational structure of the organisation, including main divisions, operating companies, subsidiaries, and joint ventures.		Full	RIL Annual Report FY 2012-13 (Pg 14,200 -203) Further information can be obtained at RIL Annual Report FY 2012-13 is available at http://ril.com/rportal1/DownloadLib Uploads/1368015904301_AR08052013.pdf
2.4	Location of organisation's headquarters.	98	Full	
2.5	Number of countries where the organisation operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	12-15	Full	
2.6	Nature of ownership and legal form.		Full	RIL Annual Report FY 2012-13 (Pg 77,78) Further detailed information can be obtained on RIL Annual Report FY 2012-13 is available at http://ril.com/rportal1/DownloadLib Uploads/1368015904301_AR08052013.pdf
2.7	Markets served (including geographic breakdown, sectors served, and types of customers / beneficiaries).	12-15	Full	
2.8	Scale of the reporting organisation.	12-15, 38, 40-42, 45	Full	
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	12-15, 40-42	Full	
2.10	Awards received in the reporting period.	20-21	Full	
3. Rep	ort Parameters			
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	17	Full	
3.2	Date of most recent previous report (if any).		Full	RIL Sustainability Report FY 2011-12 http://ril.com/downloads/pdf/ril_sr2011_12.pdf RIL Annual Report FY 2012-13 http://ril.com/ rportal1/DownloadLibUploads/ 1368015904301_AR08052013.pdf
3.3	Reporting cycle (annual, biennial, etc.)		Full	Annual
3.4	Contact point for questions regarding the report or its content.	97	Full	
3.5	Process for defining report content.	30-31	Full	
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	16-17	Full	
3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	16-17	Full	
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other		Full	We continue to report on all domestic operations of RIL, downstream as well as

	Description	Reference	Extent of reporting	Explanation
	entities that can significantly affect comparability from period to period and/or between organizations.			upstream businesses including of our upstream operations where we are 30% joint-operators.
3.9	Data measurement techniques and the basis of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.	16-17 36-39	Full	
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statements (e.g., mergers / acquisitions, change of base years / periods, nature of business, measurement methods).		Full	For some KPI's the figures have been reworked, regrouped and rearranged. Restatements of data have been specified where applicable
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	16-17, 36-39	Full	
3.12	Table identifying the location of the Standard Disclosures in the report.	76	Full	
3.13	Policy and current practice with regard to seeking external assurance for the report.	72-73	Full	
4. Gov	ernance, Commitments, and Engagement			
4.1	Governance structure of the organisation, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organisational oversight.	22-25	Full	
4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	22-25	Full	
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.	22-25	Full	
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	24, 29	Full	
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organisation's performance (including social and environmental performance).		Full	RIL Annual Report 2012-13 (Pg 72-73) RIL Annual Report FY 2012-13 is available at http://ril.com/rportal1/ DownloadLibUploads/1368015904301_ AR08052013.pdf
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	22-25	Full	
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organisation's strategy on economic, environmental, and social topics.		Full	RIL Annual Report FY 2012-13(Pg 59-65, 71) RIL Annual Report FY 2012-13 is available at http://ril.com/rportal1/ DownloadLibUploads/1368015904301_ AR08052013.pdf
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	18-19, 24, 26-27	Full	
4.9	Procedures of the highest governance body for overseeing the organisation's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	22-25	Full	
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	24	Full	RIL Annual Report FY 2012-13 (Pg 67-73,105) RIL Annual Report FY 2012-13 is available at http://ril.com/rportal1/DownloadLib Uploads/1368015904301_AR08052013.pdf

	Description	Reference	Extent of reporting	Explanation
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organisation.	22-25	Full	Our existing risk management processes go beyond the requirement of the precautionary principles and cover the three bottom-lines
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organisation subscribes or endorses.	16-17, 24, 84-87	Full	
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organisation: * Has positions in governance bodies; * Participates in projects or committees; * Provides substantive funding beyond routine membership dues; or * Views membership as strategic.	25, 84-87	Full	
4.14	List of stakeholder groups engaged by the organisation.	32-34	Full	
4.15	Basis for identification and selection of stakeholders with whom to engage.	32-34	Full	
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	32-34	Full	
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organisation has responded to those key topics and concerns, including through its reporting.	32-34	Full	
	STANDARD DISCLOSURES PAR	RT II: Disclosure	of Manageme	nt Approach
DMA E	Disclosure on Management Approach EC	29, 40-42, 44-46, 54, 65-69	Full	
DMA EI	N Disclosure on Management Approach EN	24, 29, 44-53	Full	
DMA L	A Disclosure on Management Approach LA	24, 29, 58-65	Full	
DMA H	R Disclosure on Management Approach HR	29, 61, 65	Full	
DMA S	Disclosure on Management Approach SO	24-25, 29, 60-61, 65-71	Full	
DMA PI	R Disclosure on Management Approach PR	24, 29, 52-55	Full	
	STANDARD DISCLOSUR	ES PART III: Per	formance Indi	cators
Econor	nic Performance Indicators			
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	38-42	Full	
EC2	Financial implications and other risks and opportunities for the organisation's activities due to climate change.	46	Full	
EC3	Coverage of the organisation's defined benefit plan obligations.	38, 42	Full	RIL Annual Report FY 2012-13 (Pg 143-145) RIL Annual Report FY 2012-13 is available at http://ril.com/rportal1/DownloadLib Uploads/1368015904301_AR08052013.pdf
EC4	Significant financial assistance received from government.	40-42	Full	
EC5	Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.		Full	Across locations, the minimum wage offered by us is more than the standard entry level wage as recommended by regulation
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	54	Partial	The nature of our products demands high quality input materials and services that can be manufactured only by technically & financially competent suppliers/contractors. We continue to source materials & services from local (India-based) suppliers as & when feasible from a technical, competency, quality and commercial perspective. Hence we do not feel the aspect is material
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.		Full	Currently, we do not have any specific procedures for local hiring of senior management. The hiring is based on merits, irrespective of the location of the person.



	Description	Reference	Extent of reporting	Explanation
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	38-39 65-69	Full	
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	65-71	Full	
Enviro	Environmental Performance Indicators			
EN1	Materials used by weight or volume.	36-37, 46	Full	
EN2	Percentage of materials used that are recycled input materials.	49, 57	Full	
EN3	Direct energy consumption by primary energy source.	36-37, 39, 46	Full	
EN4	Indirect energy consumption by primary source.	36-37, 39, 46	Full	
EN5	Energy saved due to conservation and efficiency improvements.	36-37, 45-46, 92-94	Full	
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	56-57, 95-96	Full	
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	56-57, 95-96	Full	
EN8	Total water withdrawal by source.	36-37, 39, 48-50	Full	
EN9	Water sources significantly affected by withdrawal of water.	49	Full	
EN10	Percentage and total volume of water recycled and reused.	36-37, 39, 48-50	Full	
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	50-51	Full	
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	50-51	Full	
EN13	Habitats protected or restored.	50-51	Full	
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	50-51	Full	
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.		Full	No IUCN Red List species within area of operations based on latest EIA Report
EN16	Total direct and indirect greenhouse gas emissions by weight.	36-37, 39, 46	Full	WRI's GHG protocol tool has been used for calculation of direct emissions based on fuel consumption and the CEA (Central Electrical Authority - Government of India) grid emission factors have been used for Indirect emissions
EN17	Other relevant indirect greenhouse gas emissions by weight.		Not Reported	We are in the process of strengthening our systems to capture Scope 3 emissions. The same will be reported in our next report for FY 2013-14
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	36, 45	Full	
EN19	Emissions of ozone-depleting substances by weight.		Full	We do not use ODS in our production processes
EN20	NOx, SOx, & other significant air emissions by type & weight	. 36-37, 50-51	Full	
EN21	Total water discharge by quality and destination.	36, 49-51	Full	
EN22	Total weight of waste by type and disposal method.	36-37, 39, 51	Full	
EN23	Total number and volume of significant spills.	51	Full	
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	51	Full	
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organisation's discharges of water & runoff.	50-51	Full	
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	56-57, 95-96	Full	

	Description	Reference	Extent of reporting	Explanation
EN27	Percentage of products sold and their packaging materials that are reclaimed by category.		Not Reported	Our products include hydrocarbon derivates, in the form of upstream oil and gas, refined products polymers, polyesters and bulk chemicals used as feedstock and are transported through ships, tankers and pipelines. Products that use packaging material constitute an insignificant part of our overall production and hence we have not captured or reported the same
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.		Full	No monetary fine of any significant value has been imposed on any manufacturing locations of our company during FY 2012-13 neither non-monetary sanctions for non-compliance with environmental laws and regulations imposed on the company.
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organisation's operations, and transporting members of the workforce.	46	Full	
EN30	Total environmental protection expenditures and investments by type.	38-39	Full	
Social	: Labour Practices and Decent Work			
LA1	Total workforce by employment type, employment contract, gender and region.	38, 63	Partial	At RIL, we do not make distinction between geographical areas within India and consider India as one region. The employment information is monitored as people of Indian origin and expatriates. As on March 31, 2013, we have 23,468 persons of Indian origin and 51 expatriates. Currently we do not extensively track the gender wise information of our contract workforce. However we are putting in systems in place to strengthen our response to the same
LA2	Total number and rate of employee turnover by age group, gender, and region.	38	Full	At RIL, we do not make distinction between geographical areas within India and consider India as one region. The employment turnover information is monitored as people of Indian origin and expatriates. During FY 2012-13 1889 employees of Indian origin and 6 expatriates separated from the organisation. The employee turnover includes 1776 males and 119 females. The new employee hires includes 2358 of Indian origin and 5 expatriates. Number of new employee hires includes 2207 male & 156 female employees.
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	38	Full	
LA4	Percentage of employees covered by collective bargaining agreements.	65	Full	
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.		Full	We follow the requirements of the Industrial Disputes Act, India, 1947 for issuing minimum notice period (s) regarding significant operational changes.
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programmes.	59-61	Full	We have established joint safety committees at all our manufacturing locations with equal participation from management and nonmanagement staff
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and gender.	36-39, 61	Full	
LA8	Education, training, counseling, prevention, and risk-control programmes in place to assist workforce members, their families, or community members regarding serious diseases.	58-59	Full	
LA9	Health and safety topics covered in formal agreements with trade unions.	59-60	Full	All our wage settlement agreements with unions contain topics including health and safety.
LA10	Average hours of training per year per employee by employee category and gender.	39, 63-64	Full	

	Description	Reference	Extent of reporting	Explanation
LA11	Programmes for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	64-65	Full	
LA12	Percentage of employees receiving regular performance and career development reviews by gender.	65	Full	All eligible employees receive regular performance and career development reviews
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	22-25	Full	
LA14	Ratio of basic salary of men to women by employee category.		Full	There is absolutely no difference between the basic salaries of men to women. We are firm believer of equal opportunity principle. The ratio of basic salary of men to women is 1:1
LA15	Return to work and retention rates after parental leave, by gender	38	Full	
Social	: Human Rights			
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.		Full	India has ratified more than 39 conventions of the ILO that are covered in the nine chapters (excluding penalties and supplemental) and 120 sections of The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987), which covers various aspects of human rights. We have a screening process for our investment agreements based on the requirements of this Act. All our significant investments in India go through a due diligence process. This process covers all the laws of the land including compliance to the above said acts/rules
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.		Full	India has ratified more than 39 conventions of the ILO that are covered in the nine chapters (excluding penalties and supplemental) & 120 sections of The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987), which covers various aspects of human rights. We follow our internal guidelines in selection of suppliers & contractors which include compliance with local regulations including this Act. All our significant contracts require adherence to the laws of the land including the above stated rules and are agreed upon by our business partners entering into contract with us
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	65	Full	Our existing induction programmes covers basics of human rights. This year new joiners were given training amounting to 1,180 manhours
HR4	Total number of incidents of discrimination and corrective actions taken.		Full	This year, there was no incident of discrimination across our locations
HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.		Full	This year, there was no operation identified in which the right to exercise freedom of association and collective bargaining was at significant risk
HR6	Operations identified as having significant risk for incidents of child labour, and measures taken to contribute to the elimination of child labour.		Full	This year, there was no operation identified as having significant risk for incidents of child labour
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labour, and measures to contribute to the elimination of forced or compulsory labour.		Full	This year, there was no operation identified as having significant risk for incidents of forced or compulsory labour
HR8	Percentage of security personnel trained in the organisation's policies or procedures concerning aspects of human rights that are relevant to operations.	61	Full	
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.		Full	This year there were no reported incidents of violation involving rights of indigenous people across locations
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments		Full	We follow the laws in India pertaining to human rights and conduct human rights reviews on an ongoing basis. All our operations are subjected to this review.
HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms		Full	None during the reporting period

	Description	Reference	Extent of reporting	Explanation
Social	:Society Performance Indicators			
SO1	Percentage of operations with implemented local community engagement, impact assessments and development programs.	65-71	Full	All our operations have implemented local community engagements and development programs
SO2	Percentage and total number of business units analyzed for risks related to corruption.	22-24	Full	
SO3	Percentage of employees trained in organisation's anti-corruption policies and procedures.	22-24	Full	
S04	Actions taken in response to incidents of corruption.		Full	This year, there were no reported cases involving acts of corruption
S05	Public policy positions and participation in public policy development and lobbying.	25, 57	Full	
S06	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.		Full	We do not support any specific political party
S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.		Full	This year, there was no legal action initiated against RIL for anti-competitive behaviour, anti-trust and monopoly practices.
S08	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.		Full	This year, there was no fine or non-monetary sanction imposed on RIL for non-compliance with laws and regulations
S09	Operations with significant potential or actual negative impacts on local communities		Full	During our community engagement programs and assessments, we have not come across any significant negative impacts on the community due to our presence in the area
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative Impacts on local communities		Full	None
Social	: Product Responsibility			
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	52-55	Partial	All our significant products and services comply with health and safety related regulatory requirements. Additionally, we are supporting a life cycle assessment study being done by ICPE and we are also working with the Bureau of Indian Standards for formulating standards and guidelines. This is an on-going exercise. Further more, several of our products form the base or intermediate products, which are then converted into various final products using incremental materials and /or processes. Given the heightened degree of intermediation and the involvement of technical convertors, it is not feasible for us to track final products made from our products and hence, we are not in a position to conduct comprehensive health and safety impact assessments at the use and service, disposal and recycle stages of the product life cycle. In so far as our products are concerned, we comply with all regulatory health and safety impact mandates
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.		Full	No significant incident of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle
PR3	Type of product and service information required by procedures and percentage of significant products and services subject to such information requirements.	52-55	Partial	Our core / major products are derived by processing hydrocarbon materials including crude oil, condensates and natural gas. These follow all regulatory requirements for product and service information. Awareness is imparted to customers on safe use of product and services. Since, our core raw material is



	Description	Reference	Extent of reporting	Explanation
				hydrocarbon, which is sourced globally; it is not feasible to inform consumers about its sourcing. Our products are provided with Material Safety Data Sheets which clearly delineate information on environmental impacts on the content of the substance, safe handling and disposal of the products
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.		Full	No significant incident of non-compliance with regulations and voluntary codes concerning product and service information and labelling
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	54	Full	
PR6	Programmes for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.		Full	We are members of the Advertisement Standards Council of India (ASCI) and adhere to all laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.		Full	No significant incident of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.		Full	No significant complaint regarding breaches of customer privacy &losses of customer data
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.		Full	No significant fine for non-compliance with laws and regulations concerning the provision and use of products and services
Oil and	d Gas Sector Supplement			
OG1	Volume and type of estimated proved reserves and production	45	Full	As on 31st March 2013, our proved developed reserves for oil and gas stood at 1.81 million tonnes and 18,470 million m³ respectively
OG2	Total amount invested in renewable energy		Full	No significant investments were made during FY 12 -13
OG3	Total amount of renewable energy generated by source	45	Full	
OG4	Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored	50-51	Full	
OG5	Volume and disposal of formation or produced water	49	Full	
OG6	Volume of flared and vented hydrocarbon	51	Full	
OG7	Amount of drilling waste (drill mud and cuttings) and strategies for treatment and disposal.	49	Full	
OG8	Benzene, lead and sulfur content in fuels	54-55	Full	
OG9	Operations where indigenous communities are present or affected by activities and where specific engagement strategies are in place		Full	None of our operations are present in areas having population of indigenous people.
OG10	Number and description of significant disputes with local communities and indigenous peoples		Full	There were no significant disputes with local communities and indigenous people during the year 2012-13
OG11	Number of sites that have been decommissioned and sites that are in the process of being decommissioned.		Full	None of our sites have been decommissioned or were in the process of decommissioning during the year 2012-13
OG12	Operations where involuntary resettlement took place, the number of households resettled in each and how their livelihoods were affected in the process.		Full	No resettlement took place during the year 2012-13 at any of our operational sites.
OG13	Number of process safety events, by business activity	60-61	Full	
OG14	Volume of biofuels produced and purchased meeting sustainability criteria		Full	We did not produce or purchase any bio-fuels during the reporting period

## UNGC – Communication on Progress

Global Compact Pr	inciples	Our Response
Human Rights	Support and respect the protection of internationally proclaimed human rights within the business' sphere of influence	We recognize and accept our responsibility to uphold human rights at the workplace and its sphere of influence. We comply with all labour laws formulated by the Constitution of India. Our grievance mechanism is equipped to address all employee grievances related to work environment and company policies.
	Ensure that the business is not complicit in human rights abuses	Our code of conduct is applicable to all employees and we do not have any instance of human right abuses in FY 2012 -13.
Labour Standards	Uphold the freedom of association and effective recognition of the right to collective bargaining	We exercise freedom of association and comply with all the regulations enacted by Government of India developed to address labour issues. We have trade unions representing workers and disputes are dealt in accordance with the Industrial Disputes Act of 1947. There has been no loss of workdays during FY 2012-13 on account of any labour dispute.
	Uphold the elimination of all forms of forced and compulsory labour	The Forced Labour Convention (29) and the abolition of Forced Labour Convention (105) has been ratified by India and our company does not support forced or compulsory labour in any form
	Uphold the effective abolition of child labour	and we adhere to all labour laws in this respect  We respect human rights at the work place and
	Uphold the elimination of discrimination in respect of employment and occupation	pursue leading global practices, which ensure freedom of association, prohibition of child labour, protection of indigenous rights and prohibition of forced and compulsory labour.

Global Compact Prin	nciples	Our Response
Environment	Support a precautionary approach to environmental challenges	We recognize the challenges faced by our industry, whether in terms of depleting crude resources, climate change, or end-of-life of petroleumbased products. To address these, we have a comprehensive environmental policy in place with a focus on conserving and improving the environment. We ensure regulatory compliance and also conduct environmental impact assessments for all our expansion projects.  Our manufacturing plants are ISO 14001:2004 certified and have specific goals and targets which are monitored at regular intervals.
	Undertake initiatives to promote greater environmental responsibility	To reduce our environmental footprint, our efforts are focused on reducing GHG emissions. We have a dedicated CDM cell which looks into opportunities for GHG reduction. Our efforts are also dedicated towards conserving and reducing material consumption and at the same time increasing the use of recycled material.
	Encourage the development and diffusion of environmentally-friendly technologies	We use energy efficient clean technologies. It is our constant endeavour to improve our specific energy consumption. We are also investing in alternate energy sources. (Refer our environmental section for further details)
Anti- corruption	Work against all forms of corruption, including extortion and bribery	Our Code of Conduct defines our commitment of conducting business with due regard to the interests of our stakeholders and also the environment. Further, the Code of Conduct and Ethics Policy cover such issues as bribery & corruption, fraud, insider trading and human rights & discrimination.
		Our policy covers all individuals worldwide working with RIL and its subsidiaries at all levels and grades, including directors, senior executives, officers, employees, consultants, contractors or any other person associated with RIL. The policy lists tenets on ethical business conduct, definitions and the framework for reporting concern

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<sup>&</sup>lt;sup>27</sup>RIL has published its first Business Responsibility Report this year along with its Annual Report. Further information against each NVG-SEE Principle can be accessed in RIL's BRR in its Annual Report 2012-13 (Page 103) http://ril.com/rportal/jsp/eportal/ListDownloadLibrary.jsp



The World Business Council for Sustainable Development (WBCSD) is a CEO-led, global association of around 200 companies dealing exclusively with business and sustainable development.

On invitation to Mr. Mukesh D. Ambani, Reliance Industries Limited became a Council Member of WBCSD in 2007. Mr. Ambani was elected as Vice Chairman of the WBCSD Executive Committee in 2008 and had been re-elected as Vice Chairman in 2010.

The Council's objectives are to:

- Be a leading business advocate on sustainable development
- Participate in policy development to create the right framework conditions for business to make an
  effective contribution to sustainable human progress
- · Develop and promote the business case for sustainable development
- Demonstrate the business contribution to sustainable development solutions and share leading edge practices among members
- Contribute to a sustainable future for developing nations and nations in transition

As a member of WBCSD, we work with a mindset beyond corporate philanthropy, to build inclusive business models that create new revenue streams while serving the needs of the people of India through sound commercial operations. We have presented many such examples in this report that clearly demonstrate a strong business case for sustainable development.

While developing this report we referred to WBCSD's four focus areas viz; Energy and Climate; Development; Business Role and Ecosystems.

- Energy and Climate has been identified as one of the material issues to us and we have taken numerous initiatives to mitigate our GHG emissions and minimise the impact of our activities on climate change.
- Our foundation focuses on holistic community development, and we have partnered with various NGOs and initiated various community related programmes. These programmes are aimed at inclusive growth and empowering people to help them move into formal economic activities.
- We aim to enhance to quality of life in society across the entire socio economic spectrum through our various initiatives and also seek to define the Business Roles we will play in tomorrow's society by actively engaging with stakeholders
- We believe that Ecological balance is one of the three pillars of sustainable development and without it, business cannot function. Environmental excellence is one of the pillars of our sustainability strategy. We are also investing in various initiatives that will mitigate the impact on our ecosystem.

## Business Responsibility Report (BRR) 2012-13 linkage

RIL has published its first Business Responsibility Report this year along with its Annual Report<sup>28</sup>. The following is a mapping of this report's contents against the BRR disclosure.

Business Responsibility Report Disclosure	Page reference	Direct reference / Explanation	
Section A			
Corporate Identity Number (CIN) of the Company		L17110MH1973PLC019786	
Registered address, Website, email id	97-98		
Sector(s) that the Company is engaged in (industrial activity code-wise)	12	Industrial Group Description  061 Extraction of crude petroleum  062 Extraction of natural gas  131 Spinning , weaving and finishing of textiles  139 Manufacture of other Textiles  192 Manufacture of refined petroleum products  201 Manufacture of basic chemicals , fertilizer and nitrogen compounds, plastics and synthetic rubber in primary forms  203 Manufacture of man-made fibres	
Key products/services, Locations of business activity (National and International), Markets served	12		
Section B			
Paid up Capital, Total turnover, Total profit	41		
Total Spending on Corporate Social Responsibility (CSR) as percentage of profit after tax (%) and list of activities under which expenditure has been incurred	65	Total Spending on Corporate Social Responsibility (CSR) as percentage of profit after tax was 1.7 %	
Section C			
Subsidiary Companies and their participation in BR initiatives	15	RIL encourages its subsidiary companies to participate in its group wide Business Responsibility (BR) initiatives on a wide range of topics. All subsidiaries are aligned to the activities under the aegis of Reliance Foundation. RIL's subsidiaries like Reliance Fresh, Reliance Trends etc have taken part in initiatives across issues like farm engagement activities, training and skill development of youth, community connected activities and promotion of education etc	
Participation of other entities that the Company does business with, in the BR initiatives of the Company		RIL actively supports its suppliers and distributors to participate in the company's social responsibility and environmental initiatives. Currently less than 30% of other entities participate in the BR initiatives of the Company	
Section D			
Details of Directors responsible for BR	22	Corporate Governance and Stakeholders Interface (CGSI) Committee of the Board of Directors is responsible for the implementation of the BR policies. The following are the committee members:  • Shri Yogendra P. Trivedi, Independent Director, BR Head	
		(DIN Number: 00001879) • Phone: 022 - 2363 3600	
		• email: trivedi_yogendra@yahoo.co.in	
		Shri Mahesh P. Modi, Independent Director (DIN Number: 00001982)	

which are approved by the Board and signed by MD/owner/CEO/appropriate Board Director;  Whether the nine policies are formulated in consultation with the relevant stakeholders Conformance of the policies to any national /international standards  Our policies under principles 3.5 and 6 of NVG-SEE conform to national/international standards. The policies are based on the NVG-guidelines in addition to conformance to the spirit of international standards. The policies are based on the NVG-guidelines in addition to conformance to the spirit of international standards. The policies are based on the NVG-guidelines and ILO principles  The policies have been communicated to key internal stakeholders of RIL. The communication is an on-going process to cover all internal and external stakeholders  Governance related to BR. Committee for implementation of BR policies and grievance redressal mechanism related to the policy/policies  Has the company carried out independent auditiveolutation of the working of this policy by an internal or external agency  Existing sustainability report of the organization  Section E  Principle 1  22-25.  RIL's policies pertaining to Health, Safety and Environment have been evaluated by external agencies viz. DNY, LRQA, BVQI  http://ril.com/downloads/pdf/ril_sr2011_12.pdf  principle 1  22-25.  RIL's policy on bribery and anti-corruption covers all individual worldwide working with it and its subsidiaries at all levels and grades, including directors, senior executives, officers, employees (whether permanent, fixed-term or temporary), consultants, contractors or any other person associated with RIL. The well defined policy lists tenets on ethical business conduct, definitions and the framework for reporting concerns and process of the process o	Business Responsibility Report Disclosure	Page reference	Direct reference / Explanation
which are approved by the Board and signed by MD/owner/CEO/appropriate Board Director;  Whether the nine policies are formulated in consultation with the relevant stakeholders Conformance of the policies to any national /international standards  Our policies under principles 3.5 and 6 of NVG-SEE conform to national/international standards. The policies are based on the NVG-guidelines in addition to conformance to the spirit of international standards. The policies are based on the NVG-guidelines in addition to conformance to the spirit of international standards. The policies are based on the NVG-guidelines and ILO principles  The policies have been communicated to key internal stakeholders of RIL. The communication is an on-going process to cover all internal and external stakeholders  Governance related to BR. Committee for implementation of BR policies and grievance redressal mechanism related to the policy/policies  Has the company carried out independent auditiveolutation of the working of this policy by an internal or external agency  Existing sustainability report of the organization  Section E  Principle 1  22-25.  RIL's policies pertaining to Health, Safety and Environment have been evaluated by external agencies viz. DNY, LRQA, BVQI  http://ril.com/downloads/pdf/ril_sr2011_12.pdf  principle 1  22-25.  RIL's policy on bribery and anti-corruption covers all individual worldwide working with it and its subsidiaries at all levels and grades, including directors, senior executives, officers, employees (whether permanent, fixed-term or temporary), consultants, contractors or any other person associated with RIL. The well defined policy lists tenets on ethical business conduct, definitions and the framework for reporting concerns and process of the process o			
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national /international standards  to notional/international standards. The policies are based on the NVG-guidelines in addition to conformance to the spirit of international standards like ISO 9000,ISO 14000, OHSAS 18000, UNGC guidelines and ILO principles  Communication of policies to all relevant internal and external stakeholders  The policies have been communicated to key internal stakeholders of RIL. The communication is an on-going process to cover all internal and external stakeholders  Governance related to BR. Committee for implementation of BR policies and grevance redressal mechanism related to the policy/policies  Has the company carried out independent audit/evaluation of the working of this policy by an internal or external agency  Existing sustainability report of the organization  Section E  Principle 1  22-25, Settion E  Principle 1  22-25, Settion E  Principle 2  45, 49,51, 53-57  Principle 3  38, 63-65, 81  Principle 4  32-34, 65-71  Principle 6  27, 30-31, 44-46, 92-94  There are no pending or unresolved show cause/ legal notices received from CPCB/SPCB as on end of the FY 2012-13  by a contractor of the policy in the policies are based on the NGC pint of the internal and internal and ILO principles in the policy of the policies and ILO principles and ILO principles and ILO principle	Whether the nine policies are formulated in consultation with the relevant stakeholders		Yes
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Principle 7  Principle 8  received from CPCB/SPCB as on end of the FY 2012-13  39, 65-71	Principle 6		submitted to CPCB/SPCB and no non-conformances have been
Principle 8 39, 65-71		92-94	There are no pending or unresolved show cause/ legal notices received from CPCB/SPCB as on end of the FY 2012-13
	Principle 7	25	
Principle 9 29, 54, 82	Principle 8	39, 65-71	
	Principle 9	29, 54, 82	

## Abbreviations

AAA	One of the highest credit ratings of financial	EBITDA	Earnings Before Interest, Tax, Depreciation &
	instruments given by rating agencies, reflects highest financial strength to meet repayment		Amortization
	obligations	EC	Economic Indicators
AGM	Annual General Meeting	EMP	Environment Management Process
AIDS	Acquired Immune Deficiency Syndrome	EN	Environmental Indicators
API	American Petroleum Institute	EPS	Earnings Per Share
ARC	Annual Rate Contract	EVP	Employee Value Proposition
ART	Anti-Retroviral Treatment	FC&A	Finance, Control and Accounting Academy
ASCU	Arsenic Copper Mixture	FCC	Fluidized Catalytic Cracking
ATF	Aviation Turbine Fuel	FPSO	Floating Production Storage and Offloading
Βαα2	Moody's long term obligation ratings are	FY	Financial Year
	opinions of the relative credit risk of fixed income obligations with an original rating of one year or more.	G3.1 Guidelines	The new set of Sustainability Reporting Guidelines, launched by GRI in 2010
BBB+	Standard & Poor's is a division of McGraw Hill	GCPTCL	Gujarat Chemical Port Terminal Company Limited
DDD+	that publishes financial research & analysis	GHG	Green House Gases
	stocks & bonds. It is one of the top three in this	GIDC	Gujarat Industrial Development Corporation
DCE	business, along with Moody's and Fitch Ratings.	GJ	Giga Joules
BCF	Billion Cubic Feet	GRI	Global Reporting Initiative
BCFe	Billion Cubic Feet Equivalent	GRM	Gross Refining Margin
BEE	Bureau of Energy Efficiency	GT	Gas Turbine
BG	British Gas	НСМ	Human Capital Management
BID	Business Initiative Directions	HDPE	High Density Polyethylene
BIJ	Bharat India Jodo	HIV	Human Immunodeficiency Virus
BOPD	Barrels of Oil Per Day	HMD	Hazira Manufacturing Division
BRR	Business Responsibility Report	HP	High Pressure
BSC	British Safety Council	HR	Human Resources /Human Resources Indictors
BSE	Bombay Stock Exchange	HS&E	Health, Safety and Environment
CARD	Capacity, Achievement, Relations and Domain	HSE-MS	HSE Management System
CBSE	Central Board of Secondary Education	HTM	Highly Toxic Material
CCR	Continuous Catalytic Regeneration	IBDP	Integrated Block Development Plan
CDM CERs	Clean Development Mechanism  Certified Emission Reductions	ICC	Indian Chemical Council
		ICPE	Indian Centre for Plastics in the Environment
CGSI	Corporate Governance & Stakeholders' Interface Centre for High Technology	ICQCC	International Convention for Quality Control Circles
CII	Confederation of Indian Industries	ILO	International Labour Organisation
CIPT	Central Intellectual Property Team	IP	Intellectual Property
CO <sub>2</sub>	Carbon Dioxide	IPIECA	International Petroleum Industry Environment
CMD	Chairman & Managing Director		Conservation Association
CNI	Cetane Number Improver	IPO	Initial Public Offering
S&P CNX	Standard & Poor's CRISIL NSE Indices	IQPC	International Quality & Productivity Centre
CO <sub>2</sub> e	Carbon Dioxide Equivalent	IT	Information Technology
CO <sub>2</sub> e CRM	Customer Relationship Meets	JV	Joint Venture
CRP	Control cum Riser Platform	KG D6	Exploration Block in Krishna-Godavari Basin
CSMVS	Chatrapati Shivaji Maharaj Vastu Sangrahalaya	KPIs	Key Performance Indicators
CSR	Corporate Social Responsibility	KTA	Kilo Tonnes Per Annum
DAF	Dhirubhai Ambani Foundation	LA	Labour Indicators
DAIS	Dhirubhai Ambani International School	LAB	Linear Alkyl Benzene
DMA	Disclosure on Management Approach	LDPE	Low Density Polyethylene
DNV	Det Norske Veritas	LEAP	Leading Expert Access Program
E&P	Exploration & Production	LLDPE	Linear Low Density Polyethylene
EBDIT	Earnings Before Depreciation ,Interest & Tax,	LP	Low Pressure
	go zero zepreciation ,interest a rux,	LPR	Life Protection Rules

## $\begin{array}{c|c} \textbf{Reliance Sustainability Report} \\ 2012-13 \end{array}$

## Abbreviations

MMBPD	Million Barrels Per Day	PS	SC	Production Sharing Contracts
MEG	Mono Ethylene Glycol	PS	5M	Process Safety Management
MENA	Middle East & North Africa	РТ	ГА	Purified Terephthalic Acid
MET	Model Economic Township	PV	<b>V</b>	Photovoltaic
MMBBL	Million Barrel	PV	VC	Poly Vinyl Chloride
MMBOE	Million Barrel of Oil Equivalent	PX	(	Paraxylene
MMCFPD	Millions of Cubic Feet Per Day	Q	CFI	Quality Circle Forum of India
MMSCMD	Million Metric Standard Cubic Meter Per Day	QF	RA	Quality Risk Assessment
MMT	Million Tonne	R.A	ALP	Reliance Accelerated Leadership Program
MMTPA	Million Tonne Per Annum	RC	C	Responsible Care, an Initiative of the Chemical
MoPNG	Ministry of Petroleum and Natural Gas	D.C	60	Industry
MP	Medium Pressure		CO	Rate Contract Offer
MSAT	Mobile Source Air Toxics	RC		Reliance Corporate Park
MT	Metric Tonnes		JIL -	Reliance Jio Infocomm Limited
MTBE	Methyl Tertiary Butyl Ether	RF		Reliance Foundation
MW	Mega Watts	RI		Reliance Innovation Council
NAB	National Association for the Blind	RI		Reliance Industries Limited
NACO	National AIDS Control Organization		OGC	Refinery Off Gas Cracker
NGOs	Non-Government Organisations		OW	Right of Way
NIO	National Institute of Oceanography		RDT	Reliance Rural Development Trust
NMITLI	New Millennium Indian Technology Leadership	RT		Road Traffic Accidents
	Initiative		ΓG	Reliance Technology Group
NOx	Oxides of Nitrogen		&P	Standard & Poor's
nPnO	Normal Paraffins and Normal Olefins	SE		Styrene Butadiene Rubber.
NSE	National Stock Exchange	SE		Segregated Ballast Tank
NVG-SEE	National Voluntary Guidelines for Social, Environmental & Economic Responsibilities		CM	Supply Chain Management
	of business		EBI	Securities & Exchange Board of India
OCIMF	Oil Companies International Marine Forum	SE		Special Economic Zone
OGP	International Association of Oil and Gas		HG	Self Help Group
	Producers	SC		Social indicators
OHC	Occupational Health Centre		Ox	Oxides of Sulphur
OHSAS	Organisational Health and Safety Assessment Series		PM	Suspended Particulate Matter
OISD	Oil Industry Safety Directorate	SS		Secondary School Certificate
OS	Organisational Stakeholders		ΓAR	Smart Transformation at Reliance
OSHA	Occupational Safety and Health Administration	TE		Tuberculosis
P&C	Procurement & Contracts	TC		Trillion Cubic Feet
PARC	Product Application Research Centre		CFe	Trillion Cubic Feet Equivalent
PBDIT	Profit before Depreciation, Interest and Tax		EAL	Aluminium Triethyl
PBR	Poly Butadiene Rubber		PA	Tonnes Per Annum,
PDVSA	Petroleos de Venezuela, SA		QM	Total Quality Management
PE PDV3A	Poly Ethylene		HMWPE	Ultra-High Molecular Weight Polyethylene
PEM	Proton Exchange Membrane		LSD	Ultra Low Sulphur Diesel
PET	Polyethylene Terephthalate	Ü	NFCCC	United Nations Framework on Convention for Climate Change
PIMG	Pipeline Integrity Management Group	UI	NGC	United Nations Global Compact
PMT	Panna Mukta Tapti		DF	Vessel Deficiency Note
POY	Partially Oriented Yarn		LCC	Very Large Crude Carriers
PP	Poly Propylene		OC	Volatile Organic Compounds
PPE	Personal Protective Equipment		BCSD	World Business Council for Sustainable
PR	Product Responsibility Indicators			Development
	,	W	/EF	World Environment Foundation

## Annexure – I

## **Energy Saving Initiatives**

#### Allahabad Manufacturing Division

- Optimization of Dow heat consumption in polymerization by modifying split box
- $\bullet \;\;$  Saving in power consumption by reducing system air pressure
- Reducing potable water consumption in colony and Effluent Treatment Plant to reduce pump load
- Saving in fuel oil by reducing steam system pressure.

#### Barabanki Manufacturing Division

- Replacement of 70W HPSV Lamps with 30W and 42W LED Lamps.
- Replacement of 250W Metal Halide Lamps with 150W Green Energy Efficient Lamps.
- Replacement of 160W with 30Watt W Lamps at boiler area
- New Deep Vacuum Feed Pump (55KW motor) replaced with Old Deep Vacuum feed Pump (22KW Motor)
- Reduction in running hours of Nitrogen plant (average running of 10 hours per Day).
- Flasher Pre-polymeriser Glycol circulation pump motor replaced with energy efficient motor
- Finishing Glycol circulation pump motor replaced with energy efficient motor

#### Dahej Manufacturing Division

- Reactor feed preheater is replaced with higher size for better heat recovery based on Pinch study of MEG Plant.
- $\bullet\;$  Optimization of steam & power system using online optimizer.
- Steam saving in Propylene compressor by troubleshooting antisurge valve opening problem in Ethane Propane Recovery Unit.
- Power saving by replacement of air compressor's 1st stage inter cooler in Air Separation plant.
- Vacuum improvement of Caustic Evaporation Unit by retubing of second effect evaporator and plugging of tubes in first and third effect evaporator.
- Increasing insulation thickness of MP and LP steam header in yard piping based on Economical Insulation thickness in view of increase in Fuel Price.
- Stoppage of drinking water pump to avoid double pumping by hydraulic study at High Density Polyethylene Plant
- MP steam traps replacement in Yard Piping
- HP steam saving by increasing absorption time
- Steam traps replacement in Ethylene Vinyl Acetate plant

### Hazira Manufacturing Division

- Uprating Gas Turbine capability of Gas Turbine (GT-4) at CPP&U plant.
- Uprating Gas Turbine capability of Gas Turbine (GT-1) and running it in Advanced Process Control in manual mode at CPP&U plant.
- Burner optimization in Heat Recovery Steam Generators at CPP&U plant.
- Replacing MP steam consumption with LP steam consumption in Dehydrator Reboiler in MEG plant.
- LP steam saving by Pure Terephthalic Acid dryer outlet temperature optimization.
- 50 % capacity Boiler Feed Pump (BFP) operation resulting in LP steam savings at CPP&U plant.
- Power saving due to stoppage of vapour Pressure Swing Absorption plant based on oxygen optimization after catalyst change out at MEG plant.
- Modification in operating philosophy of oxygen compressor at MEG plant.
- $\bullet\;$  Shifting of operating philosophy from 9 Gas Turbines to 8 Gas Turbines.
- Deaerator Optimization at CPP&U plant.
- Steam diversion to Cracker plant at Pure Terepthalic Acid plant.
- Gas Turbine Capacity Utilization by reducing Spinning reserve from 3 MW to 2 MW.
- Reducing bypass stack losses in Gas Turbine # 4
- Integration of LP air header between polyester new utilities and polyester old utilities.
- Furnace convection coil cleaning to reduce stack temperature
- Chilled water System header pressure optimisation at Continuous polymerization plant
- Installation of Pyro block in two Furnaces at Cracker plant.
- Furnace Convection Coil cleaning in Recycle Furnaces
- $\bullet\;$  Dow circulation pump impeller trimming in Dow heater area.
- Fuel gas heating in Gas Turbine 5
- Installation of Variable Frequency Drive's in jet water pumps at Utility plant
- $\bullet \;\;$  Inverter temperature optimisation at Air Humidification Unit area
- $\bullet\;$  Usage of LP steam in dryer steam coils in Drawline instead of MP steam
- Stoppage of one Effluent pump

- Upgradation of DM water/Centrate water exchanger to reduce LP steam consumption.
- Installation of Pyro block in Furnaces at Cracker plant.
- Butene injection point relocation scheme
- Saving in steam consumption by reduction in catalyst batches at utility plant.
- Stoppage of 2 no's of hot Tri Ethylene Glycol systems in old utility by optimizing other running systems
- Reduction in the consumption of instrument air by substituting it with plant air at PVC plant
- Increase Polymer Cooler by closing Air cool condenser fin valve to save dowtherm
- Creation of Solvent grade Methyl Tertiary Butyl Ether tanker loading facility to reduce pump running hours by avoiding inter tank blending.
- Cleaning of air cooled condenser fins badly choked (Internally and externally)
- Reduction in running hours of off. spec. ethylene pump used for inter sphere transfer.
- Reduction in MP steam by lining up LP Steam in Dehydrator reboiler in ethylene Glycol plant
- Lighting optimisation at Spinning Machine wind up area.
- · Lighting optimisation at polyester complex.
- Condensate recovery through PTA dryer condenser

#### Hoshiarpur Manufacturing Division

• Saving in electricity consumption by replacing traditional lights with CFL

#### Jamnagar Manufacturing Division (DTA)

- Grid Transformer Relay setting change facilitated reduction in Steam Turbine Generator condensation load in CPP.
- Reduction in Lean Amine circulation through increased Methyl ethanolamine strength from 35 to 37.5 wt % in Lean Amine in sulphur complex.
- LP steam reduction in air preheater in all Coker heaters improving heater efficiency.
- MP steam reduction in stripper by optimizing process conditions in Diesel Hydrotreater plant.
- MP steam reduction in Crude unit by maintaining reduced LP steam super heat temperature.
- C3-C4 fuel saving by routing PP line D degassing column vent to fuel gas header instead to flare system.
- Condensate recovery in Sulphur Recovery Unit.
- Heat recovery from Light Coker Gas Oil pump around to preheat cold Vacuum Residue from tanks to reduce firing in Coker heaters.

- Boiler blow-down water diversion in Sulphur Recovery Unit.
- One Coke Drum quench water pump was stopped in Coker unit
- Running of single condensate pump instead of two pumps in parallel in Amine Treatment Unit.
- Running of single degassed sulphur pump in sulphur unit, instead of two pumps in parallel
- Reduction of Carrier air for FCAT transferring at Fluidised Catalytic Cracker Unit
- Destaging of impeller of cold condensate distribution pumps in DTA utility.

Steam saving through optimization of Blow-down in main column steam generator at Fluidised Catalytic Cracker Unit

#### Jamnagar Manufacturing Division (SEZ)

- Peak firing enablement of Gas Turbine resulting in operation of 4 GT's instead of 5 GT's.
- Use of Light Coker Gas Oil stream as heating media instead of MP steam in Stripper Reboiler of Coker plant.
- Reduction in fuel by reducing reflux rate in the stripper column in Heavy Naphtha Hydrotreater plant.
- Five pumps operation instead of six at Refinery Tank farm for crude units feeding.
- Feed temperature of Heavy Naphtha Hydrotreater stripper increased which resulted in fuel saving in Reboiler by extracting additional energy from air cooler.
- Velocity HP steam optimization in all passes of heater, in Coker plant.
- MP steam saving in Naphtha Splitter by reducing reflux rate.
- Furnace stack  $O_2$  reduction from 3 to 1.5% in Crude Distillation Unit furnaces and improving efficiency, by stack  $O_3$  optimization.
- Power saving in Vent Gas Recovery compressor by optimal distribution of load between two trains of Polypropylene units.
- HP steam saving in turbine by reduction of Alkylation refrigeration discharge pressure from 5.2 to 5.03 Kg / cm2 in Alkylation Unit.
- Power saving by impeller trimming of 5 Gasoline and 5 Diesel transfer pumps at Refinery Tank farm.
- Hydrogen compressor pressure reduction done
- Power Saving by stopping LP Condensate pump at Crude Distillation Unit
- Stripper Column pressure optimization at Heavy Naphtha Hydrotreater plant.

Use of LP Steam at Fluidised Catalytic Cracker Reactor using Thermo compressor

#### **Nagpur Manufacturing Division**

• Removal of Carpet Losses in Boiler Yard resulted in Saving of Coal Consumption

#### Naroda Manufacturing Division

- Upgrading the worsted Humidification plants by replacing Centifugal Fans by Axial Flow Fans in 02 more Plants.
- Power saving by Shut down of Transformer.
- Power saving by stopping of Tubelights on Air Jet and Sulzer Rapier Machines by lowering Lighting Fixture and removing one tube light from each fixture.
- Power Saving by installing Turbo Ventilators at Worker's Kitchen and stopping 12 tube lights and one exhaust fan.
- Power Savings by processing Fabrics on New Fabric Merceriser and Stopping Old Jet Dyeing machines for Denier Reduction Process.
- Power saving by stopping oil application pump
- Reduction in power consumption after optimizing treatment time of new Hydro extractor
- Steam Savings by processing Fabrics on New Fabric Merceriser and Stopping Old Jet Dyeing machines for Denier Reduction Process.

#### Nagothane Manufacturing Division

- Converting a turbine from steam driven to motor driven resulting in reduction in steam generation at CPP.
- Uprating Gas Turbine (GT-51) resulting in improvement in heat rate of 195 Kcal / KWH.
- Optimized the De-aerators pressure in CPP based on availability of LP steam in the complex.
- Reduced the HP steam let down through Pressure Reducing & De- superheating System and maximized HP extraction from Propylene Refrigeration Turbine.
- · Efficiency improvement of chiller

## Patalganga Manufacturing Division

- Stoppage of Steam Turbine Generator at CPP plant.
- Stopping the Extruder and auxiliary pump at polyester section
- Stopping Of one Normal paraffin loading Pump in tank farm
- Commissioning of one centrifugal pump which will run instead of 3 sundyne pump.
- Steam saving through steam trap management

#### Silvassa Manufacturing Division

• Improved Power Factor by Installation of 2 capacitors of 7500 KVAR.

- $\bullet\,$  Pressure mapping & optimization of compressed air generation & distribution.
- $\bullet\,$  Substitution of HP air with LP air at in Partial Textured Yarn plant
- Optimization of compressed air cooling water system.
- Provision of Timer in suction blower on new 68 Machines
- To minimise lapping of yarn & conserve energy, specially Lycra Machines
- Replacement of compressors at utility plant

#### Vadodara Manufacturing Division

- Direct supply of Polymer Grade Propylene from Naphtha Cracker Plant to Polypropylene Copolymer Plant.
- Shifting of 40 MT / hr steam load from Aux boiler to Heat Recovery Steam Generator.
- Change in control philosophy at steam network to avoid steam venting at Acrylo Nitrile plant.
- In Naphtha Cracker Plant, optimization of De-aerator after installation of Dissolved Oxygen Analyser to reduce steam consumption.
- Steam to flare control valve output indication and control on Distributed Control System (Naphtha Cracker Plant).
- Ethylene Glycol recycle water optimization (reduction of recycle water in re-absorber, reactor inlet and aldehyde purge).
- Improved condensate recovery by increased flow circulation (from integrated offsite plant to Poly Butadiene Rubber plant).
- Gas Turbine (GT1) component up rate to reduce heat rate and improve power generation.
- Replacement of damper having twin blade (air ceiling) to ensure minimum leakage of flue gas at Gas Turbine (GT1) & repair of deformed duct as well as internal insulation.
- Stoppage of one Cooling Water pump in Integrated Offsite Plant Cooling Tower by isolating two cells.
- Dry ice cleaning of heater convection bank.
- Stoppage of one Cooling Water Fan at Integrated Offsite Plant Cooling Tower
- Reflux optimization at Poly Butadiene Rubber plant
- Heat recovery by reducing condensate drum pressure at Poly Butadiene Rubber plant
- Bypass of start-up heater at Acrylo Nitrile plant.
- Change in start-up procedure for Naphtha Cracker Plant to reduce the start-up time and unproductive energy loss
- DM water reduction in Polypropylene Copolymer Plant.
- Diversion of hydrogenation separator Off gas from flare to fuel gas system

## Annexure – II



## Key Areas of Research and Development

- Improved catalyst system for producing impact copolymers and bi-axially oriented polypropylene.
- Development of morphological catalysts system for 1-alkene polymerization.
- New catalytic cracking technology for high light olefin yields from low value hydrocarbon streams.
- Purification of normal olefins from coker gas oil for LAB production.
- Selection of preferred refinery configurations, based on economics and technology evaluation.
- Selection of technology for gasification, cracking, LDPE, LLDPE, paraxylene (PX), acetic acid and other projects.
- Improvement and innovation for in-house catalysts with higher efficiency (activity and throughput) for producing polypropylene.
- In-house production of 1-butene catalyst.
- Selection and pilot plant studies for improved catalysts for transalkylation.
- Replacement of dimethyl disulphide as sulphiding agent with DSO in crackers.
- Development of reactor models in various refinery/ petrochemicals plants.
- Comparative evaluation and benchmarking of various technologies.
- PTT spinning technology development.
- Technical evaluation of design of internals in new generation polyester plants.
- Development of profiled cross-section spun-lace polyester fibre for hygiene products.
- Development of micro spun-lace fibre for wet wipes and hygiene products.
- Productivity enhancement micro and super micro polyester staple fibre.
- Development of fine denier conjugates fibre for filling applications.
- High stability catalyst additive for maximizing petrochemicals co-production in fluidized catalytic cracking (FCC).
- Novel, fluid catalytic cracking process for converting lowvalue streams to light olefins.
- New process to remove chloride from hydrocarbon streams.
- Detailed characterization technique to predict, monitor and control gasoline blending.
- Online composition prediction and composition-based process models to plan, monitor, and control refinery process.

- Extraction of relatively hydrogen-rich stream from a low-quality refinery stream.
- The use of feed properties and operating conditions to optimize petroleum coke quality.
- Advanced concept for gasifying petroleum coke.
- Separation of olefins from coker gas oil for linear alkyl benzene (LAB) production.
- Determination of crude corrosion potential and requisite mitigation.
- Removal of heat stable salts (HSS) and sodium from refinery streams.
- Hydroisomerization catalyst for diesel production and low pressure, ultra-low sulphur diesel (ULSD) hydrotreating catalyst.
- CO, capture from flue gas.
- Technology development to process low-cost, heavy crudes.
- Computational fluid dynamics (CFD) studies for trouble shooting plant operations.
- New process for acidity reduction of crude.
- Hydroprocessing kinetic model development including deactivation kinetics, and mechanistic model with catalyst parameters.
- Fundamental, ethylene reactor model.
- Process and catalyst for high performance, polypropylene (PP) homo polymer grades.
- Process and catalyst system for high performance, impact polypropylene and biaxially oriented polypropylene grades.
- Compounded pipe-grade resin for water and gas applications.
- Specialty multilayer films for aseptic packaging.
- · Specialty high flow melt blown PP grades.
- Development of metallocene-grade polyethylene film.
- Up gradation of existing, polymer extrusion systems for quality improvement and capacity enhancement.
- Online tool for establishing the safe operating boundaries and operating window for high pressure polyolefins plant.
- Process for effective monomer recovery in polyolefin plants.
- Commercialization of terpolymer grade for heat sealing film application.
- Process and catalyst for producing ultra-high molecular weight polyethylene (UHMWPE) with targeted range of molecular weight and high density grades.
- Technology using high performance in-house catalyst for manufacturing alpha olefins.

- Novel homogeneous catalysts and process for ethylene polymerization.
- Regeneration and alternate applications of spent catalysts and adsorbents.
- Synthesis and characterization of noble metal nanoparticles and their deposition on commercial catalysts.
- Lab-scale development of superabsorbent polymers.
- Specialty polyethylene products.
- Lab-scale development of microbial and photocatalytic processes for effluent treatment in acrylonitrile and polyvinyl chloride plants.
- Catalytic process for production of 1-hexene.
- $\bullet\,$  Novel process for producing a rugged, high temperature-insensitive polymer.
- Next generation paraffin dehydrogenation catalyst.
- Identification of novel materials for catalytic applications.
- · Self-healing elastomers.
- Novel catalyst system for 1,3-butadiene.
- Identification of an environmentally friendly process for purified terepthalic acid (PTA) manufacture.
- Implementation of an energy-efficient separation process in PTA plants.

- Degassing drum installation in PTA to reduce methyl acetate losses.
- Development of specialty polyester yarn.
- Development of barrier polyethylene terephthalate (PET) resin for packaging oxygen sensitive foods and beverages.
- Specialty yarns such as insect repellent yarn, multifunctional yarn, and conducting polyester yarn.
- Low antimony polyester products.
- Use of polyester fibres as replacement for hazardous asbestos fibres in cement roof sheets.
- Hydrophilic, spun lace fibres for non-woven wipes.
- Development of cobalt-free polyester resin.
- PET resin with high impact strength and thin-walled, injection moulding applications.
- Improved properties of rPET (recycled PET).
- Catalyst for polyester productivity enhancement and colour improvement.
- Development of bi-shrinkage yarns for improved fabric feel and profiled yarns for differentiated effects.
- Polytrimethylene terephthalate (PTT) based staple fibre



## Feedback

The current Sustainability report, previous editions of our report and additional information can be found at www.ril.com.

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