Photo Captions
Praxair’s resilient end markets include food, beverage, healthcare, specialty gases, environmental and aerospace. Overall, these markets have expanded to 27 percent of sales with several countries, such as Brazil and Canada, already close to the company’s 33 percent target by 2020.

Praxair is a leading supplier of oxygenation systems for the growing aquaculture industry. The cover photograph shows Praxair employees, Ingar Kjøstolfsen, sales manager, Applications, and Thomas Juve, Norway market development manager, at Bremnes Seashore AS in Norway. Praxair delivers oxygen and several other gases to Bremnes’ onshore and offshore facilities in addition to providing them with custom oxygen application solutions.

At Praxair, the world is our lab. With more than 100 university and industry partnerships, and open innovation networks where we actively seek connections with innovators across industries, Praxair has consistently succeeded in leveraging these relationships to bring step change technologies to the world.

Our innovation connections with original equipment manufacturers (OEMs) and major salmon farmers such as Bremnes Seashore have resulted in identifying key industry issues. They have also enabled rapid and collaborative deployment of effective solutions that help maintain or improve fish health at offshore fish farms and support the emergence of land based facilities. These solutions relieve increasing pressure on declining wild catch globally.

Learn more from Praxair’s website at: http://www.praxairfood.com/industries/seafood/gases-and-aquaculture and at: https://youtube/Uiya9RvtrGY

Forward Looking Statement
This document contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based on management’s reasonable expectations and assumptions as of the date the statements are made but involve risks and uncertainties. These risks and uncertainties include, without limitation: the expected timing and likelihood of the completion of the contemplated business combination with Linde AG, including the timing, receipt and terms and conditions of any required governmental and regulatory approvals that could reduce anticipated benefits or cause the parties to abandon the transaction; the occurrence of any event, change or other circumstances that could give rise to the termination of the business combination agreement; the ability to successfully complete the proposed business combination and the exchange offer, including satisfying closing conditions; the success of the business following the proposed business combination; the ability to successfully integrate the Praxair and Linde businesses; the possibility that Praxair stockholders may not approve the business combination agreement or that the requisite number of Linde shares may not be tendered in the public offer; the risk that the combined company may be unable to achieve expected synergies or that it may take longer or be more costly than expected to achieve those synergies; the performance of stock markets generally; developments in worldwide and national economies and other international events and circumstances; changes in foreign currencies and in interest rates; the cost and availability of electric power, natural gas and other raw materials; the ability to achieve price increases to offset cost increases; catastrophic events including natural disasters, epidemics and acts of war and terrorism; the ability to attract, hire, and retain qualified personnel; the impact of changes in financial accounting standards; the impact of changes in pension plan liabilities; the impact of tax, environmental, healthcare and other legislation and government regulation in jurisdictions in which the company operates; the cost and outcomes of investigations, litigation and regulatory proceedings; the impact of potential unusual or non-recurring items; continued timely development and market acceptance of new products and applications; the impact of competitive products and pricing; future financial and operating performance of major customers and industries served; the impact of information technology system failures, network disruptions and breaches in data security; and the effectiveness and speed of integrating new acquisitions into the business. These risks and uncertainties may cause actual future results or circumstances to differ materially from the GAAP or adjusted projections or estimates contained in the forward-looking statements. The company assumes no obligation to update or provide revisions to any forward-looking statement in response to changing circumstances. The above listed risks and uncertainties are further described in Item 1A (Risk Factors) in the company’s latest Annual Report on Form 10-K filed with the SEC and in the proxy statement/prospectus and the offering prospectus included in the Registration Statement on Form S-4 (which Registration Statement has not yet been declared effective) filed by Zamalight plc with the SEC which should be reviewed carefully. Please consider the company’s forward-looking statements in light of those risks.
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Message from Praxair’s Chief Executive Officer

“Sustainable Development is ingrained in Praxair’s culture, and an integral part of our mission of making our planet more productive.”

Dear Stakeholder,

Sustainable Development is ingrained in Praxair’s culture, and an integral part of our mission of making our planet more productive. This year’s Sustainable Value Report again illustrates some of the important achievements that are reflected in our financial and operational results and the global impact of our business.

Commitment to Sustainability
We successfully closed out the first year of our 2020 Sustainable Development Targets (2016-2020), and have achieved or are on track with all of them. 2016 results include:

- Achieving a recordable injury rate that was eight times better, and lost workday cases that were 15 times better, than OSHA benchmarks
- Earning 54% of revenue from our sustainability portfolio, which consists of innovative applications that bring environmental and social benefits to our customers
- Enabling our customers or their end users to avoid more than double the GHG emissions than were emitted in all of our operations
- Realizing more than $100 million in savings from resource efficiency through our sustainable productivity program, which contributed to our 2016 historically strong operating margin and return on capital
- Delivering direct benefits to nearly 350,000 people around the world through our employee engagement program – more than 13 beneficiaries for each Praxair employee

Continued Recognition
Praxair has been selected as a component of the prestigious Dow Jones Sustainability World Index for 14 consecutive years, recognizing the company’s long-standing commitment to environmental and social responsibility – the only U.S. chemical company with this distinction. Praxair was also named to the 2016 CDP Climate A List, recognizing the company’s long-standing commitment to growth through resource productivity and environmental innovation.

Additionally, Praxair was recognized by Forbes as one of the Best Employers in America in 2016 and named to Corporate Responsibility Magazine’s 100 Best Corporate Citizens List for the fifth consecutive year. We are also proud to be named to the DiversityInc’s 2017 list of Noteworthy Companies for Diversity, and named a 2017 World’s Most Ethical Company® by the Ethisphere Institute.

Vision and Values
Our vision to be the best performing industrial gases company in the world means more than just financial performance. It is an ongoing commitment to our core values: safety, integrity, customer satisfaction, diversity & inclusion, environmental stewardship and community engagement, in addition to being a results-driven high-performance company.

I am proud that these values are shared by our more than 26,000 employees around the world. They continue to knit us together as a company, and create lasting social, environmental and economic value over the long term.

Steve Angel
Chairman, President and CEO

* This section responds to G4-1
Praxair Applications Enable >2X Carbon Productivity*

Praxair is a company in the business of resource transformation in a world concerned about climate change. We have adopted a target to demonstrate that we can transform natural resources and add more than twice the value than what we deplete: we seek to annually demonstrate that a subset of Praxair applications allow our customers or their end users to avoid more than twice the GHG emissions of all Praxair operations and its value chain. In 2016, total GHG emissions were 24 million MT CO$_2$e, vs. 68 million MT CO$_2$e avoided by our customers or end users, from the five applications shown below - well over two times more GHG benefit created than depleted. Details are provided in the Performance Dashboard, page 22.

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* This section responds to G4-27, G4-EC7 and G4-EN7. Numbers are rounded to the closest million and don’t sum to total. Details are provided on page 24.
Message from Praxair’s Chief Sustainability Officer

Dear Stakeholder,

This report describes the first year of progress toward our new Sustainable Development 2020 Targets (SD 2020 Targets). These targets will deliver long-term sustainable value for Praxair and our employees, customers, shareholders and the communities where we live and work.

Sustainable value is the delivery of clear business benefits that also help to address significant global challenges. For example, energy is a key feedstock for Praxair products. The previous page shows that Praxair uses energy and emits greenhouse gases (GHG), but that products and technologies that we deliver help our customers avoid more than twice as many GHG emissions as we emit.

Sustainable value can also be very local. Consider a letter received by the manager of a Praxair plant in India thanking Praxair for the performance of one of our drivers. A Praxair tanker truck driver took prompt defensive action to avoid hitting a second tanker truck that had swerved in front of him – as well as a passenger car traveling alongside. The letter writer, who was in the car, wrote that he owed his life, and that of his passenger, to the training, expert defensive driving and composure of the Praxair driver.

From developing applications to meet the global challenge of climate change, to practicing safety vigilance on local roads, much of our success as a business and in our sustainable development activity is owed to our human capital: our employees. The image on the facing page recognizes the net sustainable value created by each Praxair employee in 2016. Together, we are making our planet more productive.

Praxair’s SD 2020 targets are designed to help meet business challenges and to enable us to contribute to meeting some of the world’s biggest social, economic and environmental challenges, as described by the UN Sustainable Development Goals (SDGs). We describe this in the following section.

I offer a warm thank you to all our employees, and to our many stakeholders on whom we depend.

Riva Krut, Vice President & Chief Sustainability Officer
Email: Riva_krut@praxair.com or sustainability@praxair.com
Tel: 203-837-2337

Figure 1: The six capitals of Integrated Reporting
Throughout this report, we show how Praxair nurtures natural capital, human capital, as well as the financial, and intellectual, manufactured and social capitals to create enduring sustainable value. These “six capitals” of Integrated Reporting are referenced with these icons throughout this report.

- FINANCIAL
- NATURAL
- MANUFACTURED
- INTELLECTUAL
- HUMAN
- SOCIAL
Praxair Employees Enable Sustainable Value Creation*

Praxair’s mission is making our planet more productive. This Sustainable Value Report shows how we execute on this mission. We seek to drive financial results and also create sustainable value. In many cases, we seek to create “net positive” impacts by putting more value back into society, the environment, and the economy than we take out. This image recognizes employee contributions by showing elements of Praxair’s 2016 net positive impacts on a per employee basis.

**Praxair Employees Enable Net Sustainable Development Value**

In 2016, each employee enabled the following net sustainable value creation:

- **1,600 MT CO₂e avoided**
- **13 people benefited from community engagement**
- **>60 MT SO₂ avoided**
- **>5,000 people given access to safe drinking water**

*Calculation method: CO₂e avoided was calculated by taking total GHG avoided by use of a subset of Praxair products and technologies (68 Million MT CO₂e), minus its total GHG emissions (24 million MT), which is 44 million MT CO₂e avoided. This was divided by the number of employees (2016: 26,498). SO₂ avoided took the total SO₂ avoided by the use of Praxair hydrogen to make Ultra-Low Sulfur Diesel (1.6 million MT SO₂) minus Praxair total 2016 SO₂ emissions (114 MT), divided by the number of employees. Praxair water treatment applications provided benefits to more than 145 million people. We subtracted the number of people that would consume the equivalent of Praxair’s net fresh water use (63 million cubic meters) and divided by total employees. Community engagement net benefits: Our 2016 employee volunteerism brought direct benefits to nearly 350,000 beneficiaries around the world, or more than 13 beneficiaries per employee.*

* This section responds to G4-EC7
Praxair is a global industrial gases company with a strong track record of delivering value to its multiple stakeholders. Its business model is to transform air and other process gases into products and applications that in many cases help customers become more energy and resource efficient, or provide a social benefit. Praxair oxygen helps steelmakers save energy, allows sustainable aquaculture to thrive, and serves hundreds of thousands of patients needing respiratory oxygen. Praxair hydrogen helps oil refiners to make ultra-low sulfur diesel and helps improve air quality. Praxair high performance surface coatings help improve energy efficiency in jet engines and machine turbines. Praxair’s business success depends on its unrelenting focus on its business model, strategy and key priorities, which are closely aligned with the company’s core values and its mission of making the planet more productive (see pages 29 – 31).

This section describes Praxair’s Sustainable Development priorities and how these create value for its business as well as for society, the economy and the environment.

**Praxair’s SD 2020 Targets**

Praxair embraces a high-performance culture and is proud of its strong track record of long-term sustainable value creation. The company’s SD 2020 Targets identify six Priority Factors (PFs) and 24 related Key Performance Indicators (KPIs), each with performance targets. Icons are also provided in each case to denote value creation from relevant capitals of Integrated Reporting. Most of the targets run 2016-2020 and are metric-based, and most pertain to all Praxair operations worldwide.

These targets were accepted by Praxair’s Executive Leadership Team in 2015 and subsequently accepted and endorsed by Praxair’s Board of Directors Committee on Technology, Safety and Sustainability. This 2016 document reports Praxair’s first full year of results against the new targets.

As part of our continuous improvement process, Praxair performed a condensed sustainable development materiality analysis and accordingly made some adjustments to the SD 2020 targets, see **Confirming Priorities** on page 38. The updated set of 24 targets are provided in the image below. In addition, Praxair Surface Technologies (PST) has four targets to lower product toxicity, in the PF: Product Stewardship. Performance results for all targets for 2016 is provided in the **Performance Dashboard** starting on page 18.

Praxair’s SD 2020 Targets support both short- and long-term value and business sustainability. They are designed to bring business benefits and also to be scalable, replicable and in many cases to add social, economic or environmental value beyond “business-as-usual.” As we describe in the following pages, the achievement of these targets will also help Praxair contribute to meeting some of the world’s most pressing global challenges.

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**SUSTAINABLE DEVELOPMENT**

**TARGETS 2016-2020**

<table>
<thead>
<tr>
<th>SAFETY</th>
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<tbody>
<tr>
<td><strong>OUTPERFORM</strong> ACC large member averages for Recordable Injuries</td>
</tr>
<tr>
<td><strong>OUTPERFORM</strong> ACC large member averages for Days Away from Work</td>
</tr>
<tr>
<td>&lt;3 Vehicle Accidents per million miles driven</td>
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<table>
<thead>
<tr>
<th>COMPLIANCE</th>
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<tbody>
<tr>
<td><strong>MAINTAIN</strong> Praxair’s corporate governance Guidelines and Standards of Business Integrity</td>
</tr>
<tr>
<td><strong>100% Certification</strong> by required employees</td>
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<table>
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<tr>
<th>PRODUCT STEWARDSHIP</th>
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<tbody>
<tr>
<td><strong>CONTRIBUTE</strong> 50% Revenue from SUSTAINABILITY PORTFOLIO</td>
</tr>
<tr>
<td><strong>&gt;500,000 REFRIGERATION ENERGY SOURCED</strong> from Sustainable Productivity</td>
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</tbody>
</table>

<table>
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<tr>
<th>ENERGY &amp; CLIMATE CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CONSERVE</strong> 3 Million MWh ENERGY SAVINGS cumulative 2009-2020</td>
</tr>
<tr>
<td><strong>&lt;2% H2 GHG INTENSITY IMPROVEMENT</strong> cumulative</td>
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<table>
<thead>
<tr>
<th>SUSTAINABLE PRODUCTIVITY</th>
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<tbody>
<tr>
<td><strong>SAVE</strong> $500 MILLION cumulative, from Sustainable Productivity</td>
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<thead>
<tr>
<th>PEOPLE DEVELOPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ENGAGE</strong> ACHIEVE TOP QUARTILE EMPLOYEE ENGAGEMENT results in the chemical industry</td>
</tr>
<tr>
<td><strong>Diversity</strong> Continuous year on year improvement in the representation of women globally and U.S. minorities</td>
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</tbody>
</table>

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*All targets run 2016-2020 unless otherwise noted
**Target applies to employee and contract drivers for all product vehicle accidents
Praxair’s SD 2020 Targets and the UN Sustainable Development Goals (SDGs)

On September 25, 2015, governments around the world officially adopted a set of global goals to end poverty, protect the planet and ensure prosperity for all by 2030. These are called the Sustainable Development Goals (SDGs), see Figure 1: The UN SDGs. There are 17 global goals and 169 targets. They include goals such as ending poverty (SDG 1) and hunger (SDG 2); promoting good health and well-being (SDG 3); supporting decent work and economic growth (SDG 8); responsible production and consumption (SDG 12); and building peace, justice and strong institutions (SDG 16).

This agenda cannot be achieved by governments or companies or NGOs or individuals on their own. Praxair’s SD 2020 Targets will guide our activity in these areas to 2020, and they will also help us contribute to solving some of the global challenges laid out in the SDGs. We show how what we do helps to meet global challenges by lining up our SD 2020 Priority Factors with six SDGs (see Figure 2: Alignment of Praxair’s sustainable development priority factors and select SDGs).

Figure 1: The UN SDGs. Praxair focuses on those goals that are highlighted

Figure 2: Alignment of Praxair’s sustainable development priority factors and select SDGs
Contributing to the SDGs along Praxair’s Value Chain

Praxair’s illustration of how its applications can deliver more than two times the GHG benefits than are depleted in our operations is one example of how the company can contribute to global challenges such as those outlined in the SDGs. This target is placed within our efforts in Product Stewardship, which can contribute to SDG 12: Responsible Production and Consumption.

Overall, Praxair’s actions can contribute to the SDGs at multiple points along our whole value chain, both by increasing our positive impact and minimizing potential negative impacts, see Figure 3: SD2020 Targets & SDGs on Praxair’s value chain.

In sourcing energy, we can show how our commitment to sourcing >500,000 MWh of renewable energy contributes to SDG 7: Affordable and Clean Energy. In selecting suppliers, Praxair’s target to build capacity in minority suppliers will contribute to SDG goal 8: Decent Work and Economic Growth. For employees, we will maintain strong global standards of corporate governance, contributing to SDG 16: Peace Justice and Strong Institutions. In operations, rigorous resource efficiency will lead to more than 8 million MWh in energy savings – equivalent to >5 million MT CO₂e, contributing to SDG 12: Responsible Consumption and Production.

In distribution, the target to maintain fewer than 3 accidents per million miles can contribute to SDG 3: Global Health and Wellbeing. For customers, the innovation target to grow Praxair’s sustainability portfolio can among other benefits, enable a quarter billion people to obtain clean safe drinking water and contribute to SDG 9: Industry, Innovation and Infrastructure. In our communities, the target to contribute cumulatively more than 1,750 community service projects, can contribute to SDG 8.

Praxair contributes to multiple SDGs, but the selection of six major SDG areas of focus is consistent with its business model and sustainable development strategy, priorities and targets.

For example, for Praxair’s business model, its PF of Product Stewardship connects best to SDG 9: Industry, Innovation and Infrastructure. This PF includes three targets, one of which is to
enable safe drinking water to be delivered to 250 million people. This target is a commitment from Praxair’s water technologies, which offer gases and associated technologies for a wide range of applications including drinking water, wastewater, process water and food processing, see page 14. Taking just one of these applications, oxygenation for aquaculture, which is described on the cover and page 23 in this report, the target also can contribute to several additional SDGs such as SDG 6: Clean Water and Sanitation for All; SDG 14: Life Below Water; and SDG 12: Responsible Consumption and Production.

Similarly, Praxair’s PF in People Development lines up with SDG 8: Decent Work and Economic Growth and includes five targets. The target to improve global employee diversity lines up with SDG 8 and also lines up with SDG 10: Reduced Inequalities, as well as some sub-targets in SDG 16: Peace, Justice and Strong Institutions.

**Delivering Sustainable Value & Impacts**

The World Business Council on Sustainable Development (WBCSD) offers a methodology for *Measuring Socio-economic impact: A guide for business*. Their typology identifies and defines five steps towards impacts, starting with inputs (e.g. money spent) through activities (e.g. products or services, training provided) to outputs (e.g. volumes sold, people reached), outcomes (e.g. changes in the lives of the target population) and impacts (i.e. goal-level changes in the lives of the target population or future generations (with respect to factors such as health status, income level, educational level).

Whereas inputs, activities and outputs are clearly within the scope of the firm, the company’s influence becomes less direct for outcomes and quite indirect for impacts. Impacts may be what matter most for society. The UN SDGs, global targets that will need multi-stakeholder participation, can take years to materialize and are difficult to measure and attribute to any one organization. Praxair used the WBCSD typology to show how its SD 2020 Targets can help contribute to the UN SDGs, i.e. can help deliver relevant sustainable development. Icons are also provided in each case to denote value creation from relevant capitals of Integrated Reporting.

<table>
<thead>
<tr>
<th>Company Operations</th>
<th>Distribution</th>
<th>Product Use</th>
<th>Communities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimize negative impact on SDG 7 in its operations by conserving 8 million MWh in energy savings.</td>
<td>Minimize negative impact on SDG 8 in distribution by maintaining &lt;3 accidents per million miles driven.</td>
<td>Minimize negative impact on SDG 9 in operations by developing applications that avoid &gt;2X more GHG than emitted in all Praxair operations.</td>
<td>Increase positive impact on SDG 8 in its communities by contributing &gt;1,750 projects (cumulative) of community service.</td>
</tr>
<tr>
<td>Increase positive impact on SDG 9 in its customer and social benefits by enabling safe drinking water for &gt;250 Million people.</td>
<td>Increase positive impact on SDG 9 in its operations by developing applications that avoid &gt;2X more GHG than emitted in all Praxair operations.</td>
<td>Increase positive impact on SDG 9 in operations by developing applications that avoid &gt;2X more GHG than emitted in all Praxair operations.</td>
<td>Increase positive impact on SDG 8 in its communities by contributing &gt;1,750 projects (cumulative) of community service.</td>
</tr>
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</table>
### SAFETY

**Praxair Goal**

**SAFETY**

<table>
<thead>
<tr>
<th>2020 TARGET</th>
<th>SDG Target</th>
<th>SDG Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle Accidents ≤3 per million miles driven (employees and contractors)**</td>
<td>By 2020, halve the number of global deaths and injuries from road traffic accidents</td>
<td>3 GOOD HEALTH AND WELL-BEING</td>
</tr>
</tbody>
</table>

### Leading by Example

#### INPUTS
- Safety: a core Praxair company value and top priority

#### ACTIVITIES
- Continuous Board and executive review
- Embedded safety into Praxair’s culture, strategy and performance
- Implemented comprehensive set of KPIs and targets, training and technology investment implemented for Praxair and contract drivers
- 100% driver safety training, average 40 hours/yr
- Global technology investment inside and outside trucks to promote safety
- Investment in driver coaching to reduce critical events while driving
- Outreach and training to local communities – emergency responders, schools, driver families

#### OUTPUTS
- Praxair total product vehicle accident rate for preventable and non-preventable accidents held at world class level: 2.65 per million miles
- 10% reduction in Significant Safety events
- 11 fewer people injured
- 3.3% improved truck GHG emissions intensity 2015-2016 and >15% since 2010
- Reduced claim expense on 1st party worker’s comp. and 3rd party auto liability incurred losses
- Distribution productivity savings were $34 million and $391,000 in additional, or incremental, sales revenue

#### OUTCOMES
- Fewer human injuries from accidents
- Lower health costs for drivers, their families and communities
- Better air quality and related human and community health in regions where Praxair works and drives

#### IMPACTS
- S. AMERICA: Drivers are all contract drivers; achieved a PVA rate of 2.43 per million miles driven*

---

* The incidence of road traffic deaths in Brazil is rising and was 23.4 per 100,000 people, costing 1.2% GDP. Brazil has a target to reduce to 11 per 100,000 by 2014 (WHO: 2012). Children are disproportionately affected by road traffic accidents and fatalities.

** Covers product vehicle accidents (PVAs)
**SUSTAINABLE PRODUCTIVITY**

<table>
<thead>
<tr>
<th>Praxair Goal</th>
<th>2020 TARGET</th>
<th>SDG Target</th>
<th>SDG Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>SUSTAINABLE PRODUCTIVITY</td>
<td>$500 Million cumulative, from Sustainable Productivity</td>
<td>By 2030, achieve the sustainable management and efficient use of natural resources</td>
<td>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</td>
</tr>
</tbody>
</table>

**Leading by Example**

**INPUTS**
- A first pillar of Praxair’s strategy is to optimize the base business, a hallmark of our culture and identity
- Business model consistent with resource productivity
- Praxair has developed a mature productivity organization

**ACTIVITIES**
- Proactively identified, measured and aggregated natural resource conservation opportunities (air, fuel, electricity, water, solid wastes and GHG)
- Calculated environmental savings, $ savings and incremental value

**OUTPUTS**

**OUTCOMES**
- 2016
  - $107 MM sustainable productivity savings
  - Nearly 2,200 projects that avoided more than 600,000 MWH, 2 million lbs of hazardous waste, 225 million gallons of water and 393,000 MT CO$_2$e

**IMPACTS**
- 2016
  - 25% productivity from sustainable productivity
  - $19 MM incremental revenue
  - 52% replication rates vs 42% in general productivity – both best ever results for Praxair
  - Contributed to Praxair’s historically strong 2016 operating margin and return on capital
  - Competitive advantage: has become part of Praxair’s culture and intellectual capital

Cumulative 2010 - 2016 contribution to community health local to our facilities: 11,393 projects avoided:
- >2.5MM MT CO$_2$e (equivalent to the energy use of >250,000 U.S. homes in one year or twice that of China)
- 1.4 billion gallons of water, equivalent to the annual water use of nearly 2,000 people in the U.S. or 5,000 people in China

Scalable impact:
- Represents a projected $1 billion gross sustainable productivity savings 2010 - 2020, with related community health and environmental benefits
Enable delivery of **SAFE DRINKING WATER FOR 250 Million people**

### Leading by Example

**INPUTS**
- Praxair gases offer a wide range of applications for drinking water, wastewater and process water and food processing, all while maximizing treatment capacity, reducing VOC emissions and odors, and reducing costs

**ACTIVITIES**
- $O_2$ for wastewater treatment reduces VOCs
- $CO_2$ can reduce pH in water and wastewater
- $O_3/O_2$ as environmentally preferable water disinfectant
- $CO_2$ for desalination
- $O_2$ for water quality improvement
- $O_2$ for aquaculture

**OUTPUTS**
- VOC emissions reductions: U.S., EU
- Reduce pH in water & wastewater: global
- Water disinfection: U.S., Asia, South America, EU
- Desalination: Spain, U.S.
- Water quality improvement: global
- Oxygenation for aquaculture

**OUTCOMES**
- 2016
  - Enabled provision of safe drinking water to 145 million
  - Also improved industrial water treatment, helping improve water quality + reduce environmental emissions, e.g. China; and food processing, e.g. Norway
  - BEIJING: $O_3$ for municipal water recycling and disinfection
  - SHAOXING: $O_3 + O_2$ for Jiangbin Water Treatment Co to reduce industrial discharge pollution
  - NORWAY: New oxygenation systems for aquaculture to maintain fish health

**IMPACTS**
- Scalable: Commitment to 250 million people – 3% of the projected global population in 2020
- BEIJING: help city mitigate water shortages and support sustainability efforts
- SHAOXING: help city reduce threat to fish stocks in the East China Sea
- GLOBAL: sustainable aquaculture helps meet growing global need for quality protein, see *Environmental Innovation* page 23
### PEOPLE DEVELOPMENT *

<table>
<thead>
<tr>
<th>Praxair Goal SUPPLIERS</th>
<th>2020 TARGET</th>
<th>SDG Target</th>
<th>SDG Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Spend $1.5 Billion</strong></td>
<td>with women-, minority-, small business- and other disadvantaged group-owned enterprises, cumulative, in the U.S.</td>
<td>Encourage the formalization and growth of micro-, small- and medium-sized enterprises, including through access to financial services</td>
<td></td>
</tr>
</tbody>
</table>

#### Leading by Example

**INPUTS**
- Global procurement and supply chain programs are committed to sourcing responsibly and supporting diverse suppliers
- Multi-tier diverse spend reporting program; encouraging multiple tiers in supply chain to incorporate the use of and report spend with diverse suppliers
- MEXICO: All programs have diverse suppliers participating

**ACTIVITIES**
- Supply Chain Finance (SCF) program launched in 2015 in the U.S. 2016 was 2nd year of program
- Supplier capacity building and productivity initiatives
- Prime suppliers encouraged to incorporate the use of diverse suppliers, which provides additional economic growth opportunities for diverse and local businesses
- Similar SCF programs in place in Brazil, Canada, China, India and Mexico, all with a portion diverse and minority supplier participation

**OUTPUTS**
- Participants can receive accelerated payments for invoices outstanding; take advantage of Praxair’s competitive interest rates
- 60 diverse suppliers took advantage of the SCF program totaling >$30MM in procurement spend
- Supported by the National Minority Supplier Development Council (NMSDC), launched pilot diverse business matchmaker program

**OUTCOMES**
- 2016
  - Matchmaker program allowed Praxair’s Global Procurement team to network with local diverse businesses seeking sales opportunities. Participants also received training on Praxair’s supplier expectations, qualification process and the benefits of certification with 3rd parties such as NMSDC
  - 70% of diverse suppliers on SCF with whom Praxair spends >$500,000 agreed or strongly agreed that Praxair’s SCF payment option was valuable to their business and helped their company increase cash flow

**IMPACTS**
- 2016
  - One woman-owned business reported that a decrease in the company’s DSO has increased her company’s cash flow and reduced its reliance on more expensive 3rd party borrowing
  - One minority-owned business reported that by utilizing the SCF program and achieving enhanced working capital, they were able to free up additional cash in their business for investment for new technology and capacity building with their customers

*This section responds to G4-EC9*
**Praxair Goal**

**COMPLIANCE**

**2020 TARGET**

**Human Rights**

Uphold Praxair’s Global Policy & Standards

**SDG Target**

By 2020, end abuse, exploitation, trafficking and all forms of violence against children everywhere

**Leading by Example**

<table>
<thead>
<tr>
<th>INPUTS</th>
<th>ACTIVITIES</th>
<th>OUTPUTS</th>
<th>OUTCOMES</th>
<th>IMPACTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Human Rights: Consistent with Praxair values of Ethics and Integrity, and its “Human Rights Policy”</td>
<td>• Human Rights training provided each year to 100% procurement managers, Praxair security organization; select managers</td>
<td>• BRAZIL 2013-2016: 100% Contract drivers (&gt;1,000) given awareness training of the crime of sex trafficking and invited to call an anonymous hotline if they witness a potential crime</td>
<td>2016</td>
<td>• Replication: Praxair to roll out programs in CANADA and MEXICO, 2017-2018</td>
</tr>
<tr>
<td>• Range of activities to determine potential direct and indirect human rights risk</td>
<td>• Related training (e.g. in compliance, diversity, safety) to 100% employees</td>
<td>• U.S. 2015-2016 Praxair Distribution (PDI) and in 2016 US Industrial Gases (USIG): 100% drivers and contract drivers invited to similar training (~2,000 drivers)</td>
<td></td>
<td>BRAZIL</td>
</tr>
<tr>
<td>• Praxair identifies opportunity to take a voluntary leadership to help stop the crime of sex trafficking along long-haul truck routes</td>
<td>• BRAZIL, 2013: Partnered with Na Mão Certa, which coordinates public-private action and training to stop this crime</td>
<td>• Awareness created among Praxair managers and drivers though training and other communication BRAZIL</td>
<td></td>
<td>• Some contract drivers report having made calls to the hotline. These may have stopped some crimes*</td>
</tr>
<tr>
<td></td>
<td>• USA 2015-2016: Engaged with Truckers Against Trafficking</td>
<td></td>
<td></td>
<td>• Distributed educational material to all distribution Centers so that instructor drivers can continue to play their role as a multiplier agent of the program</td>
</tr>
</tbody>
</table>

*This number cannot be tracked. Calls are made anonymously. Drivers participate in this program voluntarily and may or may not report these actions to Praxair.*
**People Development**

**Praxair Goal**
COMMUNITY

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<table>
<thead>
<tr>
<th>2020 TARGET</th>
<th>SDG Target</th>
<th>SDG Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BENEFIT</strong></td>
<td>By 2030, achieve full and productive employment and decent work for all women and men</td>
<td>8 DECENT WORK AND ECONOMIC GROWTH</td>
</tr>
<tr>
<td><strong>1.75 MILLION PEOPLE</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FROM COMMUNITY ENGAGEMENT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(cumulative)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Leading by Example**

**Inputs**
- Praxair Global Giving Program: >$200,000 to sponsor welding training in Louisiana and China to match needs of the local communities and Praxair customers
- Since program inception in 2014, Praxair has provided more than $1 million in workforce development funding through the Praxair Skills Pipeline™ program
- Praxair businesses: in kind support: equipment, professional development, interview skills

**Activities**
- Provided training in welding and cutting processes:
  - LOUISIANA: Partnered with Louisiana’s Community & Technical Colleges System (LCTCS) to sponsor second phase of welding training
  - CHINA: Introduced program. Partnered with welding schools in Guangzhou and Shanghai, benefitting students in low socio-economic and remote areas
- Provided professional development and resume coaching
- Hosted career events with industry + hiring managers for career opportunities

**Outputs**
- Collaborations with four colleges in programs ranging from four months to one-year
  - LOUISIANA: 50 students undergoing training
  - CHINA: 200+ graduates trained in successive four-month programs
- Professional development and equipment for instructors at each of three colleges

**Outcomes**
- Cumulative
  - Students obtained new full-time jobs, several with Praxair customers, Praxair, or elsewhere in industry
  - LOUISIANA: >150 welding credentials attained (Second class of students still in progress.) Typical starting salary $40k for Louisiana students
  - CHINA: Approximately 50% of students now gainfully employed

**Impacts**
- Cumulative
  - >$15 MM estimated increase in potential earnings over the new welders’ lifetimes
  - Improved quality of life for graduates’ families
  - Economic benefits to local communities
  - Increased customer engagement
  - Replicable: After successful second year of program, Praxair is expanding welding workforce development to other geographies and expanding the model to other skills areas
## PERFORMANCE DASHBOARD 2016**

Detail on all these targets is provided in the section following

<table>
<thead>
<tr>
<th>Priority Factors</th>
<th>SD2020 Targets</th>
<th>2016 Results</th>
<th>Status*</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety</strong></td>
<td>Outperform the ACC large member averages for Recordable Injuries</td>
<td>0.39, lower than benchmark: 0.48</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Outperform the ACC large member averages for Days Away from Work</td>
<td>0.07, lower than benchmark: 1.12</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>&lt;3 PVA's per million miles driven</td>
<td>2.65</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Compliance</strong></td>
<td>Maintain Praxair's corporate governance guidelines and a strong culture of integrity, ethics and compliance</td>
<td>Created and maintained a strong ethical culture in every country where we operate</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Ethics &amp; Integrity: 100% certification to Standards of Business Integrity (SBI) by required employees</td>
<td>100% employees certified</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>100% Compliance Training by targeted employees</td>
<td>100% targeted employees trained</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Integrity: 100% review and close of reports to Hotline</td>
<td>100% reviewed and closed</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Human Rights: Uphold our Global Policy &amp; Standards</td>
<td>No allegations of violations of Human Rights</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Product Stewardship</strong></td>
<td>&gt;50% revenue from Sustainability Portfolio</td>
<td>54%</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Enable &gt;2X net GHG benefit from applications</td>
<td>&gt;2X net benefit achieved</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Enable safe drinking water for 250 million people</td>
<td>145 million people</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Lowering product toxicity</td>
<td>Target to provide a sustainable alternative to cadmium plating; three targets in relation to eliminating hexavalent chrome containing slurries</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Energy &amp; Climate Change</strong></td>
<td>Conserve 8 million MWh of electricity cumulative 2009-2020</td>
<td>Achieved a cumulative 4.2 million MWh electricity saved</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>&gt;500,000 MWh renewable energy sourced</td>
<td>521,000 MWh sourced</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>2% hydrogen GHG intensity reduction, cumulative ***</td>
<td>-2.7%</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>7.5% trucking GHG intensity reduction, cumulative</td>
<td>3.3%</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>1 million trees planted /preserved with conservation groups, cumulative</td>
<td>350,000 trees planted or preserved</td>
<td>✓</td>
</tr>
<tr>
<td><strong>Sustainable Productivity</strong></td>
<td>Save $500 million cumulative, from Sustainable Productivity</td>
<td>$107 million saved</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>100% water management plans at high water use sites in water-stressed regions</td>
<td>60 sites identified, program rollout begun</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>&gt;300 sites achieve Zero Waste to landfill</td>
<td>219 sites achieved</td>
<td>✓</td>
</tr>
<tr>
<td><strong>People Development</strong></td>
<td>Achieve top quartile employee engagement results in chemical industry</td>
<td>83% vs benchmark: 73%</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Diversity: Continuous year-on-year improvement in the representation of women globally and minorities in the U.S.</td>
<td>• Global females: 25% (2016: 24%) • U.S. minorities: 19% (2015: 18%)</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>$1.5 Billion spend with women-, minority-, small business- and other disadvantaged group-owned enterprises, (U.S.)</td>
<td>$311 million</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Contribute 1,750 projects of community service, cumulative</td>
<td>373 Projects</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>Benefit 1.5 million people from community engagement, cumulative</td>
<td>About 350,000 beneficiaries</td>
<td>✓</td>
</tr>
</tbody>
</table>

* Check marks ✓ denote that performance is on track to target, or target was achieved
** This section, from page 18 to 28, responds to G4-2 Section 2, targets and performance related to key risks and opportunities
*** This 5-year target assumed a deterioration in performance in 2016-2017 and an improvement thereafter. See details on page 24
SAFETY

OCCUPATIONAL SAFETY – SD 2020 TARGET: OUTPERFORM THE ACC PUBLISHED LARGE MEMBER AVERAGE FOR RECORDABLE INJURY RATE (RIR)

Scope is all Praxair operations. Target is to annually outperform the ACC large industry average for recordable injury rate (RIR), Praxair achieved this target. Our 2016 RIR (the number of recordable injuries per 200,000 hours worked) was 0.39 (improved from 0.41 in 2015) versus 0.52 for the ACC large member 2016 average and eight times better than the OSHA industrial average. Praxair reduced Fatality Potential Events (FPEs) by 10 percent year over year. Regrettably, Praxair experienced one fatality in 2016 resulting from a non-preventable vehicle accident in Mexico. Additional employee and contractor safety results are provided in the SVR Annex at GRI G4 LA6.

OCCUPATIONAL SAFETY – SD 2020 TARGET: OUTPERFORM THE ACC PUBLISHED LARGE MEMBER AVERAGE FOR LOST WORKDAY CASES

Scope is all Praxair operations. Praxair’s target is to annually outperform the ACC large member average for Lost Workday Cases [LWCs, also called Lost Time Injury Frequency Rate (LTIFR)]. Praxair achieved this target. Our 2016 LWC Rate (the number of lost workdays x 200,000/total hours worked) was 0.07 (a slight increase from 0.05 in 2015), versus 0.12 for the ACC large member average and 15 times better than the OSHA industrial average. Additional employee and contractor safety results are provided in the 2016 SVR Annex at GRI G4 LA6.

VEHICLE SAFETY – SD 2020 TARGET: MAINTAIN A RATE OF <3 PRODUCT VEHICLE ACCIDENTS (PVAS) PER MILLION MILES DRIVEN

Scope includes all Praxair and dedicated contract driver performance for all product delivery vehicles worldwide and includes both preventable and non-preventable accidents. Praxair’s annual target is to have fewer than three product vehicle accidents (PVAs) per million miles driven. Praxair achieved this target. Our total PVA rate for Praxair globally in 2016 was 2.65 per million miles, a slight increase from 2.62 in 2015. The rate for Praxair drivers was 2.6 (2015: 3.56), and the rate for contract drivers was 1.82 (2015: 1.63).

We aggressively implement technologies and training to improve driver performance, even while we recognize that approximately 50 percent of our total vehicle accidents are considered “non-preventable,” meaning our driver acted defensively and did everything possible to avoid the accident. As a general matter, the rates of road traffic deaths in middle and low income countries continues to increase, and high income countries, including the U.S., have seen this rate start to rise after decreasing for decades. These broader trends, particularly the increase of accidents due to distracted driving, could impact our total vehicle accident rate. Please see Delivering Sustainable Value, page 12, and SVR Annex GRI G4 LA6 for more information.

LEGEND
All targets are 2016-2020 unless otherwise stated.
Externaly audited information. For audited data reported here normalized vs. baseline, the audit was performed on the underlying net value. Auditor’s report is provided in the SVR Annex.
Praxair’s global Standards of Business Integrity (SBI) and “Compliance with Laws and Business Integrity and Ethics” policies apply to Praxair’s Board and to all employees of Praxair and all subsidiaries, affiliates, partnerships and other business organizations over which Praxair has control, including majority-owned joint ventures. In business ventures in which Praxair is involved, other than those over which it has control, Praxair shall exercise its power and authority as a shareholder or participant to attempt to cause this policy to be adopted and implemented. Praxair contractors, suppliers and service providers must ensure compliance with “Praxair’s Business Integrity & Ethics” policy.

Praxair met this target. High integrity is a corporate value: We continually reinforce the high global standards upon which our reputation has been built, including honesty, ethical conduct and full compliance with the law. Praxair’s Board considers it crucial that Praxair maintains a strong global compliance program and culture. Annually as part of its Strategic Business Objectives review, the Board confirms that Praxair has “Maintained world-class standards in ..., global compliance.” The annual payout of variable compensation is impacted by non-financial performance in these areas. The Board Audit Committee oversees Praxair’s compliance with legal and regulatory requirements. The Chief Compliance Officer reports both to the General Counsel and to the Audit Committee of the Board. The Board Audit Committee annually reviews the effectiveness of Praxair’s compliance with laws, business conduct, and integrity and ethics programs. It assesses the performance of the Chief Compliance Officer, of the compliance organization, which is comprised of 27 compliance champions, and determines whether resources are sufficient.

**ETHICS & INTEGRITY – SD 2020 TARGET: 100% CERTIFICATION TO PRAXAIR’S STANDARDS OF BUSINESS INTEGRITY BY REQUIRED EMPLOYEES**

SBI certification is administered to all required employees, i.e. (A) all employees with high levels of accountability and responsibility for making policy, approving contracts, budgets, etc., e.g. officers, directors, business leaders, high level managers; (B) those professional and managerial employees who interpret policy and manage or administer policy and programs, including financial, safety and environmental, human resources, legal, tax, accounting, accounts payable and receivable, procurement and contract development, etc., (includes all exempt employees); (C) administrative employees who assist in the administration of policy, including financial, safety and environmental, human resources, legal, tax, accounting, accounts payable and receivable, procurement, and contract development, etc. (includes non-exempt salaried employees such as an administrative assistant working in HR, safety, security, finance, procurement, etc.); and (D) other employees not included above, who provide production, distribution, or similar work where there is minimal exposure or opportunity for non-compliance with Praxair’s Business Integrity Standards (this category includes unionized employees and hourly paid employees). All employees in categories “A”, “B”, and “C” above must annually certify SBI compliance, except where law or regulation prohibits inclusion.

In 2016, Praxair met this target. One hundred percent of required employees certified that they have understood Praxair’s “Compliance with Laws and Business Integrity and Ethics” policies. Certification is achieved annually for Praxair’s Standards of Business Integrity (SBI) and biennially to additional related areas. In 2016, additional training covered Doing Business with the Government, Complying with Competition Laws, Understanding the Foreign Corrupt Practices Act, and Best Practices for Email and Written Communications.

In addition, Praxair requires that 100% of relevant third parties whose activities could expose Praxair to risk adhere to its SBI and “Compliance with Laws and Business Integrity and Ethics” policies, and imposes contractual and training requirements to ensure adherence.

**ETHICS & INTEGRITY – SD 2020 TARGET: 100% COMPLIANCE TRAINING BY TARGETED EMPLOYEES**

Scope is all employees in categories “A” and “B” above must complete the biennial training, except where law or regulation prohibits inclusion. In 2016, Praxair met this target. Training included four core modules: (i) Doing Business with the Government; (ii) Complying with Competition Laws; (iii) Understanding the Foreign Corrupt Practices Act; and (iv) Best Practices for Email and Written Communications.

Completing each module takes an average of 45 minutes and includes questions with increasing levels of difficulty. In addition, Praxair has provided additional compliance training in: (i) Government Permits; (ii) Antitrust-Competitors and Key Customers; (iii) Anti-Bribery “Incentives and Benefits;” and (iv) Social Networking – Information Exposure. Also, Praxair has provided Trade compliance training to the procurement and other groups with potential exposure to import and export related activities. All the above mentioned training is delivered through our Learning Module System (LMS) for employees located in Europe (except Russia), Canada and in the U.S.; and face-to-face for employees located in Asia, Mexico and Central America, South America, Russia, and in the Middle East countries.

Praxair’s international operations are subject to the risks of doing business abroad and international events and circumstances, as well as governmental regulations in the U.S. and other countries where Praxair operates that may adversely impact its business, financial position or results of operations. Noncompliance with laws, including those designed to cover securities laws, antitrust, tax and currency controls, safety and environmental protection laws and regulations could result in penalties or sanctions that could have an adverse impact on the company’s financial results and/or reputation.
ETHICS & INTEGRITY – SD 2020 TARGET: 100% REVIEW AND CLOSE OF REPORTS TO THE INTEGRITY HOTLINE

Praxair’s anonymous and confidential third-party Integrity Hotline is available 24/7 in all countries for employees or external parties to report activity that they feel might contravene Praxair policies. Calls into the hotline need to be closed out within 30 days to the satisfaction of Corporate Security. This includes allegations that meet the threshold of Praxair’s policy retaining to the handling of complaints relating to accounting, internal controls, auditing and certain other matters; allegations of violations of SBI; government inquiries or investigations; environmental issues reportable under the Praxair environmental reporting format; and any other compliance issue deemed to be of significance by the region Compliance Review Board. Status is reported quarterly into a dashboard of the corporate Compliance Review Board (CRB). Target is to have 100 percent of the reported issues reviewed and closed, which Praxair achieved. Also, Praxair has a non-retaliatory policy to issues raised through any of our integrity hotline channels (including issues raised directly to management). Each year, Praxair provides a summary of the incidents and substantiated issues to the Integrity Hotline, on its website at www.praxair.com.

HUMAN RIGHTS – SD 2020 TARGET: UPHOLD OUR GLOBAL POLICY & STANDARDS OF HUMAN RIGHTS

As a global business, Praxair is committed to responsible practices in all of the company’s markets, communities and supply chains. Praxair’s SBI, Human Rights Policy and related policies and operational standards, set a tone from the top. These standards and policies embed responsibility to respect human rights within the company’s direct and indirect spheres of influence: in all business functions and regions, for employees, for the communities around Praxair sites, and among business partners. Praxair complies with all applicable national and international laws concerning human rights, social rights and labor rights, consistent with the principles of the Universal Declaration of Human Rights; referenced elements of the International Labour Organization’s Declaration on Fundamental Principles and Rights at Work; and referenced elements of voluntary internationally recognized standards such as the OECD “Due Diligence Guidelines for Responsible Supply Chains of Minerals from Conflict-Affected and High Risk Areas.” Praxair is also a signatory of the Responsible Care® Global Charter.

Praxair achieved this target in 2016. Praxair’s “Human Rights” policy is signed by the CEO. It covers the themes of fair compensation and equal remuneration; working hours and conditions; prevention of discrimination and harassment; safety; freedom of association; prohibition of child or forced labor; and complaint procedure and implementation. Many of these themes are part of Praxair’s basic operational and supplier standards, have been put in place for decades, reflect Praxair’s material risks, and are a clear part of Board responsibility and review (see Governance on page 32). Clear action is outlined for business unit leaders and relevant corporate functions: Chief Compliance Officer and VPs of corporate Human Resources, Procurement, SH&E and M&A.

Praxair’s Supplier Expectations require suppliers and business partners to act in accordance with internationally recognized standards and with Praxair’s “Human Rights” policy. Additional policies apply to specific issues: supporting “Combating Trafficking in Persons”, a “Conflict-Free Materials Supply”, and the “UK Modern Slavery Act of 2015”. The company conducts due diligence to assure implementation of these policies. Praxair is taking voluntary action in an area where the company has a unique opportunity to make a difference: combatting sex trafficking along driver routes. Praxair has engaged actively since 2010 with the Na Mão Certa Program, an initiative of the NGO Childhood Brazil in partnership with the Ethos Institute of Business and Social Responsibility, which aims to mobilize governments, companies and civil society organizations to combat the sexual exploitation of children and adolescents on Brazilian roads. In 2015, Praxair initiated engagement with Truckers Against Trafficking in the U.S., which has similar objectives. For further information, see Driving Sustainable Value: Compliance on page 16 and the SVR Annex G4-HR10 and HR11.
ENVIRONMENTAL INNOVATION – SD 2020 TARGET: CONTRIBUTE >50% REVENUE FROM OUR SUSTAINABILITY PORTFOLIO

Scope is all Praxair operations. Praxair’s target was to annually earn greater than 40 percent of total revenue from the company’s Sustainability Portfolio. In 2016, Praxair earned 54 percent of revenue, or $5.7 billion, from the Sustainability Portfolio. Due to these results, Praxair adopted a new SD 2020 target of annually earning greater than 50 percent revenue from the Sustainability Portfolio.

This target includes sales from Praxair’s eco portfolio and social portfolio, which include applications that bring environmental and/or social benefits; please see Business Model page 30.

For the eco portfolio, Praxair R&D has developed a simplified life cycle-based screening methodology to determine and update which applications are included. A Life Cycle Assessment (LCA) includes the four stages of a product life cycle: raw material acquisition, manufacturing, use/ reuse/ maintenance and recycle/ waste management. A full LCA covers all four stages of the product life cycle; a simplified LCA/ screening LCA covers only part of the four stages of a product life cycle, i.e., it assesses one or two of the stages completely, or analyzes all four stages to lesser depth. Praxair evaluates 100 percent of products under development in depth in the first three stages, i.e., cradle to gate. Products are evaluated for impacts across Praxair’s Environmental Key Performance Indicators (EKPIs): energy (electricity, natural gas and fuel), air emissions and direct and indirect GHG emissions; waste (hazardous and non-hazardous), water and Ozone Depleting Substances (ODSs).

RESOURCE TRANSFORMATION – SD 2020 TARGET: ENABLE >2X MORE GHG TO BE AVOIDED PER YEAR THAN ARE EMMITTED ALONG PRAXAIR’S VALUE CHAIN

Target is to annually demonstrate that a subset of Praxair applications enable customers or their end users to avoid more than twice the GHG emissions of all Praxair operations and relevant elements of its value chain, i.e. Praxair’s combined Scope 1, 2 and 3 GHG emissions. Praxair achieved this target in 2016. A summary is provided on page 5: Praxair Applications Enable More than 2X Carbon Productivity.

Scope is GHG benefits from a subset of Praxair applications that enable demonstrable GHG benefits. Reports the GHG avoided by customers and other end-users by a subset of Praxair applications versus the company’s total GHG value chain footprint [Scopes 1 and 2, and those elements of Scope 3 that are relevant and calculated (see SVR Annex EN17 for Scope 3 data)].

The blue bar shows total Praxair 2016 GHG emissions were 24.1 million MT GHG: Scope 1 direct GHG emissions principally from hydrogen production: 7.3 million MT CO₂e, and from other sources include truck driving: 1 million MT CO₂e; scope 2 indirect GHG emissions mainly from air separation: 12.9 million MT CO₂e; Scope 3 emissions mainly from upstream fuel and energy related activity: 2.9 million MT CO₂e. An accounting of Praxair GHG sources and emissions is provided in the SVR Annex at GRI G4 EN15-19.

The green bar shows GHG avoided by Praxair customers and end-users that can be attributed to the use of a subset of Praxair applications. Five applications were evaluated: argon for welding and krypton for window insulation: avoided 1.5 million MT CO₂e; oxygen for steelmaking: avoided 10 million MT CO₂e; hydrogen used by oil refiners to make ultra-low sulfur diesel (ULSD) in trucks fitted with a diesel particulate filter: avoided 42 million MT CO₂e; and specialty coatings to make thermal barriers for industrial gas turbine and jet engine efficiency: avoided 14.6 million MT CO₂e. These five applications represent 12 percent of 2016 revenue and enabled 68 million MT GHG to be avoided. Praxair achieved more than a two times net GHG benefit, or 43.4 million MT CO₂e.


2016 changes: Added relevant Scope 3 GHG emissions from upstream and downstream value chain to our “footprint” accounting; this increased our reported GHG footprint. (We do not calculate Scope 3 emissions from the processing, use or disposal of our products.) Added an additional application to those that we count for their GHG benefits: Thermal Barrier Coatings, which added 14.6 million MT CO₂ to our “benefits enabled.” These coatings are integral to Praxair’s new strategic focus on resilient markets (aerospace) and will make an enduring contribution to the company’s performance against this target.
The cover of this report and the caption on the inside cover introduce Praxair’s innovations in aquaculture. By leveraging customer and OEM relationships, experience in other industries and decades of know-how and computer modeling, Praxair developed an advanced oxygenation system for fish farming that is capable of delivering high levels of oxygen in high water flow rates with minimal pressure drop, thereby reducing pumping power requirements.

At customer plants, Praxair demonstrated oxygen saturation levels exceeding 200% of air saturation and more than double the O₂ utilization efficiency of currently available systems at full commercial scale. All of this was accomplished while ensuring critical levels of dissolved oxygen are maintained in the tanks sustaining live salmon. The high oxygen utilization efficiency, low pumping power requirements, improved fish health and growth represent significant strides in rapid and sustainable deployment of solutions in this important area of global development.

Praxair leveraged these collaborations to expand its efforts in the development of supporting technologies that address additional major issues the industry is facing - for example the control of sea lice. By working with the same end users and OEMs, Praxair developed a submersible oxygenation system for use before, during and/or after sea lice treatment. This new technology significantly reduces the treatment related stress on the fish and is more practical for the farmers as compared to existing alternatives.

The development of these and other technologies makes it possible to double the quantity of farmed seafood available around the world. While these efforts focused on salmon, Praxair has already engaged with fish farms of other valuable fish species that are being consumed around the world to broaden the use of our oxygenation devices.

Access to high quality proteins, and fish in particular, is a growing issue globally. With extensive fishing in open waters, wild fish stock is less plentiful. Many fish species have reached critically low levels posing a risk of extinction. This has led to the growth of aquaculture and the emergence of recirculating aquaculture systems (RAS) as a sustainable means of raising fish. This will significantly increase the quantity of fish that is available to consumers. The United Nations estimates that by 2030 half of all seafood that is consumed will come from aquaculture.

Environmental Innovation: Bringing New Technologies to Feed a Hungry World

Scope is all end-consumers served by Praxair clean water applications. Target is to enable clean water to be received by 250 million people. This target is on track: In 2016, Praxair gases enabled clean, safe drinking water to be delivered to more than 145 million people (up from 125 million in 2015). The target measures people living in cities where Praxair ozone disinfects water to help make it potable, mainly in China; and where Praxair carbon dioxide aids in desalination, mainly in Spain and the U.S. Praxair calculates the number of end consumers based on market information about Praxair customers, e.g., city water utilities. UN demographic projections are used to project population growth.

Praxair has additional water applications that treat water and wastewater, typically for municipalities. These include a wide range of applications that treat and reuse process water, all while maximizing treatment capacity, reducing VOC emissions, improving safety and reducing costs. For further information, see Delivering Sustainable Value page 14.

PRODUCT STEWARDSHIP – SD 2020 TARGET: LOWERING PRODUCT TOXICITY

PST has established a target that by 2017, it should provide a sustainable alternative to cadmium plating. This is on track. Praxair is working to have this alternative in place not just in the EU, where it is required by the 2006 regulation for the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), but globally.

PST has established three targets in relation to eliminating hexavalent chrome containing slurries. These were prompted by requirements of REACH, but go beyond REACH in that they apply worldwide and will eliminate the toxic substances not just in Europe as required by REACH but everywhere.

• By 2021: Offer 100 percent chrome free slurry product alternatives to the market.

• By 2024: No sales of coating slurries that contain hexavalent chrome for which chrome-free alternatives have been developed and qualified by OEMs.

• By 2029: No sales of coating slurries that contain hexavalent chrome.

RESOURCE TRANSFORMATION – SD 2020 TARGET: ENABLE DELIVERY OF SAFE DRINKING WATER TO 250 MILLION PEOPLE

Environmental Innovation: Bringing New Technologies to Feed a Hungry World

The cover of this report and the caption on the inside cover introduce Praxair’s innovations in aquaculture. By leveraging customer and OEM relationships, experience in other industries and decades of know-how and computer modeling, Praxair developed an advanced oxygenation system for fish farming that is capable of delivering high levels of oxygen in high water flow rates with minimal pressure drop, thereby reducing pumping power requirements.

At customer plants, Praxair demonstrated oxygen saturation levels exceeding 200% of air saturation and more than double the O₂ utilization efficiency of currently available systems at full commercial scale. All of this was accomplished while ensuring critical levels of dissolved oxygen are maintained in the tanks sustaining live salmon. The high oxygen utilization efficiency, low pumping power requirements, improved fish health and growth represent significant strides in rapid and sustainable deployment of solutions in this important area of global development.

Praxair leveraged these collaborations to expand its efforts in the development of supporting technologies that address additional major issues the industry is facing - for example the control of sea lice. By working with the same end users and OEMs, Praxair developed a submersible oxygenation system for use before, during and/or after sea lice treatment. This new technology significantly reduces the treatment related stress on the fish and is more practical for the farmers as compared to existing alternatives.

The development of these and other technologies makes it possible to double the quantity of farmed seafood available around the world. While these efforts focused on salmon, Praxair has already engaged with fish farms of other valuable fish species that are being consumed around the world to broaden the use of our oxygenation devices.

Access to high quality proteins, and fish in particular, is a growing issue globally. With extensive fishing in open waters, wild fish stock is less plentiful. Many fish species have reached critically low levels posing a risk of extinction. This has led to the growth of aquaculture and the emergence of recirculating aquaculture systems (RAS) as a sustainable means of raising fish. This will significantly increase the quantity of fish that is available to consumers. The United Nations estimates that by 2030 half of all seafood that is consumed will come from aquaculture.
ENERGY & CLIMATE CHANGE

ENERGY & GHG EMISSIONS – SD 2020 TARGET: CONSERVE 8 MILLION MWH ELECTRICITY, 2009-2020

Scope is all Praxair operations. This long-term target is to achieve cumulative energy savings in excess of $500 million, 8 million MWh and 5 million MT CO₂e by 2020, from a baseline of 2009. Praxair is on track to meet this target. At the end of 2016, Praxair achieved a cumulative $320 million savings in energy efficiency, 4.2 million MWh electricity and 2.6 million MT CO₂e avoided. In 2016, natural gas savings were 430,000 MMBtu; electricity savings were 950,000 MWh.

Air separation units (ASUs) account for 88 percent of Praxair’s electricity use. To help Praxair achieve the target to save 8 million MWh of electricity by 2020, ASUs aim to improve their energy intensity by 0.7 percent annually. In 2016, Praxair achieved 0.8 percent improvement in ASU energy efficiency. See SVR Annex G4-EN3 for information on Praxair’s electricity consumption, G4-EN5 for Praxair’s energy intensity and G4-EN6 for energy reduction activities.

ENERGY & GHG EMISSIONS – SD 2020 TARGET: 2% HYDROGEN GHG INTENSITY IMPROVEMENT

Scope is all 22 Praxair hydrogen facilities worldwide. The target is to achieve a two percent improvement in GHG intensity by 2020. The target will not be achieved in a linear progression. Praxair took into account anticipated project startups over this period, and the implementation of projected technology innovations. Praxair projected a deterioration in GHG intensity of 3.5 percent (-3.5%) in 2016 because of two large plants coming on stream in 2018 and achieved -2.7%, i.e. better than plan. Praxair is therefore on track to achieve our target in 2020.

Major startups in 2018 are projected to improve Praxair’s overall hydrogen GHG intensity by the end of the year. For example, the Freeport, TX, hydrogen facility will capture and recover by-product streams from Dow Chemical and provide high-purity hydrogen back to Dow and to other customers. The process produces on-specification hydrogen with higher recovery rates, less waste and lower emissions of CO₂. By recovering the by-product hydrogen, rather than producing hydrogen through the reforming of natural gas, the process avoids 300,000 MT per year of direct CO₂ emissions.

ENERGY & GHG EMISSIONS – SD 2020 TARGET: TRUCKING GHG EMISSIONS INTENSITY

Scope is all Praxair driving operations where the driver is a Praxair employee. The metric combines bulk and packaged gas. The target is calculated by multiplying the number of miles driven in each geography by local GHG emissions factors and dividing by product volume delivered. The target is to improve the GHG intensity of trucking 7.5 percent, 2016-2020. Praxair is on track to achieving this target, achieving a 3.3 percent GHG intensity improvement in 2016.

Bulk driving GHG emissions intensity improved 2.9 percent from 2015 and packaged gas driving GHG intensity improved 4.7 percent from 2015. The improvements were due in part to strong fuel efficiency programs in Canada and Mexico.

Fuel efficient driving brings multiple economic, social and environmental benefits, from reduced costs to improved safety for drivers and our communities, improved air quality and fewer GHG emissions.
RENWABLE ENERGY – SD 2020 TARGET: SOURCE >500,000 MWH FROM RENEWABLE ENERGY

Scope is all Praxair operations. Target is to directly source more than 500,000 MWh of renewable energy annually through 2020. This target was achieved for 2016. Praxair sourced 521,000 MWh renewable energy, mainly hydro in New York State, and smaller quantities in Mexico and Brazil; and wind power in India. Praxair’s direct renewables sourcing is equivalent to installing about 100 wind turbines. Direct sourced renewable energy represents about two percent of all Praxair energy use. In addition, Praxair sourced about 31 percent renewable energy indirectly through the energy mix provided from its utilities.


CARBON OFFSETS – SD 2020 TARGET: 1 MILLION TREES PLANTED OR PRESERVED WITH CONSERVATION GROUPS

Scope is all Praxair operations. Praxair’s target is to plant one million trees (2016 – 2020). In 2016, Praxair planted 350,000 trees through employee engagement programs and with environmental conservation groups that received funding from the Praxair Global Giving Program and is on track to achieve the target.

Praxair is collaborating with its businesses and several environmental conservation organizations to achieve the target to plant or preserve one million trees by 2020. This builds on the 900,000 trees planted or preserved, 2012 to 2015.

This contribution of planting and preserving trees provides multiple social, economic and environmental benefits. Praxair’s Greenway Project was designed as an employee engagement tool, to multiply the environmental value created by Praxair’s employee Zero Waste to Landfill (Zero Waste) program; see page 26. Praxair’s Global Giving Program provides a “match” per waste avoided from Zero Waste sites to amplify the sustainability benefits provided to the company by the employee Zero Waste program. See “Environmental Engagement” at www.praxair.com.
SUSTAINABLE PRODUCTIVITY

PRODUCTIVITY SAVINGS – SD 2020 TARGET: SAVE $500 MILLION (CUMULATIVE) FROM SUSTAINABLE PRODUCTIVITY

Scope is all Praxair operations. Measures productivity projects that bring financial and environmental savings in Praxair’s EKPI areas. Praxair’s target for sustainable productivity is a cumulative savings of $500 million, 2016-2020. In 2016, the program achieved savings of more than $107 million and is on track to reach $500 million by 2020.

Praxair’s sustainable productivity program delivers impressive results. From the inception of this program in 2010 to the end of 2016, 11,000 projects saved nearly $700 million, and avoided more than 4.3 million MWh, 2.6 million MT CO₂e and 5.3 million cubic meters of water. Energy efficiency projects alone saved more than $320 million. The bulk of the company’s energy efficiency investment goes towards improving turbines, compressors, fans and other primary process equipment, as well as heat transfer efficiency and control equipment. For example, at Praxair’s East Chicago Air Separation plant, an opportunity was identified to reduce different sources of vented argon and increase argon production without increasing energy consumption. As a result, the plant captures and sells additional high purity argon for each hour the plant operates. This project avoided 11,000 MWh of electricity, equivalent to 5,475 MT CO₂e; and 8,000 cubic meters of water. For additional details, see Delivering Sustainable Value page 13 and SVR Annex G4 EN-6, 8, 19 and 30.

ECO EFFICIENCY – SD 2020 TARGET: # SITES BY REGION THAT ARE IMPLEMENTING WATER MANAGEMENT PLANS

Scope is all Praxair global sites that are high water users in areas of high water stress as defined by the World Business Council on Sustainable Development (WBCSD) Global Water Tool (2015 version). We determined “high stress” to mean that the baseline water stress was “medium to high,” “high” and “extremely high.” This includes 53 sites. In addition, SAWM voluntarily included seven additional sites, bringing the total to 60 sites. Fourteen of these sites are in our U.S. Industrial Gas business; one in Canada; 11 in Asia; nine in the EU; 4 in Mexico; 12 in South America (including the seven voluntary sites); and 9 HyCO sites (8 in the U.S. and one in Peru). Together these sites account for about half of all Praxair water use and 20 percent of production plants that report water use (Praxair reports water for all sites where monthly use exceeds 10,000 gallons/month). In the first year of this target, we focused on putting reporting systems in place, making technology investments, and increasing the frequency of reporting from annual to quarterly.

Praxair South America has taken a leadership role internally. Not only did they voluntarily include additional sites, they also adopted an absolute reduction target of one percent of total water volume by 2020, from a 2014 baseline. Ten sites achieved this target at the end of 2016, achieving an overall water reduction of more than 700,000 M3 – a 17.5 percent reduction. Investments were made to install meters and to re-use rainwater and condensate. Also see 2016 SVR Annex GRI G4 G4-EN8 - EN10.

ECO EFFICIENCY – SD 2020 TARGET: >300 SITES ACHIEVE ZERO WASTE TO LANDFILL

Scope is all Praxair operations. 2020 target is for >300 sites to achieve Zero Waste to Landfill. As of the end of 2016, 221 sites achieved Zero Waste to Landfill, putting Praxair on track to achieve target. Praxair defines Zero Waste to Landfill for this program as a site that diverts more than 90 percent process waste from landfill; this can include incineration for energy recovery. Altogether, 386 sites participated, representing around half of all employees worldwide. Praxair Europe is already 100 percent Zero Waste at all facilities. Several additional Praxair businesses have adopted targets to also be 100 percent Zero Waste by 2020.

In 2016, more than 157 million pounds of waste were diverted from landfill. Cumulatively since 2011, the program has avoided nearly 550 million pounds of waste from going to landfill and saved more than $1,000,000.

Zero Waste to Landfill helps extend Praxair’s mission and values and leverage our corporate culture. In many cases, the program is bringing social benefits to local communities, from education to job creation.

In addition to Praxair facilities, company offices have stepped up environmental awareness. Praxair Shanghai was awarded the WWF Green Office diploma; and four Praxair offices were awarded recognition as Green Seal™ Green Office Partners: Praxair global headquarters in Danbury, CT, as well as Praxair India headquarters in Bangalore and Burr Ridge, Illinois, and Praxair Europe headquarters in Madrid.
PEOPLE DEVELOPMENT

EMPLOYEE ENGAGEMENT – SD 2020 TARGET: ACHIEVE TOP QUARTILE EMPLOYEE ENGAGEMENT RESULTS IN THE CHEMICAL INDUSTRY

Scope is all Praxair employees. Annual target is to achieve top quartile employee engagement results in the chemical industry, as determined by major third party HR polling firms such as Willis Towers Watson. Praxair achieved this target with an overall employee engagement index score of 83 percent, eight percent higher than benchmark industry peers for the Global Chemical Companies Norm. The latest survey was distributed to all Praxair worldwide employees and hourly workers, and substantially expanded the number of questions and the number of employee invitees compared to the previous survey. Survey responses were received from 18,883 employees, 73 percent of the respondent pool. Recently, Praxair employees answered an additional and shorter Employee Engagement Pulse Survey. This was distributed to 30 percent of employees in 2016 and reconfirmed an employee engagement score of 83 percent.

Praxair achieved these results by investing in multiple programs and activities. Each year, more than 80 percent of our employee volunteers in Praxair’s Community Engagement projects report that these projects promote employee engagement. One example is Salvador Gonzalez Cano, Bulk Fleet Maintenance Manager in Praxair’s San Nicolas plant in Mexico. Salvador was the inspiration behind a project in Mexico called Furniture for All. Employees from four Praxair sites taught safe carpentry skills to make benches from scrap wooden pallets to more than 1,000 local residents, including children. The benches were provided to the local community. “When we have the resolve to achieve great results, we can do extraordinary things,” he said. “All of us who work at Praxair share an excellent spirit of collaboration.” The team is shown in the photograph on page 28.

DIVERSITY & INCLUSION – SD 2020 TARGET DIVERSITY: ACHIEVE CONTINUOUS YEAR-ON-YEAR IMPROVEMENT IN THE REPRESENTATION OF WOMEN GLOBALLY AND MINORITIES IN THE U.S.

Praxair set these aspirational goals for its exempt global female and U.S. minority populations. The aspirational goals have 2015 as the baseline, with the objective of continuous improvement in diversity representation year over year. For 2015, the percentage of global females was 23.7 percent, which improved to 24.5 percent for 2016. Of Praxair’s global female population, senior leadership declined from 19.4 to 17 percent, middle management stayed flat at 17 percent and professional levels trended up from 24 to 25 percent. For 2015, the percentage of U.S. minorities was 18 percent, which improved to 19 percent for 2016. Of Praxair’s U.S. minority population, senior leadership increased from 20 to 22 percent, middle management trended up from 14.3 to 15.7 percent, and professional levels trended up from 18.3 to 19.2 percent. Further information is provided in the 2016 SVR Annex G4-LA12 “Diversity and Equal Opportunity.”

SUPPLIER ENGAGEMENT – SD 2020 TARGET: SPEND $1.5 BILLION WITH WOMEN-, MINORITY-, SMALL BUSINESS-, AND OTHER DISADVANTAGED GROUP-OWNED ENTERPRISES, CUMULATIVE

The scope of this target is U.S. procurement spend. The target is to spend $1.5 billion cumulatively on goods and services from women-, minority-, small business-, and other disadvantaged group-owned enterprises. Praxair is on track with this target: The company spent $311 million in 2016, including $272 million with small businesses (increase of 22 percent from 2015), $31 million with woman-owned businesses (increase of 15 percent from 2015) and $7.6 million with minority-owned businesses (increase of 33 percent from 2015).

Praxair procurement and supply chain programs are committed to sourcing responsibly and supporting the growth of diverse suppliers and local manufacturing. We continue to incorporate qualified diverse suppliers in a range of procurement opportunities and invest in programs that help suppliers gain access to affordable financing options. Additionally, by leveraging subject matter expertise from our own employee base, we have been able to provide training needed to help our suppliers grow and strengthen their lines of business. Also see Delivering Sustainable Value page 18.
This scope covers all employee-based Praxair community engagement activity. The metric counts direct beneficiaries as reported by the employee or the project leader in a Praxair database that has been active since 2010. The 2020 target is a cumulative 1,750 projects from 2016. Praxair reports 373 projects in 2016, on track to meeting the 2020 target. Employee volunteers report positive impacts personally and professionally: 74 percent of volunteers reported that their project improved their management effectiveness; 80 percent reported that it promoted positive employee engagement; and 83 percent reported that it increased their awareness of community needs. In addition, 70 percent report that their projects had a positive impact on Praxair’s reputation.

Praxair is a global company with a strong local footprint. Community Engagement projects tend to be just that: local projects that attend to local needs. Employee projects focus on four themes: Health (32 percent); Education & Diversity (32 percent); Community Support (21 percent) and Environment (15 percent). The local focus of these projects is aligned with the business in that region, as the company tends to hire talent, and source contractors and suppliers, locally. This is exemplified by the ONE Degree program established by the Praxair Global Procurement and Materials Management (GPMM) group in mid-2014.

ONE Degree captures the concept of “one degree” of separation between our businesses and local suppliers. Its vision is “to enhance the lives of children and their families, in the communities that we live and serve, by providing educational support and opportunities for success.” Procurement teams in each region identified and sought to make a positive impact on local challenges. In Brazil, China, India and the U.S., 153 volunteers contributed more than 2,000 hours and benefited more than 2,000 youths.


Scope is all employee-based Praxair community engagement activity. The metric counts direct beneficiaries as reported by the employee or the project leader into a Praxair database that has been active since 2010. The 2020 target is a cumulative 1.75 million people benefiting from community engagement cumulatively from 2016. In 2016, Praxair Community Engagement benefited 349,905 people, on track to meeting the target in 2020. Since the inception of this reporting metric, Praxair employee community-engagement has benefitted more than 2 million people. More information is provided in Praxair’s 2016 Community Engagement Report and in the Sustainable Development Reporting Center area on our website: www.praxair.com, and the 2016 SVR Annex at GRI G4-SO1.
**ABOUT PRAXAIR***

**Business Model**

Praxair is a Fortune 300 company with 2016 sales of $10,534 million and approximately 26,500 employees. We are a leading industrial gases company in North and South America and one of the largest worldwide, doing business with more than one million customers in more than 50 countries. The company produces, sells and distributes atmospheric, process and specialty gases, and high performance surface coatings. Praxair products, services and technologies are making our planet more productive by bringing efficiency and environmental benefits to a wide variety of industries, including aerospace, chemicals, food and beverage, electronics, energy, healthcare, manufacturing, primary metals and many others.

The Business Model table on the next page describes Praxair’s natural capital value creation, from raw material Inputs and business Activities to Outputs, Outcomes and Impacts.

**Inputs & Activities:** The highest volume products produced are atmospheric gases. Using air, a renewable raw material, Praxair produces oxygen, nitrogen and argon principally through cryogenic air separation, which is energy (electricity) intensive. Cryogenic air separation is also used to produce rare gases such as krypton, neon and xenon. Praxair’s process and specialty gases include hydrogen, carbon dioxide and helium; as well as other specialty gases and acetylene. Hydrogen and carbon monoxide can be produced by either steam methane reforming or auto-thermal reforming of natural gas or other feed streams such as naphtha; or by purifying by-product sources. Most carbon dioxide is purchased from by-product sources and is processed in Praxair’s plants to produce commercial and food-grade carbon dioxide. Most of the helium sold by Praxair is sourced from certain helium-rich natural gas streams in the United States, with additional supplies being acquired from outside the United States. Acetylene is primarily sourced as a chemical by-product, but may also be produced from calcium carbide and water. Praxair also has a surface technologies materials business that improves the quality and durability of coatings and the use of specialty powders for new applications and industries; its raw materials are principally rare earth minerals and specialty gases.

**Outputs:** Praxair’s applications - the “Outputs” in the table - serve a range of markets from manufacturing and metals to healthcare and aerospace. In this section of the table, the green colored cells highlight some of Praxair’s applications that bring environmental benefits and some social benefits, and are tracked and counted as part of the Eco Portfolio. The use of oxygen for steelmaking, for example, enables steelmakers to produce high quality steel. Oxygen helps to improve steelmaker’s energy efficiency and brings other environmental benefits as well as improved costs and productivity. Blue cells denote other applications that bring only social benefits, like the use of oxygen for respiration, or helium in MRIs. White cells denote other significant applications that do not bring a direct environmental or social benefit or are not tracked separately.

**Outcomes:** Many Praxair applications enable positive economic, environmental and social benefits or “Outcomes.” More than half of Praxair revenue is generated by applications that bring social and environmental benefits, principally energy efficiency, but also fewer air emissions, and cleaner drinking water. The use of natural capital inputs through activities, outputs and outcomes can be shown by looking at Praxair’s energy and greenhouse gas footprint vs. the value created, also see Praxair Applications Enable >2X Carbon Productivity, page 5.

**Impacts:** Many of these Outcomes can be shown to enable broader and longer-term “Impacts,” and can have a positive impact on several of the UN Sustainable Development Goals (SDGs). See Delivering Sustainable Value, pages 8 and following.

Importantly, Praxair’s business model is local in most of its markets. Our businesses each have a strong regional and country identity, including local management, local employees and local suppliers, and are embedded in their communities, typically for the long term. The range and scale of Praxair benefits can be shown on a per employee basis, see Praxair Employees Enable Sustainable Value on page 7.

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*This section responds to G4-4, G4-8, G4-14, G4-15 and G4-56
## Business Model

### Inputs

<table>
<thead>
<tr>
<th>Raw Materials</th>
<th>Air and Electricity</th>
<th>Natural Gas or Industry Byproducts, Water (Steam)</th>
<th>Industry Byproduct, Natural Wells</th>
<th>Byproduct from Natural Gas Processing</th>
<th>Rare Earth Minerals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Stewardship</td>
<td>Managing environmental and safety aspects through the product life cycle from raw materials sourcing and supplier engagement to operations, distribution and customer use.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Activities

<table>
<thead>
<tr>
<th>PRODUCTS</th>
<th>O₂</th>
<th>N₂</th>
<th>Ar</th>
<th>H₂</th>
<th>CO₂</th>
<th>He</th>
<th>Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUSINESS OPERATIONS</td>
<td>ATMOSPHERIC GASES</td>
<td>PROCESS &amp; SPEC GASES</td>
<td>COATINGS</td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

### Outputs

<table>
<thead>
<tr>
<th>2016 END MARKET (% revenue)</th>
<th>EXAMPLES OF SIGNIFICANT PRODUCT APPLICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing &amp; Metals (40%)</td>
<td>Steel making, glass, non-ferrous metal processing</td>
</tr>
<tr>
<td></td>
<td>Inerting, metals processing</td>
</tr>
<tr>
<td></td>
<td>Welding, stainless steel production, window insulation</td>
</tr>
<tr>
<td></td>
<td>Heat treatment of stainless steel</td>
</tr>
<tr>
<td></td>
<td>Welding</td>
</tr>
<tr>
<td>Energy (12%)</td>
<td>Refinery processing</td>
</tr>
<tr>
<td></td>
<td>Inerting, blanketing, purging</td>
</tr>
<tr>
<td></td>
<td>Diesel &amp; gasoline reformulation</td>
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<tr>
<td></td>
<td>Replaces acids in industrial processes</td>
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<tr>
<td></td>
<td>Leak detection</td>
</tr>
<tr>
<td>Chemicals (10%)</td>
<td>Water treatment</td>
</tr>
<tr>
<td></td>
<td>Manufacture of ammonia, methanol</td>
</tr>
<tr>
<td></td>
<td>Synthesis &amp; separation</td>
</tr>
<tr>
<td></td>
<td>Leak detection</td>
</tr>
<tr>
<td>Food &amp; Beverage (9%)</td>
<td>Modified Atmosphere Packaging (MAP), Aquaculture</td>
</tr>
<tr>
<td></td>
<td>Freezing, chilling, preservation</td>
</tr>
<tr>
<td></td>
<td>Cryogenic freezing</td>
</tr>
<tr>
<td></td>
<td>Beverage carbonation</td>
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<tr>
<td>Healthcare (8%)</td>
<td>Respiration</td>
</tr>
<tr>
<td></td>
<td>Cryopreservation</td>
</tr>
<tr>
<td></td>
<td>Medical gas, MRIs</td>
</tr>
<tr>
<td>Electronics (8%)</td>
<td>Inerting</td>
</tr>
<tr>
<td></td>
<td>Cleaning &amp; inerting</td>
</tr>
<tr>
<td></td>
<td>Inerting</td>
</tr>
<tr>
<td></td>
<td>Electronics processing</td>
</tr>
<tr>
<td>Aerospace (3%)</td>
<td>Fuel</td>
</tr>
<tr>
<td></td>
<td>Autoclave</td>
</tr>
<tr>
<td></td>
<td>Welding</td>
</tr>
<tr>
<td></td>
<td>Fuel</td>
</tr>
<tr>
<td>Other (10%)</td>
<td>Water treatment</td>
</tr>
<tr>
<td></td>
<td>Water treatment</td>
</tr>
<tr>
<td></td>
<td>Laboratories</td>
</tr>
<tr>
<td></td>
<td>Coatings</td>
</tr>
</tbody>
</table>

### Outcomes

Examples of environmental, economic, and social benefits:

- Productivity, product quality
- Human health and safety
- Fewer emissions of NOx, SO₂, VOCs
- Cleaner drinking water
- Medical O₂
- More energy efficient industrial production
- Fewer GHG emissions
- More energy efficiency
- Fewer black carbon and GHG emissions
- Cleaner manufacturing
- Fewer environmental releases
- Improved product durability, Essential for Solar PV
- Cleaner drinking water
- Medical O₂
- Freezing + preserving food, medical samples
- Better air quality
- Water treatment & desalination
- MRIs, LCDs, diving gases, airbags
- Chrome cadmium replacement

### Impact

DELIVERING SUSTAINABLE VALUE (see pages 8-17)
Executing and Delivering Our Strategy

<table>
<thead>
<tr>
<th>Optimize Base Business</th>
<th>Grow Resilient End-Markets</th>
<th>Capitalize On Acquisitions / JVs</th>
<th>Execute Backlog &amp; Win New Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Price attainment of +1%</td>
<td>• Grew exposure to 27% of total sales; expect 33% by 2020</td>
<td>• Yara CO₂ acquisition increased CO₂ portfolio to 10% of total sales</td>
<td>• +$1B in project wins in the USGC (-70% of total backlog)</td>
</tr>
<tr>
<td>• $2.8B operating cash flow, record 26% sales</td>
<td>• Added CO₂ sources in the U.S.; 50% increase over the last three years</td>
<td>• GE JV (aircraft engine coatings) expected to grow to &gt;$200 MM sales</td>
<td>• 8% average per year expected contribution to EPS from 2017 onward</td>
</tr>
<tr>
<td>• Aligned cost structure to changing market conditions</td>
<td></td>
<td>• +15 packaged gas acquisitions</td>
<td></td>
</tr>
</tbody>
</table>

Figure #: Executing and Delivering Our Strategy

Mission*
Praxair’s mission is making our planet more productive. We develop technology, products and services that help to sustain and protect our planet. This mission and our values, strategy and growth drivers are the bedrock of Praxair’s sustainable development strategy and foundation for its sustainable development priorities.

Our Core Values

Safety First
A passionate commitment to safety underpins all of our activities. The safety of our products and services, safety at work, safety on the road and safety at home are the highest priorities for our employees, contractors, families and customers.

High Integrity
We continually reinforce the high global standards upon which our reputation has been built, including honesty, ethical conduct and full compliance with the law.

Results Driven
With personal accountability, collaboration, and innovation, we focus on consistently delivering value to all our stakeholders.

Customer Satisfaction
We provide products, applications technologies and services that represent the highest standards of quality and reliability. We work closely with our customers to overcome their challenges and achieve their goals.

Diversity & Inclusion
We place a high value on attracting and developing talented people from diverse backgrounds, creating an inclusive environment where employees can make an impact.

Environmental & Social Responsibility
We help customers worldwide improve their environmental performance and carbon footprint, while minimizing our own environmental resource intensity and maximizing our social and community contributions.

Business Strategy
Praxair’s business strategy is outlined in the Executing and Delivering Our Strategy figure above. First is to optimize the base business of industrial and process gases that serve the major end-markets of manufacturing & metals, energy and chemicals, that together generated 62% 2016 revenue. Second is to drive 33% revenue by 2020 from our new strategic focus on resilient end-markets such as healthcare, food & beverage, environmental, specialty gases and aerospace. Third is to execute on the project backlog and win new projects. Fourth is to leverage the anticipated cyclical recovery in emerging markets, oils and metals, and to benefit from the associated currency exchange tailwind.

Praxair Applications Enable >2X Carbon Productivity shows the net GHG benefit created by Praxair applications across this strategy: from Praxair’s base business (oxygen for steel and krypton and argon for welding), its growth business (hydrogen) and its focus on resilient end-markets (materials for aerospace). See page 5.

Praxair Policies**
Praxair’s policies and position statements are provided at www.praxair.com. Praxair’s “Business Integrity and Ethics Policy” and “Compliance with Laws Policy” establish the “tone at the top” and define what is expected of Praxair employees at all levels. Praxair’s Standards of Business Integrity (SBI) makes it clear that Praxair is committed to consistent, global high standards of ethical and responsible conduct in compliance with applicable laws in all the countries where it does business. A range of corporate policies cover issues from Product Stewardship to Human Rights. These reference and/or are aligned with relevant externally developed environmental, economic and social charters, and are maintained and updated as needed.

Praxair’s environment, health, safety and security program is certified to the Responsible Care Management System®. The company is a signatory of the new Responsible Care® Global Charter and its Six Elements. See the Product Stewardship section of our website: www.praxair.com. Praxair supports the Precautionary Principle as defined in Principle 15 of the Rio Declaration: “In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation.” Praxair uses a well-defined, science-based process for assessing and managing risks in the face of uncertainty.

* This page responds to G4-14 and G4-15
** This page responds to G4-56
A comprehensive review of Praxair’s corporate governance framework is provided in its March 2017 Proxy Statement, and on our website: www.praxair.com.

Praxair’s Board of Directors
Praxair’s Board of Directors consists of nine Board members; an executive director (chairman and CEO) and eight independent directors. In order to enhance the Board’s independence and oversight of management, the independent directors elected a lead director from among their group. The lead director presides over meetings of the non-management directors and performs other duties, including coordinating a performance review of the CEO. The Board also has processes in place for the highest governance body to ensure that conflicts of interest are avoided.

Overall corporate governance, risk management and shareholder engagement is overseen by the full Board and its committees and is described in Praxair’s March 2017 Proxy Statement. Among other items, the March 2017 Proxy Statement confirms that the key aspects of the corporate governance structure are in place in areas of particular interest to the sustainability community, such as director independence; appropriate board committees including a sustainability committee; board effectiveness and alignment with long-term shareholder interests; industry experience; CEO variable compensation; management stock ownership requirements; and disclosure of CEO compensation.

The “Letter from Our Lead Director” in the March 2017 Proxy Statement emphasized the Board’s commitment to a strong corporate governance structure; to a diverse, qualified, independent and engaged Board of Directors; to shareholder outreach (including, in 2016, direct communication with the Board); to the integration of shareholder feedback into executive compensation design; and to environmental and social responsibility.

Praxair’s Executive Officers
Praxair’s Executive Officers are elected by the Board of Directors and serve at the pleasure of the Board. The Board elects Praxair’s officers annually following each annual meeting of shareholders.

* This section responds to G4-34
** David Strauss was named an Executive Officer in April 2017

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**CESARE ARMANI**
Chairman and Chief Executive Officer, Praxair, Inc.

**EDUARDO MENEZES**
Executive Vice President

**SCOTT E. TELESZ**
Executive Vice President

**ANNE K. ROBY**
Senior Vice President

**MATTHEW J. WHITE**
Senior Vice President and Chief Financial Officer

**GUILLERMO BICHARA**
Vice President, General Counsel and Corporate Secretary

**Kelcey Hoyt**
Vice President and Controller

**DAVID STRAUSS**
Vice President and Chief Human Resources Officer**
Alignment with Compensation

In the discussion of annual performance-based variable compensation, the Board Compensation and Management Development Committee observed that the Company’s culture is the foundation on which employees drive and deliver financial results. They confirmed the importance of setting non-financial objectives to reinforce leadership’s focus on maintaining an enduring culture that supports both short- and long-term sustainable results and established annual non-financial goals with respect to those elements.

<table>
<thead>
<tr>
<th>Non-financial Incentives - GOALS</th>
<th>Non-financial Incentives - DETAIL</th>
<th>Strategic Non-financial business results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety:</strong></td>
<td>• Providing our employees with a safe operating environment through investing in state-of-the-art technology and by driving a culture in which safety is a top priority</td>
<td>• Maintained world class performance in safety with a 10% reduction in significant safety events</td>
</tr>
<tr>
<td>• Zero fatalities</td>
<td></td>
<td>• Record year for recordable injury rates that was eight times better than industry average</td>
</tr>
<tr>
<td>• Maintain best in class safety rates</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Compliance:</strong></td>
<td>• Create and maintain a strong ethical culture in every country where we operate</td>
<td>• Continued programs and practices, such as the annual certification of the Standards of Business Integrity, to ensure a strong ethical culture is upheld in every country in which we operate</td>
</tr>
<tr>
<td>• Maintain a strong global compliance program and culture</td>
<td>• All employees accountable for ensuring that business results are achieved in compliance with local laws and regulations and our Standards of Business Integrity</td>
<td></td>
</tr>
<tr>
<td><strong>Productivity:</strong></td>
<td>• Deliver value through continuous innovation to help our customers enhance their product quality, service, reliability, productivity, safety, and environmental performance</td>
<td>• Strategically pursued resilient markets, on target to grow from 25% to 33% of total sales by 2020</td>
</tr>
<tr>
<td>• Enhance organizational capabilities in tools, processes and practices</td>
<td></td>
<td>• Increased CO₂ capacity by 50% in the U.S., and in Europe, the Yara CO₂ acquisition significantly strengthened the growth platform on the continent</td>
</tr>
<tr>
<td><strong>Environmental Performance and Sustainability:</strong></td>
<td>• Rigorous processes and procedures to ensure compliance with all applicable environmental regulations, to meet sustainable development performance targets and to continuously reduce the environmental impact of our operations in the communities in which we operate</td>
<td>• Optimized base business through productivity</td>
</tr>
<tr>
<td>• Superior performance in SD including environmental stewardship</td>
<td></td>
<td>• Maintained industry leading project execution with 98% first year reliability</td>
</tr>
<tr>
<td><strong>Productivity:</strong></td>
<td>• Work across disciplines, industries and sectors, with our employees, customers, suppliers and a range of other stakeholders to get more output utilizing fewer resources and with less environmental impact</td>
<td>• Dow Jones Sustainability World Index for 14th year in a row</td>
</tr>
<tr>
<td>• Enhance organizational capabilities in tools, processes and practices</td>
<td>• … to get more output utilizing fewer resources and with less environmental impact</td>
<td>• Recognized as only industrial gases company that made the “CDP A-List” for the Materials sector</td>
</tr>
<tr>
<td>People Development:</td>
<td>• Attraction, retention and development of a diverse and engaged workforce through a robust succession planning process</td>
<td>• Had over 200 sites achieving over 90% waste reduction</td>
</tr>
<tr>
<td>• Strengthen leadership pipeline, including globally diverse talent</td>
<td>• Employee value proposition includes providing strong, dynamic leadership, a challenging work environment, industry leading performance, competitive pay and benefits, and rewards and recognition for outstanding performance</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Continued to develop a diverse pipeline of future senior leaders</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Received “Top 25 Noteworthy Company” by DiversityInc and a perfect score of 100 by The Human Rights Campaign for workplace equality and advocacy</td>
<td></td>
</tr>
</tbody>
</table>

* March 2017 Proxy Statement pages 40-44.
Sustainable Development Governance*

Sustainable development is governed by the Board and executive leadership and integrated throughout Praxair:

The Board Technology, Safety & Sustainability (TSS) Committee assists the Board in its oversight of sustainability and environmental matters. Its Charter is referenced in Praxair’s March 2017 Proxy Statement and is available on www.praxair.com. The committee, which is made up of four independent, non-executive directors, met twice in 2016. Among other duties, it reviews Praxair’s policies, programs, practices and performance related to identifying and managing priority sustainable development topics. The TSS Committee undertakes a regular review of the Company’s sustainability program and certain enterprise risks such as natural disasters and plant control systems and security. Other risk areas are regularly reviewed by the full Board. Safety and environmental risk are covered at each Board meeting. The vice president, Sustainable Development, reports at least annually to this Committee.

In 2016, the Board TSS Committee reviewed Praxair’s policies, programs and practices related to sustainability and the environment, and the first year results for Praxair’s new Sustainable Development 2020 (SD 2020) Targets. It also reviewed Praxair’s protection strategy to manage potential risk from natural disasters and its SD 2020 Targets. It was also chartered to review Praxair’s sustainability reporting and sustainability strategies, programs and practices. It also reviewed Praxair’s protection strategy to manage potential risk from natural disasters and its plant control systems and security. Other risk areas are regularly reviewed by the full Board. Safety and environmental risk are covered at each Board meeting. The vice president, Sustainable Development, reports at least annually to this Committee.

Other board committees oversee additional sustainability elements. For example, the Governance & Nominating Committee reviews, among other things, the company’s responses to broad public policy issues in the areas of social responsibility, corporate citizenship and charitable contributions. The vice president, Sustainable Development, reports at least annually to this committee on progress and outcomes in employee community engagement. The Compensation & Management Development Committee reviews compensation and incentives, management development and succession, and diversity policies, objectives and programs.

The Executive Leadership Sustainability Steering Committee is the senior executive-level committee with responsibility for economic, environmental and social topics, and it provides internal oversight of sustainable development. It consists of the six members of the executive leadership team (Praxair’s Office of the Chairman [OOC]: CEO, CFO, two EVPs, one SVP and general counsel), the vice presidents of Sustainable Development, Human Resources and Communications; and the director, Investor Relations. This committee meets at least twice a year. It reviews performance to date and reviews and approves priorities, plans and targets for the coming period.

A senior vice president is the highest ranking executive officer responsible for sustainability and is a member of the OOC, reporting directly to the CEO. She is responsible for Global Supply Systems (GSS), R&D, Global Market Development (GMD), Global Operations Excellence (GOE), GPMM, Sustainable Development, Safety, Health and Environment (SH&E), Global Sales and Electronic Materials.

The vice president, Sustainable Development, reports to the senior vice president and is the highest ranking functional leader of sustainability. She coordinates the development of the sustainable development targets, including the new SD 2020 Targets and action plans. She coordinates the development of external sustainable development reporting and responses to external third parties such as CDP and DJSI. She is also responsible for coordinating consultations with internal and external stakeholders relating to ESG issues (see the next section: Engaging Stakeholders), and staying current with emerging issues. Emerging issues deemed to be significant may be brought to the attention of the Sustainable Development Corporate Council. If considered relevant, they may be reported to the OOC and the Board Committee. She leads the company’s community engagement program as well as global internal and external engagement on sustainable development issues and ensures the fair, reasonable and transparent treatment of all perspectives. She is a member of the Praxair External Reporting Disclosure Committee and of the Advisory Committee to the Praxair Global Giving Program. The director, Sustainable Development and Community Engagement, reports to the vice president, Sustainable Development.

Business Sustainable Development Councils are established in each business comprised of all the functional leaders and coordinated by a business-level Sustainable Development Coordinator. Business Councils meet quarterly. They lead business- and functional-level internal and external engagement on sustainable development and coordinate the implementation of local sustainable development action plans and the SDMS. Business Sustainable Development Coordinators participate in a monthly meeting coordinated by the office of Sustainable Development, and are typically joined by the senior vice president and a range of corporate functional leaders. They share sustainable development best practices and challenges between corporate groups and the businesses.

Performance against sustainable development targets is the responsibility of all businesses. Overall reporting is coordinated by the vice president, Sustainable Development. Reporting on specific targets is consolidated and coordinated by one or more corporate functional vice presidents and is reviewed internally at least annually (and in many cases monthly).

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Praxair’s SD 2020 Targets – Priority Factors and executive coordination

<table>
<thead>
<tr>
<th>TARGETS</th>
<th>SAFETY</th>
<th>COMPLIANCE</th>
<th>PRODUCT STEWARDSHIP</th>
<th>ENERGY &amp; CLIMATE CHANGE</th>
<th>SUSTAINABLE PRODUCTIVITY</th>
<th>PEOPLE DEVELOPMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESPONSIBLE EXECUTIVES</td>
<td>VP, SH&amp;E</td>
<td>Chief Compliance Officer</td>
<td>Chief Technology Officer</td>
<td>VPs: Global Operations Excellence, SH&amp;E, Sustainable Development; Director, Energy Management</td>
<td>VPs: HR, SD, Procurement</td>
<td></td>
</tr>
</tbody>
</table>

* This section responds to G4-34
Praxair’s Vision Statement is “to be the best performing industrial gases company in the world as determined by our customers, employees, shareholders, suppliers and the communities in which we operate.” Praxair’s business strategy reflects continuous engagement with these groups and they are invited to voice their opinions. This in turn provides value to Praxair in several of the Integrated Reporting capitals as indicated in the right column of the tables below. This chapter describes ongoing engagement with those stakeholders as well as governmental agencies and industry associations. The section following, Confirming Priorities, describes stakeholder engagement related to the development of this Report and confirming the continued relevance of Praxair’s Priority Factors and SD 2020 Targets.

**Employees**

Praxair is committed to the safety, well-being and professional development of all employees worldwide. The company is committed to providing a safe and inclusive workplace with an emphasis on the highest standards of integrity and professional performance. This allows Praxair to maintain a high rate of employee engagement (see Performance Dashboard, page 27), which in turn helps build intellectual and human capitals.

<table>
<thead>
<tr>
<th>Group</th>
<th>Frequency</th>
<th>Key Topics</th>
<th>Response to key topics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>All employees</td>
<td>Continuous</td>
<td>• Pay</td>
<td>• Praxair provides a range of employee benefits and has a robust training and development program and annual employee performance appraisals (see SVR Annex G4-LA 9-11).</td>
<td></td>
</tr>
<tr>
<td>All employees</td>
<td>Continuous</td>
<td>• Conditions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Employee retention and engagement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A global employee survey is conducted every 2-3 years.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• We run periodic pulse surveys in the years between.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>• For employee volunteerism and community engagement, see the Communities row in this table and Zero Waste to Landfill in the Performance Dashboard, page 26.</td>
<td></td>
</tr>
</tbody>
</table>

**Customers**

Customer retention is crucial to Praxair’s results. A significant portion of Praxair revenue is earned from recurring customers and retained accounts. Praxair’s applications bring productivity benefits to our customers and help build Praxair’s financial, intellectual, manufactured and natural capitals. For example, Praxair’s oxygen enrichment technology helped China’s Sinopec Beihai Refining & Chemical company increase its fluidized catalytic cracking unit (FCCU) capacity by 20 percent and save more than $7 million on capital expenditures.

A second example is in the packaged gas business. In 2016, Praxair invested $3.5 million in 80 projects from 10 different countries that converted customers from cylinders to “microbulk” tanks or microbulk to on-site fixed tanks. Efficiencies were realized from reducing the number of delivery trips and from converting tank sizes for filling and truck delivery. In addition to the added customer convenience, these projects realized savings to Praxair of >$1 million and an estimated 600 MT CO₂e.

<table>
<thead>
<tr>
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<th>Frequency</th>
<th>Key Topics</th>
<th>Response to key topics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>All customers</td>
<td>Continuous and periodic</td>
<td>• Productivity</td>
<td>• Work continuously to integrate Praxair’s business with that of its customers, and continue to offer them relevant technologies to improve their resource efficiency and positive environmental impacts – particularly in energy use and the reduction of GHG emissions.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Competitive advantage</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All customers</td>
<td>Continuous and periodic</td>
<td>• Safety</td>
<td>Globally, Praxair provides customers with safety information relating to its products and services and in some cases has provided basic safety training. For example, in 2016 Praxair India:</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Product knowledge</td>
<td>• Held several interactive, high-energy safety training seminars with key customers. One safety refresher training at Marcopolo, Dharwad, was held at a customer request. The one-day event for a cross-functional team of some 20 customer employees covered cryogenic liquid and cylinder handling, followed by site visits.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Quality</td>
<td>• Achieved customer recognition: Plant serving Tata Steel in Jamshedpur, India, was rated 4.86/5 by Tata on several aspects related to quality, supply and service.</td>
<td></td>
</tr>
<tr>
<td>Subset concerned about ESG issues</td>
<td>Periodic</td>
<td>• Climate change</td>
<td>• Climate Change: In 2016, Praxair was selected for the CDP Climate A List.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Human rights</td>
<td>• Anti-Slavery: Praxair issued a position statement in conformance with the UK Modern Slavery Act of 2015.</td>
<td></td>
</tr>
</tbody>
</table>

* This section through page 37 responds to G4-24, G4-25, G4-26, G4-27
Shareholders

Strong cash flow from operations ($2.8 billion in 2016, representing 26 percent of sales) enabled Praxair to return to shareholders approximately $1.0 billion in 2016 primarily in the form of dividends, and to increase its dividend by five percent beginning in the first quarter of 2017, marking the 24th consecutive annual dividend increase. Consistent and ongoing outreach to the SRI community helps build Praxair’s reputational (social and relationship) capital. For example, Praxair was featured as an example of best practice in Power Forward 3.0: How the largest U.S. companies are capturing business value while addressing climate change, a publication of WWF, CDP and Calvert and invited to address the U.S. Sustainable Investment Forum (U.S. SIF).

<table>
<thead>
<tr>
<th>Group</th>
<th>Frequency</th>
<th>Key Topics</th>
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<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regular investors</td>
<td>Continuous</td>
<td>• Leadership • Financial returns • Governance • Compliance</td>
<td>• Praxair stockholders continued to demonstrate a strong commitment to Praxair and its management team. • All Board members elected to serve another term, all with &gt;90% of votes cast. • All proposals to shareholder vote were approved by substantial majorities. • Praxair engaged in direct meetings or telephone calls with &gt;340 investors representing &gt;80% of Praxair stockholding. • See March 2017 Proxy Statement, pages 4, 10.</td>
<td></td>
</tr>
<tr>
<td>SRI investors</td>
<td>Periodic</td>
<td>• Energy and GHG footprint • Sustainable productivity initiatives • Sustainability portfolio</td>
<td>• Of &gt;340 investor meetings and calls, &gt;20 meetings or calls were focused specifically on ESG-related issues, representing 10% of Praxair stockholders. Communications were typically held with the director, Investor Relations, often with the VP, Sustainable Development. • Praxair considers the DJSI and CDP questionnaires as proxies for emerging relevant sustainability questions; they are built into the company SDMA as appropriate. • In 2016-2017, additional engagement included International Integrated Reporting Council (IIRC) U.S. SIF (Sustainable Investment Forum).</td>
<td></td>
</tr>
</tbody>
</table>

Suppliers

Praxair has a relatively simple and often local supply chain. Three priority groups of suppliers are electrical utility companies, contract drivers and disadvantaged group-owned suppliers. Praxair’s supplier engagement drives better business performance, promotes our core values and builds supplier capacity, and helps build financial, natural, and social and relationship capitals. For example, an idea for ASU energy efficiency originated in Praxair’s Technology Center in Tonawanda, New York, and migrated to the engineering and R&D teams. Praxair’s Fife, Washington, ASU facility adopted the concept and installed a new higher capacity side core heat exchanger to the plant’s liquefier. This saves nearly 5.4 million kilowatt hours a year – enough to power 500 homes across the area. Tacoma Power rewarded these efforts by giving Praxair a $1.2 million rebate, one of the largest in the utility’s history.

<table>
<thead>
<tr>
<th>Group</th>
<th>Frequency</th>
<th>Key Topics</th>
<th>Response to key topics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric utility suppliers</td>
<td>Continuous</td>
<td>• Energy efficiency</td>
<td>• Praxair works with some of our major electricity suppliers in the U.S. on energy efficiency to help them meet their state energy efficiency requirements.</td>
<td></td>
</tr>
<tr>
<td>Contract drivers</td>
<td>Continuous</td>
<td>• Safety</td>
<td>• Contract drivers receive the same or comparable levels of training and often technology investment as Praxair drivers. • Contract drivers are included in Praxair’s SD 2020 Target for reduced product vehicle accidents (see Performance Dashboard page 19).</td>
<td></td>
</tr>
<tr>
<td>Minority suppliers</td>
<td>Continuous</td>
<td>• Capacity building</td>
<td>• Praxair has an SD 2020 Target to promote engagement and help build capacity among disadvantaged group-owned suppliers; this was achieved (see Performance Dashboard page 27 and Driving Sustainable Value - People Development - Suppliers, page 15, which shows the benefits of Praxair’s Supply Chain Financing program and the Suppliers area on <a href="http://www.praxair.com">www.praxair.com</a>).</td>
<td></td>
</tr>
</tbody>
</table>
Communities

Praxair is at its core a “local” company. Praxair makes large, capital investments near customer sites and signs long-term supply agreements. Whenever possible, Praxair distributes product locally to reduce the costs of long-distance truck transport. The company, therefore, makes long-term investments in communities where it builds facilities, and looks locally for talent, leadership and suppliers. This in turn helps build Praxair’s reputation and business relationships, i.e., social and relationship and financial capitals. For example, Praxair community engagement in 2016 brought direct benefits to >350,000 people around the world (see Performance Dashboard, page 17).

<table>
<thead>
<tr>
<th>Group</th>
<th>Frequency</th>
<th>Key Topics</th>
<th>Response to key topics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Praxair corporate/Global Giving Program</td>
<td>Continuous</td>
<td>Diversity, Education, Healthcare, Environment</td>
<td>Community engagement is a part of Praxair’s culture and is encouraged by leadership. Praxair engages with its communities by building close relationships with local providers of emergency services, with employee volunteer projects that help build community resilience and through the Praxair Global Giving Program (see SVR Annex G4-S01).</td>
<td></td>
</tr>
<tr>
<td>Employees</td>
<td>Continuous</td>
<td>Community resilience</td>
<td>Praxair has a strong community engagement program and activity in all businesses (see SVR Annex G4-S01. See Praxair 2016 Community Engagement brochure in the Sustainable Development Reporting Center on <a href="http://www.praxair.com">www.praxair.com</a>).</td>
<td></td>
</tr>
</tbody>
</table>

Government Agencies

Praxair has a strong global ethics and compliance program. This helps build reputational capital (social and relationship). Praxair was named a 2016 World’s Most Ethical Company® by the Ethisphere Institute.

Praxair’s Government Relations department participates in discussions with federal and state governments regarding legislation that drives energy efficiency, delivers positive outcomes in electricity regulation and supports our unique technologies to produce clean energy. See the Government Affairs area on www.praxair.com.

<table>
<thead>
<tr>
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<th>Frequency</th>
<th>Key Topics</th>
<th>Response to key topics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government agencies</td>
<td>Continuous</td>
<td>Compliance</td>
<td>Praxair maintains a detailed oversight process to ensure that its activities are conducted in a legal, ethical and transparent manner.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Praxair certifies employees on issues related to doing business with the government, complying with anti-trust and competition laws and the U.S. Foreign Corrupt Practices Act (FCPA).</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Praxair met with the U.S. Congress and state and local officials to discuss clean energy generation for fuel cell technologies; energy efficiency; and the benefits of leak detection programs for natural gas pipelines.</td>
<td></td>
</tr>
</tbody>
</table>

Industry Associations & Groups

Praxair is a member of a range of trade associations, business associations and alliances, including national chemical associations and industrial gas associations in the company’s key geographies, and manufacturers associations and chambers of commerce, through which it interacts with government officials and stakeholders to educate policy makers on issues that are important to the company. This helps build financial and reputational capitals. See SVR Annex G4-16 for a full list of industry associations.

<table>
<thead>
<tr>
<th>Group</th>
<th>Frequency</th>
<th>Key Topics</th>
<th>Response to key topics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry groups</td>
<td>Continuous</td>
<td>Policy development</td>
<td>In many cases, a Praxair executive holds a board seat and/or serves on a relevant committee, or Praxair participates in projects, where it views membership as a strategic partnership.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Praxair also participates in additional local and regional organizations.</td>
<td></td>
</tr>
<tr>
<td>Chemical industry</td>
<td>Continuous</td>
<td>Responsible Care®</td>
<td>Praxair is certified to the Responsible Care Management System® and is a signatory of its Global Charter.</td>
<td></td>
</tr>
</tbody>
</table>
Praxair performs a full Sustainable Development Materiality Assessment (SDMA) every five years in preparation for setting new five-year targets. This was reported in the 2015 SVR. An external assurance performed against the AA1000AS Standard confirmed that the SDMA conformed to the AA1000APS (2008) principles of inclusivity, materiality and responsiveness; that select KPI assertions in Praxair’s SVR were accurate and reliable in accordance with the Standard; and that Praxair’s Priority Factors were in general alignment with the GRI G4, UNSDGs, Responsible Care Management System (RCMS), and Sustainability Accounting Standards Board (SASB) frameworks. Each year, Praxair conducts a condensed SDMA to confirm alignment and consider adjustments and improvements.

CONTINUOUS IMPROVEMENT
In 2016, several minor updates were made, see the table below.

INTERNAL REVIEW TO CONFIRM PRIORITIES
Praxair’s Sustainable Development group administered an internal survey of 16 corporate functional leaders (SVP, VPs and directors of Operations, Procurement, Safety, Communications, Diversity, Talent, Energy); and 56 business leaders (33 men, 23 women) from businesses in the U.S., Asia, EU, Mexico and Costa Rica. The top six priority factors were confirmed. Their suggestions were included in the table below, SD 2020 Priority Factors and Targets: 2016 Updates.

EXTERNAL STAKEHOLDERS
Additional stakeholder engagement conducted in 2016 - early 2017 related to confirming priorities and preparing for this report included:

SRI Investors and Industry Groups: Presentations to a range of industry and SRI audiences of Praxair’s SD 2020 targets and the long-term impacts on global aspirations such as the UN SDGs. The chemical industry Global Charter, SASB (in its topic area of Safety & Environmental Stewardship of Chemicals) and the RobecoSAM DJSI questionnaire, all reinforced their focus on product stewardship and responsible chemicals management. Praxair Surface Technologies developed additional targets in this area.

GRI Transition to Standards: Participated in the transition of GRI reporting guidelines to the Global Sustainability Reporting Standards. Praxair’s VP, Sustainable Development, is Chair of the GRI DPOC, which is overseeing the creation of the new GRI Sustainability Standards.

International <IR> Framework: Provided feedback on the technical program of the IIRC.

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### SD 2020 Priority Factors and Targets: 2016 Updates

<table>
<thead>
<tr>
<th>PRIORITY FACTOR</th>
<th>Key Performance Indicators</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>• Occupational Health &amp; Safety • Vehicle Safety</td>
<td>• We deleted “Health” from the list of KPIs. While Praxair has a wellness program, the priority issue is the safety of employees and contractors. • Praxair tracks occupational safety separately from vehicle safety, so both KPIs are now listed.</td>
</tr>
<tr>
<td>Compliance</td>
<td>• Corporate Governance &amp; Ethics • Ethics &amp; Integrity • Human Rights</td>
<td>• Language and sequence changed to be consistent with the SD 2020 Targets.</td>
</tr>
<tr>
<td>Eco Portfolio</td>
<td>Product Stewardship</td>
<td>• Environmental Innovation Resource Transformation • Lowering Product Toxicity</td>
</tr>
<tr>
<td>Energy &amp; Climate Change</td>
<td>• Energy &amp; GHG Emissions • Sustainable Transportation Renewable Energy • Carbon Offsets</td>
<td>• This includes trucking GHG intensity, so the reference to Sustainable Transportation was eliminated. • Praxair added a KPI and corresponding target on renewable energy. • Added KPI to describe outcomes of Praxair tree-planting activities. • Added KPI to align with target on cost savings associated with environmental projects that also reduce waste, air emissions, and energy and water use. • Broadened to targets on waste and water management. • Deleted because this is a subset of sustainable productivity. • Name of KPI and target were updated as per Annual Report and Praxair’s strategic focus, to “Diversity &amp; Inclusion” (from “Diversity”). • No changes. • Replaces greening of supply chain. • No changes. • Removed: Relevant stakeholders are mentioned within other KPIs.</td>
</tr>
<tr>
<td>Sustainable Productivity</td>
<td>• Productivity Savings • Eco Efficiency • Supplier Sustainability Management</td>
<td></td>
</tr>
<tr>
<td>People Development</td>
<td>• Diversity &amp; Inclusion • Employee Engagement • Supplier Engagement • Community Engagement • Stakeholder Engagement</td>
<td></td>
</tr>
</tbody>
</table>

* This section through page 39 corresponds to G4-19, G4-20, G4-21, G4-26 and G4-27
Emerging Issues in Human Rights: Stayed current with an uptick of interest in corporate human rights issues in the human rights community, at certain government and intergovernmental agencies, among some customers and in the SRI and sustainability community. For example: the new UK Modern Slavery Act of 2015; an updated version of the EICC Citizenship Code of Conduct to v5.1; a new initiative by the UN Human Rights Council to establish a binding treaty on multinational corporations and human rights; a stronger weighting on this issue by the RobecoSAM DJSI; and the publication of the Corporate Human Rights Benchmark in early 2017, representing investor, business and human rights groups. See SVR Annex GRI G4 HR1 & HR2.

Students: Praxair’s VP, Sustainable Development, surveyed a Masters of Science class in Sustainability Management at Columbia University, comprising 35 students from 16 countries (16 U.S. nationals), of which 69 percent were female. The students initially identified clean technology, renewable energy, climate change and water as key issues. They selected the same “top six” elements as those in the internal consolidated Praxair survey, although there were different emphases. The students ranked Growth and Climate Change at the top, consistent with external groups, millennial groups and SRI investors.

CONCLUSION
Praxair is confident that its six Priority Factors are appropriate. The factors are indicated in the top quadrant of the Figure above. The top six elements remained unchanged from the prior year. Minor edits and adjustments (as noted in the table on the previous page). The full new set of Priority Factors, Issues, and SD 2020 Targets, is provided in the Performance Dashboard on page 18. The table below, Integration of Sustainable Development, shows how the SD Priority Factors are aligned with Praxair’s vision, values, key risks and non-financial incentives for executive compensation.
ABOUT THIS REPORT *

Scope and Context of this Report**
Each year, Praxair’s Sustainable Value Report (SVR) includes quantitative and qualitative information relating to the previous calendar year. This report covers calendar year 2016, the first reporting year of Praxair’s third generation five-year sustainable development strategy and Sustainable Development 2020 Targets (SD 2020 Targets).

The SVR is supported by an SVR Annex that provides source data and additional information based on the Global Reporting Initiative. Praxair’s report uses the same scope in its SVR as is used in its Annual Report. Except where indicated, this Report includes 100 percent of Praxair 2016 revenue. Praxair includes consolidated global information from entities where it is the majority shareholder (more than 50 percent) and certain joint ventures; it excludes data from entities where Praxair has a minority interest.

During the year ended December 31, 2016, Praxair had acquisitions totaling $363 million, primarily the acquisition of Yara International ASA’s European carbon dioxide business and packaged gases businesses in North America and Europe. For our sustainable development reporting, Praxair integrates data from acquisitions, and these new businesses are included in the scope of future reports.

Relationship to Praxair Financial Reporting
Whereas Praxair’s Annual Report reports U.S. GAAP financial information, this SVR reports non-financial information we believe to be relevant to our stakeholders and key to driving long-term sustainable results. “Nonfinancial” is used in this report in the same way it is used by Praxair’s Board in its March 2017 Proxy Statement page 21. This report also includes information relating to upstream and downstream activities that are relevant business value drivers. Examples are: Scope 3 Greenhouse Gas emissions from contract drivers; measures of environmental and social benefits for customers of Praxair applications; and social and other impacts to communities from Praxair operations and community engagement activities.

Reporting Frameworks Applied
This SVR drew on these voluntary reporting frameworks.

1. GRI G4. The Global Reporting Initiative GRI Guidelines are the most widely used guidelines for corporate sustainability reporting. Praxair has followed the GRI framework since 2010. This SVR and its Annex were prepared according to the GRI G4 Guidelines and we expect to report against the new GRI Sustainability Reporting Standards (GRI SRS’s) in our 2017 SVR. This document reports against the most relevant GRI G4 indicators, which are referenced as footnotes throughout this document. Additional information, including source data and reporting against additional GRI G4 indicators, is provided in the SVR Annex. A GRI G4 Index is provided in the SVR Annex. Praxair’s SVR and SVR Annex were submitted for the GRI Content Index Service, and GRI confirmed the accuracy of the GRI G4 Content Index and confirmed that the reports are In accordance with the GRI G4 Guidelines – Core option; see SVR Annex. Regional sustainability reports for Praxair South America (biennially) and Praxair Central America (annually) have reported against GRI G4 since 2013; these reports are available on www.praxair.com.

2. The Climate Change Reporting Framework (CCRF) is a set of proposed disclosures about climate change that are made in or are linked to information about financial performance in mainstream financial reports.

3. International Integrated Reporting Framework provides a framework for investors and other stakeholders to gain greater insight into the medium- and long-term sustainability of a company. It proposes that a company should report how it manages all of its six capital flows: financial capital as well as human, intellectual, manufactured, natural, and social and relationship (sometimes referred to collectively as “social capital”), and the connectivity between them. Much of this report demonstrates how Praxair uses or invests in these capitals and transforms them into short or long-term value. This is denoted with the use of icons introduced on page 6 and used throughout.

Principles for Defining Report Content and Quality**
Consistent with GRI G4 and AA1000 AS Accountability Principles, Standard, the following principles defined the content and the quality of data and narrative in this report.

• Complete
• Responsive
• Material
• Inclusive
• Context-driven

Content
To determine relevant content, Praxair considered multiple relevant external guidance documents, including the following:

1. GRI Sustainability Topics for Sectors: What do stakeholders want to know? metrics for the chemical sector.

2. The U.S. Sustainability Accounting Standards Board (SASB) sector standard for chemical companies reporting.

For more information on how external considerations were integrated into Praxair’s determination of priority issues, see the Priority Factors and Related KPIs and Outlook sections.

Data Consolidation and Reporting
Various databases are managed across Praxair to aggregate data. Data is collected from the businesses by the corporate functions, including Safety, Health and Environment (SH&E), Human Resources (HR), Finance, Operations, Global Procurement and Materials Management (GPM), Productivity, R&D, Sales, Sustainable Development and the Praxair Global Giving Program. Consolidated information is housed in various corporate databases. Praxair uses a licensed global sustainability reporting software program to integrate data reporting for sustainable development.

* This section, through page 41, responds to G4-18
** This section responds to G4-23
Performance Reporting
Most Praxair sustainable development targets run 2016-2020 unless indicated otherwise. Performance against targets is reported in the Performance Table on page 4 and in the Sustainable Development Performance Dashboard section starting on page 22.

Sustainable Value Creation
This report shows how performance towards Praxair’s sustainable development targets is Delivering Sustainable Value (see page 8) to the company and to the broader 2030 objectives of the the UN Sustainable Development Goals (SDGs).

Changes, Adjustments & Restatements*
Praxair is not restating any environmental data for previous years due to mergers or acquisitions, change of baseline years, or the nature of the business. Praxair has made certain changes to measurement methods, either to address an update to an SD 2020 target or to revise an environmental KPI. These changes impact previous years’ data and are explained in either the Performance Dashboard of the 2016 SVR or the relevant GRI section of the 2016 SVR Annex. For example:

- Praxair revised its water management KPI to align with the water KPI used by the Dow Jones Sustainability Index Corporate Sustainability Assessment. This change resulted in Praxair reporting new data for 2013-2015. The new methodology for calculating Praxair’s water KPI is described in the 2016 SVR Annex, G4-EN8.
- Praxair revised its target to from earning 40 percent revenue from its sustainability portfolio, to earning 50 percent revenue. This is described in the 2016 SVR, Performance Dashboard page 22.

Assurance**
3. For the eighth consecutive year, Praxair commissioned an external audit for several key environmental and social data elements. Data in this SVR and Annex that are externally assured are indicated with a ✔️ mark in the Performance Dashboard of this SVR, and/or in the SVR Annex. The 2016 Assurance Letter is provided on pages 42-44. In 2016, as part of its preparation for its SD 2020 Targets, Praxair commissioned an external audit of its Sustainable Development Materiality Assessment (SDMA) against AA1000 AS. We consider this to be still current. Both assurance auditor letters are provided on our website, www.praxair.com.

* This section responds to G4-22
** This section responds to G4-33
June 21, 2017

To the Management of Praxair, Inc.

Carbon Verification Service, LLC was engaged by Praxair, Inc. to provide assurance of its global 2016 Key Performance Indicators (KPI) and other social metrics. 2016 was the seventh consecutive year that Carbon Verification Service was retained by Praxair to verify its KPIs. Upon being retained, Carbon Verification Service conducted a conflict of interest review to insure that its review would be free of bias and would be done on an independent basis. Carbon Verification Service provides only verification and auditing services to its clients, including Praxair, to avoid conflict of interest concerns. Carbon Verification Service is not owned or operated by any other entity.

The objective of the verification was to provide limited assurance of the reported KPI values and to assess the accuracy, completeness, relevance, consistency and transparency of Praxair’s information and assertions. Carbon Verification Service assessed conformance of Praxair’s GHG emission inventory with The Greenhouse Gas Protocol. The verification protocol employed for verification of Praxair’s 2016 GHG emissions was ISO 14064-3 (2006): Specification with guidance for the validation and verification of greenhouse gas assertions. Consensus protocols for the verification of the KPI metrics, other than GHG emissions, do not currently exist. Carbon Verification Service utilized the same verification principles prescribed by ISO 14064-3 to guide the verification of this data.

Carbon Verification Service, LLC reviewed selected quantitative KPIs. The verification was based on site visits to Sulphur, LA and La Porte, TX. Review of documentation from six other locations was also performed. We did not review all information and supporting documentation associated with the KPIs for all of Praxair’s global locations and facilities.

Praxair management is responsible for the reported KPIs and for the process of assembling the data upon which the reported KPI values are based.

Based upon the verification work performed from April through June 2017, there is no evidence that Praxair’s KPI data assertions, which appear in the table below, are not materially correct and are not a fair representation of data and information and have not been prepared in accordance with accepted standards and practice.

For Carbon Verification Service, LLC

James J. Groome
President
PRAXAIR'S ASSERTIONS

Praxair reported the following KPI values:

<table>
<thead>
<tr>
<th>Metric</th>
<th>2016 Value</th>
<th>Units of Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>GHG Emissions Scope 1</td>
<td>8,348,000</td>
<td>Metric Tons CO₂e</td>
</tr>
<tr>
<td>GHG Emissions Scope 2</td>
<td>12,881,000</td>
<td>Metric Tons CO₂e</td>
</tr>
<tr>
<td>Proportion of reported Scope 1 and 2 emissions verified</td>
<td>100</td>
<td>%</td>
</tr>
<tr>
<td>GHG Emissions Scope 3 - Contractor Driving</td>
<td>276,000</td>
<td>Metric Tons CO₂e</td>
</tr>
<tr>
<td>Electricity Consumption</td>
<td>23,152,000</td>
<td>MWh</td>
</tr>
<tr>
<td>Natural Gas Consumption</td>
<td>2,709,000</td>
<td>MWh</td>
</tr>
<tr>
<td>Diesel/Gas</td>
<td>344,000</td>
<td>MWh</td>
</tr>
<tr>
<td>Steam</td>
<td>1,147,000</td>
<td>MWh</td>
</tr>
<tr>
<td>Distillate Fuel Oil #2</td>
<td>10,900</td>
<td>MWh</td>
</tr>
<tr>
<td>Total municipal water supplies</td>
<td>59,480,000</td>
<td>Cubic meters</td>
</tr>
<tr>
<td>Fresh surface water</td>
<td>282,427,000</td>
<td>Cubic meters</td>
</tr>
<tr>
<td>Fresh ground water</td>
<td>6,364,000</td>
<td>Cubic meters</td>
</tr>
<tr>
<td>Water returned to the source of extraction at similar or higher quality</td>
<td>285,128,000</td>
<td>Cubic meters</td>
</tr>
<tr>
<td>Total net water consumption</td>
<td>63,173,000</td>
<td>Cubic meters</td>
</tr>
<tr>
<td>NOₓ Emissions</td>
<td>1,832</td>
<td>Metric Tons</td>
</tr>
<tr>
<td>SO₂ Emissions</td>
<td>114</td>
<td>Metric Tons</td>
</tr>
<tr>
<td>VOCs</td>
<td>450</td>
<td>Metric tons</td>
</tr>
<tr>
<td>Total (Solid + Hazardous) Waste Not Landfilled</td>
<td>157,339,000</td>
<td>Lbs. of (Solid + Hazardous) waste not landfilled</td>
</tr>
<tr>
<td>Chemical Oxygen Demand</td>
<td>889</td>
<td>Metric Tons</td>
</tr>
<tr>
<td>Employee Lost Time Injury Frequency Rate</td>
<td>0.073</td>
<td>Lost time injuries per 200,000 hours worked</td>
</tr>
<tr>
<td>Employee Lost Time Injury Frequency Rate</td>
<td>0.364</td>
<td>Lost time injuries per 1,000,000 hours worked</td>
</tr>
<tr>
<td>Occupational Illness Frequency Rate</td>
<td>0.009</td>
<td>Occupational Illness Cases per 200,000 hours worked</td>
</tr>
<tr>
<td>Occupational Illness Frequency Rate</td>
<td>0.046</td>
<td>Occupational Illness Cases per 1,000,000 hours worked</td>
</tr>
<tr>
<td>Contractor Lost Time Injury Frequency Rate</td>
<td>0.0</td>
<td>Lost time injuries per 200,000 hours worked</td>
</tr>
<tr>
<td>Contractor Lost Time Injury Frequency Rate</td>
<td>0.0</td>
<td>Lost time injuries per 1,000,000 hours worked</td>
</tr>
<tr>
<td>Community Engagement: cash raised or donated by employees and facilities</td>
<td>Approx. 1,800,000</td>
<td>USD</td>
</tr>
<tr>
<td>Year-over-Year Change - Scope 2 Emissions</td>
<td>2</td>
<td>%</td>
</tr>
<tr>
<td>Tier 1 Process Safety Events</td>
<td>0.137</td>
<td>Number of Events per 1,000,000 hours worked</td>
</tr>
</tbody>
</table>