

Making our planet more productive



PRAXAIR SUSTAINABLE DEVELOPMENT REPORT: 2012 DATA YEAR

 **PRAXAIR**
Making our planet more productive

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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 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; 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 projections or estimates contained in the forward-looking statements. Additionally, financial projections or estimates exclude the impact of special items which the company believes are not indicative of ongoing business performance. 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 Form 10-K and 10-Q reports filed with the SEC which should be reviewed carefully. Please consider the company’s forward-looking statements in light of those risks.

Photo Captions:

Top: Karner blue butterfly which is being preserved at Praxair Surface Technologies’ facility in Concord, NH. (Photo courtesy of Lindsay Webb, New Hampshire Fish and Game)

Bottom left: Pat Hanlon, a Praxair Distribution, Inc. (PDI) employee, proudly supports Praxair’s Zero Waste program at South Bend, Ind.

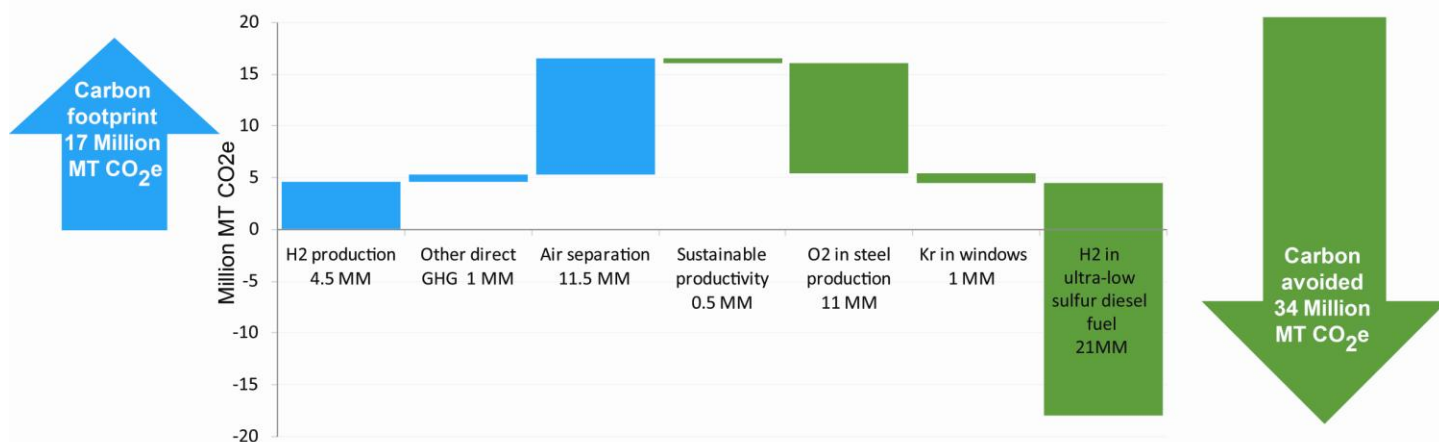
Bottom middle: A Praxair truck on the road.

Bottom right: Attendees at the SAWM Supplier Sustainability Forum include (left to right) Marcus Vinicius Cintra de Rezende, commercial manager of Panalpina; Kelly Andrey Vassel Reibnitz, CRM analyst at Tractebel Energia Comercializadora; Carolina Rolim Soares, sustainability coordinator of WEG; and Ricardo Mutuzoc, sustainability manager of Philips.

Cover photographs also appear within the feature stories in each chapter.

Praxair 2012 Carbon Footprint:

Enabled twice as many GHG emissions to be avoided than were emitted (net benefit 17 Million MT GHG)



FEATURE STORY: Customer Carbon Productivity Enables a 2x Net GHG Benefit

GLOBAL CHALLENGE

A key challenge of sustainable development is to multiply resource productivity while reducing resource use. This challenge plays out acutely in the energy area, as escalating demands for energy put pressure on finite fossil fuels and drive the need for cleaner and more efficient technologies.

BUSINESS RESPONSE

Praxair's products and applications frequently help our customers improve their energy efficiency and reduce their environmental impact. In 2012, 27 percent of our revenue, or \$3 billion, was earned from applications that bring environmental benefit. As part of this, Praxair also seeks to demonstrate the "carbon productivity" of our product portfolio. We calculated our carbon productivity for three signature Praxair products in three markets: hydrogen sold to make ultra-low sulfur diesel fuel (ULSD) and used in trucks fitted with diesel particulate filters; krypton sold to insulate thermal windows; and oxygen sold to optimize combustion in steelmaking. In 2012, these markets contributed 11 percent of sales. These applications enabled customers to avoid 34 million metric tons (MT) of CO₂e. More information on our methodology and external audit of results can be found on our website at [less carbon more green](#).

OUTCOMES

In 2012, a subset of Praxair applications enabled twice as many greenhouse gas (GHG) emissions to be avoided than were emitted in all its operations. *Making our planet more productive* is not only about reducing resource use; it is also about doubling resource efficiency.

Strategy & Analysis

Key Figures 2012

		2011	2012
Economic			
Sales	\$ million	\$11,252	\$11,224
Capital expenditures	\$ million	\$1,797	\$2,180
Adjusted operating profit (NOTE 1)	\$ million	\$2,469	\$2,502
Adjusted net income – Praxair, Inc. (NOTE 1)	\$ million	\$1,666	\$1,681
Adjusted diluted earnings per share (NOTE 1)	actual dollars	\$5.43	\$5.57
Productivity savings	\$ million	\$375	\$448
After-tax return on capital (NOTE 2)	percentage	14.8%	13.9%
Return on equity (NOTE 2)	percentage	28.1%	28.9%
Payments to vendors	\$ million	\$5,600	\$5,604
Donations and other community investments	\$ million	\$5.00	\$5.60
Environment			
Electrical energy intensity / product vs. 2009 (100)	MM MWh per unit	96.8	95
Indirect GHG intensity / ASU product vs. 2009 (100)	MT CO2e per unit, baseline of 100 in 2009	96.1	95
Direct GHG intensity / H2 product vs. 2009 (100)	MT CO2 per unit, baseline of 100 in 2009	98	98
Distribution GHG intensity vs. 2009	MT CO2e per unit product delivered in truck	95	93
NOx emissions	MT	1,745	1,692
Environmental fines	actual dollars	\$35,562	\$48,085
R&D: “eco-portfolio”	percent revenue	26%	27%
Social			
Total employees		26,184	26,539
Employee engagement	results of biennial survey	-	-
Worldwide employee diversity	percent professional employees, male/female	82%/18%	79%/21%
Board diversity	percent of women or U.S. minority or non-U.S.	50%	55%
Executive leadership diversity	percent of women or U.S. minority or non-U.S.	51%	53%
Emerging country leadership diversity	Percent local, i.e., national or regional	92%	100%
Lost workday case rate, Praxair	per 200,000 hours worked	0.05	0.05
Lost workday case rate, contractors	per 200,000 hours worked	0.08	0.05
Recordable injury rate, Praxair	per 200,000 hours worked	0.40	0.42
Recordable injury rate, contractors	per 200,000 hours worked	0.16	0.24
Fatalities employees		0	2
Fatalities contractors		1	1
Worldwide vehicle accident rate, Praxair drivers	per million miles	2.76	2.80
Worldwide vehicle accident rate, contractors	per million miles	2.87	2.10
Community engagement	Number of people benefitting	275,000	304,149
Community engagement	Incidences of volunteerism	16,590	19,426

Note 1: Adjusted amounts are non-GAAP measures. 2012 adjusted amounts exclude the impact of the cost reduction program, pension settlement and income tax benefit related to the U.S. homecare divestiture. 2011 adjustment amounts exclude the impact of a net gain on acquisition and the cost reduction program. Adjusted amounts are reconciled to reported amounts in the “Non-GAAP Financial Measures” section in Item 7 of the 2012 Annual Report.

Note 2: After-tax return on capital and return on equity are non-GAAP measures defined in the “Non-GAAP Financial Measures” section in Item 7 of the 2012 Annual Report. Calculations for years prior to 2012 have been adjusted to conform to current year presentation.



FEATURE STORY: Sustainable Productivity Helps Drive Return on Capital (ROC)

GLOBAL CHALLENGE

A slowing world economy has created challenges to business profitability. Praxair's productivity is key to continuing to achieve industry-leading Return on Capital (ROC). One crucial contributor to Praxair's ROC has been the outstanding performance of its productivity organization, which has for several years achieved 6–7 percent savings off its cost stack. Productivity savings often resulted in environmental benefits: reductions in energy, fuel, water or waste. The question was, could environmental actions bring financial savings – and would there be other business benefits?

FUNCTIONAL AREA RESPONSE

2012 "sustainable productivity" savings climbed to \$112 million from a start of \$32 million in 2010. In 2012, it contributed 25 percent of total productivity dollars, including more than 1,750 projects that saved more than 300 million gallons of water, 800 million kilowatts of electricity and 500,000 MT CO₂e.

OUTCOMES

An operational linkage has been forged between productivity and sustainability. Sustainable productivity is making a measurable contribution to productivity and to ROC. And it is yielding additional benefits: these projects generate higher rates of replication and innovation than regular productivity projects; and ideas are coming from non-specialists. As environmentally engaged employees enhance resource efficiency and boost operating margin, they learn better asset management and create an environment that is safer and more engaged. Overall, business and brand value is being enhanced.

Savings from Sustainable Productivity (\$MM)



1.1 Statement from the most senior decision-maker of the organization

Dear stakeholder

In 2012, Praxair delivered solid financial results while navigating through a challenging global economic environment. Our sustainable development program was a key component of our success that will become more important as we look to the future. This year's report clearly demonstrates we are on the right path.

Our business model frequently brings environmental and energy efficiencies to our own processes and those of our customers. This is increasingly important in a world in which energy demand is rising, along with our growing need to reduce dependence on finite natural resources. We recognized this and sought to do something about it. In an evaluation of the carbon productivity of just three of our applications, we found that we enabled greenhouse gas benefits that were double those of our operational greenhouse gas emissions.

Praxair is helping our planet meet one of its crucial challenges: to make more with less.

Sustainable development is also providing direct business value. Our productivity organization achieved savings of \$448 million in 2012. "Sustainable productivity" – cost savings that also bring environmental advantage – contributed 25% of these total productivity dollars. This includes more than 1,750 projects that saved more than 300 million gallons of water, 800 million KWh of electricity and approximately 500,000 MT CO₂e. Projects like these are sourcing new ideas for replication, providing Praxair with new ways to maintain our productivity advantage.

Sustainability values have tapped into employee values and we are seeing enormous enthusiasm for these programs. The most significant example of employee engagement has been our Zero Waste initiative. From 11 participating sites, including 10 that achieved zero waste in 2011, we grew to 187 participating sites in 2012, with 89 achieving zero waste. More than 6,000 employees are pursuing zero waste at their sites, while at the same time they are reducing our environmental footprint, decreasing risk and saving money. The Praxair Foundation is "matching" these employee efforts by funding the planting of 250,000 trees in 2013. We want to show that sustainability does not only save money, it adds social, environmental and economic value as well.

In order to stay competitive, Praxair is collaborating with stakeholders inside and outside the company. We work with universities in all of our geographies to promote sustainable innovation. We hosted our first supplier innovation forum in Brazil and have launched a new award to recognize our business partners for their contributions to sustainable innovation. In the environmental area, we worked with a local environmental agency in New England to restore biodiversity. In the area of diversity, we extended our partnership for STEM education with the American Association of University Women (AAUW).

Praxair is increasingly investing in our value chain and gaining long-term benefits as a result.

For the 10th consecutive year, Praxair was included in the Dow Jones Sustainability World Index. We also marked our fourth consecutive year being named as a top green company by Newsweek, ranking number one in the Standard and Poor's 500 Materials sector and number four in the Worldwide Materials sector. Additionally, our global safety team maintained best-in-class performance in recordable injuries, lost workdays and high severity vehicle accidents – a tribute to the hard work and diligence of our employees around the world.

Strategy & Analysis

In 2012, our employees across the globe contributed more than 85,000 volunteer hours – donating their time to initiatives that promote higher education, support health research and provide resources to disadvantaged families. The efforts of our employees have benefited more than 300,000 people worldwide: providing a net benefit ratio of 10 beneficiaries to every 1 employee.

I am proud to be a part of Praxair's global team, in conjunction with our diverse stakeholders, as we drive sustainability efforts throughout the company. Making our planet more productive does not only mean we make more with less— it means we create lasting social, environmental and economic value.

A handwritten signature in black ink that reads "Steve Angel". The signature is written in a cursive, flowing style.

Steve Angel

Chairman, President & Chief Executive Officer
June 2013

1.2 Description of key impacts, risks and opportunities

SUSTAINABLE DEVELOPMENT GOVERNANCE

The most senior body responsible for sustainable development at Praxair is the Governance and Nominating Committee of the Board of Directors. This committee has oversight responsibility for, among other things, the company's responses to broad public policy issues in the areas of corporate social responsibility, corporate citizenship and sustainable development. The vice president of sustainable development presents at least annually to the Board on these issues. In recognition of the increased importance of sustainable development to corporate strategy, some changes were made in 2012. A senior executive Sustainable Development Steering Committee (SDSC) was established, and the post of director, sustainable development, was elevated to vice president and chief sustainability officer. The SDSC is comprised of the Office of the Chairman: the CEO and senior executive team, the senior vice presidents of Human Resources and Communications and Public Relations, and the vice president and chief sustainability officer. This group establishes the sustainable development strategy and is responsible for oversight of sustainable development plans and business performance against goals. They meet at least biannually.

The vice president, sustainable development, leads the corporate sustainability strategy and drives functional alignment and awareness throughout the organization. She also leads the Sustainable Development Management System (SDMS) and is accountable for the achievement of the corporate sustainable development targets and continued progress in community engagement and employee environmental engagement. She chairs the Corporate Sustainable Development Council, which ensures alignment with business strategy and functions. Members are directors from the corporate functions responsible for implementing the sustainable development strategy, including: Governance and Integrity, Risk Management, Strategy, Finance, Sales, Investor Relations, Investment, Legal, Sourcing, Energy, Capital Projects, Research and Development (R&D), Operations, Productivity, Safety, Health and Environment (SH&E), Human Resources, Marketing and Business Development, Corporate Communications, Mergers and Acquisitions, Government Relations, Information Technology Services and the Praxair Foundation. It is the responsibility of the Council to stay current with emerging issues that pertain to sustainable development. The vice president, sustainable development, is on the Board of the Praxair Foundation.

At the business/segment level, each business president chairs a Sustainable Development Council for his/her business, and each functional vice president is represented on the corporate Sustainable Development Councils. Each business unit has a dedicated sustainable development coordinator, who leads its business council, arranges quarterly meetings and reports on its action plans and progress on the SDMS work areas and targets. Some segments, such as Asia, have appointed coordinators at the country level as well. Coordination of the work of the business sustainable development coordinators is through the vice president, sustainable development. This group meets monthly via teleconference and periodically in person as time permits.

Strategy & Analysis

SUSTAINABLE DEVELOPMENT STRATEGY

1.2 (1): Vision 2015

Strategic Platforms	Earnings Growth & Return on Capital	Customer Satisfaction	Sustainable Development	Employee Engagement
Company Vision:	Be the best performing industrial gases company in the world as determined by our customers, shareholders, suppliers, employees and the communities in which we operate.			
Corporate Goal:	Embed sustainable development across the value chain.			
Business Drivers	Economic	Environmental	Social	
Energy	Enable affordable, reliable, efficient solutions.	Support renewable energy technologies.	Protect health & the environment.	
Environment	Widen opportunities from emerging regulations & innovations.	Demonstrate customer carbon productivity.	Ensure safety, health, security & engagement.	
Emerging Economies	Invest in growth & innovation.	Promote eco-efficiency.	Develop local talent and partnerships.	
Execution	Safely drive profitability & productivity.	Minimize resource use.	Uphold global standards.	

Over the past decade, Praxair has built a strong foundation for sustainable development and has been recognized for 10 consecutive years on the World and North American Dow Jones Sustainability Indexes (DJSI) in the Chemicals sector. The current challenge to sustainability leaders is how to maintain leadership and find opportunities to add value. In 2012, several changes were made in Praxair's sustainability organization to assist in both areas.

Vision 2015 uses Praxair's business drivers as the frame for its sustainable development strategy, allowing Praxair to demonstrate how sustainability is positioned as part of its current and future strategy. In addition, Vision 2015 illustrates how sustainability helps to address global mega-challenges, such as the challenge of emerging economies to meet rising expectations from consumers in a context of population growth and rapid urbanization, causing a demand for energy at less environmental cost and requiring new solutions to achieve resource productivity.

MANAGEMENT SYSTEM

The vice president, sustainable development, reports monthly on performance against the Sustainable Development Dashboard to senior management and the executive team. Dashboard metrics include all operational environmental targets, sustainable productivity and community engagement. Performance in other areas is managed in those functions, for example in Human Resources, Compliance and Technology. The corporate Sustainable Development Action Plan (SDAP) is replicated by each business with a parallel action plan and annual targets that relate to issues specific to that particular business.

MATERIALITY ASSESSMENT

Praxair's Sustainable Development Materiality Analysis (SDMA) defines Praxair's material sustainable development issues. For the purposes of this policy, the words "material," "materiality" and "complete" are not meant to describe materiality for the purposes of financial reporting, but rather to refer to the relevance of sustainability issues to Praxair. Sustainable development key performance indicators (KPIs), including environmental KPIs (EKPIs), are selected based on business risks, opportunities and priorities, and current and emerging internal and external considerations as reflected in stakeholder perspectives. Once priorities are defined, metrics measure performance, management system elements are put in place and performance targets and a reporting schedule are created to ensure internal and external

accountability. The process is reviewed annually. Praxair works hard to ensure that stakeholders' rights are respected, and it references a range of internationally-agreed upon standards and norms (see 4.12).

1.2 (2): SUSTAINABLE DEVELOPMENT MATERIALITY ASSESSMENT (SDMA) PROCESS

Prioritize	Measure	Manage	Targets	Mgt. Reporting	External Reports
Corporate: • Risk assessment • Stakeholder evaluations: Customers, investors, external groups South America: • Stakeholder forums: employees, suppliers Mexico: • Stakeholder evaluation	SD & EKPIs	Policy SOPs Reporting, approvals Roles, responsibilities Data management Training Document control	Goals & targets Action plans SD Dashboard	Annual • Report to Board, OOC • SDMS review Quarterly • Report to Exec. SDSC Monthly • BU & functional dashboard reports	GRI Reports • Corporate • South America • Central America CDP GHG Report • SD Highlights

Stakeholder views had significant input into the determination of priorities in 2012.

Six priority issues were selected for each sustainability theme (i.e., social, environmental and economic). In general terms, the themes were very similar to 2011, but there were some important changes of priority (e.g., the theme of “transport” rose to third place from sixth in the environmental theme) and definition (e.g., the theme of “ethics and integrity” now includes “human rights”). The regional Stakeholder Engagement (SE) Forum in Brazil provided valuable insight into how globally relevant themes like human rights and diversity play out locally. Modifications and clarifications were made in both themes and commitments were made to address these issues. The following describes Praxair’s sustainable development priorities, what changed from last year, and how business and other stakeholder views are reflected:

Economic and Governance

1. *Integrity and Ethics* (including human rights) are key values for Praxair. Human rights were added to this theme. The theme has become more important to the sustainable development community as seen in changes in the DJSI and GRI G4 questions. This was echoed in the South America stakeholder forum and Mexico stakeholder survey. The issue covers very specific themes that can play out differently in different sectors and geographies. In the United States, concerns about conflict materials have created U.S. Securities and Exchange Commission (SEC) reporting requirements and affect categories of Praxair’s materials sourcing. In Brazil, stakeholders were sensitive to their context of high social vulnerability. For them, the values of ethics and integrity are integrated with those of human rights.
2. *Earnings Growth and Leading Return on Capital (ROC)* remained a strategic theme in 2012. This was also discussed in the Brazil stakeholder forum.
3. *Compliance* remains a core commitment of the company as it operates globally. This theme now includes “Cost of Compliance,” which was a self-standing element in 2011.
4. *Sustainable Productivity* was integrated with business operations – productivity and sustainable productivity are key contributors to ROC. This was discussed by employees and suppliers in Brazil stakeholder forums. The term was changed from “eco-productivity” to “sustainable productivity.”
5. *Supplier Sustainability Management* increased in importance among regulators and customers, as well as external stakeholders. This was validated by several Praxair customers and in Brazil stakeholder forums. The issue was moved from the “social” category to correspond to DJSI categorization.
6. *Emerging Markets* are a growth driver for Praxair. The company concentrates on Brazil, Russia, India, China and Mexico.

Strategy & Analysis

Environment

1. *Energy* markets are a key business driver for Praxair. Stakeholders, including those at the Brazil supplier forum, generally considered this to be the priority issue in the environment theme.
2. *GHG and Climate Change* remains a material issue for the company and external stakeholders, particularly SRI investors.
3. *Transport* is a key area for efforts in employee, contractor, product and community safety, security and environmental responsibility. Because of Praxair's trucking operations, this is a very visible part of its business and reputation. The theme was elevated in priority from sixth to third, primarily in response to feedback from the Brazil supplier forums. It was pointed out that this is an area in which Praxair recognizes real and perceived potential risks and impacts to employees, contractors and surrounding communities and makes substantial investments in their prevention and mitigation.
4. *Customer Environmental & GHG Productivity* remains a priority issue for external stakeholders, particularly SRI investors; and Brazilian customers, eight of whom requested a Carbon Disclosure Project (CDP) Supply Chain response.
5. *Resource Optimization* is a key element of Praxair's business proposition and brand message. The theme is integral to the Zero Waste program that expanded globally in 2012. Water was in the top 10 ranking for audiences in both Praxair Mexico stakeholder surveys.
6. *Air Emissions* remain a priority issue.

Social

1. *Health and Safety* remains a major focus of Praxair's values and strategy and the highest social priority. This was strongly confirmed in the Brazil stakeholder forums.
2. *Diversity and Talent Development* are increasingly seen as strategic issues for Praxair, and reflect the risk identified in the 2012 Annual Report of the continuing challenge to attract and retain qualified personnel. It was confirmed as a strong priority in the Brazil employee stakeholder forums and a Mexico survey. In South America, a region with strong ethnic and racial diversity, the major concern was to ensure gender equity.
3. *Stakeholder Engagement* was newly emphasized in the sustainability community as a key to determine materiality. This was reflected in changes in emphasis in the questionnaires from DJSI, CDP and GRI G4, and in stakeholder forums in Brazil and Mexico.
4. *Product Stewardship* received elevated interest from regulators, the DJSI and GRI G4.
5. *Organizational Alignment and Communication* remains crucial internally to ensure coordination of strategy, programs and communication. This issue was expanded to include "communication." In the Brazil stakeholder forums, suppliers and employees highlighted improvement opportunities in communication and the need to foster a culture of sustainable development.
6. *Community Engagement* is a new topic to enter the priority KPIs, in recognition of the strategic value of Praxair's community engagement activity. External stakeholders in Mexico ranked this highest in the social theme.

PERFORMANCE AND TARGETS

Praxair's 2012 SDMA targets and results are provided in 1.2(4). This table provides a summary of Praxair's performance against 2012 targets. Detail is provided in the relevant GRI section(s) within the report. This reflects continuous improvement; confirms that these targets respond to issues raised in Praxair's current risk, opportunities, and materiality assessment; and aligns with its SDMA 2012 priorities.

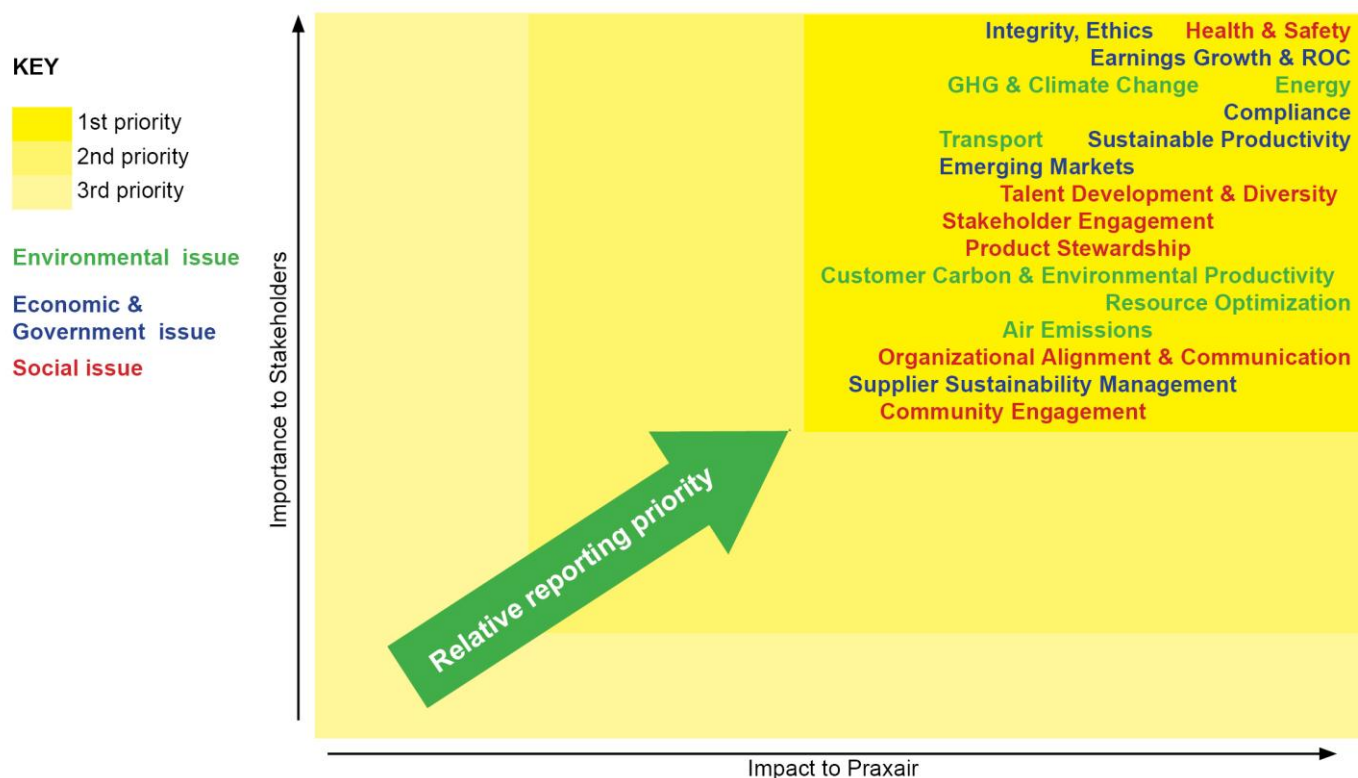
Strategy & Analysis

Several targets were reviewed and improved. Target dates were standardized to end in 2015, except where specifically indicated, and several targets were strengthened. The new target for sustainable productivity (previously called “eco-productivity”) is to generate \$500 million in cumulative sustainable productivity savings. The new target for supplier sustainability management is to achieve at least \$10 million in savings from greening the supply chain. The new target for carbon productivity is to enable at least twice as much GHG to be avoided than is emitted in all operations. The target for increasing organizational alignment and communication is to achieve 100 Zero Waste sites. In community engagement, two new targets were set: (1) by 2015, global Praxair initiatives should cumulatively benefit at least 1 million people; (2) Praxair should maintain an annual net benefit ratio of at least 10 beneficiaries per Praxair employee from community engagement.

Performance against the hydrogen GHG intensity target continues to track towards the goal of 4 percent GHG intensity improvement by 2020, or 0.4 percent per annum GHG intensity improvement. Praxair indicated last year that this target might need to be reviewed, primarily because of the unexpected, sharp and enduring drop in the price of natural gas. While this goal is still within the target range, the trend is a concern.

Strategy & Analysis

1.2 (3): SUSTAINABLE DEVELOPMENT MATERIALITY ASSESSMENT (SDMA) 2012



Sustainable Development Materiality Assessment (SDMA) Chart

- This matrix arranges Praxair sustainable development priorities and those of its stakeholders.
- Key stakeholders: investors, customers, employees, regulators, suppliers and communities.
- 1st and 2nd priority items are subjects of Praxair sustainable development action plans and targets.
- This matrix is a summary; it does not represent the full range of issues considered.

Strategy & Analysis

1.2 (4): Sustainable Development Targets & Performance 2012

Performance area	GRI #	2010	2011	2012	Target 2015
Economic & Governance					
Employees certified that they read & understood Praxair Standards of Business Integrity (%)	EC intro	100	100	100	100
Industry-leading earnings growth & return on capital (ROC)	EC1	14	14	14	
Enable delivery of safe drinking water, particularly in China (# people)	EC8	25 million	25 million	25 million	25 million
Cumulative savings from sustainable productivity [\$MM cumulative, (actual)]	Economic Feature Story	\$32	\$96 (\$64)	\$208 (\$112)	\$500
Customer eco-portfolio (% revenue)	EC2, EN26		26%	27%	30%
Cumulative savings from greening supply chain [\$MM]	EN intro	N/A	N/A	\$4.3	\$10
% applications development from emerging economies	EC6	N/A	23	31	40
Environment					
Cumulative energy savings (2009-2020)	EN3, EN4			\$70MM	\$100MM
Design portfolio energy intensity (% improvement vs. baseline)	EN4	2.2	3.8	4.9	6
ASU GHG emissions intensity (% improvement vs. baseline)	EN16	1.9	3.2	4	6
Hydrogen GHG emissions intensity (% improvement vs. baseline)	EN16	0.8	2	2	2.4
Transport GHG emissions intensity (% improvement vs. baseline)	EN29	3	5	7	9
Enable double the GHG to be avoided per year than is emitted in all operations (net GHG MT MM avoided)	Opening Feature Story		7	100% (17)	100%
Air emissions: Reduce vehicle NOx emissions (% reduction vs. baseline)	EN20		18.9%	25%	20
Social					
Continuously improve safety performance (recordable injury rate per 200,000 hours)	LA 7 - 8	0.51	0.4	0.42	0.4
Emerging economy local or regional leadership (%)	LA 1, 2, 10, 14		92	100	>90
Site Zero Waste achievement (# achieving)	Social Feature Story		10	89	100
Continuous improvement in level of employee satisfaction (biennial survey, 2012 survey deferred to 2013)	4.16	86	n/a	n/a	87
Product stewardship: Track trends and respond to CDP supply chain (%) # customer requests	4.16, PR5	(100%) 6	(100%) 8	(100%) 9	100%
Cumulative benefit of community engagement (CE): cumulative # (annual)	4.16, SO 1	140,000	415,000 (275,000)	715,000 (300,000)	1 million
Positive benefit ratio of employees: beneficiaries from community engagement		1:5	1:11	1 : 12	>1:10

SUSTAINABLE DEVELOPMENT PROGRAMS

The theme of Praxair's sustainable development activity has been to demonstrate multiple ways that the company and its employees are helping to achieve the mission of *making our planet more productive*. Praxair's first focus was to define sustainability in terms of resource productivity: making more from less. This interpretation has now broadened. In addition to measuring the inputs and outputs of sustainable development programs, Praxair is now identifying outcomes: net benefits or enduring social, environmental and economic value created. One example is that Praxair's community engagement program benefitted 12 people for each employee or a 12:1 net social benefit. Another is that the carbon benefits enabled by Praxair's applications in use are now double Praxair's operational greenhouse gas emissions: a 2:1 net carbon benefit. In addition, Praxair broadened its scope across the value chain to include suppliers, customers and other external groups such as government agencies and environmental groups.

Several sustainable development programs are provided as feature stories within this report:

1. Customer Carbon Productivity Enables a 2X Net GHG Benefit
2. Sustainable Productivity Helps Drive Return on Capital (ROC)
3. Supplier Sustainability Forum Promotes Innovation
4. Partnership for Biodiversity Helps Save the Karner Blue Butterfly
5. Facility Zero Waste Creates Multiple Benefits

2. ORGANIZATIONAL PROFILE

2.1 Name of the Organization

Praxair, Inc.

2.2 Primary brands, products and/or services

2.3 Operational structure of the organization

Praxair, Inc. was founded in 1907 and became an independent publicly traded company in 1992. Praxair was the first company in the United States to produce oxygen from air using a cryogenic process and continues to be a major technological innovator in the industrial gases industry.

Praxair is the largest industrial gas supplier in North and South America, is rapidly growing in Asia, and has strong, well-established businesses in Europe. Praxair's primary products in its industrial gases business are atmospheric gases (oxygen, nitrogen, argon, rare gases) and process gases (carbon dioxide, helium, hydrogen, electronic gases, specialty gases, acetylene). The company also designs, engineers and builds equipment that produces industrial gases for internal use and external sale. The company's surface technologies segment, operated through Praxair Surface Technologies, Inc., supplies wear-resistant and high temperature, corrosion-resistant metallic and ceramic coatings and powders.

Industrial Gases Products and Manufacturing Processes

Atmospheric gases are the highest volume products produced by Praxair. Using air as its raw material, Praxair produces oxygen, nitrogen and argon through several air separation processes of which cryogenic air separation is the most prevalent. As a pioneer in the industrial gases industry, Praxair is a leader in developing a wide range of proprietary and patented applications and supply systems technologies. Praxair also led the development and commercialization of non-cryogenic air separation technologies for the production of industrial gases. These technologies opened important new markets and optimized production capacity for the company by lowering the cost of supplying industrial gases. These technologies include proprietary vacuum pressure swing adsorption (VPSA) and membrane separation to produce gaseous oxygen and nitrogen, respectively. Praxair also manufactures precious metal and ceramic sputtering targets used primarily in the production of semiconductors.

Process gases, including carbon dioxide, hydrogen, carbon monoxide, helium, specialty gases and acetylene, are produced by methods other than air separation. Most carbon dioxide is purchased from by-product sources, including chemical plants, refineries and industrial processes and is recovered from carbon dioxide wells. Carbon dioxide is processed in Praxair's plants to produce commercial and food-grade carbon dioxide. Hydrogen and carbon monoxide are produced by either steam methane reforming of natural gas or by purifying by-product sources obtained from the chemical and petrochemical industries. Most of the helium sold by Praxair is sourced from helium-rich natural gas streams in the United States, with additional supplies being acquired from outside the United States. Acetylene can be produced from calcium carbide and water. Praxair purchases a significant percentage as a chemical by-product.

Industrial Gases Distribution

There are three basic distribution methods for industrial gases: (1) on-site or tonnage; (2) merchant liquid; and (3) packaged or cylinder gases. These distribution methods are often integrated, with products from all three supply modes coming from the same plant. The method of supply is generally determined by the lowest cost means of meeting the customer's needs, depending upon factors such as volume requirements, purity, pattern of usage and the form in which the product is used (as a gas or as a cryogenic liquid).

On-site. Customers that require the largest volumes of product (typically oxygen, nitrogen and hydrogen) and that have a relatively constant demand pattern are supplied by cryogenic and process gas on-site plants. Praxair constructs plants on or adjacent to these customers' sites and supplies the product directly to customers by pipeline. On-site product supply contracts generally are total requirement contracts with terms typically ranging from 10–20 years and containing minimum purchase requirements and price escalation provisions. Many of the cryogenic on-site plants also produce liquid products for the merchant market. Therefore, plants are typically not dedicated to a single customer. Advanced air separation processes allow on-site delivery to customers with smaller volume requirements. Customers using these systems usually enter into requirement contracts with terms typically ranging from 5–15 years.

Merchant. The merchant business is generally associated with distributable liquid oxygen, nitrogen, argon, carbon dioxide, hydrogen and helium. The deliveries generally are made from Praxair's plants by tanker trucks to storage containers owned or leased and maintained by Praxair or the customer at the customer's site. Due to distribution cost, merchant oxygen and nitrogen generally have a relatively small distribution radius from the plants at which they are produced. Merchant argon, hydrogen and helium can be shipped much longer distances. The agreements used in the merchant business are usually 3–5-year requirement contracts.

Packaged Gases. Customers requiring small volumes are supplied products in metal containers called cylinders, under medium to high pressure. Packaged gases include atmospheric gases, carbon dioxide, hydrogen, helium and acetylene. Praxair also produces and distributes in cylinders a wide range of specialty gases and mixtures. Cylinders may be delivered to the customer's site or picked up by the customer at a packaging facility or retail store. Packaged gases are generally sold by purchase orders. A substantial amount of the cylinder gases sold in the United States is distributed by independent distributors that buy merchant gases in liquid form and repackage the products in their facilities. Packaged gas distributors, including Praxair, also distribute welding equipment purchased from independent manufacturers.

Over time, Praxair has acquired a number of independent industrial gases and welding products distributors at various locations in the United States and continues to sell merchant gases to other independent distributors. Between its own distribution business, joint ventures and sales to independent distributors, Praxair is represented in 48 states, the District of Columbia and Puerto Rico.

Surface Technologies

Praxair Surface Technologies is a leading worldwide supplier of coatings services and thermal spray consumables to customers in the aircraft, energy, printing, primary metals, petrochemical, textile and other industries. Its coatings are used to provide wear resistance, corrosion protection, thermal insulation and many other surface-enhancing functions, which serve to extend component life, enable optimal performance and reduce operating costs. It also manufactures a complete line of electric arc, plasma and wire spray, and high-velocity oxy-fuel (HVOF) equipment.

2.4 Location of organization's headquarters

Praxair's worldwide headquarters is located in leased office space in Danbury, Conn. Other principal administrative offices are owned in Tonawanda, N.Y., and leased in Rio de Janeiro, Brazil; Shanghai, China; and Madrid, Spain.

2.5 Countries where the organization operates

Praxair is a global enterprise with approximately 62 percent of its 2012 sales outside of the United States. It conducts industrial gases business through consolidated companies in Argentina, Bahrain, Belgium, Bolivia, Brazil, Canada, Chile, China, Colombia, Costa Rica, Denmark, the Dominican Republic, France, Germany, India, Italy, Japan, South Korea, Mexico, the Netherlands, Norway, Paraguay, Peru, Portugal, Puerto Rico, Russia, Saudi Arabia, Spain, Sweden, Taiwan,

Thailand, United Arab Emirates, Uruguay and Venezuela. Societa Italiana Acetilene & Derivati S.p.A. (“S.I.A.D.”), an Italian company accounted for as an equity company, also has established positions in Austria, Bosnia, Bulgaria, Croatia, the Czech Republic, Hungary, Romania, Russia, Serbia, Slovakia, Slovenia and Ukraine. Refrigeration and Oxygen Company Limited (ROC), a Middle Eastern company accounted for as an equity company, has operations in the United Arab Emirates, Kuwait and Qatar. Praxair’s surface technologies segment has operations in Brazil, Canada, China, France, Germany, India, Italy, Japan, Singapore, South Korea and the United Kingdom.

Sustainability is globally integrated into Praxair in all its regions. For the most part, this report does not provide regional or country-specific details. Praxair’s businesses in South America and Mexico produce region-specific GRI-based sustainability reports, which can be viewed at Praxair’s sustainable development reporting center.

2.6 Nature of ownership and legal form

Praxair is a publicly traded company (NYSE: PX). As of January 31, 2013, there were 296,188,748 shares of common stock of Praxair, Inc. outstanding.

2.7 Markets served

Praxair serves approximately 25 markets as diverse as healthcare and petroleum refining; computer-chip manufacturing and beverage carbonation; fiber optics and steelmaking; and aerospace, chemicals and water treatment. In 2012, 94 percent of sales were generated in four geographic segments (North America, Europe, South America and Asia), primarily from the sale of industrial gases, with the balance generated from the surface technologies segment. Praxair provides a competitive advantage to its customers by continuously developing new products and applications, which allow them to improve their productivity, energy efficiency and environmental performance.

2.8 Scale of the reporting organization

As of December 31, 2012, Praxair had 26,539 employees worldwide. Sales in 2012 were \$11,224 million.

Praxair designs, engineers, manufactures and operates facilities that produce and distribute industrial gases. These industrial gas production facilities and certain components are designed and/or manufactured at its facilities in Tonawanda, N.Y.; Burr Ridge, Ill; Rio de Janeiro, Brazil; Monterrey, Mexico; Shanghai, China; and Bangalore, India. Praxair’s Italian equity affiliate, S.I.A.D., also has such capacity. Due to the nature of Praxair’s industrial gas products, it is generally uneconomical to transport them distances greater than a few hundred miles from the production facility. As a result, Praxair operates a significant number of production facilities spread globally throughout a number of geographic regions.

The following is a description of production facilities for Praxair by segment. No significant portion of these assets was leased as of December 31, 2012. Generally, these facilities are fully utilized and are sufficient to meet the company’s manufacturing needs.

Strategy & Analysis

North America

The North America segment operates production facilities in the United States, Canada and Mexico, approximately 245 of which are cryogenic air separation plants, hydrogen plants and carbon dioxide plants. There are five major pipeline complexes in North America located in Northern Indiana, Houston, along the Gulf Coast of Texas, Detroit and Louisiana. Also located throughout North America are packaged gas facilities, specialty gas plants, helium plants and smaller plant facilities.

Europe

The Europe segment has production facilities primarily in Italy, Spain, Germany, the Benelux region, France, Scandinavia and Russia that include more than 55 cryogenic air separation plants. There are three major pipeline complexes in Europe located in Northern Spain and the Rhine and Saar regions of Germany. These pipeline complexes are primarily supplied by cryogenic air separation plants. Also located throughout Europe are specialty gas plants, packaged gas facilities and other smaller plant facilities.

South America

The South America segment operates more than 45 cryogenic air separation plants, primarily located in Brazil. Many of these plants support a major pipeline complex in Southern Brazil. Also located throughout South America are carbon dioxide plants, packaged gas facilities and other smaller plant facilities.

Asia

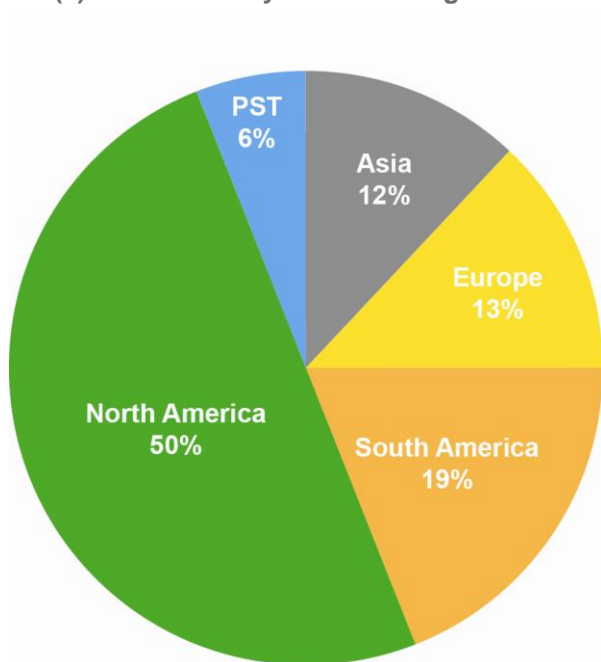
The Asia segment has production facilities located primarily in China, Korea, India and Thailand, approximately 40 of which are cryogenic air separation plants. Also located throughout Asia are noncryogenic air separation, carbon dioxide, hydrogen, packaged gas and other production facilities.

Surface Technologies

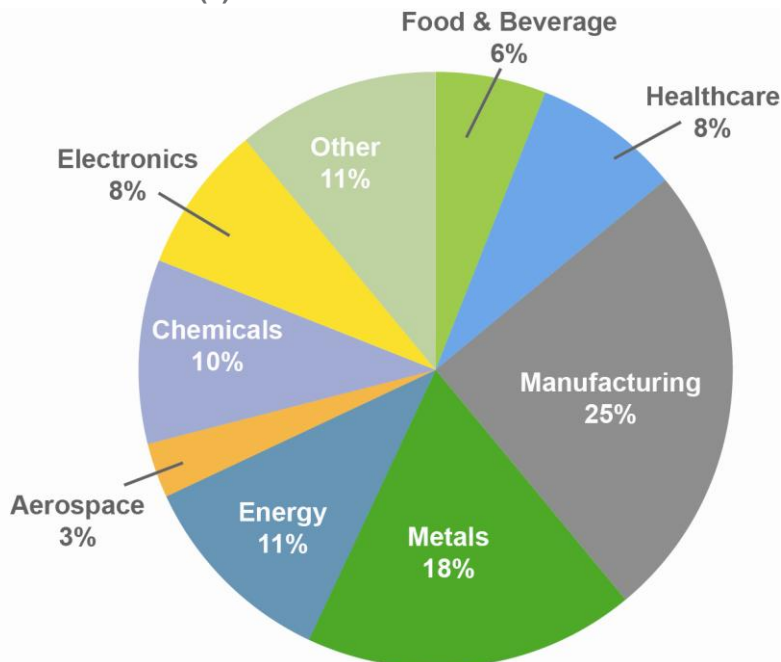
The surface technologies segment provides coating services and manufactures coating equipment at approximately 40 sites. The majority of these sites are located in the United States and Europe, with smaller operations in Asia, Brazil, India and headquarters located in Indianapolis, Indiana.

Strategy & Analysis

2.8 (1): 2012 Sales by Business Segments



2.8 (2): End Markets







2.9 Significant changes during the reporting period

There were no significant changes during the reporting period regarding size, structure, or ownership including: the location of, or changes in, operations, including facility openings, closings, and expansions; or changes in the share capital structure and other capital formation, maintenance, and alteration operations.

2.10 (1): Sustainable Development Awards

The following are selected awards earned and received by Praxair in 2012. A more comprehensive list of recognition for sustainable development excellence is maintained on Praxair's website, www.praxair.com.

Recognition	Criteria
 Dow Jones Sustainability Indexes <ul style="list-style-type: none"> • World Index • North American Index 	<p>September 2012 – Praxair was selected as a component of the 2012-2013 Dow Jones Sustainability World Index and is the only U.S.-based company in the chemical sector selected for the World Index for nine consecutive years. Membership in the World Index ranks Praxair among the top 10 chemical companies worldwide in terms of sustainability leadership. Praxair is also a member of the Dow Jones Sustainability North America Index, a subset of the World Index, which places it among the top 20 percent of companies in its sector in North America.</p>
CARBON DISCLOSURE PROJECT <ul style="list-style-type: none"> • Global Carbon Disclosure Leadership Index (CDLI) 	<p>September 2012 – Praxair was included in the Carbon Disclosure Project (CDP) Global Carbon Disclosure Leadership Index (CDLI), one of only 10 companies to have achieved this distinction for four consecutive years. With a disclosure score of 95, Praxair is ranked among the top 30 best-performing companies in the world for carbon disclosure.</p>
 maplecroft <small>risk responsibility reputation</small>	<p>April 2012 – Maplecroft Climate Innovation Indexes (CIIs). This index, published by the risk analysis company Maplecroft, has determined that Praxair, Inc. (NYSE: PX) is one of the top 10 leaders among the 360 largest U.S. companies in the innovation of clean-tech solutions and new products, the mitigation of climate-change-related risks and the management of carbon emissions. This is the third consecutive year that Praxair has been listed in the top 10.</p>
 sam 	<p>February 2012 – The SAM annual Corporate Sustainability Yearbook, authored by Pricewaterhouse Coopers and the Sustainability Asset Management (SAM) Group, is based on economic, environmental and social dimensions. SAM's approach goes beyond the conventional framework and includes other intangible business issues, such as management of innovation, customer relationships and brands. Praxair has been a Silver or Bronze class member since the report was created in 2004. In 2012, Praxair received the Silver Class distinction.</p>

3. Reporting Parameters

3.1 Reporting period

January 1, 2012, to December 31, 2012.

3.2 Date of most recent previous report

2012 (2011 data).

3.3 Reporting cycle

Annual

3.4 Contact point

Riva Krut, Vice President & Chief Sustainability Officer

E-mail: Riva_krut@praxair.com or sustainability@praxair.com; Tel: 203-837-2337

Reporting Scope and Boundary

3.5 Process for defining report content

Report content is identified and prioritized by Praxair's vice president, sustainable development, using the SDMA process described in 1.2. For the fourth year, Praxair reports using the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines 3.1, consistent with best practices. Priority issues for 2012 are defined in the SDMA process and presented in 1.2, as was the system for reviewing, maintaining and continuously improving these priorities.

3.6, 3.7, 3.8 Reporting boundaries and basis for reporting

The Praxair Sustainable Development Report: 2012 Data Year integrates sustainability aspects of Praxair's processes and business operations in each section. It includes quantitative and qualitative information relating to calendar year 2012 and comparative data for 2011, 2010 and 2009, which is the baseline year for Praxair's sustainable development targets. Except where indicated, it reports consolidated data from entities where Praxair is the majority shareholder (more than 50 percent) and joint ventures where Praxair has management control; it excludes all data from entities where Praxair has minority ownership or no management control.

Sustainable development indicators in this report are those that are reported under the internal SDMS: operational energy and environmental performance, including sustainable productivity; marketplace customer eco-efficiency targets; and employee environmental and community engagement, including zero waste.

3.9 Data measurement techniques and the bases of calculations

Various databases are managed across Praxair to accurately capture and aggregate data. These are separated by function. Safety data, safety and environmental compliance data, and product safety data are collected monthly from the businesses by the SH&E organization. HR data is collected by that organization, and data for Finance, Operations, Global Procurement and Materials Management (GPMM), Productivity, R&D, Sales and the Praxair Foundation are collected by the respective organizations.

Environmental data for tracking performance against sustainable development targets is collected into the SDMS, which is described in the Strategy and Analysis and the Environment Disclosures chapters. This draws on data from the EKPI database, which tracks all environmental data; from the Productivity database, which tracks sustainable development results of productivity projects; and from spreadsheets reporting into the SDMS for the Water Tool, for Zero Waste and for Earth Week activities. Community engagement activity is tracked with a global survey tool and exported into a

spreadsheet for analysis. Sustainable development metrics for the R&D organization are integrated into the R&D database and management system.

Standard Operating Procedures (SOPs) are in place to define the scope and boundary of a particular measure. A GHG Inventory Management Plan (IMP) defines SOPs for GHG measurement and management and is available on the SH&E intranet site and the SDMS. For the SH&E management system and SDMS, SOPs are maintained within their respective intranet sites. Performance is monitored and reported to ensure consistent performance that meets targets.

3.10 Explanation of the effect of any re-statements and the reasons

Several changes and corrections are reported.

3.10 (1): Sustainable Development Report Changes and Re-statements

ISSUE	Change	Reason
Reporting year	The sustainability report published this year (June 2013) will be called "Praxair Sustainable Development Report: 2012 Data Year." The report published in 2014 will be named for the year of data being reported rather than the year of publication, i.e., "Praxair Sustainable Development Report 2013."	This is to align the sustainable Development naming convention with that of Praxair's 2012 Annual Report.
Key Figures: Donations and other community investments	The value of 2011 donations and other community investments has been corrected to \$5.0MM. This was previously reported as \$4.5MM.	The previously reported value was did not include all Praxair Foundation contributions.
Internal Assessments	B assessments in 2010 and 2011 were corrected to 103 and 132; they had been reported as 46 and 48 respectively.	Praxair was reporting sites audited rather than the number of audit protocols. Going forward, it will report the number of audit protocols completed.
Scope 2 GHG Emissions	The value of 2011 Scope 2 electricity has been corrected to 11.4 million MT. This was previously reported as 10.9 million MT.	Praxair improved its scope of site Scope 2 GHG reporting to capture all Scope 2 energy (including energy paid by others) used at the site. This increased its reported 2011 Scope 2 GHG emissions by 500,000 MT and related results: GHG emissions intensity over revenue; Scope 2 emissions from electricity and from ASUs.
Training & Development	The values of 2009, 2010, and 2011 total average training hours have been corrected to 32, 37, and 45 hours, respectively. These were previously reported as 56, 65, and 76 hours, respectively.	Praxair previously reported training hours based upon United States training and other areas, where data was available. Due to new reporting systems, Praxair now reports development training on a global basis.

3.11 Significant changes from previous reporting periods

There were no other significant changes from previous reporting periods in terms of these issues.

GRI Content Index

3.12 Location of the standard disclosures

Praxair provides sustainability information in the following key corporate publications:

- Praxair's 2012 Annual Report and 2013 Notice of Meeting and Proxy Statement contain key financial and non-financial indicators and qualitative information about business practices at Praxair, including information material to Praxair's sustainable development strategy and this report.
- Praxair's website received a major update in early 2013 and contains detailed information on corporate responsibility and sustainable development.
- Some Praxair businesses publish regional sustainable development reports. In 2013, the South America and Mexico businesses each published their sustainable development reports, aligned with the GRI guidelines.
- Praxair's investor relations presentations are available to the public and highlight Praxair's growth strategies and business outlook.
- Praxair's Sustainable Development Report: 2012 Data Year is based on GRI 3.1. It presents Praxair's sustainability reporting and is addressed to readers interested in sustainable development reporting, particularly the socially responsible investment (SRI) community and the sustainability rating community. GRI elements within the themes of economic, environment and social are referenced by GRI number. Praxair's GRI Index is located in an annex to this report.
- Praxair's CDP Investor Response is published as its climate change report on its [Sustainable Development Reporting Center](#). Praxair was the first company to issue its CDP response on its website, a practice that is now considered a best practice.
- For the general reader, Praxair's Sustainable Development Reporting Center provides links to various annual summary reports: Sustainable Development Highlights, Corporate Diversity Highlights, Community Engagement Highlights and Community Engagement – Asia; and regional sustainability reports for South America and Mexico/Central America.

ASSURANCE

3.13 External assurance

The reporting period is 2012. Data was primarily obtained from corporate databases and management systems, including financial management reporting systems, corporate HR information management systems, corporate compliance information reporting systems, the corporate safety and environmental compliance management system and the Praxair SDMS. Each has associated approval and verification processes. Praxair management is responsible for establishing and maintaining internal controls and reporting.

- This report contains excerpts from Praxair's 2012 Annual Report which was externally audited by independent auditors.
- Selected environmental data (air emissions, energy, fuel, water, GHG, GHG from contractor driving, [Zero Waste](#) data) and social data [Lost Time Injury Frequency (LTIFR) and community engagement] received an independent Limited Assurance from Carbon Verification Services.

Global Reporting Initiative™ (GRI) Application Level: A+

GRI's Report Services has reviewed Praxair's 2012 disclosures against the GRI 3.1 Guidelines and concluded that the report fulfills the requirement of Application Level A+. The details of how Praxair's 2012 disclosures address the GRI 3.1 Guidelines are further defined in the GRI Index table, found at the back of this report.

3.13 (1): GRI Application Level Compliance

Report Application Level		C	C+	B	B+	A	A+
Standard Disclosures	G3 Profile Disclosures OUTPUT	Report on: 1.1 2.1 - 2.10 3.1 - 3.8, 3.10 - 3.12 4.1 - 4.4, 4.14 - 4.15		Report on all criteria listed for Level C plus: 1.2 3.9, 3.13 4.5 - 4.13, 4.16 - 4.17		Same as requirement for Level B	
	G3 Management Approach Disclosures OUTPUT	Not Required	Report Externally Assured	Management Approach Disclosures for each Indicator Category	Report Externally Assured	Management Approach Disclosures for each Indicator Category	Report Externally Assured
	G3 Performance Indicators & Sector Supplement Performance Indicators OUTPUT	Report on a minimum of 10 Performance Indicators, including at least one from each of: Economic, Social and Environmental.		Report on a minimum of 20 Performance Indicators, at least one from each of Economic, Environmental, Human rights, Labor, Society, Product Responsibility.		Report on each core G3 and Sector Supplement* Indicator with due regard to the Materiality Principle by either: a) reporting on the Indicator or b) explaining the reason for its omission.	

*Sector supplement in final version

4. GOVERNANCE, COMMITMENTS AND ENGAGEMENT

GOVERNANCE

4.1 Governance structure of the organization

The ultimate authority to govern Praxair rests with the Board of Directors, whose role is to effectively govern the affairs of the company for the benefit of its shareholders in consideration of other constituencies, including employees, customers, suppliers and the communities in which it does business. The Board appoints the company's officers, assigns them responsibility for management of the company's operations and reviews their performance. A full description of Board responsibilities is given in the [Corporate Governance Guidelines section](#) of Praxair's website.

The Governance and Nominating Committee of Praxair's Board of Directors is responsible for periodically reviewing these guidelines and practices, monitoring legislative and best practice developments in corporate governance and recommending governance changes as circumstances warrant. In addition, this committee sponsors an annual board self-assessment in which directors are encouraged to comment upon the effectiveness of the board in fulfilling its responsibilities. Praxair's Board diversity is provided at LA13.

Table 4.1 (1): Board Committees at a Glance, including oversight of sustainable development

Meetings	Summary Responsibilities
Audit Committee	
Meetings in 2012: 5 Number of Members: 5 Percent Non-Executive: 100%	The Audit Committee assists the Board in its oversight of (a) the independence, qualifications and performance of Praxair's independent auditor; (b) the integrity of Praxair's financial statements; (c) the performance of Praxair's internal audit function; and (d) Praxair's compliance with legal and regulatory requirements.
Compensation and Management Development Committee	
Meetings in 2012: 5 Number of Members: 5 Percent Non-Executive: 100%	The Compensation and Management Development Committee assists the Board in its oversight of (a) Praxair's compensation and incentive policies and programs; and (b) management development and succession, in both cases particularly as they apply to Praxair's executive officers.
Governance and Nominating Committee	
Meetings in 2012: 6 Number of Members: 5 Percent Non-Executive: 100%	The Governance and Nominating Committee assists the Board in its oversight of (a) the selection, qualifications, compensation and performance of Praxair's directors; (b) Praxair's governance, including the practices and effectiveness of the Board; and (c) various important public policy concerns that affect the company. In furtherance of these responsibilities, the Governance and Nominating Committee, among other duties: reviews Praxair's policies and responses to broad public policy issues such as social responsibility, corporate citizenship, charitable contributions, sustainable development, legislative issues and important shareholder issues, including management and shareholder proposals offered for shareholder approval.
Finance and Pension Committee	
Meetings in 2012: 3 Number of Members: 5 Percent Non-Executive: 100%	The Finance and Pension Committee assists the Board in its oversight of (a) Praxair's financial position and financing activities; (b) Praxair's financial risk management policies and activities; and (c) the ERISA-qualified, funded plans sponsored by Praxair.

4.2 Whether the Chair of the highest governance body is also an executive officer

Praxair's Chair of the Board is also its CEO.

4.3 For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members

Praxair has a unitary board structure with one executive member; the rest are independent. Two of the 11 board members are female. Independence standards are defined on Praxair's website.

4.4 Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body

Praxair's Corporate Governance and Board Practices include its policy for communications with the Board. The Board has established procedures to enable a shareholder or other interested party to direct a communication to the Board of Directors. Such communications may be confidential or anonymous and may be communicated by mail, e-mail, through its Investor Relations Department or by telephone. Information on how to submit communications to the Board, and how they will be handled, is included on Praxair's website.

4.5 Linkage between compensation for members of the highest governance body, senior managers and executives, and the organization's performance

Praxair's 2013 Notice of Meeting and Proxy Statement, page 33, "Alignment of Executive Compensation Programs with Praxair Business Objectives," outlines executive compensation objectives that link pay to financial and non-financial performance, including social and environmental performance. The Compensation Committee seeks to achieve its executive compensation objectives by utilizing best practices to align the design of its compensation programs with the company's business objectives.

- Business Objective: Achieve sustained growth in profitability and shareholder return, resulting in a robust cash flow to fund capital investment opportunities and dividends.
- Business Objective: Maintain world-class standards in safety, environmental responsibility, global compliance, productivity, talent management and financial controls.
- Business Objective: Attract and retain executives who thrive in a performance-driven culture.

Executive and senior management compensation includes strong retention incentives, such as vesting stock options and stock grants. These are described in the 2013 Notice of Meeting and Proxy Statement, pages 31-64.

4.6 Processes in place for the highest governance body to ensure conflicts of interest are avoided

A comprehensive process for ensuring the avoidance of conflicts of interest is provided in Praxair's 2013 Notice of Meeting and Proxy Statement, pages 13ff. Potential conflicts of interest can be self-identified by the director or executive officer or may arise from internal audits, the integrity hotline or other referrals, or through periodic due diligence conducted by the Corporate Secretary's office. The Governance and Nominating Committee then examines the facts and circumstances of each matter referred to it and makes a final determination as to appropriate action.

4.7 Process for determining the composition, qualifications and expertise of the members of the highest governance body and its committees

Praxair's 2013 Notice of Meeting and Proxy Statement, page 22, outlines the process for determining qualifications for members of the Board of Directors. The process is open to shareholder recommendations, and selection depends on qualifications for the job and the needs of the Board at the time. Gender and other indicators of diversity are not explicitly

referenced. Two of the 11 Board members are women, and two others are U.S. minorities. The Governance and Nominating Committee will consider any candidate for election to the Board who is timely recommended by a shareholder and whose recommendation otherwise complies with the requirements under Praxair's certificate of incorporation. The qualities and skills sought in director nominees are governed by the projected needs of the Board at the time the Governance and Nominating Committee considers adding a new director or re-nominating incumbent directors. Consistent with the Board's Corporate Governance Guidelines, the Committee seeks to build and maintain a Board that contains a range of experiences, competencies and perspectives that is well-suited for advice and counsel to, and oversight of, the company's business and operations. In doing so, the committee takes into account a variety of factors, including:

1. The company's strategies and its market, geographic and regulatory environments, both current and projected.
2. The mix of experiences, competencies and perspectives (including gender, ethnic and cultural diversity) currently represented on the Board.
3. The results of the Board's annual self-assessment process.
4. The CEO's views as to areas in which management would like to have additional advice and counsel from the Board.
5. With respect to the incumbent directors, meeting attendance, participation and contribution and the director's current independence status.

The committee also seeks in each director candidate a breadth of experience and background that (a) will allow the director to contribute to the full range of issues confronting a global industrial company; and (b) will qualify the director to serve on, and contribute to, any of the Board's standing committees, thus facilitating the Board's committee rotation policy. In addition, the Governance and Nominating Committee believes that every director nominee should demonstrate a strong record of integrity and ethical conduct, an absence of conflicts that might interfere with the exercise of his/her independent judgment and a willingness and ability to represent all shareholders of the company.

4.8 Statements of mission or values, codes of conduct and principles

CORPORATE MISSION AND VALUES

Praxair Vision

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.

Mission

Making our planet more productive: We develop technology, products and services that help to sustain and protect our planet. We are committed to improving our customers' economic and environmental performance around the globe.

Strategy & Analysis

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 our shareholders and other stakeholders through flawless execution, operational discipline and continuous improvement.

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.

The Right People – We place a high value on attracting and developing talented people from diverse backgrounds who work hard to make a difference in the world and make our company successful.

Environmental and 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.

CORPORATE POLICIES

Praxair policies are governed by its Standards of Business Integrity and include policies to protect equal opportunity and prevent discrimination, protect safety and the environment, protect human rights, ensure a conflict-free materials supply and ensure that the activities of its employees and contractors do not promote sex trafficking or forced labor.

Sustainable Development Principles and Policy

Praxair's Sustainable Development Principles were originally published in 2003 and were revised in 2008.

Sustainable Development Principles

These principles guide Praxair's decision-making process across its business and are rooted in its mission of *making our planet more productive*.

- *Governance and Integrity*: Maintain strong systems and a culture of global corporate governance, compliance, ethics, human rights, integrity and accountability.
- *Strategic Leadership*: Stay current with, and take advantage of, emerging global opportunities, developments and challenges to position Praxair for the future.
- *Customer Commitment*: Focus relentlessly on delivering value through continuous innovation — helping customers enhance their product quality, service, reliability, productivity, safety, energy efficiency and environmental performance.
- *Environmental Responsibility*: Achieve continuous environmental performance improvement and energy efficiency in our operations.
- *Employee Safety and Development*: Provide opportunities that allow employees to develop to their fullest potential in a creative, inclusive and safe environment.

- *Community Support:* Participate in community development in regions where we operate.
- *Financial Performance:* Maintain year-on-year recognition from shareholders and stakeholders for top-tier financial performance.
- *Stakeholder Engagement and Communication:* Partner with internal and external stakeholders to achieve a strong, secure and sustainable society, economy and environment.

Praxair issued a Sustainable Development Management System (SDMS) policy, signed by the senior vice president and chief technology officer, and the vice president and chief sustainability officer. The policy was written to align with ISO 14001, the International Standard for EMSs; Sigma SD Guidelines; and ISO 26000:2010, the ISO standard for social responsibility.

Sustainable Development Management System (SDMS) Policy

- Conduct our business and sustainable development activity ethically and with integrity, complying with applicable requirements of the laws and regulations applicable to our activities, as well as Praxair global and local standards and policies.
- Establish leadership and responsible parties to implement this SDMS, and ensure that they have clear roles and responsibilities and adequate resources.
- Maintain a process to assess potentially material economic, environmental and social aspects arising from our activities, products and services.
- Based on this materiality assessment, establish goals, targets and programs to address and continuously improve Praxair's sustainability performance.
- Align these goals and targets with the organization's business strategy, vision and standards, as well as its principles of sustainable development and existing management practices, systems and procedures.
- Pursue continual performance improvement of the SDMS and its related activity.
- Encourage suppliers and contractors to further their activity in the area of sustainable development and their alignment with Praxair's global standards, policies and Principles of Sustainable Development.
- Communicate this policy to employees, the general public and to relevant parties.
- Report regularly, both internally and externally, and in a manner that is transparent, relevant, material, complete and reliable, as well as responsive to stakeholder inputs and feedback.
- Annually review this policy and the SDMS with a view to continuous performance improvement.

4.9 Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct and principles

The Board Governance and Nominating Committee is charged with overseeing Praxair's identification of key issues for the management of economic, social and environmental performance. The full board ensures that Praxair complies with national and international law, with Praxair's Standards of Business Integrity and other Praxair policies or external standards and codes to which Praxair subscribes, such as Responsible Care®. The Board reviews safety and compliance performance at each board meeting; and sustainability performance at least once a year (twice in 2012).

4.10 Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental and social performance

Praxair's 2013 Notice of Meeting and Proxy Statement, pages 11-15, "Board Effectiveness Assessment," notes that "The Board assesses its effectiveness annually under a process determined by the Governance and Nominating Committee. Typically, this assessment includes evaluating the Board's effectiveness in the areas of Performance of Core Responsibilities, Decision- Making Support, the Quality of Deliberations and Director Performance, as well as consideration of additional Board practices and policies recommended as best practices by recognized governance authorities. Similarly, each Committee annually assesses its effectiveness in meeting its oversight responsibilities under its charter from the Board.... In addition to leading the annual Board and Committee effectiveness assessment referred to above, the Governance and Nominating Committee annually reviews with an outside expert the Company's governance practices, and updates those practices as it deems appropriate."

COMMITMENTS TO EXTERNAL INITIATIVES

4.11 Explanation of whether and how the precautionary approach or principle is addressed by the organization

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. Decision-making requires a systematic evaluation of risk and benefits. Praxair's product safety program is supported by its commitment to Responsible Care®. Risk assessment includes hazard identification, characterization, exposure assessment and risk assessment. Risk management encompasses the identification, selection and implementation of alternative actions for addressing risk through the control of identified hazard(s) and/or exposure. More information is available on the Product Safety section of Praxair's website.

4.12 Externally developed economic, environmental and social charters, principles or other initiatives to which the organization subscribes or endorses

4.12 (1): Externally-developed Charters, Principles, Initiatives

Organization name and description	Stakeholders	Scope
No funding is provided beyond membership dues unless otherwise indicated	Binding/non-binding. Mandatory/voluntary	
Responsible Care®: Working with national and international chemical industry associations, chemical companies around the world are required to participate in Responsible Care®. Praxair is also committed to the <i>ICCA's Global Chemical Management Policy</i> .	Industry association. Binding on members. Mandatory for industry.	Global
Electronics Industry Code of Conduct/ GeSI: Praxair has joined this group and requires applicable suppliers to adhere to the EICC Code of Conduct and fill out its questionnaire. Praxair's policies correspond to the EICC Code.	Industry partnership. Non-binding. Voluntary for industry.	Global
The Climate Disclosure Standards Board (CDSB) Climate Change Reporting Framework (CCRF): In acknowledgement of the materiality of climate change to Praxair's sustainable development program, Praxair is an associate member of the CDSB.	Investors, professional organizations, environmental think-tanks, companies Voluntary. Non-binding	Global
Ethos Institute: The organization's mission is to promote the practice of corporate social responsibility	Companies, pension funds, universities, mandatory adherence to Ethos "mission"	Brazil

4.13 Memberships in associations and advocacy organizations

Praxair is a member of a range of trade associations, business associations and alliances. The more active relationships are listed below. In many cases, these are organizations where a Praxair executive holds a board seat and/or serves on a relevant committee; where Praxair participates in projects; and/or where it views membership as a strategic partnership. In addition, Praxair participates in additional organizations, including many at the local and regional level. Some of these organizations include:

- Asia Industrial Gas Association
- Advanced Biofuels Coalition
- American Chemistry Council
- American Institute of Chemical Engineers: AIChE
- Brazilian Chemical Industry Association: ABIQUIM
- HR Policy Institute
- Compressed Gas Association (U.S.)

- European Industrial Gas Association
- National Enhanced Oil Recovery Initiative: NEORI
- U.S. - Brazil CEO Forum
- U.S. - China Business Council

STAKEHOLDER ENGAGEMENT

4.14 List of stakeholder groups

4.15 Basis for identification and selection of stakeholders

Praxair's mission defines its principal corporate stakeholders as customers, shareholders, suppliers, employees and prospective employees, and the communities where it operates. Additional stakeholders that have a specific interest in sustainable development issues, as well as those that can and do impact or influence Praxair's sustainable development strategy and/or reputation, have also been identified. These include the SRI community; regulators and government agencies; technical, academic, professional, public policy and civil society organizations, and potential employees with an interest in Praxair's activities in corporate responsibility and sustainable development.

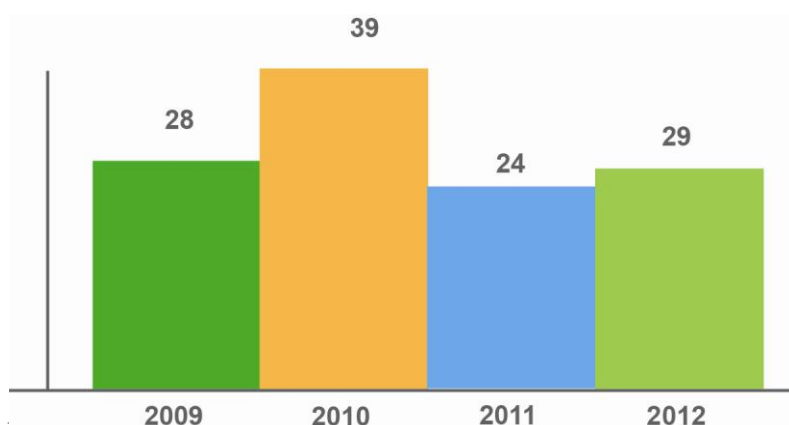
4.16 Approaches to stakeholder engagement

Praxair's approach to identifying and selecting stakeholders is covered in the Mission Statement of Praxair's Corporate Sustainable Development Council and is consistent with the best practices defined in the *GRI Guidelines*. Praxair's ongoing sustainability stakeholder engagement strategy focuses on information sharing, dialogue and partnership, with the aim of advancing business objectives and promoting its sustainability strategy. Stakeholder perspectives are actively sought and integrated into the SDMA as described above. The following are 2012 examples of engagement with key stakeholders. Some of these were undertaken specifically as part of the report preparation process; others were not.

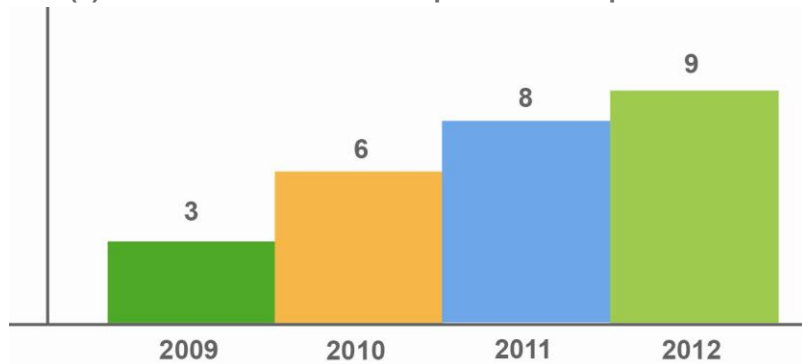
Customers

Praxair tracks customer requests for sustainable development information in a global database. Quarterly reports of frequency, themes and affected businesses are provided to the Corporate Sustainable Development Council. Praxair recorded 29 requests in 2012, up from 24 in 2011. Themes have remained constant: over half of the inquiries were in relation to Praxair's position on energy, climate change and GHG; the balance was general inquiries about Praxair's human rights program, business practices and integrity.

4.16 (1): Number of Customer Requests for Supplier Sustainability Information



4.16 (2): Number of Customer Requests for Responses to the CDP Supply Chain Project



In line with the continued interest in climate change issues, nine Praxair customers sought GHG product information through the CDP Supply Chain project, up from eight in 2012 [see 4.14 (2)]. Five of these requests came from customers based in Brazil, and two from multinationals that are large customers in Brazil.

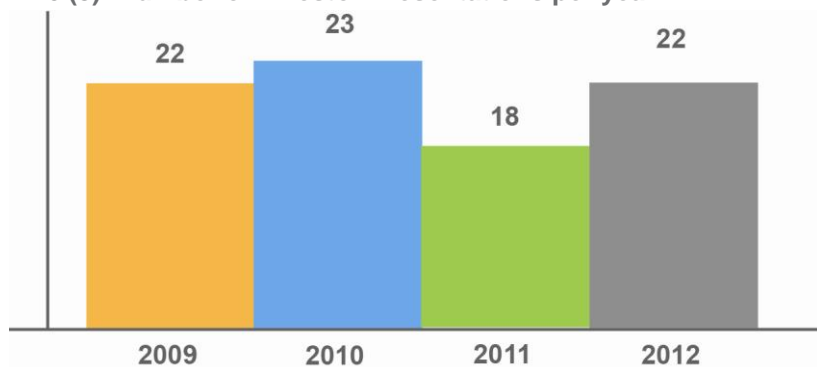
Praxair actively seeks out opportunities to engage with key customers in this area. In 2012, the vice president, sustainable development, and/or business sustainable development coordinators, and executives from key customers met several times to exchange information and ideas, and seek opportunities to support and further the progress of each company's efforts in this area.

One major customer in Brazil, Fibria Cellulose, recognized White Martins (SAWM) as an "Outstanding Supplier" in the theme of climate change. SAWM was invited to make a presentation to Fibria's Supplier Sustainability conference on the SAWM CDP Supply Chain response. In China, a Praxair team including the CEO of Praxair Asia, attended Intel's Supplier Sustainability Day in Shanghai in August 2012.

Shareholders (including Investors, Analysts and Socially Responsible Investors [SRI])

Praxair is consistently rated among the most shareholder-friendly chemical companies *by Institutional Investor* magazine. Praxair's [Investor Relations](#) activity resides on its website, which also hosts recordings and the slides of quarterly earnings conferences, and ongoing executive presentations to the investor community [see 4.14 (3)]. In 2012, Praxair executives presented 22 [investor conferences](#) in the United States alone. The majority of the presentations are webcast and archived on Praxair's [website](#).

4.16 (3): Number of Investor Presentations per year



Praxair responds to over two dozen requests each year for information from the SRI community. These requests for information are typically presented in a pre-populated questionnaire, which Praxair confirms and/or provides additional information. Stakeholders have encouraged the company to reduce this burden by providing this Sustainable Development Report structured clearly against the GRI Guidelines, which is designed to facilitate data collection from the SRI community and other stakeholders, and it has done so for three years. However, the response burden continues to rise. In 2012, the 10 SRI questionnaires that Praxair considered to be most important requested responses to 759 questions and 2,926 data points. In a work year of 220 days, just these 10 questionnaires require responses to an average of 3.5 questions and 13 data points each day. Praxair applauds the move in 2012 by DJSI and CDP to align their climate change reporting elements, as this allows all parties to concentrate resources on strategic issues.

Principal areas of interest to the SRI community are Praxair's financial health and return on capital, strong corporate governance, climate change risk and opportunity/innovation, and support of human rights. Praxair responds to the Dow Jones Sustainability Index annual questionnaire and has been included in their World Index, which names the top 10 percent of chemical companies for sustainability performance, for the past 10 consecutive years.

Praxair addresses investors' interest in climate change risk and opportunity by publishing its response to the CDP response in the [Sustainability Reporting Center](#) on its website. Praxair is proud to be listed on a range of other investor sustainability indexes. For details, see Praxair's [recognition](#) for sustainable development excellence on its website.

Employees

Praxair conducted its second global employee survey in 2010; the third survey will be conducted in the third quarter of 2013. In terms of sustainable development, the survey showed that employees believe that Praxair is well focused on safety, the environment and social responsibility. Employees identified opportunity areas in categories such as competitive position and career development. Each business and functional leader analyzed his/her group's results and developed action plans to address key issues. Overall results were communicated by the CEO to employees via the corporate intranet, and leaders held department meetings to share company and specific department results.

In 2012, a range of employee engagement activities were conducted. Some examples include:

Global:

- Sites representing six thousand employees participated in site [zero waste activities](#) designed to deepen employee sustainability and environmental and brand engagement.
- For Earth Week 2013, 2,500 employees provided “personal sustainability acts” (PSAs), which are commitments to environmental action that they are taking at home, at work, on the road or in the community (2012: 1,500). PSAs are shared on the corporate intranet throughout the year, as examples of employee and brand alignment.
- As part of Earth Week 2013, 2,500 employees responded to a short baseline survey designed to determine employee sustainable development engagement. Sixty-seven percent said that they have both knowledge of and participation in Praxair's sustainable development program.
- Diversity: Connections groups give participants an opportunity to share common experiences and gain awareness of diverse perspectives and ideas. Employee-initiated and led, Connections groups are open to all employees with active groups in Asia, Europe and the United States.
- Diversity: The Global Talent Management Program identifies technical and leadership development opportunities to meet the needs of the business and develop well-rounded leaders with diverse talents and perspectives.
- Diversity: Minority and Women's Global Leadership Forums are led by senior management and provide an opportunity for participants to enhance leadership skills, identify networking opportunities and learn from others' experiences in Praxair's diverse workplace.

Regional:

- Brazil: An employee stakeholder engagement forum was held as part of the SAWM sustainability materiality assessment and as input for their regional sustainable development report. Employees were selected to participate in panels to define materiality. At this meeting, the [SAWM Sustainable Development Report](#) for 2011 was reviewed and discussed, providing input on strengths and opportunities and suggestions for the future.
- Brazil: Created an internal interactive *White Connection* (online forum) to invite employees to “chat” about how to adopt a more sustainable lifestyle at home and at work. The initiative, moderated by the Sustainability group of the company, engaged with 100 employees over the period of a week.

Suppliers

Brazil: Supplier Sustainability Forum: See feature story at the beginning of the Economic chapter.

Industry Groups

- Praxair is an active member of the country/regional chapters of the Compressed Gas Associations (CGAs) in the United States, Brazil, Asia and the European Union. These chapters are looked to by regulators as the source of technical standards for safety. Praxair is an active contributor to these standards. For example, in 2013, Praxair made a substantial contribution to the Asia Industrial Gas Association AIGA 084_13 Methodology to Establish “Product Carbon Footprint” (PCF).
- American Institute of Chemical Engineers (AIChE): Praxair is an active member. In 2012, the theme of the AIChE annual meeting was sustainability. In recognition of Praxair’s leadership in sustainability, Praxair’s CEO was invited to serve as the master of ceremonies for the meeting. A retired Praxair director was named as the incoming president of AIChE.

Government Partnerships

Brazil: Science Without Borders (SWB). The Praxair Foundation provided support to SWB for 10 undergraduate STEM students from Brazil to study at U.S. universities for two semesters and gain hands-on work experience by participating in the Praxair internship program. The students, two women and eight men, studied chemical engineering, mechanical engineering, industrial engineering and materials science engineering and worked in a variety of Praxair’s business groups, including R&D, U.S. Industrial Gases and HYCO, Praxair’s hydrogen operation. They worked at key facilities located in Tonawanda, N.Y.; Houston, Texas, and Danbury, Conn. Praxair plans to support another round of 10 interns participating in the 2012-2013 academic year.

Academics/Students

China: 2013 China Europe International Business School (CEIBS) Business Sustainability Project team. Six business students from CEIBS evaluated Praxair’s business model and sustainability material to determine what the business sustainability focus should be for Praxair in China. Their work involved interviewing selected senior management, customers and local regulators, as well as benchmarking against select sector peers. The project was designed to engage the students, learn their views of Praxair and gather suggestions for Praxair’s future activity.

China: 2013 Green Youth Sustainability Program. Praxair China and Encactus (a community of student, academic and business leaders committed to business and sustainability), in partnership with Nanjing Agricultural University, Guang Zhou University and Chong Qing Normal University, hosted a competition for students to design and promote the best “green” project. Judges included the Praxair China president; the Enactus China president; business leaders from external partner CSR organizations and university professors.

Brazil: During the 2012 recruitment fair at Pontifical Catholic University of Rio de Janeiro, SAWM held a contest for college students with the theme of “expanding innovation in organizational culture.” The student with the winning idea won a one-month internship at SAWM with the possibility of a contract extension.

Brazil: Trainees and young employees from the administrative and engineering areas participated in discussion groups to suggest ideas related to the overall values that SAWM should promote among its employees, especially younger employees.

Communities, Government Agencies and Suppliers

Community engagement is described at SO1; government relations are described at SO5.

4.17 Key topics and concerns identified through stakeholder engagement and how the organization has responded to those key topics and concerns

At the corporate level, Praxair used evaluations of inbound questionnaires from customers and sustainability groups, such as CDP and DJSI, to determine stakeholder views. In addition, stakeholder engagement forums of suppliers and employees were held in Brazil, and a stakeholder evaluation and an employee survey in Mexico. External topics and concerns are reported by management to the Corporate Sustainable Development Council, and a consolidated list of emerging stakeholder concerns and issues was then developed. During this process, Praxair also considered information about environmental and social risks identified in its Enterprise Risk Management survey and published in the 2012 Annual Report. These stakeholder views shaped the SDMA in several ways, as described previously in this chapter.



FEATURE STORY: Supplier Sustainability Forum Promotes Innovation

GLOBAL CHALLENGE

A major sustainability proposition in 2012 was that potential business opportunity can be identified in the supply chain: by inviting suppliers to help shape program priorities and to contribute ideas to make or save revenue. For example, the promotion of education, training and co-creation with suppliers can help Praxair's suppliers and employees to reduce risk, enhance productivity and contribute to innovation.

BUSINESS RESPONSE

Praxair South America (SAWM) has a world-class customer relationship management program, Cliente Mais, that has achieved a 98 percent customer retention rate, and 99 percent of customers confirm that they are “enchanted” (the highest rating) with their relationship with SAWM. As part of their commitment to working with partners across the value chain, SAWM hosted its first Supplier Sustainability Forum, structured with expert input from customers, suppliers and academics. Thirty representative suppliers, including energy, freight, services and equipment providers, attended. After introducing SAWM's sustainability program, the forum sought supplier views of SAWM sustainability priorities and reporting, and feedback on its sustainability strategy over the short-, medium- and long-term.

To emphasize shared value from this engagement, SAWM created an award for the “Best Sustainable and Innovator Supplier.” In 2013, the program will become an annual forum to share expectations and discuss supply chain improvement opportunities. It will expand to other countries in South America, and program content will be deepened.

OUTCOMES

The Forum deepened engagement with suppliers in Brazil, allowed for an honest exchange of views, and brought learning and improvement ideas to both sides. All parties agreed on the merit of the forum. Feedback from one materials supplier participant noted his appreciation of the invitation to “step outside” of the day-to-day transaction-based relationship and to look for opportunities to co-develop innovative solutions. For Praxair globally, the forum deepened the company's understanding of ways that global issues are understood in local contexts and enriched Praxair's evaluation of its sustainable development priorities.

MANAGEMENT APPROACH

The most senior officers responsible for the economic health of the company are the chief executive officer and the Board of Directors. This chapter reports on economic issues from the point of view of investors, governments, employees, suppliers and communities. Summary data is provided in the Key Figures 2012 table at the beginning of this report.

HIGHLIGHTS

In 2012, Praxair delivered solid results while navigating through a challenging global economic environment. Strong growth in its North American business was offset by recessionary economic conditions in Europe and Brazil and by the negative currency translation impact of a significantly stronger U.S. dollar against most major currencies. Despite these challenges, sales grew 5 percent and EPS 8 percent over 2011, excluding the effects of foreign currency, and operating profit as a percent of sales improved to a record level of 22 percent.

Praxair generated record operating cash flow of \$2.8 billion, an increase of 12 percent over 2011, which enabled it to re-invest in its business for growth. It funded record capital expenditures in 2012, and with a robust backlog of projects entering 2013 and promising opportunities on the horizon, project capital spending is expected to remain at strong levels for years to come. Despite this record level of construction activity, Praxair was able to maintain its ROC at 14 percent – the best in the industry. In addition, dividends and repurchased shares increased, which increased returns to shareholders. Just after year-end, Praxair announced the 20th consecutive annual increase in its dividend, which represents a 21 percent compounded growth rate over the 20-year period.

Praxair has a 2015 target of 30 percent revenue to come from applications that bring environmental advantage. The company has reported the percentage of revenue from environmental applications for several years; in 2012, Praxair achieved 27 percent, and \$3 billion in revenue. “Environmental benefits” are measured by the R&D team based on an internal methodology that uses the environmental KPIs built into the R&D process.

Environmental initiatives generate additional revenue in many industries where Praxair helps customers optimize resources, particularly energy, and reduce emissions. For example, in the chemical industry, Praxair works with customers to develop new ways to improve their processes, meet their environmental goals and lower their production costs.

The value can be demonstrated in one case study with a long-standing customer, Valero, the world’s largest independent petroleum refiner and marketer. Praxair is building two new hydrogen plants for Valero in Port Arthur, Texas, and Saint Charles Parish, La., to help Valero complete an ambitious and innovative new project. As part of the work to ensure the supply of hydrogen to Valero’s new 50,000 barrels-per-day hydrocrackers, Praxair will build, operate and maintain a Steam Methane Reformer (SMR) at each site. These SMRs are the largest Praxair has built to date; each has a capacity of 135 million standard cubic feet of hydrogen per day. Also, these SMRs will do more than just provide the necessary hydrogen; each will generate twice the amount of steam than previous designs from a fully integrated auxiliary boiler.

In addition to helping Valero efficiently produce clean-burning diesel fuel, these facilities will help Praxair supply hydrogen to customers in the Gulf Coast and lower Mississippi River corridor as well as providing employment opportunities and subcontractor work for years to come.

GOALS AND PERFORMANCE

Praxair's sustainable development targets and performance are provided in Table 1.2 (2) in the Strategy and Analysis chapter.

Ethics and Integrity: As in previous years, 100 percent of employees certified that they read and understood Praxair's Standards of Business Integrity.

Enable the delivery of safe drinking water to millions of people, particularly in China: Praxair once more provided this service to more than 25 million consumers.

Customer carbon productivity: Praxair's 2015 target is that its applications should enable a net 10 million MT CO₂e avoided. The company exceeded this in 2012: Praxair applications enabled twice as many GHGs to be avoided than were emitted in all of its operations.

Customer eco-portfolio: Achieve 30 percent sales and \$3 billion from products that bring environmental advantage. In 2012, Praxair achieved 27 percent and \$3 billion.

Energy intensity improvement in facility design: Praxair has a target to improve energy intensity 1 percent per year in its new air separation units (ASUs), per metric ton of atmospheric gas (normalized to gaseous oxygen or GOx) produced. This is achieved by investing in design improvements. Praxair has achieved a 4.9 percent improvement off the 2009 base, exceeding the target of 3 percent.

Energy management: Praxair's target (2009-2020) is to achieve a minimum energy savings of 1.8 MM MWh of electricity and 2.5 MM MMBtu of natural gas, delivering anticipated savings of more than \$100 MM. In 2012, it saved 1 million MWh of electricity and 1.2 million MMBtu of natural gas, delivering savings of more than \$70 MM – more than 70 percent of the target for 2020. Cumulatively, Praxair achieved savings of more than \$150 MM.

Cumulative savings from sustainable productivity: Cumulatively since 2010, when Praxair started reporting results in this area, sustainable productivity savings are \$208 million, or 41 percent towards a 2015 target of \$500 million.

Local sourcing of Praxair talent and of suppliers: Praxair invests in local talent and 100 percent of its country leadership is a local or regional national.

Investing in community resilience: Praxair's businesses and Foundation make financial contributions and in-kind grants, and employees donate funds, to support community resilience. Additional information on community engagement is provided in the Society section of the Social chapter.

Investing in emerging economies: Praxair's 2015 target is to source 40 percent of applications development from emerging economies, which the company measures by the proportion of R&D staff based in emerging economies. In 2012, this was 31 percent, up from 23 percent in 2011. Praxair's main R&D offices in emerging economies are in Bangalore and Shanghai; Praxair also has R&D staff in other parts of Asia, Spain and Rio de Janeiro.

ECONOMIC PERFORMANCE

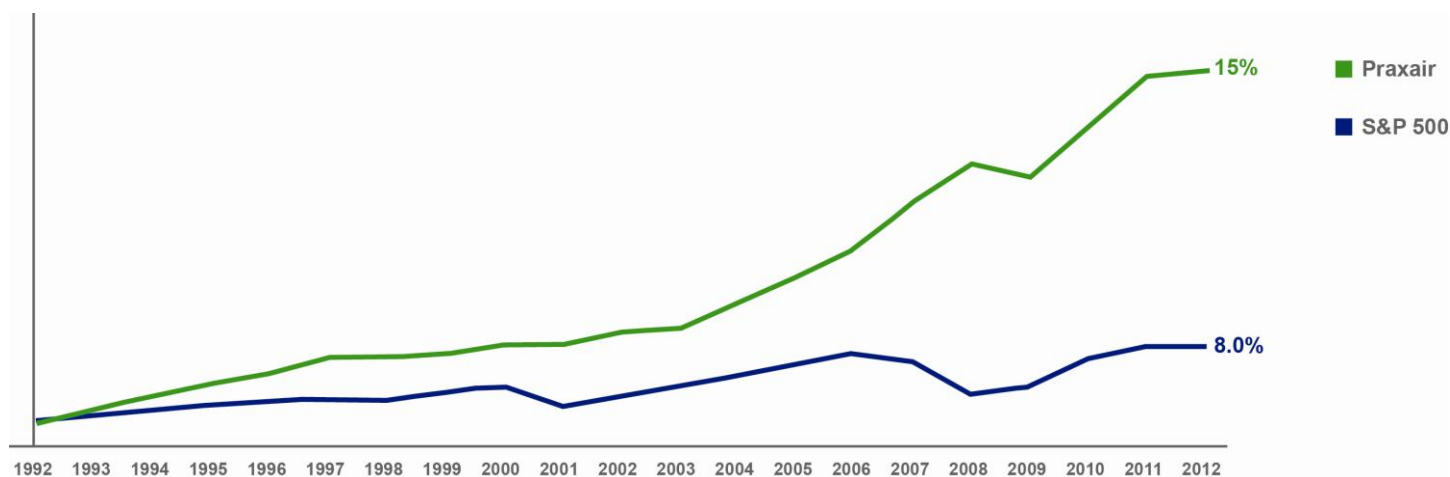
EC1 Direct economic value generated and distributed

Praxair revenue: \$11.22 billion

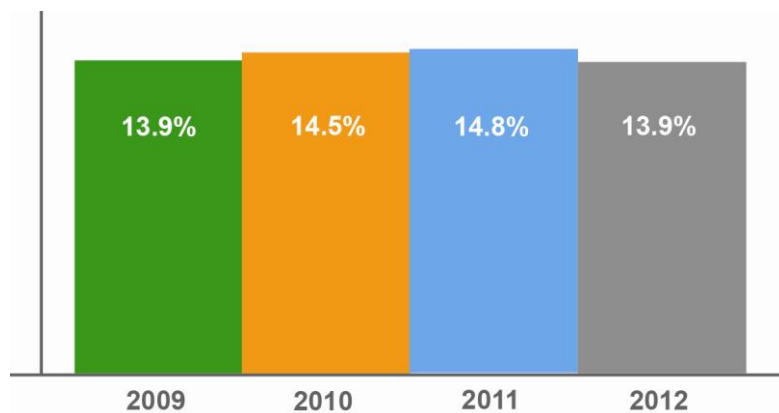
Praxair Foundation spend: \$5.6 million. Also see SO1.

A full description of Praxair's financial results is provided in the 2012 Annual Report.

EC1 (1): Indexed Earnings Per Share (EPS), 1992-2012



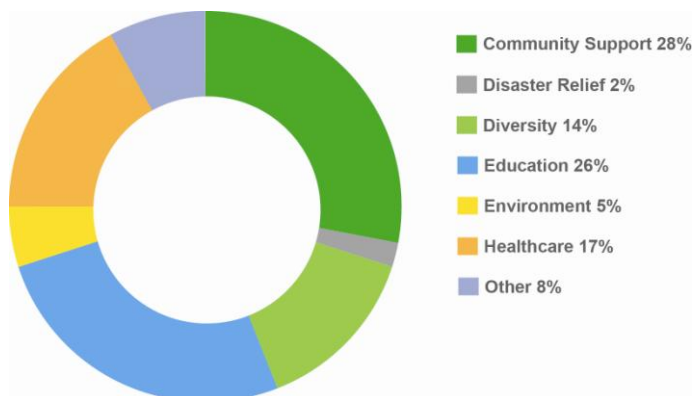
EC1 (2): Praxair Annual Return on Capital (ROC), 2009-2012



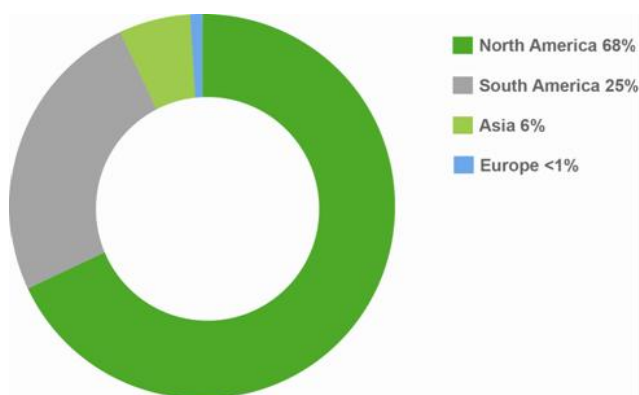
Economic

In 2012, the Praxair Foundation donated approximately 14 percent of Foundation funds toward efforts to increase diversity and inclusion. Approximately one-fourth of the funding was directed to education. Nearly one-third was directed to community support. The balance was provided in the areas of disaster relief, environment, and healthcare. See EC8 for a breakdown of Foundation support by purpose and by region. See also SO1 for information on community engagement.

EC1 (3): 2012 Foundation Spending by Area



EC1 (4): 2012 Foundation Spending by Geography



EC2 Financial implications and other risks and opportunities for the organization's activities due to climate change

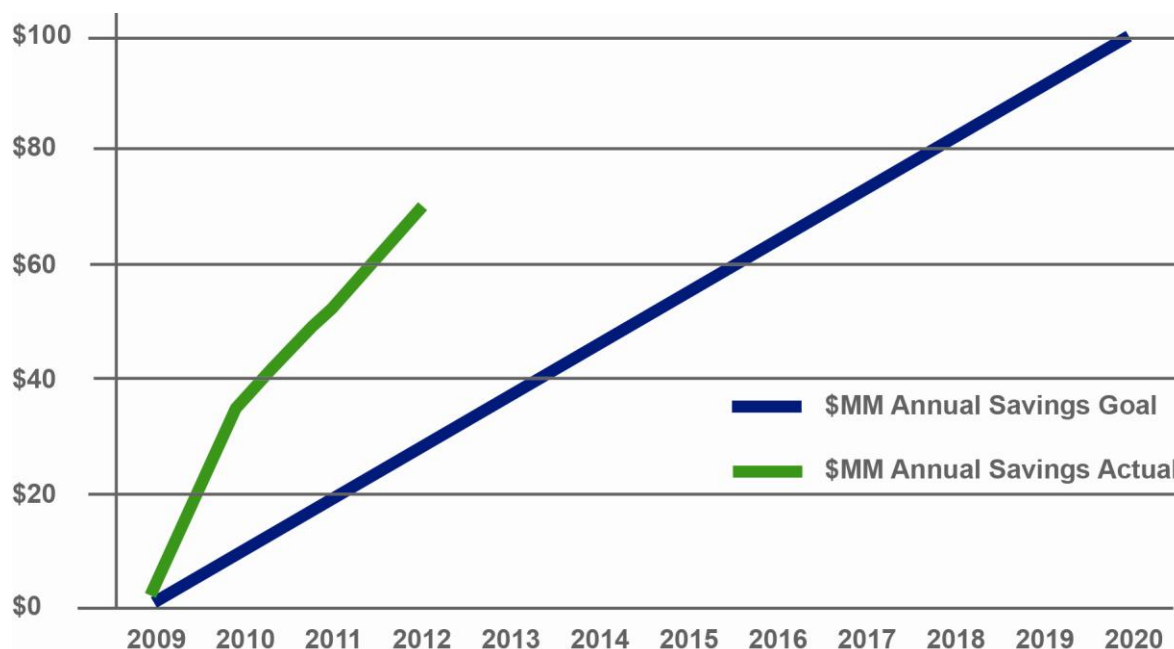
Praxair recognizes business risks and opportunities from the need to meet the world's increasing demands for energy, while optimizing the use of nonrenewable natural resources. Overall, the GHG benefit brought by Praxair products and applications exceed its GHG footprint (see feature story at beginning of this report).

In 2012, Praxair's energy spend was 25–30 percent of total operating cost. Climate change regulations, among other impacts, are expected to increase the price of energy, which is a significant cost for Praxair. For example, if Praxair energy costs increased by 10 percent, they could rise to 28–32 percent of total operating costs, or more than \$80 million. As this area is characterized by considerable uncertainty, actual impacts to energy prices around the world could be greater, or less, than this hypothetical example of 10 percent.

To help mitigate these risks, Praxair engages in a range of activity to reduce and optimize energy its use. Energy savings from Praxair's energy efficiency program are 12 times better than that of typical solar projects and more than twice that of wind alternatives — reinforcing that energy efficiency is the best investment the company can make right now to reduce its global energy footprint and natural resource consumption. Starting in 2009, the productivity organization started to record environmental savings, which Praxair calls “sustainable productivity.” Sustainable productivity savings in 2012 were \$112 million, including 500,000 MT CO₂e. See the feature story at the beginning of the Strategy and Analysis chapter.

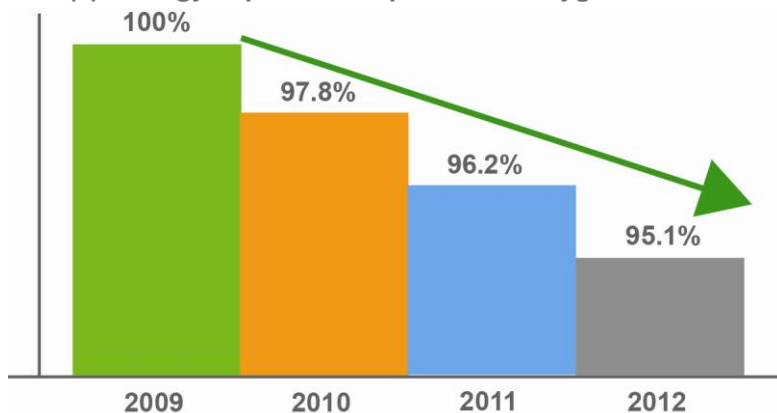
Operationally, in 2012, Praxair saved 1 million MWh of electricity and 1.2 million MMBtu of natural gas, delivering savings of more than \$70 MM – more than 70 percent of its target for 2020. Cumulatively, the company has achieved savings of more than \$150 MM since 2009. See EC2 (1).

EC2 (1): Combined Power and Gas Improvement Annual Savings



Praxair also invests in design improvements for energy efficiency. EC2 (2) shows a 4.9 percent improvement since 2009, representing savings in 2012 of 1.4 MW and close to \$1 million. Capitalized savings over the life of the new plant portfolio would be over \$4 MM.

EC2 (2): Energy Improvement per Ton of Oxygen Produced



Climate change also presents Praxair with market opportunity. Praxair has a corporate target that products with environmental benefits should equal \$3 billion by 2015, or 30 percent of sales. The vast majority of products that come under the definition of “products with environmental benefits” also reduce or mitigate climate change (e.g., increase energy efficiency, increase durability, reduce emissions).

Stricter regulation of water resources in emerging economies such as China is being implemented to improve and manage water quality in areas where water resources are challenged by population pressure in mega-cities, and increased drought and weather extremes. This presents market opportunity for Praxair, as the company develops and delivers customized systems to help industrial plants and municipalities meet their wastewater management goals.

The City of Bloomington’s water purification plant on Lake Bloomington, Ill., which has been operating since 1929, supplies drinking water to 70,000 residents and a major manufacturing customer in the city and the surrounding area. Average daily demand is 14 million gallons. The treatment plant uses Lake Bloomington and Lake Evergreen as surface water sources that cause scaly deposits on plumbing fixtures and water heaters at homes. To manage this, the treatment plant used lime, which has high pH that can cause scaling and eventually clog the piping and filters in the plant potentially increasing the costs of operations and maintenance. Praxair proposed a carbon dioxide system for pH control. Carbon dioxide is effective and safe and offers treatment flexibility. Praxair’s carbon dioxide system provided a range of advantages that reduced costs and improved environmental and safety conditions.

Praxair works directly with customers to provide beginning-to-end water treatment methods, from needs assessment and treatment strategy to equipment design, installation and industrial supply. Praxair also offers a wide range of applications that treat and reuse process water, all while maximizing treatment capacity, reducing VOC emissions, improving safety and reducing costs. Also, as the global demand for potable water continues to rise and fresh water supplies are quickly depleting, Praxair advances industrial technology to make this life-sustaining resource accessible to a growing population.

In addition, new products and services will be needed to mitigate the effects of climate change or plan for adaptation. These play out in different geographies, but they include the need for infrastructure build-outs for water systems; technology to provide more resource efficiency; and energy security and reliability. These provide market opportunity for Praxair, as the company provides gases into all these markets (e.g., nitrogen to make lighter composites to make aircraft more fuel efficient; alloys to make wind turbines more durable; carbon dioxide to make water more potable and to clean wastewater systems). These gases are some of the gases sold into Praxair’s end-markets in electronics (8 percent

revenue), aerospace (3 percent) and “other” (11 percent); such gases provide growth opportunities as markets continue to grow from climate-related technologies.

EC3 Coverage of the organization’s defined benefit plan obligations

Either a defined benefit or a defined contribution plan is available to all U.S. employees and employees in some other countries. Further detail is provided in Note 16 of the 2012 Annual Report.

Praxair has two main U.S. retirement programs which are non-contributory defined benefit plans: the Praxair Pension Plan and the CBI Pension Plan (for former employees of CBI Industries, Inc., which Praxair acquired in 1996). Effective July 1, 2002, the Praxair Pension Plan was amended to give participating employees a one-time choice to remain covered by the old formula or to elect coverage under a new formula. The old formula is based predominantly on years of service, age and compensation levels prior to retirement. The new formula provides for an annual contribution to an individual account which grows with interest each year at a predetermined rate. This new formula applies to all new employees hired after April 30, 2002, into businesses adopting this plan.

Pension coverage for employees of certain of Praxair’s international subsidiaries generally is provided by those companies through separate plans that are typical for the country of employment.

EC4 Significant financial assistance received from government

The government is not present in Praxair’s shareholding structure.

MARKET PRESENCE

EC5 Range of ratios of standard entry level wage by gender compared to local minimum wage

Praxair’s compensation policy assigns jobs into pay levels based on job descriptions so that people performing the same type of job functions are in the same pay range, regardless of age, gender and race. To help ensure that its compensation policy is being appropriately administered, Praxair conducts annual pay equity analyses in the United States and in other countries where required by law. Specific salary information is confidential.

Praxair reports that 100% of employees in all business units earn at least the local minimum wage.

EC6 Policy, practices and proportion of spending on locally-based suppliers

Sustainable Supply Chain

The principal products and services Praxair procures include energy, components for engineering projects, gas cylinders and valves, tanks and tank equipment, vehicles, IT products and various services, including contractors for construction and contract drivers. In 2012, Praxair spent more than \$7 billion on employee costs, utilities and purchased goods and services, the majority of which is bought within local geographies. Equipment and services for capital products uses a more global approach. By sourcing products and services locally around the world, it allows for more continuity in producing sustainable products and ensuring consistent production regardless of unforeseen economic and environmental issues. Praxair contracts with quality suppliers who are globally competitive and who provide the lowest long-term costs without compromising compliance and Praxair’s quality, safety, environmental and human rights standards.

Praxair works with suppliers in more than 50 countries. Its commitment to emerging economy growth is complemented by its commitment to investing in such economies. Due to the nature of Praxair's industrial gas products, it is generally uneconomical to transport them distances greater than a few hundred miles from the production facility. As a result, Praxair invests in building local facilities and hires locally: local management, employees and local contractors. See EC7.

Key leaders from Praxair's GPMM organization were moved to Shanghai in 2007 to be closer to the company's growth geographies. The most significant sets of suppliers from the point of view of local sourcing are facility construction contractors and contract drivers. Installation of new equipment, as well as ongoing maintenance, is largely performed by local suppliers. One-hundred percent of contract drivers in Asia, Europe and South America (where most drivers are contractors) are also local.

For example, 80 percent of Praxair Mexico's suppliers are based in Mexico and Central America. See [Praxair Mexico Sustainable Development Report](#) for more details. Many of these suppliers are small and medium enterprises (SMEs). Praxair recognizes the social and economic advantages of partnering with SMEs and works to contribute to their development. Praxair Mexico participated in a project of the Mexican development bank NAFINSA to provide SMEs access to preferred supplier financing mechanisms. They implemented a Supplier Development Program that provides targeted support to selected suppliers by organizing meetings with other providers, identifying areas of opportunity and giving tips for improvement. They also committed to extend social responsibility into their supply chain. In 2013, they will select two providers to assist them in obtaining certification for the distinctive CEMEFI Socially Responsible award.

Promoting Supplier Diversity

For the past decade, Praxair's Supplier Diversity Program has championed those companies in the United States classified as small and diverse businesses. Praxair seeks to provide maximum practicable opportunities for all qualified business enterprises to participate in the supply of goods and/or services that support the company's business model. All types of qualified business enterprises are welcome to participate in the RFP processes for goods and services.

Praxair's vice president and controller serves as the small business liaison officer and oversees Praxair's Small Business Subcontracting Program. On an annual basis, in collaboration with management and support staff from Praxair's GPMM team, a detailed small business subcontracting plan is established with practical goals that Praxair strives to achieve with small businesses in procuring designated commodities. In 2012, Praxair spent over \$317MM (approximately 18 percent of its total procurement spend) with small businesses on products and services that covered approximately 500 different commodity codes.

Praxair has also invested in capacity building with this group of suppliers and this has yielded benefits on both sides. For some suppliers, formal and informal mentoring was offered in areas of business that are mutually important. For some small business suppliers seeking to increase their export service offerings to compete in the global marketplace, Praxair's strong team of international trade professionals has offered assistance. For small business bulk transportation providers, Praxair safety and KPI programs have yielded more efficient response times and fewer safety incidents.

Globally, an effort is in place to identify and enhance the supplier diversity initiatives in areas with emerging programs and/or the potential to develop them. Beginning in 2013 and beyond, GPMM will collaborate with its global affiliates to better understand the supplier diversity landscape and the opportunities in each country. Praxair strives to achieve an inclusive environment where supplier diversity is understood as a valuable asset and a competitive advantage.

Supplier Expectations and Performance Standards

Praxair works with its suppliers as business partners. Alongside commercial aspects such as risk, reliability, quality, price and availability, its supplier selection also takes into account other sustainability aspects. For example, Praxair's SBI

requires that company employees maintain fair and honest working relationships with suppliers. Suppliers are expected to comply with all laws, ordinances, permits and government rules and regulations applicable to the goods and services they provide, as well as any statute, rule or regulation of any government authority or agency concerning safety, health, welfare and the conduct of employees. In addition, vendors must be in compliance with all applicable fair labor, equal employment opportunity (EEO), affirmative action (AA) and employee notice laws and requirements, including but not limited to, women and minorities, covered veterans (United States) and individuals with disabilities. In the United States, vendors must comply with Federal Acquisition Regulations that favor using small business concerns.

At the same time, Praxair states in clear and transparent language what the company expects from its business partners. Praxair's Supplier Expectations indicate that suppliers are expected to adhere to the law and to environmental and social standards, including safety, security and respect for human rights. These supplier expectations are clearly communicated and made available in multiple country languages on Praxair's website. Additionally, these standards are communicated in contracts, via meetings and with integrity letters. In Brazil, Praxair's supplier selection process factors in social responsibility practices as a "tie breaker" after traditional considerations such as quality, service and price are met.

Suppliers of services and materials are qualified on the basis of their ability to meet Praxair's technical and commercial requirements and, where relevant, safety and environmental standards. Specific classes of suppliers must meet a range of standards for technical qualification. These include control and evaluation of equipment suppliers, engineering contractors and construction contractors, and safety qualification of their subcontractors, testing laboratories, consultants and other contractors providing materials, equipment, labor and/or services to Praxair. After all conditions are met, suppliers are technically qualified and recorded in technically approved supplier lists.

Site safety is a major potential risk for Praxair's Global Supply Systems (GSS) organization and its worldwide construction projects, particularly as Praxair is now building mega-projects. Before any work can begin on- or off-site, contractors and their subcontractors must satisfy the following minimum safety criteria:

- No fatalities in the previous three years.
- OSHA Recordable Injury/Illness (RII) rate of less than 7.0. (While OSHA is a U.S. reference, this rate, defined as the number of RIIs per 200,000 labor-hours worked, is applicable to all regions.)
- OSHA Lost Workday Case (LWC) rate of less than 3.0.
- An Experience Modification Rate (EMR) of less than 0.8. (EMR is a factor based on a contractor's injury costs in a given geographic area and is used as a multiplier in determining worker compensation premiums for individual contractors. This rate is only applicable to U.S. contractors.)

Praxair's Safety Critical Commodities (SCC) standards also ensure that the company is making an above-average effort at sourcing high-quality materials from preferred suppliers that meet the company's strict requirements. Starting in January 2007, all purchases of SCCs have been, and will continue to be, purchased using Praxair-approved vendors. An SCC is any component that, if it fails to function as designed, could lead to a significant process safety event. This standard applies to all Praxair regions and business units that purchase SCCs, and the program strives to meet the following targets:

- To purchase all products identified as safety critical commodities from approved manufacturers.
- To have all nonconformances with SCC products identified, reported and addressed.

- To have at least one approved supplier in every country in which Praxair has operations. (This was accomplished; in many countries, Praxair has multiple approved suppliers.)

The SCC standards are communicated internally to employees via the company intranet. Standards and qualifications are also clearly provided to current and potential suppliers. Lastly, SCC requirements are defined in supplier agreements and, for some products, in the product specifications.

Other contractors must meet environmental standards, including evidence of compliance with an environmental management system. Materials suppliers must meet Praxair's Commitment to Sourcing Non-Conflict Materials and commit to meeting the Electronics Industry Code of Conduct (EICC Code), which includes providing assurance that their suppliers are also sourcing conflict-free materials (see HR2).

Investing in Supplier Relationships: A Win-Win-Win

Praxair works hard to deepen relationships with suppliers while ensuring that they meet its standards and business values. This brings multiple benefits to the company and to the communities near its operations.

Worldwide contractor safety training: One-hundred percent of contract drivers, and most contract construction workers, are hired from local firms. In addition to the jobs provided to locally based construction workers and drivers, in 2012, Praxair invested over a quarter-million hours in safety training for 6,500 contractors in all its emerging economies and in the European Union – an average of 38.5 hours a year, nearly a work week. If each contractor hour costs Praxair \$20, this investment can be estimated at more than \$5 million. In all cases, this training is directed towards achieving safer construction of Praxair facilities and safer, more secure and more fuel-efficient transportation of Praxair products. Praxair's world-class results for contractor and driver safety are a measureable consequence of this investment. In 2012, contractor drivers held vehicle accidents down to a best-ever 2.1 accidents per million miles driven (see LA7). In addition, the safety training results in a transfer of professional skills that increases the employability of the recipient.

Supplier Human Rights Standards: See HR2.

Audit and Assessment

Praxair uses various tools and measures to select and evaluate suppliers. It has defined qualification processes for suppliers who present the greatest potential risk, including commercial, quality, safety, environmental or human rights risks. New and re-qualifying suppliers that fall into these categories must provide records and self-assessments of the specified quality, environmental, safety or social management systems and performance. Depending on the potential risks, Praxair also performs supplier scorecard audits on-site.

Praxair continuously assesses performance of its engineering suppliers. Suspected violations of Praxair standards can be reported to the Integrity Hotline. One-hundred percent of reports of non-compliance along Praxair's supply chain are assessed; allegations that prove to be substantiated may result in termination of contracts with suppliers.

GSS developed and maintains a Supplier Web database of technically approved and qualified suppliers and contractors. The database provides comprehensive information on Praxair suppliers, with technical records, contact information and non-compliance documentation per supplier. This creates efficiencies within the purchase process as employees can easily access a range of information about a supplier before moving forward. If a supplier is not included in the database, they must work with GPMM and Engineering to become properly qualified. Use of the database is proscribed in a global

standard and is supported by a quality manager and a global team.

The results of the Supplier Scorecard are stored in the Supplier Web database. This includes ratings of suppliers on quality, product delivery and commercial performance. The frequency of publishing scorecards is based on performance, criticality and annual spend. Specific performance targets are set. A score at or above 80 percent qualifies; a score between 50–80 percent requires risk mitigation action; a score at or below 50 percent requires a risk evaluation and the Praxair team is instructed to proceed with caution when considering these suppliers. Suppliers are made aware of their scorecard results, which aim to deepen a performance-based partnership with suppliers. Praxair works with suppliers throughout the year to help them raise their score.

Greening the Supply Chain

In 2012, substantial progress was made in deepening Praxair's commitment to a sustainable supply chain, and a new target was set to green the supply chain. See the introduction to the Environmental chapter.

EC7 Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation

Along with investing locally, and consistent with its growth goals in emerging economies, Praxair has a commitment to source and develop local talent. One-hundred percent of Praxair country or regional business leaders are emerging economy local or regional nationals. Praxair has a preferred practice of hiring local leadership that understands the culture and business practices. This provides ideal role models for the local workforce and offers a more cost-effective option than moving leaders from another country. Further detail is provided on diversity in the LA section.

Praxair also invests in building capacity by establishing R&D centers in emerging economy countries. Research and development for industrial gases is principally conducted at Tonawanda, N.Y.; Burr Ridge, Ill; Shanghai, China; and Bangalore, India. Praxair has a target to source 40 percent of applications development from emerging economies by 2015; in 2012, Praxair achieved 31 percent. The following activities help ensure that local talent receives leadership opportunities:

1. Increase local recruiting efforts.
2. Train and develop the current workforce for advancement.
3. Offer English as a second language for colleagues to operate effectively in a multinational environment.
4. Create opportunities for high-potential local nationals to have special assignments outside their home countries.

EC8 Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind or pro bono engagement

Praxair's growth depends on strong and developing economies. Per capita industrial gas consumption in all of the company's geographies is tracked as an indicator of market growth opportunity.

In addition, a significant portion of Praxair's applications support the development of social and economic infrastructures. Praxair gases help to make safe drinking water for 25 million consumers each day, mostly in China. Industrial and specialty gases enable cleaner and more efficient economic growth in industries from cement to steel. Praxair applications are also integral to the development of future energy infrastructures (e.g., applications for renewable energy and second-generation biofuels).

Praxair is committed to improving the quality of life in the communities it serves. Through financial contributions and the

volunteer efforts of employees, Praxair supports programs that address diversity, education, the environment and community resilience – all important aspects of community sustainability. In 2012, the Praxair Foundation contributed \$5.6 million to a range of programs and charitable organizations around the world. In addition, employee and facility/business contributions were estimated as more than \$470,000, and the dollar value of global employee in-kind contributions, such as food and school equipment, was estimated at more than \$420,000. The total Praxair contribution, not including volunteer time, was estimated at \$6,496,765. Charts in EC1 show how this contribution was distributed by theme and by business region.

EC9 Understanding and describing significant indirect economic impacts

Elements of Praxair's direct and indirect economic impacts are provided in Table 1.1 (1). Praxair provides careers and benefits to over 26,000 employees, many of whom are hired locally, and thousands of retirees. Indirect benefits accrue to Praxair vendors (also in many cases hired locally), as well as customers, shareholders and communities in which the company operates.

All Praxair community engagement projects are encouraged to help meet specific needs identified by community leaders, but there is no science with which to measure the impact of community outreach. Praxair uses a methodology based upon that developed by the London Benchmarking Group (LBG) to evaluate the indirect economic, environmental and social impacts of its community engagement activity for the company, its employees and beneficiaries (see SO1, SO8 and SO9). In 2012, for more than 80 percent of projects, volunteers reported that community engagement had a direct positive impact on recipients' quality of life. In 70 percent of projects, volunteers reported that community engagement provided the beneficiaries with value that could lead to economic benefits, such as job skills or opportunities for personal growth.



Partnership for Biodiversity helps save the Karner Blue Butterfly

GLOBAL CHALLENGE

Globalization and economic development bring new challenges. Population growth, urbanization, and economic development are putting unprecedented pressure on a finite set of natural resources. The minimization of natural resource use and the preservation of planetary resources and biodiversity are not only consistent with Praxair's values; they are imperative to ensure planetary—and business—survival.

LOCAL RESPONSE

Praxair Surface Technologies (PST) site in Concord, NH, employs 72 people and designs and makes thermal spray equipment that helps customers reduce maintenance, lower operating costs, increase product life, and improve efficiency and performance. Concord is a Zero Waste facility and has had no accidents (i.e. recordable injuries) in the last two years. The facility has a strong culture of community engagement.

At Concord, urbanization has very local impacts. The 20-acre site on a historic “pine barren” ecosystem had in the past supported diverse wildlife, including butterflies such as the Karner blue butterfly, frosted elfin, and Edwards' Hairstreak that fed off grasses, herbaceous plants, lupines and small shrubs; as well as a range of birds. But biodiversity was being lost as this habitat changed. In particular, the Karner blue butterfly, [a symbol of the state of New Hampshire](#) and indigenous to the area, was listed as “endangered” by the [U.S. Fish & Wildlife Service](#) (FWS).

OUTCOME

Concord's management coordinated activity with the [New Hampshire Fish and Game Department](#) to restore the biodiversity at the site. A very densely planted 10-15 acres has been established within the Praxair property, which Praxair will maintain. This will help restore the Karner blue butterfly and frosted elfin as well as the other ecosystem species. A celebration of this activity was held on Earth Day 2013, and presentations were made to all employees by the site safety and health manager and a representative from the New Hampshire Fish and Game Department. This is a small but vital example of how employees at one site, working together with a local government agency, have helped preserve ecosystem diversity and a sustainable planet.

MANAGEMENT APPROACH

Praxair environmental issues are managed under the vice president, Safety, Health and Environment (SH&E). Sustainability elements are managed under the vice president, sustainable development, and chief sustainability officer. Both report to the senior vice president and chief technology officer.

HIGHLIGHTS

Praxair's core values were updated in early 2013 and include Environmental and 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."

Employee environmental engagement was a major highlight of 2012. Praxair saw escalations in its rate of site engagement in Earth Week activity, employee Earth Day Acts, zero waste activity and sustainable productivity. Sixty-seven percent of Praxair survey respondents (representing 9 percent of global employees) reported both knowledge of and participation in Praxair's sustainable development program and activities. Environmental stewardship is promoted by Praxair because it is consistent with the company's mission of *making our planet more productive* and with its eco-efficiency initiatives. It has also proven to be a meaningful way to engage employees and continue to drive business and sustainability value. More information is provided in 4.16 above and in the feature stories on Zero Waste and sustainable productivity.

GOALS AND PERFORMANCE

Over time, the Sustainable Development Management System (SDMS) has been enhanced with the addition of several global operational goals and targets for environment, energy and greenhouse gas (GHG) emissions.

Praxair has a range of targets for the 2009 through 2015 time period:

- Facility design: Achieve 1 percent **energy efficiency** per year per product produced from new facilities. This target was met in 2012.
- **Air separation units (ASUs)**: Achieve a 6 percent energy and GHG intensity improvement per unit of product by 2015, from a 2009 baseline. In 2012, a 5 percent improvement over baseline for both energy and GHG was achieved.
- **Distribution** activities: GHG intensity target of 9 percent each for the bulk and packaged gases businesses. Bulk distribution has had a 7 percent improvement since the base year of 2009. Packaged gases had a 10 percent improvement over the base year of 2009.
- **Hydrogen** production facilities: Achieve 0.4 percent per year GHG intensity improvement by 2020. A 2 percent improvement over the baseline was achieved in 2012.
- Air emissions: Reduce **NOx emissions** from driving by 20 percent by 2015, from a 2009 base year. Praxair exceeded this goal in 2012, achieving a 25 percent reduction since 2009.
- **Zero Waste**: Achieve zero waste at 50 sites. Eighty-nine sites achieved zero waste. Forty-nine sites reported more than 95 percent waste diverted from landfill.
- New environmental target: Achieve more than \$10 million in savings from **greening the supply chain** between 2012 and 2015. Praxair achieved \$4.3 million in savings from sustainable procurement.
- Financial savings from **sustainable productivity** in 2012 were nearly twice those of 2011. A new target was established to achieve cumulative savings of \$500 million by 2015. At the end of 2012, \$208 million was achieved.

Environmental

SUSTAINABLE DEVELOPMENT MANAGEMENT SYSTEM (SDMS)

The SDMS process includes a policy, materiality assessment and the creation of a Sustainable Development Dashboard, the development of goals and targets and continuous improvement of sustainable development performance; see the Strategy & Analysis section. Many of the SDMS goals and targets are environmental, and this work is shared with the businesses and the environmental organization. Environmental priorities in 2012 were determined to be energy, GHG and climate change, transport, customer environmental and GHG productivity, resource optimization and air emissions. Two themes in the economic section also have a strong bearing on environmental stewardship: sustainable productivity (EC2); and greening the supply chain (discussed in this section).

POLICY

Praxair's new SDMS policy, provided in the Strategy & Analysis section, includes elements relevant to the environment. The policy conforms to ISO 14001 and to ISO 26000. It commits to comply with applicable requirements of the laws, regulations and standards applicable to Praxair's activities, as well as Praxair global and local standards and policies; it requires clear definition of leadership, and responsible parties to implement the SDMS; and the maintenance of a process to develop priorities and performance targets based on potentially material economic, environmental and social aspects. The policy also commits to align these goals and targets with the organization's business strategy and policies; to pursue continual performance improvement; and to encourage suppliers and contractors to further their activity in this area. Further, the policy commits to communication with employees, the general public and relevant parties; regular reporting, both internally and externally, in a manner that is transparent, relevant, material and complete; and reliable reported data that is timely, transparent and responsive to stakeholder inputs and feedback.

ORGANIZATIONAL RESPONSIBILITY

Praxair's senior vice president and chief technology officer is accountable for environmental issues. The R&D, Engineering, Productivity, Sustainable Development, and Safety, Health and Environment (SH&E) organizations report into this office. Safety, health and environmental issues, and Praxair's Safety, Health and Environmental Management System (SHEMS) are led by the vice president, SH&E. The SDMS is led by the vice president, sustainable development. In late 2012/early 2013, to recognize the increased strategic value of both functions, leadership positions in sustainable development and SH&E were both elevated from executive director to vice president level.

BUSINESS INTEGRATION AND INTERNAL REPORTING

SDMS elements are integrated into operations. Each month, the businesses review, approve and comment on results against environmental goals and targets in the SDMS; this data is reported to the functional executive. Overall results are reported quarterly as part of the Sustainable Development Dashboard to the executive leadership team.

ENVIRONMENTAL MANAGEMENT SYSTEM (EMS) CERTIFICATIONS, AUDITS AND ASSESSMENTS

Praxair's operating principles make safety "a line management accountability," and this also applies to environmental performance. Praxair's global Environmental Management System (EMS) adheres to ISO 14001:2004, the International standard for EMSs.

External Environmental Audits

Praxair receives external environmental audits against the RCMS®, ISO 14001, ISO 5001 for energy management, and the Mexican government Clean Industry Standard. Sixty percent of Praxair by revenue is covered by external international EMS certifications or their equivalents. Praxair also has its global environmental data externally assured.

Environmental

Responsible Care®

In 1988, the American Chemistry Council (ACC) launched Responsible Care® to respond to public concerns about the manufacture and use of chemicals. As a Responsible Care® company, Praxair strives to continually improve its health, safety and environmental performance; listen and respond to public concerns; work with customers, carriers, suppliers, distributors, and contractors to foster the safe and secure use, transport, and disposal of chemicals; achieve optimum environmental performance; and report its goals and progress to the public. It is also required to implement a third-party certified Responsible Care Management System® (RCMS®) to ensure that appropriate actions are taken to improve, track and publicly report performance and to include a security code that helps protect people, property, products, processes, information and information systems by enhancing security throughout our businesses.

The ACC requires member companies to be externally audited by authorized auditors. Praxair U.S. is audited by Bureau Veritas per the requirements of the RCMS®. The 2011-2013 re-certification cycle required corporate headquarters plus eight sites to be audited and certified over the three-year period. This cycle will close with an audit of the Danbury, Conn., headquarters site on September 18-19, 2013. The new cycle begins January 2014 and goes to December 2016.

The scope of the audit includes sites that “manufacture and distribute industrial gases per the RCMS® Technical Specification (TC) RC 101.03.” All of these sites were audited using Praxair’s SHEMS, which incorporates TC RC 101.03 into its Worldwide SH&E Manual for all facilities worldwide.

Eighty-five facilities worldwide maintain ISO 14001 certification. Praxair Germany received ISO 5001 (Energy Management System) certification in late 2011 for all its sites.

Praxair Mexico and Central America have participated from 2009 in the national environmental agency PROFEPA Clean Industry program. Certification is awarded to companies that demonstrate that they satisfactorily meet all environmental compliance requirements as well as natural resource efficiencies. Environmental audits of the EMS system and performance are required. Clean Industry certification has been achieved in 11 Praxair Central America plants. Their goal is for 100 percent of locations to obtain Clean Industry certification by 2015.

Several 2012 key environmental performance results, as reported through Praxair’s internal databases and the SDMS, were [externally audited](#) in 2013. These included energy, GHGs, water, air emissions (NOx), sulfur dioxide (SOx), volatile organic compounds (VOCs), chemical oxygen demand (COD), zero waste and contractor GHG from driving.

Internal SH&E Assessment Program

Praxair sites, and other sites where Praxair is a majority shareholder, are evaluated for safety, environment and quality (FDA compliance). Monthly reports are provided to senior management; quarterly reports to the Praxair Board. Regular assessments are a requirement of the SHEMS and help to ensure consistently high standards in all areas of safety, environmental protection, security and compliance. Corporate assessments (“A” assessments) of all sites and facilities are performed by SH&E staff once every three, four or five years according to a set schedule, or more frequently if management considers this warranted. In addition, businesses regularly conduct facility self-assessments (“B” assessments).

EN DMA (1): Internal and External Assessments and Certifications

	2010	2011	2012
Responsible Care®	Global	Global	Global
External Environmental and Related Certifications			
Sites certified to ISO 14001	68	70	85
Sites certified to ISO 5001: Energy Management		All Germany	All Germany
Internal Assessments for Site SHE Compliance			
"A" Assessment audits conducted	55	64	51
Percent meeting audit standards	84%	89%	90%
"B" Assessment audits	171	139	159
Government inspections	278	278	246
% government inspections without findings	94%	97%	95%

Training and Communication

Environmental and safety training is conducted for all employees and all contractors where there are no legal restrictions (see LA 10). In addition, SDMS training is conducted for all users.

Environmental communication has increased as it is integrated into Praxair's core values, brand and sustainable development strategy. The message is that all employees can play a part in *Making our planet more productive*. Strong internal communications and programs support this, including messages from executives and worldwide environmental engagement programs such as Zero Waste, annual Earth Week activities and community environmental engagement.

Supply Chain Environmental Management

Supplier sustainability management is a material sustainability key performance indicator (KPI) and has both social and environmental elements. Praxair's Global Procurement and Materials Management (GPMM) organization is integrating suppliers into the company's sustainability strategy and finding new ways to reduce natural resource use, bring energy and environmental efficiencies and save money. From the environmental point of view, Praxair's new target is to achieve at least \$10 million in cumulative savings from greening the supply chain (2010–2015).

All suppliers are contractually obligated to meet regulatory requirements for safety and environmental responsibility and expected to adhere to Praxair's [supplier expectations](#), which are provided in multiple country languages on Praxair's website. Suppliers of chemicals and other services on Praxair property are also contractually obliged to meet additional requirements and [pre-qualifications](#), including safety and environmental management systems and performance standards, and are periodically reviewed against these standards.

Praxair achieved \$4.3 million in savings from greening the supply chain. Within this, Praxair's Asset Recovery Program achieved \$1.7 million in operating profit and cost avoidance. Recycled items included more than 60 large pieces of distribution equipment such as tractors, trucks, trailers and forklifts; 14 end-of-life railcars; more than 15,000 used cylinders; and nearly two million pounds of scrap metals (additional to the cylinders). As a result of this program, over 5,000 MT of CO₂e emissions were avoided. This program was awarded the 2012 Environmental Recognition Award from the U.S. Compressed Gas Association (CGA).

MATERIALS

EN1 Materials used by weight or volume

Atmospheric gases are the highest volume products produced by Praxair. Using air as its raw material, Praxair produces oxygen, nitrogen and argon through several air separation processes of which cryogenic air separation is the most prevalent. As air is a renewable natural resource, there is no environmental consequence of this raw material.

Process gases, including carbon dioxide, hydrogen, carbon monoxide, helium, specialty gases and acetylene, are produced by methods other than air separation, and, in many cases, are sourced as an industrial by-product or waste. Most carbon dioxide is purchased from by-product sources, including chemical plants, refineries and industrial processes and is recovered from carbon dioxide wells. Hydrogen and carbon monoxide are produced by either steam methane reforming of natural gas or by purifying by-product sources obtained from the chemical and petrochemical industries. Most of the helium sold by Praxair is sourced from helium-rich natural gas streams in the United States, with additional supplies being acquired from outside the United States. Acetylene can be produced from calcium carbide and water. Praxair purchases a significant percentage as a chemical by-product. The volumes of process gases procured are considered business confidential.

Praxair also builds ASUs and steam methane reformers (SMRs). Construction materials for these are generally from nonrenewable sources: aluminum, carbon steel, stainless steel, copper and brass alloys, brass and metals. The estimated weight of capital equipment purchased worldwide (steel and aluminum in various equipment and components) was 544,000 MT in 2012.

EN2 Percentage of materials used that are recycled input materials

Praxair's business is to sell gases, which are consumed in use or vented. More than 50 percent of revenue from products sold in 2012 was sourced from renewable natural resources. One-hundred percent of Praxair's atmospheric products – oxygen, nitrogen, argon and some rare gases – are separated from the air. A portion of Praxair's carbon dioxide is sourced from ethanol fermentation (biomass source).

The company focuses on a range of recycling opportunities. For some of its business lines, Praxair actively sources recycled input materials and contributes to by-product synergy (BPS) by making productive use of by-products as sources of products:

- As of 2011, most of the acetylene produced in the United States is sourced from by-product acetylene, avoiding the mining of calcium carbonate and the recycling or disposal of carbide lime.
- More than 95 percent of Praxair carbon dioxide is sourced from renewable or industrial by-product sources, purified and sold to food and beverage industry customers. The total weight of these by-products as a percentage of total material use is not reported here. One example of a standard business arrangement is the [15-year agreement](#) signed in 2012 for the purchase of carbon dioxide, a by-product from a chemical company in Virginia (USA). The carbon dioxide will be purified and liquefied at a new Praxair plant and be used primarily for food freezing and processing and beverage applications.

Environmental

- As part of its sustainable supply chain program, Praxair's GPMM organization works with vendors to reduce upstream natural resource consumption. One example is an initiative to increase the purchase of high-quality retread tires for Praxair's trucking fleet.

Most gases are transported in pipelines or cylinder trucks. Praxair's cylinders are recycled for decades (see EN 27). There is minimal packaging and very little opportunity to take back recycled input materials from customers.

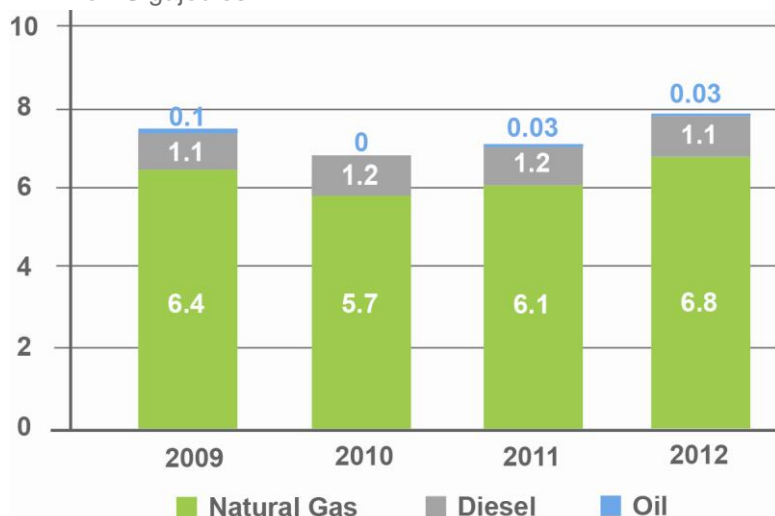
ENERGY

EN3 Direct Energy Consumption

Praxair's total direct energy consumption in 2012 was 2.2 million MWh (8,000,000 GJ). Praxair rigorously manages direct energy consumption both in terms of price and quantity used.

EN3 (1): Total Direct Energy Consumption

In million Gigajoules



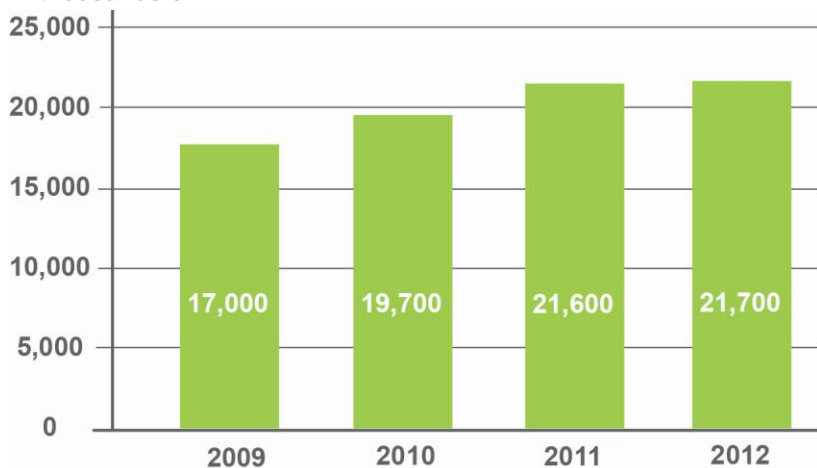
EN4 Indirect energy consumption

Total indirect non-renewable energy consumed in 2012 was approximately 18.7 million MWh (67.3 million GJ).

Energy use is one of Praxair's largest expenses and is rigorously managed both in terms of price and quantity used. Nevertheless, energy use will increase with business growth because energy is the most significant input cost to produce atmospheric products. Praxair therefore has an annual target to improve energy intensity (per metric ton of product produced) from ASUs by 1 percent. In 2012, this target was exceeded as the company achieved a 2.8 percent improvement over 2011 (5 percent versus the 2009 baseline). Praxair does not use primary energy to generate intermediate energy.

EN4 (1): Indirect Energy Consumption

In thousands of MWh



RENEWABLE ENERGY

Praxair procures 15 percent of energy from renewable sources, mainly hydro in New York State and in Brazil. In the case of Brazil, renewable energy is purchased as part of the energy mix from Praxair's energy utility providers.

Renewable energy is also purchased as part of the energy mix from Praxair's energy utility providers in other regions. This is reflected in the different GHG emissions factors attributed to Praxair's energy use in EN16. As these providers come under increasing regulatory pressure to include more non-fossil-fuel sources in their energy mix, more renewable energy sources will be brought into Praxair's mix.

[Praxair research](#) has concluded that, at its demonstrated energy and financial rate of return from energy-efficiency projects, facility energy efficiency projects are the best investment it can make to improve its global energy footprint and reduce natural resource consumption. Renewable energy is a revenue driver for Praxair, and the company provides multiple industrial gas applications for its customers in this industry.

EN5 Energy saved due to conservation and efficiency improvements

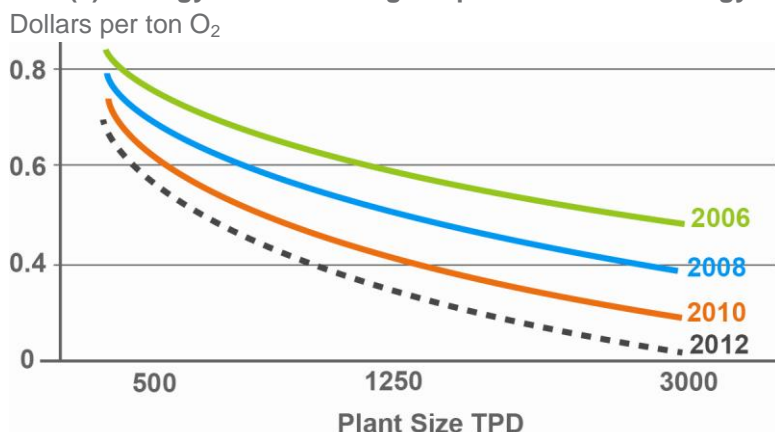
Praxair is vigilant at managing its energy footprint and has a range of design and operational initiatives to reduce operational energy consumption. By the end of 2020, Praxair expects to see \$1 billion in energy cost savings over the 20-year period, from a 1992 baseline. See 1.2 (4).

Energy savings (electricity, natural gas and fuel) are collected as part of the overall environmental savings reported per relevant sustainable productivity project. Total sustainable productivity in 2012 yielded savings equivalent to almost 500,000 MT of CO₂e emissions — a 67 percent increase over 2011. These projects provided energy savings from enhancing the energy efficiency of Praxair's buildings, processes and transportation fleet. Also see EC2 for cost savings related to energy efficiency.

Energy-efficient design in new ASU plants improves the energy intensity per unit of oxygen manufactured in those plants. New plants achieved an annual power reduction of 1.4 MW at the end of 2012 – enough to power 1,500 U.S. homes for a year. By 2016, this figure is expected to exceed 25 MW, resulting in a cumulative 50 MW reduction in 2012 and 80 MW by 2015. This will represent a 30 percent improvement in the Oxygen Cost Index (the energy cost of producing a ton of

oxygen) over a 2006 base, as shown in EN5 (1).

EN5 (1): Energy-Efficient Design Improves Product Energy Intensity Oxygen Cost Index



EN6 Initiatives to provide energy-efficient or renewable energy-based products and services, and reductions in energy requirements as a result of these initiatives

Energy-efficiency initiatives that helped improve Praxair operational and product energy intensity in 2012 included major cold box redesigns to a class of ASU plants to improve power and argon recovery; process changes in another class of ASU plants; and improved heat exchanger design that improved liquid production.

Some Praxair products and applications support renewable energy solutions. Praxair's materials business currently serves more than 50 solar production facilities worldwide with a combined capacity of over six gigawatts. Praxair's gas products, delivery systems and technologies are provided globally throughout the solar supply chain, enabling the production of crystalline and thin-film solar cells. Gas offerings include bulk, on-site and specialty gases such as nitrogen, hydrogen, silane, ammonia, high-purity argon, phosphorous and boron dopants, together with associated distribution equipment. Praxair also offers a full line of planar and tubular sputtering targets for the deposition of metal and transparent conducting oxide (TCO) thin-film layers, which are critical to the performance of photovoltaic devices. Praxair is a leader in the development of AZO, copper, nickel vanadium and aluminum next-generation tubular targets, which enable more cost-effective fabrication of thin-film photovoltaic cells.

In 2012, Praxair China announced a new contract with Changzhou Trina Solar Energy Co., Ltd., a leading solar company, to supply silane, ammonia, argon, nitrogen and oxygen to Trina Solar's new production facility in Changzhou, Jiangsu Province. Praxair China also supplies Trina Solar's other production facilities in Changzhou. Praxair's applications will help drive the cost competitiveness required to grow the industry.

EN7 Initiatives to reduce indirect energy consumption and reductions achieved

Praxair's energy efficiency program is an important part of its culture and a crucial element of margin creation; results were reported in EN5. Praxair reports elsewhere in this report on eco-efficiency through sustainable productivity (EC2); greening the supply chain (see "Supply Chain Environmental Management" in the Management Discussion section of this chapter); upstream and downstream Scope 3 GHG (EN17); fuel and GHG efficiency in transportation (EN29); and employee environmental engagement designed to reduce the use of non-renewable natural resources.

WATER

Praxair uses water mainly as a coolant to produce its products. The company focuses on resource efficiency, including the optimization of water consumption. Praxair uses water treatment additives which have been pre-approved by the permitting agency and are used in a manner that ensures there is no detrimental environmental impact. Praxair offers customers solutions that help them to purify water, use it more efficiently and reduce pollution.

Water quality and availability are local issues and vary substantially from region to region. Praxair's worldwide environmental standards require all sites to evaluate water risks and to comply with Praxair standards and applicable local rules, regulations and programs. This activity is audited by Praxair's internal Assessment program. In 2012, Praxair once again participated in the Carbon Disclosure Project (CDP) survey on the risks and opportunities of water management for companies.

EN8 Total water withdrawal by source

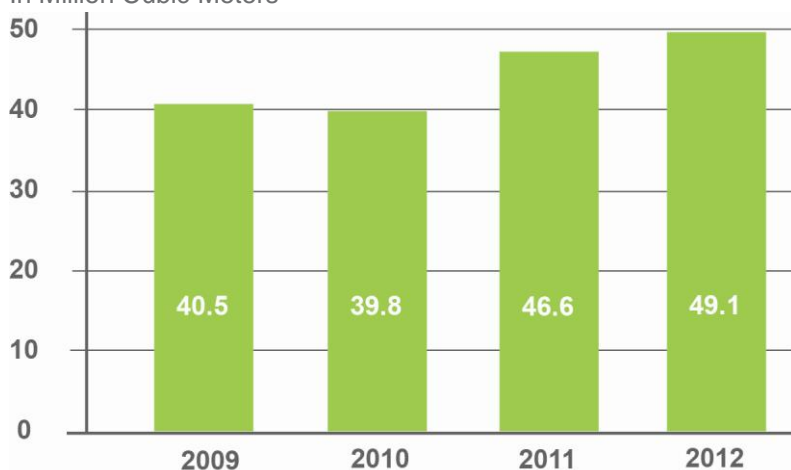
In 2012, global water usage (49,105,232 cubic meters) was 5 percent higher than in 2011. The largest single factor in the increase was the start-up in China of two large and energy efficient ASUs, powered by steam compressors.

The numbers above do not include once-through, non-contact cooling water, where water is drawn from and returned to the same body of water without the addition of chemicals or contaminants. In 2012, Praxair estimated once-through cooling water usage as 326 million cubic meters, an increase of 5 percent over 2011. This increase can be attributed to increased production levels. Praxair reports water use for approximately 380 sites where monthly use exceeds 10,000 gallons per month.

In 2012, water supplied by municipalities or other water utilities was estimated as 17 percent (8.4 million cubic meters) of the water consumed. The balance of 83 percent (40.9 million cubic meters) came from customers or was procured from surface and well waters or other industrial sources. Some Praxair sites gather rainwater for re-use; this information is not collected for corporate reporting.

EN8 (1): Water Consumption

In Million Cubic Meters



Environmental

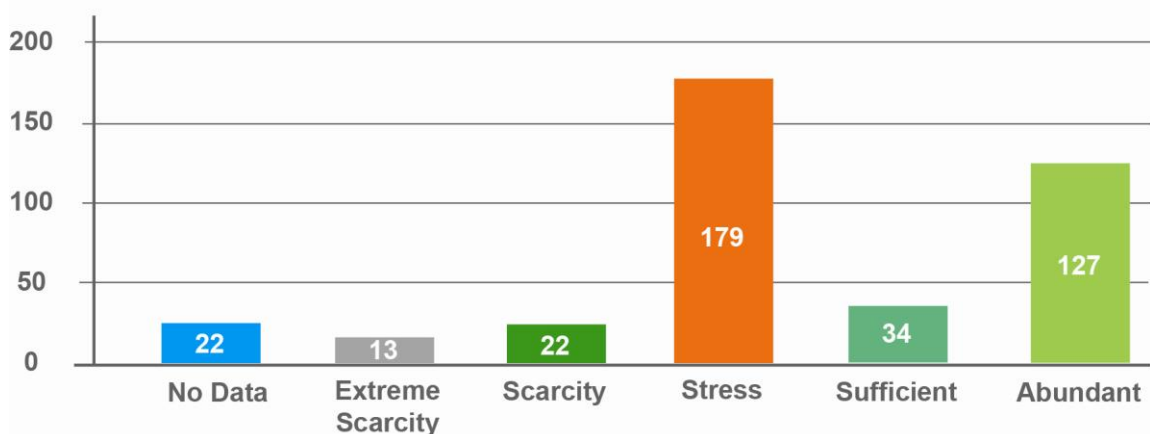
EN9 Water sources significantly affected by withdrawal of water

Praxair's 2011 target was to install the WBCSD Global Water Tool and use it to obtain a global picture of water stress or abundance at its locations now and for the next 15 years; these results would then be used as a basis to improve water reporting and management. Of the 380 sites that report water, the tool determined that 13 are currently in areas of extreme water scarcity. Of these, there are six in Mexico, four in the United States and one each in Spain, Peru and Brazil. The tool also determined that by 2025, this number would rise to 21. The total water consumption from these 14 sites is 36,500 cubic meters per year or less than 0.1 percent of Praxair's total water consumed.

EN9 (1): Number of Praxair Facilities in Water-Stressed Regions, 1995

Site Distribution Watershed (source WRI 1995)

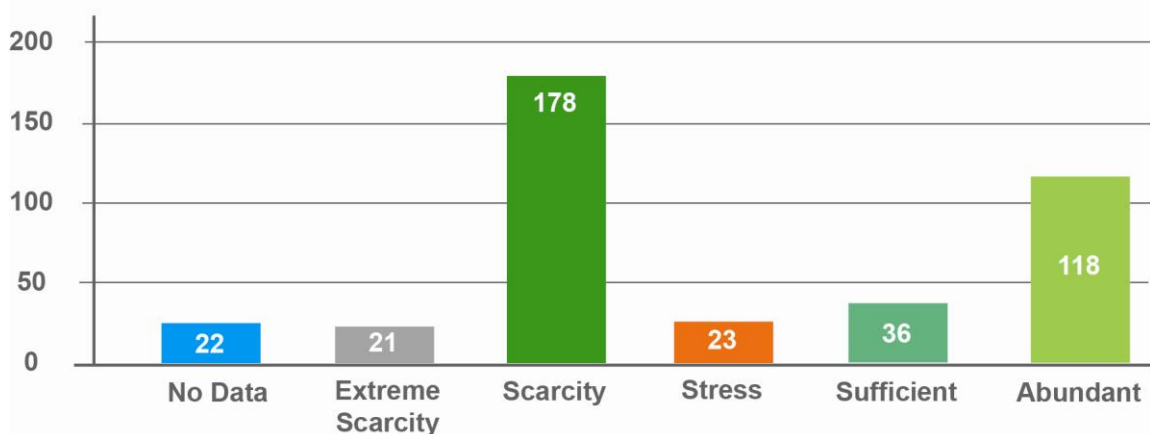
Annual Renewable Water Supply per Person



EN9 (2): Number of Praxair Facilities in Water-Stressed Regions, 2025 (projected)

Site Distribution Watershed (source WRI Projections 2025)

Annual Renewable Water Supply per Person



EN10 Percentage and total volume of water recycled and reused

In 2012, 99 percent of the water that Praxair used (48.4 million cubic meters) was recycled numerous times through cooling towers before discharge.

BIODIVERSITY

Biodiversity factors are considered prior to making an investment decision. Praxair manages the risk to biodiversity impacts from its operations through a risk assessment process; its criteria for pre-investment site assessment; and a broad program of employee environmental awareness that has a special focus on biodiversity.

EN11 & EN12 Location and size of land owned, leased, managed in or adjacent to; and description of significant impacts of activities, products and services in protected areas and areas of high biodiversity value outside protected areas

As part of its Enterprise Risk Management program, Praxair is required to assess the environmental and community risks for any new or expanded facilities. Issues evaluated are land use and ecosystem impacts, including the evaluation of a project's potential impact on sensitive ecological receptors (wetlands, ecologically significant areas, endangered/threatened species, etc.) and the specification of measures that will be used to protect these receptors. The results of this assessment can influence decisions to modify the project (e.g., selecting a new location or modifying a plant's footprint to avoid ecological or sensitive receptors) or to develop mitigation strategies (e.g., installing additional containment structures or pollution control equipment such as oil/water separators or air quality and noise control equipment) to ensure the ecological health of the region is maintained or enhanced.

Praxair requirements for investment approval involve an environmental impact assessment and consideration of site environmental conditions (soil or water contamination or depletion can cause biodiversity loss). External stakeholders, particularly local authorities, are included in these assessments, where appropriate. Praxair's SHEMS system, which requires continuous site monitoring of emissions to air, water and soil and compliance with and achievement of Praxair's environmental and GHG goals and targets, is in place at all of Praxair businesses and is integrated for all acquisitions.

EN13 Habitats protected or restored

Previous Praxair Sustainable Development Reports have highlighted biodiversity conservation in Brazil, Mexico, France and the United Kingdom. This report highlights biodiversity conservation at a PST site in Concord, N.H. See the feature story at the opening of this chapter. EN14 describes a new set of partnerships with environmental conservation organizations that will expand Praxair's activity in biodiversity preservation.

EN14 Strategies, current actions and future plans for managing impacts on biodiversity

Praxair employees are working with local government representatives and other experts and are contributing their efforts outside the facility boundary. Twenty percent of employee community engagement projects in 2012 were directed towards environmental conservation or education, and 5 percent of Praxair Foundation donations supported this theme.

One of the major themes in Praxair's sustainable development strategy is to emphasize the link between its brand message of *Making our planet more productive*, and multiple interconnected activities, including a new global Greenway program. Through this program, and collaboration with The Nature Conservancy and The Arbor Day Foundation, Praxair planted or preserved 250,000 trees in sensitive ecosystems around the world in 2012. See the feature story at the start of the Social chapter.

EN15 Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk

In 2012, Praxair performed an initial scan of its larger facilities against a world map of areas at risk of biodiversity loss. The only site that overlapped the IUCN Red List was near the Iguatama facility in Brazil, near the Sao Francisco River. The river is on the IUCN Red List because the Sao Francisco sparrow is categorized “near threatened.” Restoring habitats is considered to be the best strategy to allow the sparrow to return to previous levels, and Praxair is actively engaged in this.

The Karner blue butterfly is not identified on the IUCN Red List, although it is listed as “endangered” by the FWS. See the feature story at the beginning of this chapter for more information about this project.

EMISSIONS, EFFLUENTS AND WASTE: GHGs

EN16 Total direct and indirect GHG emissions by weight

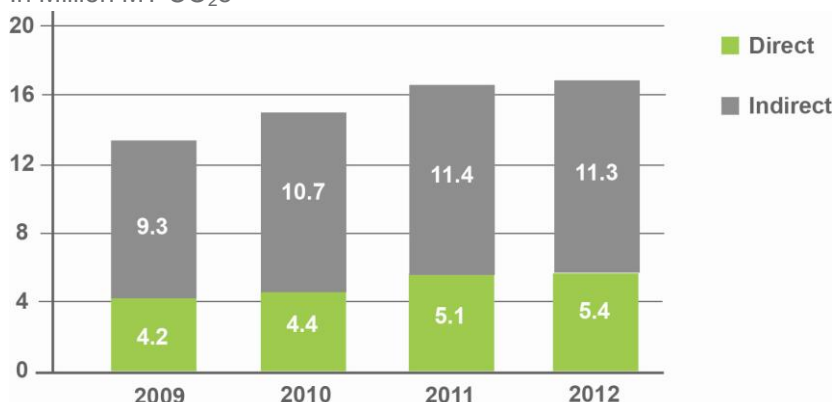
Praxair GHG emissions disclosures have been prepared based on a reporting year of January 1 to December 31, the same as the financial reporting period. The GHG emissions information has been prepared with reference to the World Resources Institute/World Business Council for Sustainable Development Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, revised edition ([the GHG Protocol®](#)) and the [Climate Change Reporting Framework \(CCRF\)](#) developed by the Carbon Disclosure Standards Board (CDSB). Praxair is an associate member of the CDSB. A summary of the key disclosure policies is below, together with an explanation of where changes have been made from policies in the previous year.

All GHG emissions figures are in MT of CO₂e and include all six GHGs covered by the Kyoto Protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), perfluorocarbons (PFCs), hydrofluorocarbons (HFCs) and sulfur hexafluoride (SF₆).

Total GHG emissions from Scopes 1 and 2 were 16.7 million MT in 2012. This represents a 1 percent increase over 2011, mainly from increased hydrogen production. In addition, overall efficiency was impacted by plants that were not operating at full capacity. These factors more than outweigh the almost 500,000 MT of emissions reduced due to energy efficiency and other emissions reduction activities.

EN16 (1): Total GHG Emissions

In Million MT CO₂e



Environmental

EN16 (2): Statement of Greenhouse Gas Emissions

CO₂e Emissions in Thousands of Metric Tons

	2009 Baseline Year	2011	2012
Scopes 1 & 2			
Scope 1	4,163	5,077	5,355
Scope 2	9,316	11,377	11,329
Total (Scopes 1 & 2)	13,479	16,454	16,685
GHG Emissions Intensity (CO₂e/\$M revenue)			
Total Scopes 1 & 2	1,505	1,462	1,487
GHG Emissions Intensity (CO₂e/MT product indexed to 100 in 2009)			
Scope 1 – Hydrogen plant	100	98	98
Scope 2 – Air Separation Units (ASUs)	100	97	95
GHG Emissions Sources			
Scope 1			
Natural Gas	3,440	4,383	4,763
Diesel/Gasoline for Transportation	247	264	235
Other (Refrigerants, process emissions, etc.)	476	430	357
Scope 2			
Electricity	9,315	11,370	11,190
Purchased Steam	2	7	139

EN16 (3): GHG Emissions by Business Unit

CO₂e Emissions in Thousands of Metric Tons

	2009			2011			2012	
	Scope 1	Scope 2		Scope 1	Scope 2		Scope 1	Scope 2
Air Separation Units (ASUs)	299	7,578		401	9,650		311	9,627
Hydrogen Plants	3,086	303		3,960	427		4,420	424
CO ₂ Plants	294	157		250	158		198	153
Helium	0	47		0	31		0	31
Other	238	214		212	159		191	142
Trucking	246	0		254	0		235	0
Standard Plants	0	1,017		0	952		0	952
Total	4,163	9,316		5,077	11,377		5,355	11,329

GHG INVENTORY BOUNDARY

Direct and indirect GHG emissions from electricity have been reported from entities where the company has financial control (as defined by the CCRF). One-hundred percent of emissions for entities within the global organizational boundary have been reported.

All Scope 1 (direct GHG) and Scope 2 (indirect GHG) emissions were reported for operations within the financial boundary. There are two areas of Praxair's business that are material to its GHG emissions, but where it has limited ability to control emissions:

- Praxair plants that are owned and operated on customer sites, where the customer pays for the power and provides it to Praxair (these are called "standard plants"). As in past years, these are reported as Scope 2 since Praxair owns these plants.
- Contractor GHG emissions from driving: Praxair is implementing its own fuel use management program and working with contractors to align them with this program, but it has a limited ability to control these emissions. Emissions from contractor driving are reported in Scope 3.

Emissions Factors

Praxair uses conversion factors (called Emission Factors) to calculate GHG emissions from energy data. For electricity, Praxair uses the IEA country carbon dioxide emissions factors, except in the United States, where it uses the latest release of the Environmental Protection Agency's (EPA's) eGRID subregion emissions factors. For natural gas and other fuels, Praxair uses emission factors from the EPA's AP-42 document.

Base Year GHG Emissions

Praxair established a base year of 2009 for its current GHG targets. It has a baseline recalculation policy that takes into account factors such as acquisitions and divestitures and methodology changes. Praxair is committed to adjusting its 2009 base year emissions to reflect significant changes and allow for meaningful comparisons of its emissions over time.

Uncertainty

Praxair's SDMS was implemented in 2011. All businesses are required to sign-off on their results versus corporate GHG targets on a monthly basis, and there is a quarterly review by the Office of the Chairman. This creates a level of internal oversight and management over the company's GHG emissions data.

Materiality

Emissions from sources that contribute, in aggregate, less than 5 percent of the total Scope 1 and Scope 2 emissions are considered *de minimis* and are not reported here.

Excluded Sources of GHG Emissions

Praxair has a number of very small office sites, many with only one or two people. Praxair estimated these emissions and, as they represent less than 1 percent of its Scope 2 emissions, it considers them to be *de minimis*.

Prior Year Revisions

No revisions to prior years have been made.

External Verification

Praxair has had its GHG inventory verified by a third party since 2009. A Limited Assurance is performed on Scopes 1, 2

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and 3 emissions against the international standard ISO 14064-3. A copy of [Praxair's 2012 verification statement](#) is available on its website.

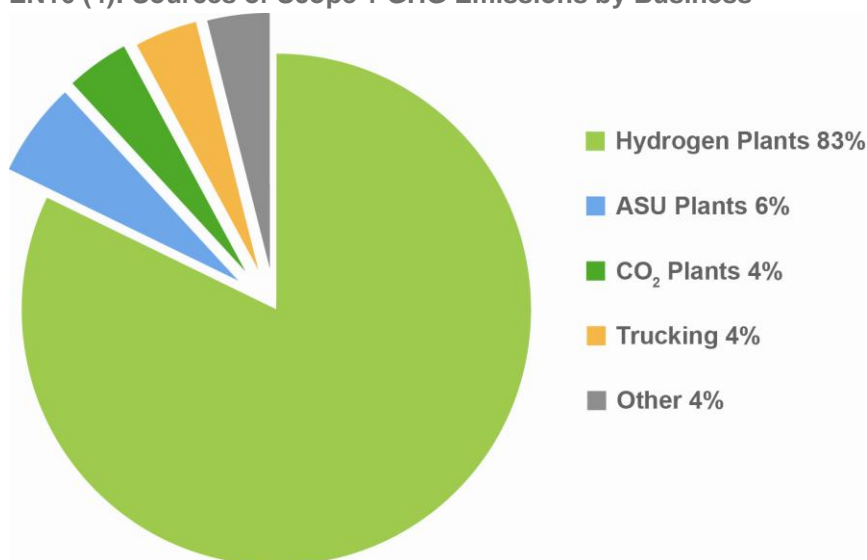
Scope 1

In 2012, Scope 1 emissions were 5.4 million MT CO₂e. This is an increase of 5 percent over 2011, in line with increased hydrogen production due to increased customer demand globally.

Praxair's largest source of direct GHG emissions is hydrogen production. Ninety-five percent of global hydrogen is produced through steam methane reforming, which generates carbon dioxide in a fixed chemical relationship and limits possibilities for Praxair to reduce net carbon dioxide emissions from hydrogen production. Therefore, it set a target to reduce the GHG intensity of hydrogen production by 4 percent by 2020 (0.4 percent per year) off a 2009 baseline. The company achieved 0.3 percent improvement in 2012. This represents a 1.9 percent improvement from the 2009 baseline.

Another significant source of direct GHG emissions is fuel consumption in Praxair's Logistics operation. Total miles driven are projected to increase, especially as the company grows in emerging economies. Praxair, therefore, has a 1.5 percent annual intensity improvement target (GHG per product delivered) for its bulk trucking operation. In 2012, it met that target and achieved 1.5 percent improvement in its bulk trucking (7.2 percent improvement from the 2009 baseline).

EN16 (4): Sources of Scope 1 GHG Emissions by Business



Scope 2

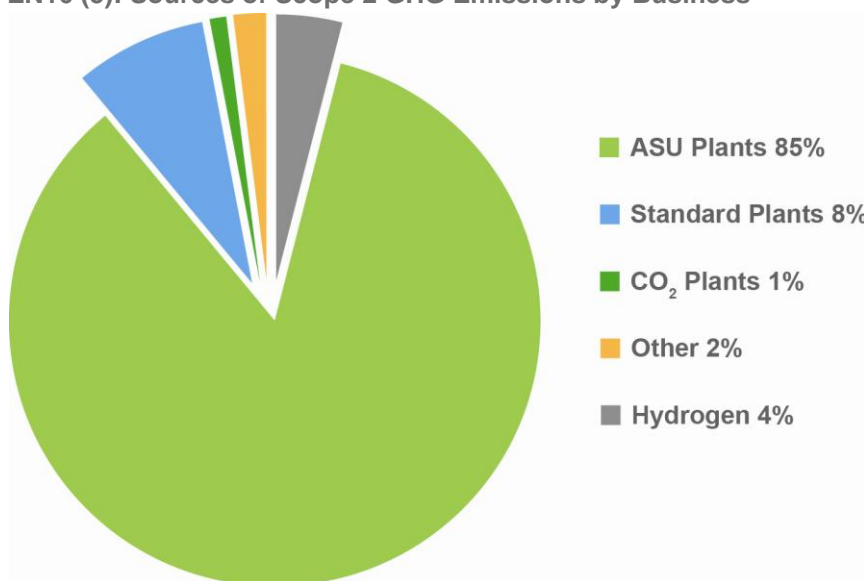
Indirect GHG emissions for 2012 were 11.3 million MT CO₂e, a 0.4 percent decrease from 2011. This is in line with a decrease in electricity between 2011 and 2012.

Overall, 85 percent of Scope 2 emissions were from ASUs. Electricity consumption is one of Praxair's largest expenses and is rigorously managed both in terms of price and quantity used. Nevertheless, energy use will increase with business

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growth. Therefore, Praxair has a 1 percent annual energy intensity improvement target per metric ton of product produced from air separation. It exceeded that target in 2012 and achieved a 1.6 percent improvement over 2011 (5 percent versus the 2009 baseline).

EN16 (5): Sources of Scope 2 GHG Emissions by Business



EN17 Other relevant indirect GHG emissions by weight **Scope 3**

Other indirect sources of GHG emissions are emissions as reported in EN17 (1). In line with the newly published GHG Protocol Scope 3 Standard, Praxair created a process map of all inputs and outputs, and estimated the proportion of GHG emissions that might come from each activity. Because Praxair calculated five new sources of Scope 3 GHG in 2012, reported emissions rose considerably. As Praxair is a basic materials company and sources much of its product from air as its principal raw material, Praxair's Scope 3 GHG emissions are smaller than its direct or indirect emissions. This is illustrated in EN17 (2).

Criteria for selecting Scope 3 reporting categories were:

1. *Relevance and transparency:* This includes activity over which Praxair has a level of operational control but where the GHG emissions are reported by another party.
2. *Relevance or materiality to Praxair's footprint:* This includes activity that may have a potentially significant GHG consequence.
3. Activity where the data was easy to obtain from a cost/benefit perspective.

As standards, scopes and metrics for reporting Scope 3 GHG are clarified over time, Praxair anticipates additional precision in this area. At this time, its reporting represents a good faith effort to focus on the most material and/or visible aspects of its Scope 3 emissions.

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EN17 (1): Scope 3 GHG Emissions

(MT CO ₂ e)	2011	2012
Upstream		
Purchased Goods and Services	400	400
Capital Goods	254,000	473,000
Fuel- and Energy-Related Activities Not Included in Scopes 1 or 2	Not calculated	1,888,000
Upstream Transportation and Distribution	Not calculated	37,000
Upstream Leased Assets	Not calculated	12,000
Waste Generated in Operations	14,000	25,000
Business Travel	9,000	9,000
Employee Commuting	Not calculated	47,000
Downstream		
Investments	Not calculated	22,000
Downstream Transportation and Distribution (contractor driving)	287,000	266,000
Total Reported Scope 3 Emissions	564,400	2,779,400

EN17 (2): Praxair 2012 Scope 3 GHG Emissions

Praxair 2012 Scope 3 GHG emissions



Image adapted from WRI/WBCSD Technical Guidance for Calculating Scope 3 Emissions, V 1.0. Other Scope 3 elements are either not relevant or not calculated: Category 10; Processing of sold products; 11: Use of sold products; 12: End-of-life treatment of sold products; 13: Downstream leased assets; 14: Franchises. Explanations provided in Praxair CDP Response.

UPSTREAM GHG EMISSIONS

The most significant source of upstream Scope 3 emissions is from fuel- and energy-related activities not included in Scopes 1 or 2. As this source is related to energy (it includes upstream emissions from purchased fuel and electricity and transmission and distribution losses), and as energy is a significant cost for Praxair, emissions from this category are most relevant and significant to the company's overall carbon footprint. Praxair's methodologies for upstream Scope 3 emissions are described below

Fuel- and Energy-Related Activities Not Included in Scopes 1 or 2

The methodology used is based on the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Category 3. For electricity, Praxair prorated the fuel mix ratios in seven countries where it uses more than 1 billion kWh. These seven countries represent more than 87 percent of Praxair's total electricity usage. The company

then extrapolated this mix to the remaining 13 percent of its electricity usage. It then assumed a T&D loss rate of 7 percent, based on information from the U.S. Department of Energy, and added in emissions from upstream natural gas.

Purchased Goods and Services

A company inventory determined that 786,662 pounds of office paper was purchased in 2009. This was converted to a baseline of 462 MT CO₂e, using the U.S. EPA WARM methodology. By the end of 2011, Praxair had reduced its paper consumption by 20 percent, to 370 MT CO₂e. The result from 2011 is carried over for 2012, since these emissions are small when compared to other Scope 3 categories.

Capital Goods

The principal material Praxair procures for capital projects is steel. Based on its annual spend, Praxair used its Steelfirst subscription to calculate the price of carbon steel per country. The weight of steel was then calculated as price per ton divided by spend. Related GHG emissions were calculated by multiplying the carbon steel volumes using a GHG emission factor derived from the U.S. EPA (0.87 MT CO₂e/ per MT carbon steel).

Upstream Transportation and Distribution

Two transportation projects were evaluated: one very large project in Russia and one medium-sized project in the United States. For each project evaluated, the distance travelled for road, rail and sea was recorded. Emissions factors per mode of transportation were calculated using the CEFIC/ECTA *March 2011 Guidelines for Measuring and Managing CO₂ Emissions from Freight Transport Operations*, and GHG emissions were determined per project. The average GHG emissions per project were multiplied by the number of oversized and heavy capital equipment transportation projects. This figure was then multiplied by 1.2 to determine GHG emissions from 100 percent of capital equipment purchased. The number likely overstates the emissions as 20 percent is from far smaller capital equipment transportation projects.

Upstream Leased Assets

GHG emissions from leased offices were assessed based on leased space (in square footage) and a standard global assumed annual energy consumption per square foot for office buildings. Praxair has 23 leased offices around the world. Square footage reports were received for seven of these, from which the smaller offices were estimated at 25,000 square feet and the larger offices at 150,000 square feet. Total square feet of leased assets were estimated as 688,000. Using the EIA report for commercial building energy use, Praxair assumed 26 KWh per square foot. CO₂e was determined using the EPA GHG Calculator. This likely overestimates the energy use as all Praxair offices are implementing energy savings initiatives.

Waste Generated in Operations

As reported in EN22, Praxair disposed of 73,000 MT of waste in 2012. Of this, 68 percent was recycled and 11 percent went to landfills. The amount of waste treated by third parties is recorded in Praxair's EKPI database according to the waste treatment methods used (landfill, recycled, other). To calculate the CO₂e emissions resulting from waste treated in landfills, Praxair multiplies the total amount of waste in this category by an emissions factor provided by the EPA, which is associated with the municipal waste mix in the United States. The IPCC suggests that any CO₂e emissions associated with recycling should not be included in Scope 3 inventories. Therefore Praxair uses an emissions factor of 0 for recycled waste treated by third parties. The "other" waste that is not landfilled or recycled is calculated equally as if it were landfilled.

Business Travel

Business travel is a very small component of Praxair's reported Scope 3 emissions; its most significant component is airline

travel. In 2008, Praxair calculated GHG emissions from rental cars, which was less than 5 percent of transportation Scope 3 emissions; therefore, it considered this to be *de minimis*. Praxair's travel vendor provided a GHG report for 2009 global air travel that calculated airline GHG emissions on the basis of short-, medium- and long-haul flights using emission factors of 0.18, 0.19 and 0.24 respectively. The GHG emissions factors are derived from the GHG Protocol. Emissions from business travel are small compared to other Scope 3 sources; these will be recalculated once every five years.

Employee Commuting

The methodology is based on the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard, Category 7: Employee Commuting. This category includes emissions from the transportation of employees between their homes and their worksites. Emissions from employee commuting may arise from automobile travel, bus travel, rail travel, or other modes of transportation (e.g., subway, bicycling, walking). The environmental impact of employee commuting is insignificant in relation to Praxair's GHG footprint. Praxair used a simplified version of the Scope 3 Protocol's average-data method to calculate emissions from employee commuting. This involved estimating emissions from employee commuting based on average (e.g., national) data on commuting patterns. National data on commuting times in some Praxair countries is provided in the OCED ["How's Life: Measuring Wellbeing" \(2011\)](#). Praxair used the OECD average time of 38 minutes per day. Time spent commuting was assumed to be in a single-occupancy car at 30 miles per hour; the average commuting distance (both ways) was assumed to be 21 miles. Praxair assumed the average passenger vehicle emissions as 423 grams of CO₂ per mile, based on the [U.S. EPA Greenhouse Gas Emissions from a Typical Passenger Vehicle](#). This was multiplied by the number of employees (2012: 26,539) and 220 working days per year.

DOWNSTREAM SCOPE 3 EMISSIONS

Praxair's most significant source of downstream GHG emissions is contractor truck driving. Praxair drivers log enough miles to drive around the world about 30 times a day, and half of this is done by contract drivers. To improve GHG intensity in trucking, Praxair works on improving distribution efficiency around the world with technology investments such as route optimization and on-board computers, and with training in fuel-efficient driving techniques. These initiatives are conducted with both Praxair drivers and contract drivers. In addition, contract drivers are engaged in a series of steps, starting with the communication of Praxair's supplier expectations, including environmental improvement. Drivers receive the same professional driver training in eco-efficiency that is provided to Praxair drivers. Praxair prioritizes its engagement in regions with the highest proportion of contract drivers. In South America, where most of the company's drivers are contract drivers, Praxair's GHG intensity reduction target was extended to contract drivers.

Praxair's methodologies for downstream Scope 3 emissions are described below

Downstream Transportation and Distribution (Contractor Driving)

Praxair products are delivered by pipeline, through on-site product production, and by truck. A small portion is delivered by train and ship. Product delivered by Praxair trucks is reported as Scope 1. Half of Praxair's truck miles are driven by contractors. Contractor miles driven are collected in each country and business or region and tracked as part of Praxair's safety program. Praxair's Scope 3 emissions resulting from delivery of products by third-party carriers was derived using the same methodology to calculate GHG emissions from Praxair's trucks: Total miles were converted into gallons (assuming consumption of a standard 5.57 miles per gallon), then converted to GHGs using an EPA emissions factor for diesel fuel to metric tons.

Investments

An estimate of Praxair's share of GHG emissions from joint ventures where it owns less than 50 percent was made based

on assuming the same output per revenue in the joint ventures as in the company's business.

SCOPE 3 SOURCES NOT REPORTED

Praxair does not report emissions in the following categories: processing of sold products, use of sold products, and end-of-life treatment of sold products. Praxair provides many intermediate products with many downstream applications, each of which has a very different GHG profile. Praxair is unable to reasonably estimate the downstream emissions associated with the various end uses of its products.

Emissions from carbon dioxide sales to the food industry may be traceable. This market segment is a subset of Praxair's food and beverage end market, which is 6 percent of the company's annual revenue. Actual carbon dioxide volumes are business confidential.

EN18 Initiatives to reduce GHG emissions and reductions achieved

Praxair has a range of targets to improve GHG emissions intensity. Section 1.2 (4) (in the Strategy & Analysis section), EN5, EN6 and EN7 provide information on initiatives and results in GHG reduction activity.

Praxair provides, and has under development, several technologies and applications that [help mitigate the effects of climate change](#). For example, for the electronics industry, the company provides rare gases that are used in liquid crystal display (LCD) flat panels that lower unit power consumption in televisions, computers and cell phones. For the agriculture industry, Praxair provides oxygen-delivery technology to optimize sustainable fish farming.

Several Praxair [carbon dioxide industrial applications chemically "fix" carbon](#) and provide a climate mitigation solution because the carbon dioxide is not emitted into the atmosphere. For example, in the pulp and paper industry, carbon dioxide is used for brownstock (brown pulp) washing and paper pH control. Carbon dioxide reacts with the alkaline compound contained in the pulp/paper, fixing the carbon. Praxair carbon dioxide can also be used for climate adaptation: In Spain Praxair carbon dioxide is helping to make desalinated water drinkable.

Praxair has responded each year to the investor request for information from the CDP, and provides this response in its [Sustainable Development Reporting Center](#). Praxair has been named to the [Global Carbon Disclosure Leadership Index](#) for four consecutive years and received an A- on the Carbon Performance Index in 2012.

EMISSIONS, EFFLUENTS AND WASTE: OTHER AIR EMISSIONS

EN19 Emissions of ozone-depleting substances (ODS)

OZONE-DEPLETING SUBSTANCES

Praxair measures the quantity of ozone-depleting substances (ODS) contained in its equipment as well as any emissions to the atmosphere. It is aggressively pursuing opportunities to reduce the use and emissions of ODS through the use of alternative, non-ODS and enhanced leak detection and repair programs for equipment that still use ODS. In 2012, Praxair released less than 16 MT of ODS.

EN19 (1): ODS Emissions by Type

ODS	2012 Emissions	MT CFC-11 equivalent
R22	15.05	0.83
R11	0.54	0.54
R402b	0	0

EN20 NOx, SOx and other significant air emissions by type and weight

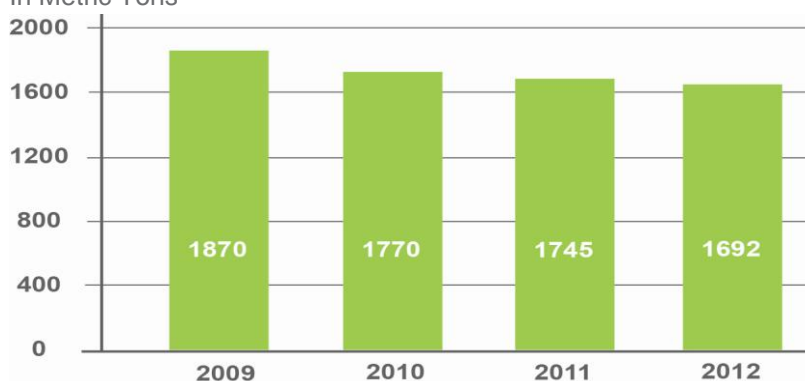
NOx EMISSIONS

Praxair's NOx emissions in 2012 improved 3 percent from 2011. Overall, NOx reductions were principally a result of improved vehicle fuel combustion in newer trucks in Praxair's fleet. Fifty-five percent of NOx emissions are a result of product transportation in trucks; another 44 percent comes from hydrogen facilities and ASUs. Non-driving sources of NOx increased to 45 percent, up from 43 percent in 2009, a function of improved reporting. As hydrogen production increases and new ASUs come on-line, operations will make a larger proportional contribution to total NOx emissions.

Contractors account for 53 percent of the total miles driven to deliver Praxair products. Combined NOx emissions from Praxair and contract drivers were 1,924 MT, down from 2,077 MT in 2011.

EN20 (1): NOx Emissions

In Metric Tons

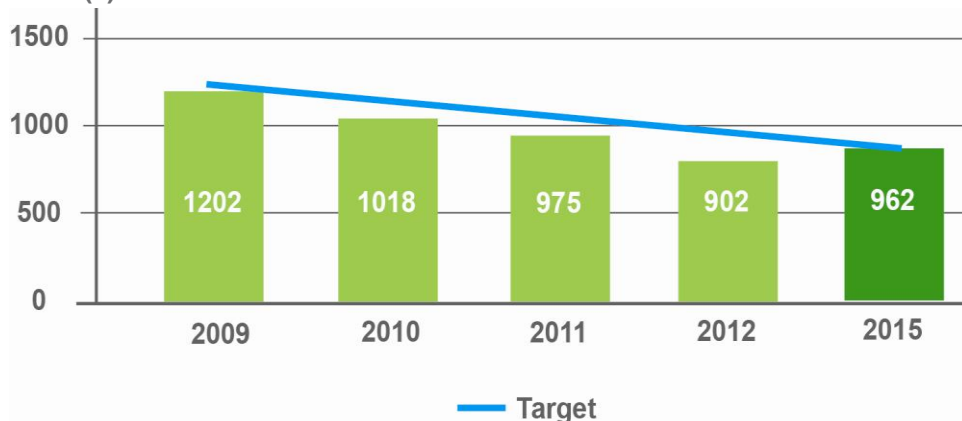


Environmental

Initiatives to Reduce NOx and Results Achieved

In 2010, Praxair set a target to reduce NOx from driving by 20 percent by 2015, against a 2009 baseline. Actual 2012 NOx emissions from driving were 902 MT, a reduction of 25 percent since 2009, which exceeds the 2015 target.

EN20 (2): Praxair Driver NOx Emissions



SOx EMISSIONS

In 2012, 81 percent of Praxair's SOx emissions resulted from product transportation by Praxair trucks, and 19 percent came from non-driving sources, up from 10 percent in 2009. Total SOx emissions in 2012 decreased 30 percent over 2011. These emissions reductions are a function of the number of miles driven. However, they also vary significantly by year and by region of the world because of the varying implementation of environmental regulations imposing lower sulfur requirements in diesel fuel over the last decade. The decrease from 2011 was primarily driven by low-sulfur diesel requirements in South America.

EN20 (3): SOx Emissions

In Metric Tons



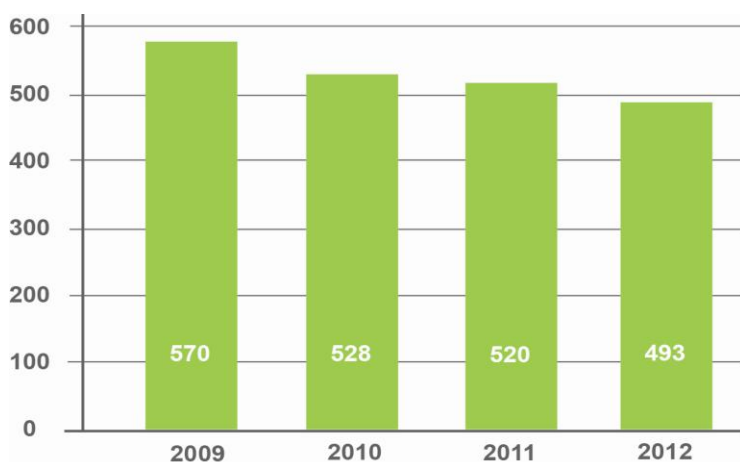
Environmental

VOC EMISSIONS

Total VOC emissions in 2012 were 493 MT, a 14 percent reduction since 2009 and a 5 percent reduction since 2011. Fifty-seven percent of Praxair's VOC emissions resulted from acetylene production and flammable gas cylinder filling, and 10 percent came from Praxair driver emissions. The decrease is primarily due to a decrease in acetylene generation and a temporary production decrease in South America.

EN20 (4): VOC Emissions

In Metric Tons



TRI EMISSIONS

In the United States, Praxair reports on- and off-site releases as part of the SARA Toxics Release Inventory (TRI). In 2012, Praxair released 194,826 pounds of reportable chemicals, compared to 160,219 pounds in 2011 (a 22 percent increase).

EMISSIONS, EFFLUENTS AND WASTE: WATER DISCHARGE, WASTE AND SPILLS

EN21 Total water discharge

Praxair did not have any unplanned water discharges in 2012.

Planned discharges of effluent or process water require permits and are reported where required by law; potential unplanned discharges may also be required by law to be reported to the governing agency. Praxair does not consolidate planned discharge volumes or report them. Most of the water Praxair uses is drawn from and returned to the same body of water without the addition of chemicals or contaminants. Therefore, Praxair does not consider water discharge to be one of its top material issues.

EN22 Total weight of waste by type and disposal method

Praxair tracks solid wastes (e.g., trash) and special and hazardous wastes. It also tracks wastes by disposal method: landfill, recycling and other (incineration, waste-to-energy, etc.). Its management metrics focus on waste to landfill and recycling; therefore, it does not track "other" waste in specific categories; the mass of waste in this category in 2012 was less than 16,000 MT.

Environmental

Of the total waste generated in 2012, 89 percent was diverted from landfill either by recycling or repurposing; this is a 20 percent increase in recycling from 2011.

Total waste generated in 2012 was 41 percent more than what was reported in 2011. The increase is primarily due to better reporting driven by [Praxair's Zero Waste program](#). Praxair's plants also required more general maintenance in 2012 than in 2011, and there was a significant increase in the volume of disposed carbide lime and scrapped cylinders.

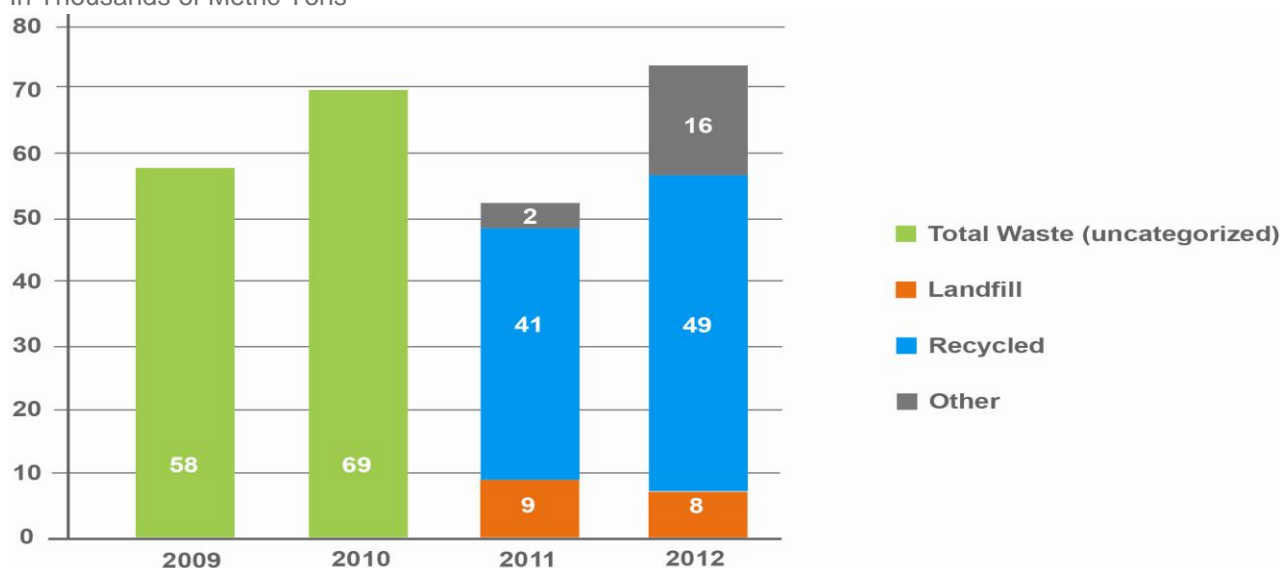
In 2011, Praxair began reporting information on how its waste was managed. In 2012, the company recycled 68 percent of all waste generated, and 8 percent went to landfills. Carbide lime and scrap metals and powders contributed approximately 80 percent of Praxair's worldwide waste by weight. In some countries, carbide lime is designated a hazardous waste due to its relatively high pH. In 2012, 26 percent of Praxair's waste was classified as hazardous waste. Carbide lime is usually considered a non-hazardous waste when disposed of and a co-product when supplied for industrial or agricultural use. Praxair seeks to find beneficial uses for the carbide lime produced and to minimize waste lime via by-product sourcing.

Praxair does not report waste by type that is reused or recycled; these records are not provided by its vendors. Since this material is not being handled as a waste, it is not a management metric. Compostable waste is not reported since Praxair waste is typically not compostable.

Praxair's waste management practices and its Zero Waste program allow waste incineration. This option is considered a last choice in the hierarchy of waste handling. Waste-to-energy is encouraged. For example, Praxair's facility in Westcreek, Ontario, negotiated a waste-to-fuel program with its waste vendor for 75 percent of its waste.

EN22 (1): Waste by Disposal Type

In Thousands of Metric Tons



EN23 Total number and volume of significant spills

Environmental

The Praxair Spill Center operates 24 hours a day, seven days a week, and has access to all federal and state agencies, emergency response authorities and local emergency response contractors. Because of the nature of Praxair's business, oil spills with environmental significance have not been a material concern. A facility's oil impacts are limited by the capacities of the compression equipment. These pieces of equipment are protected by a scuppering system, oily water separators, spill prevention, control and countermeasure (SPCC) plans and best management practices. The majority of oil spills are from vehicle hydraulics and engine components. When applicable, spills are promptly reported to the appropriate regulatory authorities.

There were 107 spills recorded in the United States and Canada in 2012. None were deemed significant, and, therefore, no spills were reported in Praxair's 2012 Annual Report.

EN24 Weight of transported, imported, exported or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III and VIII, and percentage of transported waste shipped internationally, in kilograms or tons
Praxair does not transport, import or export hazardous waste across international borders.

EN25 Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff
Refer to the biodiversity issues reported in EN9 and EN11 through EN15.

PRODUCTS AND SERVICES

EN26 Initiatives to mitigate environmental impacts of products and services

A new target was established: By 2015, the GHG benefit enabled by Praxair applications in use should be double all Praxair GHG emissions. Praxair achieved this for the first time in 2012, so the challenge will be to maintain this net benefit. See the feature story at the opening of this report. Activity in this area includes measuring and validating customer carbon productivity for selected applications, including Praxair's core product, oxygen; and its key growth product, hydrogen. Several targets have been established to reduce the environmental impact of Praxair transportation (see EN29).

Many of Praxair's environmental applications bring customer environmental benefits. For example, the company's water and wastewater treatment services develop and deliver customized systems to help industrial plants and municipalities meet their wastewater management goals. Praxair works directly with its customers to provide beginning-to-end treatment methods, from needs assessment and treatment strategy to equipment design, installation and industrial supply. It also offers a wide range of applications that treat and reuse process water, all while maximizing treatment capacity, reducing VOC emissions, improving safety and reducing costs.

As the global demand for potable water continues to rise and fresh water supplies are quickly depleting, Praxair is advancing industrial technology to make this life-sustaining resource accessible to a growing population. Last year, Praxair helped bring clean drinking water to 25 million people around the world.

In energy markets, Praxair continues to develop and advance industrial applications, supply systems and technologies that reduce emissions and improve efficiency to power a cleaner future. Praxair gases support applications and industries that supply hydrogen to powers cars, buses and forklifts; build and operate world-class oxygen supply units for gasification; and aid in the production of the next generation of biofuels and bio-based chemicals and photovoltaic cells.

EN27 Percentage of products sold and their packaging materials that are reclaimed by category

Overall, Praxair produces very little packaging waste. Praxair delivers most of its product in pipelines or bulk cylinder trucks. Since the products are consumable, there is nothing to reclaim and no packaging material for the majority of products. Metal cylinders, which last for roughly 40 years and are returnable and typically reusable multiple times, are used for the packaged gases business. In 2012, Praxair acquired Portagas and added returnable cylinders to its cylinder gas offering — an environmentally-friendly option and a testament to Praxair's commitment to sustainability. In addition, the company's GPMM organization has launched an asset management program that is actively identifying idle assets (e.g., cylinders) to ensure that they are put back into use rather than purchasing new materials. The program actively tracks all assets, is well reported and is yielding good results.

COMPLIANCE

EN28 Monetary value of significant fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations. Cases brought through dispute resolution mechanisms

Praxair maintains an outstanding record of global environmental compliance, which is measured and reported by the cost of worldwide penalties. The total monetary value of environmental penalties in 2012 was \$48,100, which consisted of four separate penalties. This continues a record of less than \$50,000 in annual penalties since 2006. Penalties are reported for the year that the fine is assessed, so the noncompliance may have occurred in an earlier year. Praxair's largest fine was related to a release of effluent contaminated with ammonia into a stream during maintenance of a heat exchanger. This occurred at the Cubatão I Plant in Brazil, and the fine of \$45,424 represented 94 percent of the year's total fines. Procedures have been adopted and training conducted to prevent a reoccurrence of this type of spill.

Praxair had 246 environmental inspections by government agencies in 2012 (278 in 2011), and 95 percent had no findings (97 percent in 2011). See EN DMA (1). Praxair is not aware of any non-monetary sanctions for environmental non-compliance or any actions brought through dispute resolution mechanisms involving independent third-party review.

EN28 (1): Environmental Penalties

2007	\$43,300
2008	\$14,100
2009	\$39,900
2010	\$27,000
2011	\$35,600
2012	\$48,100

TRANSPORT

EN29 Significant environmental impacts of transporting products and other goods and materials used for the organization's operations; and transporting members of the workforce

Praxair product is transported in pipelines, bulk trucks and packaged gas trucks. Truck transportation is a material sustainable development issue for Praxair, and in 2012, it was elevated to the third most important environmental priority, up from sixth in 2011. This reflects the findings of Praxair's risk assessment as reported in its 2012 Annual Report, page 9: "Operational Risks, including storage, vehicle transportation and pipelines, are operational risks that require continuous

training, oversight and control. Vehicle transportation accidents could result in loss of life, damage to the environment, loss of production and/or extensive property damage.” It also reflects stakeholder perceptions that Praxair truck driving carries material safety, environmental and reputational risks and opportunities. In contrast, employee travel and business commuting are not material issues for Praxair.

Praxair and its contractors drove 275 million miles in 2012 — a 3 percent increase over 2011. This is equivalent to driving more than 30 times around the earth each day. Praxair drivers accounted for 129 million of these miles (47 percent); contract drivers drove 146 million miles, the same ratio as in 2011. Principal environmental impacts from driving are GHG, SOx and NOx emissions. Principal safety aspects are vehicle accidents, which are reported in LA7. Praxair reports safety and environmental metrics for both Praxair and contract drivers.

Praxair’s has the following worldwide environmental improvement targets for distribution:

- **GHG Intensity:** An annual 1.5 percent improvement per year in GHG emissions per ton of product delivered, 2009–2015, for Praxair bulk and packaged gases deliveries. In 2012, Praxair achieved these targets with a 7.2 percent improvement versus baseline for bulk trucks and a 10.2 percent improvement for packaged gas trucks. Praxair also applies this target to its contract drivers in Brazil as an example of a best practice (see EN17). Other regions are starting to replicate this example.
- **NOx Emissions:** Reduce driver NOx emissions 20 percent, 2009–2015. NOx emissions from Praxair driving were 902 MT, representing a reduction of 300 MT or a 25 percent decrease from the 2009 baseline, demonstrating that this target has already been achieved. See EN20. Praxair reports driving-related SOx and NOx emissions for both company and contractor driving at EN20.

In order to support customer service, safety, environmental and community responsibility, and product safety and security, Praxair invests heavily in a range of initiatives, including systems and technology, logistics and route optimization, partnerships for best practices and training. Some of these are described below.

Systems and Technology

As fuel is a major cost, Praxair invests continuously in fuel efficiency. Efforts include investing in aerodynamic shields for bulk trucks, acquiring hybrid and hybrid-electric packaged gas delivery trucks and replacing the U.S. sales teams’ small truck fleet with fuel-efficient sedans. Praxair’s Global Operations Excellence (GOE) organization made the following major contributions to logistics and distribution operational efficiency:

- **Aerodynamic shields:** These shields insert a plate to close the gap between the truck cab and the trailer. Praxair is testing the development of [new gap fairing technology](#) that has been proven to provide significant fuel efficiency improvement.
- **On-board computers (OBCs):** OBCs allow drivers and management to track metrics such as speed, distance, fuel consumption, idle time, engine RPMs and hard break events – variables that have a significant impact upon safety and fuel efficiency – in real time. Praxair installed OBCs in a significant portion of its packaged gases and bulk fleets worldwide. For example, at White Martins (SAWM), GPS-type, real-time monitoring systems gather data on the exact location of a vehicle, including information such as speed, braking and acceleration. Telemetry is used to continuously evaluate programmed routes.
- In South America, all drivers, both employees and third parties, received special training in operational safety and defensive driving over a 60–90 day period. This was followed by an observation period where an experienced driver accompanied a newly trained driver on trips.

Environmental

- *Roll Stability Systems (RSSs)*: These have been deployed on the majority of the bulk transportation fleet. This technology has contributed to a significant reduction in stability-related rollovers.

Logistics and Route Optimization

Logistics optimization brings environmental benefits from fuel efficiency, and safety and security benefits from fewer miles driven. This is a key area for productivity teams around the world, and they identified projects that saved 2.5 million gallons of diesel fuel and nearly 300,000 gallons of gasoline from Praxair drivers. One project in Brazil, which won SAWM's Best Sustainable Productivity Project award in 2012, noted that drivers were delivering loads ahead of customer needs. They developed a Six Sigma project to optimize routes and reduced or eliminated inefficient deliveries from 44 percent to 35 percent in 10 months. Among the savings were approximately 14,000 gallons of diesel fuel and 109,000 fewer miles driven — a reduction of 190 tons of GHG emissions. This project is being replicated in other regions.

Partnerships for Best Practice

Praxair Mexico has been a participant in the Clean Transportation voluntary national program, developed by SEMARNAT (Mexico's Department of Environmental and Natural Resources) and industry representatives, since 2010. In 2012, Praxair Mexico was recognized for excellent performance in this program. One part of the program focuses on reducing fuel consumption, GHG emissions and the cost of transportation, as well as adopting advanced technology, fleet modernization and driver training and certification. Praxair Mexico's improvements included a reduction of 5,800 MT CO₂e emissions. One-hundred percent of Praxair Mexico drivers received training in the use of new transportation technologies.

Both In the United States and Canada, in 2011 and 2012, in partnership with Natural Resources Canada (NRCan), Praxair implemented eco-driving training for drivers to encourage idling reduction and other measures to reduce fuel consumption and emissions. The program, which builds on and complements existing programs already in place, has been customized for Praxair's use and is being rolled out globally.

Training

Eco-driver training is described above.

Training in safety and environmental responsibility: Praxair makes a substantial investment in this area for all employees and contractors. Much of this is directed at drivers. See LA10.

Sleep management workshops: Driver fatigue is a key safety issue for Praxair product drivers and contract drivers, as well as regular employees. Praxair worked with an expert vendor to create a custom modular video training program to deliver to Praxair personnel worldwide. Live workshops were presented at several U.S. distribution locations and to about 200 senior managers and executives at the corporate office in Danbury. Training modules were posted to the corporate intranet in September 2012. They contain three video modules on the topic of sleep and sleep hygiene, including specifics on the impact of sleep cycles, sleep disorders and diet. At end of the first quarter of 2013, the program had been viewed over 2,000 times on the Praxair Video Network. It was recently translated into Canadian French.

Anti-rollover training is part of the annual requirements for professional drivers.

Recognition

National Association of Private Transport (ANTP): For the sixth consecutive year, Praxair Mexico and Central America were certified by ANTP as a safe company in the transportation of hazardous materials. As part of this recognition, 52

professional drivers were recognized. One retired driver was inducted in the ANTP Hall of Fame for zero accidents in 25 years of driving.

Mexican National Road Safety Award: In the 13th year of this award, Praxair Mexico and Central America earned two certifications for Road Transportation in Urban and Hazardous Materials. This award is the highest recognition given to national companies that apply more stringent risk prevention schemes and promote safety culture.

Other Environmental Aspects of Transportation

A range of other environmental aspects of transportation are not considered material in comparison to product transportation and are reported among Scope 3 GHG emissions at EN17. These include employee commuting, business travel and environmental aspects of upstream heavy equipment transportation. In addition, statistics on driving safety are reported in LA7 and LA10.

COSTS RELATING TO PROTECTION OF THE ENVIRONMENT

EN30 Total environmental protection expenditures and investments by type

Environmental protection costs in 2012 included approximately \$18 million in capital expenditures and \$25 million of expenses. Praxair anticipates that future annual environmental protection expenditures will be similar to 2012, subject to any significant changes in existing laws and regulations.

Based on historical results and current estimates, management does not believe that environmental expenditures will have a material adverse effect on Praxair's consolidated financial position, the consolidated results of operations or cash flows in any given year.



Employee Zero Waste Creates Multiple Benefits

GLOBAL CHALLENGE

Along with globalization and urbanization, the world is generating increasing quantities of waste per person, with most of the increase coming from the rapid rate of urbanization in emerging economies. Surveys show conspicuous consumption is increasingly a concern, particularly among younger people in emerging economies. Praxair's business promotes resource efficiency and is intolerant of waste.

WORLDWIDE LOCAL RESPONSE

In 2011, Praxair launched a facility Zero Waste program, to reduce waste to landfill. By the end of 2012, 187 sites worldwide – representing more than 6,000 employees - were participating in Zero Waste, and 89 achieved zero waste status. These efforts helped prevent 73 million pounds of waste from going to landfills. The value to Praxair was significant: the avoided waste saved money and reduced risk. Praxair management noticed “collateral benefits”: Zero Waste sites seemed better organized and their employees were more vigilant about following procedures and spotting improvement opportunities. Clearly, this project engaged employees not just in reducing Praxair's environmental footprint: it also engaged their hearts and minds.

OUTCOMES

The Praxair Foundation launched “Greenway”, a new sustainability program to recognize and “match” zero waste contributions. In 2013, the program will plant or preserve 250,000 trees. In collaboration with the Arbor Day Foundation and The Nature Conservancy, two leading environmental organizations dedicated to the protection and conservation of natural resources, the program will help restore fragile ecosystems in Brazil, Mexico, the United States and China.

Trees are relevant to Praxair because trees produce oxygen — like Praxair — and absorb carbon dioxide, which helps prevent the formation of greenhouse gases (GHGs). Trees provide additional ecosystem services: cleaning water, shoring up riverbanks, supporting biodiversity, and in some cases helping to preserve indigenous societies and economies. Greenway will engage and educate employees. It will emphasize that *making our planet more productive* is not just about doing less harm, it is also about doing good: about making more social, economic and environmental value.



SOCIAL COMMITMENT

This section reports on social issues from the point of view of all of Praxair's stakeholders. The stakeholder engagement process is described at 1.2 above and at the opening of the Economic chapter. As Praxair expand globally, it remains committed to the global application of its standards of safety, integrity, ethics, diversity and human rights.

This section speaks to Praxair's business model in several respects.

- *Safety is a core value.* 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. Praxair's safety practices and performance results are world class. See LA7.
- *We hire and invest locally, see EC6; the promotion of diversity and the management of talent* are company values and crucial to the company's future. Praxair's [2012 Annual Report](#), page 8, identifies a business risk in that if it fails to attract, hire and retain qualified personnel, the company may not be able to develop, market or sell its products or successfully manage its business. In addition, in order to source a pipeline of talent, Praxair regards STEM (science, technology, engineering and mathematics) education as a strategic issue. This can be seen in activity of the Praxair Foundation, which is supporting work in this area that relates to local needs. Some examples are:
 - In the United States, the education system has failed to equalize education outcomes for children from under-served communities, who will be the majority of the population by 2030. America already faces a skills gap in the STEM professions, and this will become a strategic economic issue. Tamara Brown, Praxair's leader of community engagement, was designated a *Champion of Change* by the White House for her work in creating Tech Savvy, a program with the Buffalo, N.Y., chapter of the American Association of University Women (AAUW), supported by Praxair, in order to promote STEM education among middle-school girls. In 2012, the Praxair Foundation provided a major grant to AAUW to allow them to replicate Tech Savvy in 10 U.S. cities where there is a strong AAUW chapter and Praxair presence. In communities where Praxair has a presence, it is valuable to build brand recognition and to be introduced to parents and children in the community. Some of these children may want to become engineers and find jobs in a "local" company that has global opportunities.
 - In Brazil, their fast-developing economy is being restrained by an education system that has not graduated enough qualified students. Businesses and the government recognize the urgent need to build skills among current and future Brazilian workers and are creating ambitious public and private programs to build professional and technical capacity. Brazil's President Rousseff has championed *Science Without Borders*, a program that aims to send 100,000 STEM students from Brazil to study at the world's best universities and colleges. Praxair's CEO, Steve Angel, chairman of the Brazil-U.S. CEO Forum's working group on education, has provided leadership in encouraging partnership between Brazilian and U.S. companies in STEM education. Companies on the American side of the forum agreed to place approximately 650 Brazilian students in internship positions for the summer of 2012 throughout the United States. Ten of these students have taken internships at Praxair.
- *We help to address and mitigate some of the world's major social challenges.* Globally, the United Nations Millennium Development Goals (MDGs) identified a target to halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation. For the most part, this target has been met, but billions of people still live without access to safe drinking water. Praxair is leading the use of industrial gases in the treatment of drinking water and industrial and municipal wastewater, and helping to address global issues of water quality, water scarcity and waste management. For example, stricter regulation of water quality in emerging economies, such as China, provides a growing market for a number of gases (e.g., oxygen for wastewater treatment). Praxair water

applications enable the provision of safe drinking water to more than 25 million people a day, mostly in China. In Praxair Mexico and Central America, water availability and water quality were identified as priorities in their stakeholder engagement surveys. One new market application in Mexico in 2012 was the promotion of carbon dioxide to balance water pH levels. This technology replaces the use of acids with a solution that is a safer, more effective sustainable alternative that does not pollute the water and complies with environmental regulations.

- *We reap multiple benefits from community engagement.* As Praxair builds a culture of sustainability, it sees stronger employee engagement. Employee volunteerism has increased in terms of time spent on projects and is providing more demonstrable value for communities, for volunteers and for Praxair's business. Many projects bring advantage to the "triple bottom line" (social, environmental and economic areas) and are recognized by Praxair's leadership. A major program in 2012 was Praxair's Zero Waste program. See the feature story at the beginning of this chapter.
- *Praxair is recognized around the world for employer excellence and social responsibility.* In 2012, Praxair was honored to be recognized for employer excellence, safety and social responsibility in several regions and country businesses, including:
 - Brazil: *Você Magazine*, Among 30 Best Companies to Start Career.
 - Brazil: *AT Kearney Ranking*, Fourth most innovative company in Brazil.
 - China: Among the "Best Places to Work," *Fortune Magazine* survey.
 - Mexico: CEMEFI Award for Social Responsibility.
 - White Martins (SAWM): Corporate Citizen Award: SAWM received this award for the eighth consecutive year for its work in Plant Jacareí. The award is given in recognition for the actions undertaken with the local community (White & Green Program, Volunteer Day and Christmas Campaign).
 - SAWM: Compressed Gas Association (CGA environment category) Award: The Zero Waste program received three awards for its results in reducing waste sent to landfills.
 - SAWM: HR Professional of the Year, Industry Diversity category. *You Magazine* HR Recognition for work done by the talent area of SAWM on behalf of the executive director and Talent Sustainability.
 - SAWM Argentina: *Apertura Magazine*, *Best Company to Work For*. Praxair Argentina was ranked 12th among 1,000 companies.
 - SAWM Bolivia: *Lider Employer Leader Award*. Praxair Bolivia received the employer Leader Award for two consecutive years. 2012: First place; 2011: third place.
 - SAWM: Social Responsibility Award, REMAR. Praxair Peru received the Social Responsibility Award from REMAR, a non-government organization. The award recognized the company for its practice of values and solidarity.
 - Mexico: In 2012, *Super Business Expansion* magazine recognized Praxair Mexico and Central America as one of the best companies for organizational culture and climate.

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Labor

MANAGEMENT APPROACH

Employee safety and engagement are strategic and connected issues for Praxair. The company's businesses have set a challenging target of increasing investment in, and revenue from, emerging economies. Praxair has policies to hire and develop local talent, invest in research and development and engage positively and directly with employees and, when appropriate, with employee representatives. The most senior executives responsible for the Social area include the chief compliance officer and executives in HR and the Safety, Health and Environment (SH&E) department, along with business leaders.

HIGHLIGHTS

Safety is a core value at Praxair. The company invests more than one million hours a year in safety training for its employees and contractors. In 2012, Praxair's global safety team maintained best-in-class performance in reducing recordable injuries, lost workdays and high-severity vehicle accidents.

Employee engagement: Levels of employee engagement increase each year. Praxair reports 19,426 incidences of community engagement, 6,000 employees represented by Zero Waste site participation and escalating levels of site involvement in [Earth Week](#). An initial survey of sustainable development engagement was conducted during Earth Week 2013. Approximately 9 percent of the employee population (2,500 employees) responded. For employees responding, 67 percent responded that they had both awareness of and participation in sustainable development efforts. Further, of those responding, 97 percent perceived that Praxair's sustainable development efforts impacted the outlook of the company.

To further promote *employee hiring and retention*, several new programs were launched in 2012. An Employee Value Proposition (EVP) was developed, recruitment has been streamlined and the website has been refreshed. Praxair was a leading contributor to the development of a website for job seekers, www.jobipedia.org. The website is coordinated by the HR Policy Association. It was developed by students, interns, entry-level employees and recruiters and provides rapid, accurate information without selling information about users or trying to advertise to them. Professionals from several participating companies answer inbound questions to help new entrants into the workforce find jobs or navigate workplace issues. A Praxair senior HR leader is one of the more active respondents to questions from job seekers.

Diversity: Praxair strives to offer a workplace environment that is inclusive and that recognizes good performance. Its chief diversity officer heads up a range of strong diversity and [equal opportunity policies](#) and sponsors a range of internal programs to create an enabling environment for employees to achieve their fullest professional potential.

GOALS AND PERFORMANCE

As reported at 4.12, Praxair's Standards of Business Integrity (SBI) and other policies, including the Equal Opportunity and Human Rights policies, ensure that key elements of employee human rights are protected. Employees are recertified at least annually in Praxair's SBI, and its implementation is monitored by Compliance Review Boards at the business and corporate levels.

Safety: Praxair's first value is to protect human life. A primary goal is to ensure the safety, health and security of its employees, customers, contractors and the communities it serves — to achieve zero accidents or incidents. Praxair's

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goal is to continuously improve safety performance (recordable injury rate per 200,000 hours). Its recordable injury rate of 0.42 was marginally up from 0.4 in 2011. This is twice as good as the average rate of companies that are members of the American Chemistry Council (ACC).

Employee engagement: Praxair has a target to administer a global employee survey biennially. The target in this area is to show continuous improvement in the level of employee satisfaction. The last survey was held in 2010; the next was scheduled for 2012, but deferred to fall 2013 for budget reasons. Results of the Earth Day survey of sustainable development engagement, coupled with data about employee community and environmental engagement, indicate that levels of employee engagement are increasing.

EMPLOYMENT

LA1 Total workforce by employment type, employment contract and region broken down by gender

The number of employees as of December 31, 2012, was 26,539, reflecting an increase of 355 employees from December 31, 2011. Praxair's workforce includes professional/managerial-level employees, technical/administrative employees (drivers) and technical and administrative staff. Many of the company's truck drivers and administrative assistants in the United States are non-exempt employees. The global implementation of the Global Employee Management System (GEMS) employee data management system is underway, which will provide for centralized tracking of workforce statistics in the near future. GEMS has now been implemented in 12 countries; implementation will be complete in 2015.

U.S. employees who work more than a pre-defined number of hours per week are entitled to benefits. The distribution of employees by region is provided in LA1 (2).

LA1 (1): Number of Praxair Employees, 2009-2012

	2009	2010	2011	2012
Number of Praxair Employees	26,164	26,261	26,184	26,539

Overall, 79 percent of Praxair professional employees are men and 21 percent are women. The senior management team is 9 percent female.

- In South America (20 percent of the global employee base), 20 percent of employees are women and 9 percent of all management positions are held by women. South America reports on age and status for 2012, where 17 percent of junior management and supervisory position are held by women,
- In Mexico (9 percent of the global employee base), 16 percent of employees are women. Women hold 8 percent of mid-level manager positions and 12 percent of director-level and senior management positions in Praxair Mexico.

Praxair's workforce does not include a substantial portion of work performed by self-employed workers or by individuals other than employees.

Praxair has nine businesses that run their own HR systems. The company consolidates key metrics at the global level, and these are reported here. This indicator is partially reported. Praxair has determined that the resources required to produce additional data does not warrant the investment. Praxair does not typically employ seasonal labor.

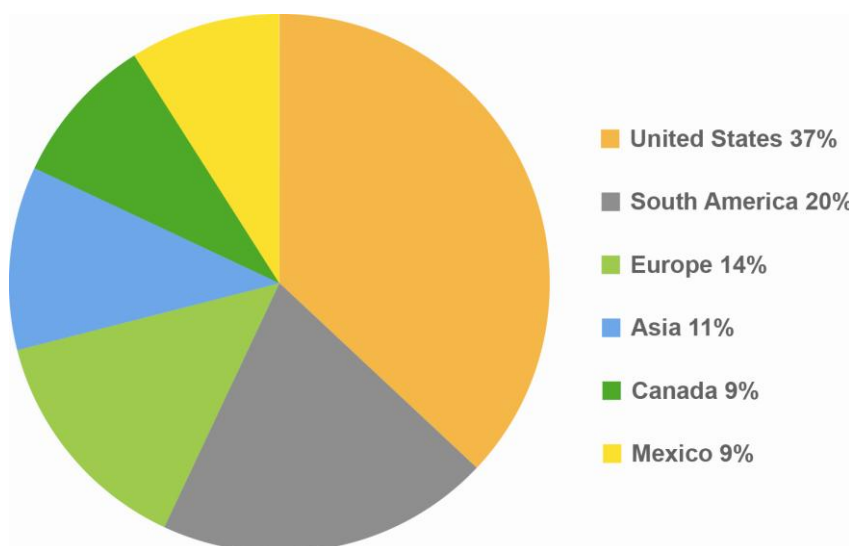
LA2 Total number and rate of new employee hires and employee turnover by age group, gender and region

Praxair's global turnover rate was 12 percent. Globally, Praxair does not provide additional details about the number and

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rate of new hires or employee turnover, as it considers this information to be confidential. Breakouts by region are provided by SAWM in their Praxair South America Sustainability report on Praxair's website. In South America only, turnover rate is provided by gender. The male turnover rate was 10 percent; for females, it was 3 percent.

LA1 (2): Praxair Employees by Region



LA3 Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations

Praxair offers a [high-performance culture](#), values ambitious and creative employees, and incentivizes and rewards good performance. Employees can expect to receive a competitive pay package that recognizes the experience, skills and abilities they bring to the company.

[Training and development](#) are offered, as well as a full range of [benefit programs](#) ranging from wellness to work-life balance. Benefits are available to all full-time employees and vary according to business unit. Paid vacations and holidays, life and accident insurance, healthcare, disability/invalidity coverage, maternity/paternity leave (including for adoption), flextime, education reimbursement, wellness allowances and a range of personal and family insurance policies, options for professional services (legal, counseling, medical care, childcare, eldercare), purchasing subsidies (personal office equipment and supplies, gym membership/equipment) and retirement provisions are some of the types of benefits provided to employees of the organization. These benefits are generally not provided to temporary or part-time employees by major operations. Specific program descriptions here apply to U.S. programs, but equivalent programs are offered in each country and referenced on that country's careers website.

Flexible Work: Praxair understands that everyone has commitments outside of work. Recognizing this, the company has global policies that provide work arrangements that help employees meet enduring or shorter-term personal needs through formal and informal means. For example, in the United States, Praxair offers paid personal days and a Flexible Work Policy that allows flexible scheduling.

Work/Life: Praxair offers a confidential resource and referral service for practical advice and referrals related to parenting

and childcare, eldercare, financial and college planning, retirement planning, survivor support programs and more.

Health and Wellness: A range of activities are offered to all employees to support employee health and wellness. They include seminars on such diverse topics as financial health/retirement, sleep management and managing such work-life issues as a family member with Alzheimer's disease; community engagement; office picnics/parties; and "bring your child to work day." Some activities are managed by an Employee Activity Council or similar, and vary by site. For those participating in the Praxair medical plan, benefits include a Healthy Living Plan, health risk assessments, and a 24-hour nursing consultation.

Volunteerism: Praxair is committed to supporting the communities around the world where its employees live and work. Employees are encouraged to participate in volunteerism and in [community engagement](#) activities. The [Praxair Foundation](#) provides generous matches to a range of employee giving. Community engagement is considered a leadership activity at Praxair, and employees at all levels of the company contribute their time and skills to help build resilient communities. Corporate policies allow employees to volunteer during work hours with the support of their managers.

LABOR/MANAGEMENT RELATIONS

LA4 Percentage of employees covered by collective bargaining agreements

Praxair's 2012 union representation was approximately 44 percent. This is broken out by region: Asia, 48 percent; Brazil, 100 percent; Europe, 83 percent; Canada, 14 percent; United States, 9 percent; Mexico, 41 percent.

LA5 Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements

Praxair considers relations with its employees to be excellent. Labor relations are addressed in a Human Rights policy. Worldwide, Praxair upholds its employees' right to choose which organizations they join and whether to unionize or not. Forty-four percent of Praxair employees belong to an independent trade union or are covered by collective bargaining agreements.

Praxair has collective bargaining agreements with unions at numerous locations throughout the world, which expire at various dates. Most of the company's labor agreements have language that defines severance arrangements. In countries or companies where employees have third-party representation via a works council or collective bargaining, Praxair respects these relationships and works with these third parties in a mutually respectful manner. In the case of work councils, Praxair meets any predetermined notice periods mutually agreed to by the parties.

As a matter of business practice, Praxair keeps employees well informed of operational changes through normal internal communications channels, most notably its corporate intranet, through which global/corporate information and business unit information (in home country language) is provided directly to employees. Business leaders also communicate through regular channels that include periodic business teleconferences, newsletters and issue communications.

Praxair makes every effort to be proactive and to provide reasonable notice to all employees if a significant change occurs, and it has a good record of employee relations in countries where it does business. The company has determined that the resources required to track minimum notice periods does not warrant the investment.

OCCUPATIONAL HEALTH AND SAFETY

LA7 Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and gender

Employees and contractor safety, including near-miss safety incidents and events with the potential to cause a fatality, are key performance indicators (KPIs) for Praxair's safety performance. They are reported monthly to the Office of the Chairman and quarterly to the Board. Accidents and near misses are closely monitored, reported and investigated. Evaluations of these events are performed, and the lessons learned are communicated in safety training and special safety alerts for the relevant work groups. The benefit of these continuous efforts is that Praxair's employee and contractor safety performance continues to be better than general industry benchmarks and among the best within the industrial gases and chemical industry.

In order to promote continuous improvement and to recognize efforts contributing to a safe working environment, Praxair annually presents the Chairman's Safety Award to businesses that meet or exceed their best-ever performance over the last 10 years in reducing recordable injuries, lost workday cases and/or product vehicle accidents. Several Praxair businesses achieved best-ever safety performance in 2012. For example, Praxair Mexico achieved best-ever results for recordable injury and product vehicle accident rates, Praxair Asia achieved best-ever recordable injury rates, Praxair Distribution, Inc. (PDI) achieved best-ever vehicle accident rates, and Praxair Europe achieved its best-ever lost workday case rate. See LA7 (1).

LA7 (1): Global Safety Performance by Region

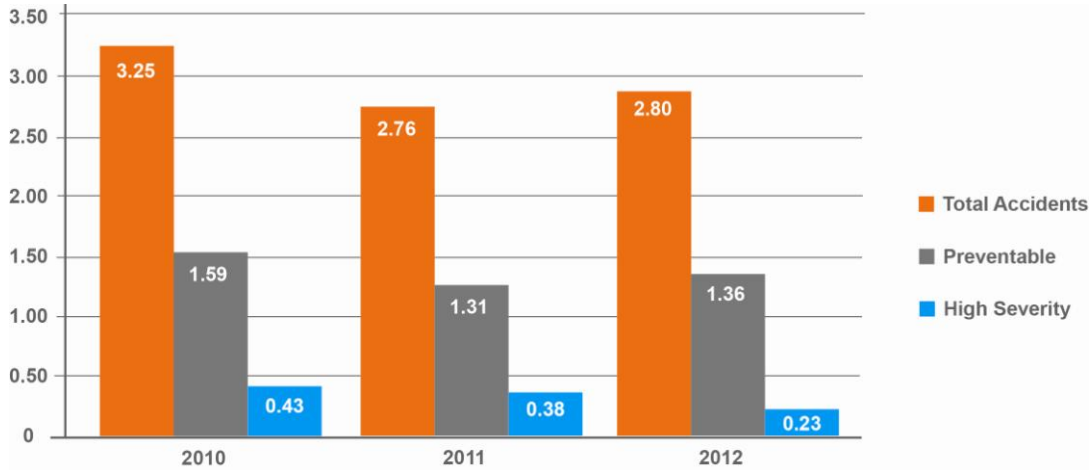
Global Safety Performance Rates per 100 Employees	Worldwide 2010	Worldwide 2011	Worldwide 2012	N. America 2012	Europe 2012	S. America 2012	Asia 2012
Rates of occupational diseases (Total 5 worldwide)		0.01	0.02	0.03	0.00	0.00	0.00
Lost Workday Case Rate overall (Total 16 worldwide)	0.04	0.05	0.05	0.06	0.03	0.02	0.07
Rates of injury (Total 126 worldwide)	0.5	0.39	0.40	0.60	0.26	0.10	0.13
Rates of injury and illness (Total 131 worldwide)	0.51	0.4	0.42	0.63	0.26	0.10	0.13
Global Work-Related fatalities							
Employees	0	0	2	1	0	1	0
Contractors	1	1	1	0	0	0	1

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LA7 (2): Worldwide Product Vehicle Safety (Praxair and Contract Drivers)

Worldwide Product Vehicle Safety – Praxair Drivers

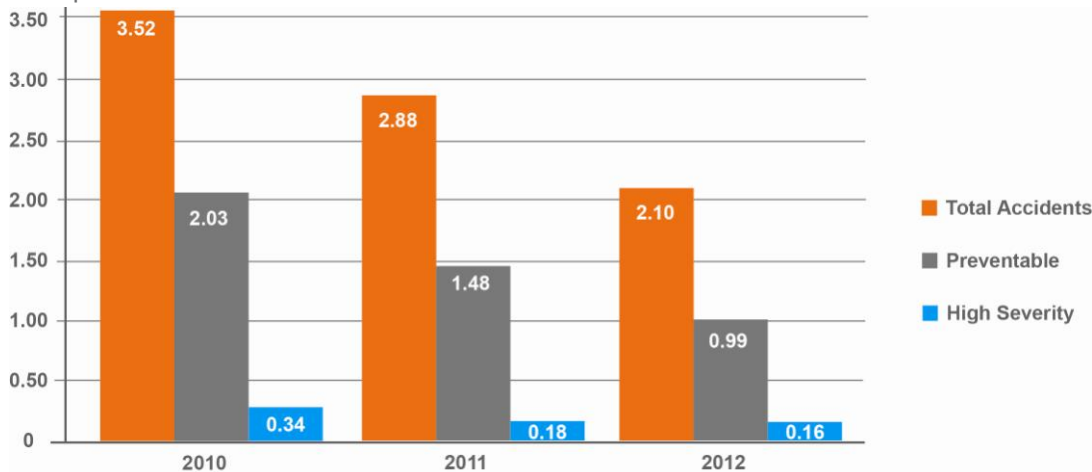
Rate per million miles



Praxair Vehicle Safety	2010	2011	2012
Total Accidents	396	345	361
Preventable	194	164	175
High Severity	52	47	30
Total Million Miles Traveled	122	125	129

Worldwide Product Vehicle Safety – Contract Drivers

Rate per million miles



Praxair Vehicle Safety	2010	2011	2012
Total Accidents	461	406	307
Preventable	266	209	145
High Severity	45	26	24
Total Million Miles Traveled	131	141	146

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LA8 Education, training, counseling, prevention and risk-control programs in place to assist workforce members, their families or community members regarding serious diseases

Praxair's SH&E department provides periodic educational programs. These include hazard communication, which addresses hazards in the workplace, especially the danger of hypoxic (low oxygen) environments, such as those encountered with confined space entry. A corporate team with participants from Legal, HR, Information Technology (IT), Medical and SH&E have developed a pandemic plan to respond to the threat of global pandemics, such as avian flu, and provide a risk assessment. Education events and materials are made available to employees, families and contractors. Annual free flu shots are offered to employees.

Health and wellness lectures are periodically held at sites and corporate offices on individual topics such as cancer prevention, heart disease, obesity, depression, stress management, Alzheimer's support, etc. For example, in the United States, employees and their families have access to a confidential counseling service that offers help for a range of psychological and life stresses. A wellness program was launched in 2011. This included a global driver fatigue and sleep apnea screening program that will be rolled out initially in the United States. This program focuses on health issues that could affect driving effectiveness, based on research findings about the fatigue and sleep apnea prevalence of driver populations.

Praxair, in partnership with a healthcare vendor, offers on-site wellness screenings at all of its major U.S. locations that include measurement of body mass index and blood pressure, as well as blood test screenings for diabetes and cholesterol. Similar programs are available in other countries. U.S. employees have access to an electronic Health Risk Appraisal (HRA) through Praxair's *Healthy Living* program, a comprehensive health management program, which is externally managed. Praxair facilities went smoke free in the 1990s, and an education campaign was rolled out simultaneously.

TRAINING AND EDUCATION

LA10 Average hours of training per year per employee by gender and by employee category

Employee Learning and Development

Praxair employee careers and career paths are strategically managed. Employees and management use a range of various competence-based and goal-setting tools within GEMS. Employees store and maintain resumes, experience, completed training, certifications achieved, performance appraisals and career goals and aspirations. Career paths are planned in conversations with their managers against competence ladders. These plans are used for talent development and succession planning and in internal recruitment.

Praxair has invested in Learning Management System (LMS) software that facilitates global reporting of formal training. The data reported below is a subset of all the Praxair-sponsored formal training provided. The LMS system enables all businesses and functions to house, track and offer training and training-related information on a single enterprise platform.

Due to the installation of new global training systems, Praxair now reports global training statistics by region. For all types of training, excluding safety training, Praxair reports an average of 25.4 hours of training globally; however, these hours vary depending on training needs and budgets. See LA10 (1).

When added to standard compliance training and safety training, employees received an average of at least 69 hours in 2012. See LA10 (2).

This training consists of:

1. Ethics and compliance training: This is mandatory at all levels. The average employee receives two hours of training each year.
2. Employee development training: Praxair employees received an average of 25 hours of formal training in 2012.
3. Professional skills training: Employees in specific businesses and functions receive additional training as needed or requested. For example, in 2012, sales skills training was provided to approximately 600 employees who received an average of approximately 13 hours of sales skills development. This will be tracked globally when Praxair's LMS is fully automated.
4. Management and development training: Trainees received an average of 39 hours of management and development training per year, an 11 percent increase from 2011 (35 hours).

SAWM, Praxair's South American business, which represents 20 percent of Praxair employees, provides a full accounting of training over time and by function. See LA10 (3).

Safety Training

Praxair rigorously focuses on training to prevent work-related risks and/or occupational health hazards for employees, their families, contractors and, in many cases, for community members. Its industry-leading safety performance is the result of a program of continuous training and communication using a wide range of media.

In 2012, Praxair invested more than 1.3 million hours in safety training for its employees and contractors. The average Praxair employee (at facilities and offices) received 42 hours of formal safety training in 2012. Facility employees received an average of 46 hours of training, and office employees received 15 hours. Praxair also reports on contractor safety training in emerging economies: contractors received significant safety training, averaging 42 hours in 2012.

All sites in all regions and business units have periodic safety meetings and an annual Safety Commitment Program. There are periodic "stand-down" meetings when operations are stopped for a safety program, continuous short "toolbox" reviews and additional annual training for specific job functions and for compliance purposes. In addition, Praxair conducts general safety training and communication through a range of global, regional and site-based channels on a needs basis, for example, in relation to safety changes in different seasons, a pandemic health threat or to communicate learnings after a safety incident. Safety training is conducted for all employees, regardless of function.

Cultural Awareness and Diversity Training

Cultural awareness and diversity training equips employees to be effective in a multicultural and increasingly diverse environment. Classroom training and e-learning are used to enhance personal and managerial skills and are offered on a mandatory and voluntary basis.

In 2012, cultural awareness training was offered to all employees, and a new learning tool, Culture Wizard, was introduced. During 2012, the Culture Wizard tool was used more than 10,000 times, benefiting global business managers, business travelers, international assignees and employees working in virtual teams to strengthen their global business skills and work effectively with others from diverse backgrounds.

Leadership and Skills Development

Classroom training is only part of the education that employees receive. Mentoring, networking, skills training and work experience are all designed to enhance employee career opportunities. Some employees receive formal mentoring, and there are various networks for employees to join based on interest (e.g., Toastmasters clubs or “Success Network” events). Eligible employees receive tuition reimbursement for approved studies, including university degrees. Following are highlights of additional initiatives that promote the career development of Praxair employees:

E-Learning: Praxair offers widespread e-learning opportunities to increase technical and managerial skills and for personal development. The Personal Development Center, for example, provides online coaching and tools for developing competencies used in annual performance evaluations, and other valued skills. Praxair has also implemented an enterprise-wide LMS system that enables all businesses and functions to house, track and offer training and training-related information on a single enterprise platform.

Business Programs

Praxair’s commercial and corporate programs offer challenging projects that will help prepare a dynamic sales and corporate roles across the business. Examples include the following rotational programs

- *Commercial Leadership Program (CLP)*: The CLP is designed to expose employees to key areas within Praxair’s sales arena and cylinder gas business.
- *Corporate Leadership Development Program (CLDP)*: This two-year rotational program exposes employees to the critical issues, decision-making processes and data analysis methods unique to each Praxair business.
- *Hydrogen Technical Orientation Program (HyTOP)*: HyTOP is a nine-month program designed to expose employees to key areas across the hydrogen business and give them hands-on experience in a variety of plant operations areas, such as safety, quality, environmental control and maintenance.
- *Leadership and Technical Orientation Program (LTOP)*: LTOP is a one-year program designed to introduce employees to the operations and commercial aspects of Praxair’s U.S. industrial gases business, such as plant start-ups or shutdowns, maintenance, project planning and execution, project management, sales and planning.
- *Operations Leadership Program (OLP)*: OLP is a one-year program that exposes employees to key plant operations within Praxair Distribution Inc.
- *International Leadership Development Program (ILDP)*: ILDP is a two year international program designed to expose attendees to key business areas and help them to build their skills. Rotations can be across several functions, including financial, business development and marketing areas.

Corporate Development Programs

- *Leading in Praxair*: This five-day supervisory skills program is offered in all geographies. During 2012, more than 1,200 managers benefitted from this training, helping them to expanding their managerial skills. This program allows Praxair to standardize managerial practices around the world.
 - *General Managers Program*: This program teaches employees how to create value using experiential techniques. The program enhances an employee’s ability to operate in a competitive business environment.
 - *Global Leadership Program*: In order to prepare the future Praxair executive, the Global Leadership Program develops the business management and leadership skills required to achieve both short- and long-term business objectives. Successful executives have the opportunity to understand their leadership strengths and weaknesses and to develop the potential of direct reports. During 2012, more than 50 employees benefitted from this program.
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This indicator is partially reported. Praxair has nine businesses that run their own HR systems. It consolidates key metrics at the global level, and these are reported here.

LA10 (1): Global Employee Development Training: Average Hours by Region, not including Safety Training

Asia	49
Europe	19
Mexico	39
South America	9
USA and Canada	12
Average, Global	25.4

LA10 (2): Global Training: Average Hours per Employee*

Average hours per employee	2009	2010	2011	2012
All employee compliance training (ethics, integrity)	2	2	2	2
Employee development training, not including safety*				25
Safety training – all employee average	30	35	43	42
Total average recorded formal training hours	32	37	45	69

*This is the first year of reporting all forms of this training on a global basis.

LA10 (3): Employee Development Training (not including safety) by Employee Type – SAWM

	2010			2011			2012		
Function	Total Hours	Number of Employees	Average/ Employee	Total Hours	Number of Employees	Average/ Employee	Total Hours	Number of Employees	Average/ Employee
Director	107	36	3	875	36	24	85	34	3
Manager	1,052	116	9	3,220	119	27	861	117	7
Supervisor	2,364	209	11	4,770	208	23	3,124	186	17
Technical & Supervisory	17,526	824	21	17,061	823	21	8,264	729	11
Administrative	13,488	1,696	8	16,254	1,623	10	9,933	1,551	6
Operations	2,747	1,286	2	10,162	1,380	7	14,156	1,287	11
Apprentice	96	45	2	15	58	0.3	261	55	5
Interns	978	146	7	543	184	3	985	132	8
Total	38,356	4,358	9	52,889	4431	12	37,668	4091	9

LA11 Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings

As noted in LA10, eligible employees can receive tuition reimbursement for eligible studies such as an MBA. Several learning and development tools made available to employees allow employees to develop professional and interpersonal skills. Employees participate in industry conferences and seminars that facilitate best-practice sharing and professional networking. Praxair's financial services vendor routinely offers on-line and in-office seminars on financial planning, including financial planning for employees approaching retirement.

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In the United States, under the company's generally applicable severance plan, if employment terminates for certain reasons, U. S. employees are generally eligible for severance benefits of up to a maximum of 26 weeks of base pay, depending on their completed years of service. See the 2013 Notice of Meeting and Proxy Statement, page 60.

LA12 Percentage of employees receiving regular performance and career development reviews by gender

Talent Management

At least annually, Praxair employees meet formally with their supervisors to review their performance and development opportunities. Employees receive a performance appraisal through the systematic use of agreed-upon measurable targets and a multidimensional performance appraisal. Performance reviews and development plans are a part of a global talent management system, which is designed to effectively utilize and advance employees across all regions.

As a strategic initiative, Praxair implemented GEMS, which is an integrated talent management solution that helps to:

- Build people's capabilities to ensure long-term business success.
- Continue to build the culture of coaching for development.
- Provide employees with a vehicle to manage their career aspirations.
- Provide employees with a fair and fact-based performance process.
- Promote a dialogue between employees and managers regarding performance and career aspirations.
- Ensure the future success of employees through strong development plans.
- Build strong succession plans to meet future leadership needs due to global business growth and ensure local talent needs.

Performance: Every year, Praxair ensures that managers and employees measure the results of individual objectives, creating a transparent link between performance and rewards. All employees around the world are expected to obtain results and demonstrate a series of competences and behaviors that support the local business strategy. Praxair's Performance Management Process (PMP) is designed to:

- Ensure alignment between employee and business unit/function goals.
- Enhance communication between employees and managers.
- Promote meaningful assessment and evaluation of individual performance.
- Promote alignment between individual performance and pay.

The first step in the PMP is to set annual performance goals. Goal setting is a collaborative process between managers and employees. Goals are the driving force behind achievement and provide an opportunity to challenge employees and improve their skills. Goals serve the needs of the company and aid in the development of employees.

An additional tool is Praxair's Career Positioning System (CPS). This initiative provides employees with a toolkit to effectively navigate their own career path. It offers users both self-assessment and management assessment against expected performance and future goals. Employees are given a clear map of the competencies expected at each level and can examine career ladders by functional area. Employees are empowered to work on their own development and to explore the wide range of career opportunities within the company. The CPS helps an employee understand his/her competency gaps and what learning and developmental activities would be beneficial to his/her advancement in the company.

DIVERSITY AND EQUAL OPPORTUNITY

LA13 Composition of governance bodies and of employees per employee category according to gender, age group, minority group membership and other indicators of diversity

Diversity is a formal business function through the Office of Diversity Management. Additionally, Praxair's CEO monitors quarterly progress in recruiting and development as well as culture, inclusion and workforce engagement. This ensures that diversity is sustained as a top priority as the company's business grows. In 2012, cultural awareness training was offered to all employees. Each subsidiary and business unit is responsible for developing and implementing action plans and initiatives to maintain an inclusive culture and increase Praxair's workforce diversity.

All of Praxair's Board members are over the age of 50. Globally, the percentage of women employees is 18 percent. LA13 (1) provides information on diversity in Praxair's Board, global senior leadership team and CEO senior management team. Nine executive officers were elected by the Board of Directors and serve at the discretion of the Board. It is expected that the Board will elect officers annually following each annual meeting of shareholders. Seven executive officers are over the age of 50 and two are below. Praxair is committed to sourcing and retaining local talent, particularly in its emerging economy countries. Below the level of corporate executive, 100 percent of Praxair's emerging economy country businesses are managed by local or regional national leaders (country presidents, managing directors or regional vice presidents).

Praxair does not currently report global diversity breakdowns in all the ways requested by the GRI, but expects to report this data in the future. Praxair also reports data from Latin America and South America in their sustainability reports.

LA13 (1): Diversity in Global Leadership and Management

	2009	2010	2011	2012
Board Diversity at Praxair				
% Women	22	20	20	18
% U.S. minority or non-U.S.	22	30	30	36
% Total board diversity	44	50	50	55
Executive Leadership				
% women	9	22	18	21
% U.S. minority or non-U.S..	32	35	36	42
% Total Executive Diversity	41	57	55	53
Emerging Economy Country Leadership				
% Local or regional national leaders (below executive)		92	92	100
Global Diversity Male/Female				
% Overall		82/18	82/18	79/21
% Management level and up		86/14	82/18	79/21

EQUAL REMUNERATION FOR WOMEN AND MEN

LA14 Ratio of basic salary of men to women by employee category and by significant locations of operation

Praxair's compensation policy assigns jobs into pay levels based on job descriptions so that people performing the same type of job functions are in the same pay range, regardless of age, sex and race. To ensure that its compensation policy is being appropriately administered, Praxair conducts annual pay equity analyses in the United States and in other countries where required by law. Specific salary information is confidential.

LA15 Return to work and retention rates after parental leave, by gender

One-hundred percent of Praxair employees of either gender are entitled to parental leave; the terms vary by country. In the United States, parental leave falls under the Family and Medical Leave Act (FMLA). To be eligible for FMLA leave benefits of 12 weeks in a year, an employee must meet some eligibility requirements, for example, time worked for Praxair (12 months). The FMLA covers birth, adoption, or foster care of an employee's child within 12 months after the birth or placement of the child ("Bonding Leave"); care for an immediate family member (spouse, child or parent) with a serious health condition ("Family Care Leave"); and an employee's inability to work because of a serious health condition ("Serious Health Condition Leave"). Other countries have equivalent programs. For example, in Mexico, under their Diversity and Inclusion Forum, a program, *Policies for Motherhood and Fatherhood in Praxair Mexico*, was launched. This program was designed to provide greater flexibility to carry out the work and family activities during the first year after the birth/adoption of a child. At this time, Praxair does not report on the number of employees who took parental leave or their return to work retention rates.

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Human Rights

MANAGEMENT APPROACH

The chief compliance officer is responsible for this area. Praxair has a very strong commitment to its global standards and policies and to compliance. Praxair recognizes and adheres to these global standards and to all labor and employment laws wherever it operates, including those respecting freedom of association, privacy and equal employment opportunity. Praxair vigorously enforces its policies among employees. Each year, 100 percent of salaried employees certify that they have read and understood Praxair's Ethics and Compliance policy, which includes training in the Foreign Corrupt Practices Act. In addition, HR professionals certify to uphold privacy, due to the confidential nature of their work.

HIGHLIGHTS

Praxair's [Human Rights policy](#) was published on the 60th anniversary of the signing of the Universal Declaration of Human Rights and was guided by the Declaration. It is signed by Praxair's CEO, and he is the most senior officer in charge of its implementation. Praxair employees represent more than 50 nationalities. The company supports the equal treatment of all employees regardless of race, nationality, ethnic background, age, religion, gender, sexual orientation or disability. Praxair rejects any form of forced labor or child labor, whether at its own premises or within its supply chain. A commitment to human rights is integrated in Praxair's Supplier Expectations. It is reiterated in the company's commitment to a conflict-free materials supply.

In 2012, Praxair developed a management briefing on Praxair's human rights policy and the Ruggie Framework that provides a summary of Praxair's policies in these areas. This will supplement training on Praxair's Human Rights policy that was conducted in the Global Procurement and Materials Management (GPMM) and Security organizations and in South America.

GOALS AND PERFORMANCE

Human rights training: Praxair's GPMM organization ensures that 100 percent of sourcing associates and their managers receive human rights training, as does 100 percent of Praxair's Security organization.

INVESTMENT AND PROCUREMENT PRACTICES

HR1 Percentage and total number of significant investment agreements and contracts that include human rights clauses or that have undergone human rights screening

When making investment decisions, Praxair exercises due diligence and aims to exclude any relationships or practices that may contravene human rights. Praxair has an established process for due diligence prior to mergers, acquisitions and joint venture formations. The SH&E department facilitates a review of all environmental and safety risks prior to the completion of an acquisition or the formation of a new entity, to identify any health, safety, operational and environmental issues and risk areas that must be resolved prior to and during project execution, define recommended actions and track project activities for successful completion of recommended actions.

HR2 Percentage of significant suppliers, contractors, and other business partners that have undergone human rights screening and actions taken

Supplier expectations include safety, environment and human rights and are built into Praxair's Procurement management system. Praxair's Supplier Expectations are part of the formal requirements and are integral to supplier quantitative and qualitative selection. These expectations influence all steps of the supplier management process including pre-qualification, policy commitments, contractual obligations, training, communication and performance assessments and reviews. One-hundred percent of relevant suppliers are screened for relevant human rights aspects.

Safety is a key priority of Praxair's supplier management strategy. Safety and environmental performance and management systems at or above the requested standards are preconditions for prequalification, contracts, assessment and requalification as well as the subject of much of Praxair's supplier training and capacity building. Inadequate performance is grounds for contract termination. Safety is integrated into procurement at all levels.

Human Rights in the Supply Chain

Praxair's potential human rights risks are principally in its materials business and, to a lesser extent, in its packaged gas/distribution business, where there are customer concerns, emerging federal regulations and state legislation that relate to origination of minerals from "conflict regions," generally understood as the Democratic Republic of the Congo (DRC), where human rights are being abused in some regions.

In 2012, because of U.S. Securities and Exchange Commission (SEC) rules requiring certain companies to report on their process to ensure a conflict-free materials supply, Praxair created a multi-functional team, coordinated by a Procurement director, to ensure that its systems and processes were in compliance. The team is conducting proper due diligence on the basis of the Ruggie Framework to ensure that Praxair is aware of potential human-rights-related risks within its sphere of influence.

Praxair strictly adheres to the Electronics Industry Citizenship Coalition (EICC) Code of Conduct and strongly supports the use of independent, credible third-party auditors in verifying conflict-free mines. Praxair participates in the EICC program. One-hundred percent of these contractors have completed the EICC Code of Conduct questionnaire for Praxair and attested that their own sources, and those of their subcontractors, are conflict-free.

Praxair serves as co-chair for the [Industrial Research Institute's Working Group](#) on the issue. These technologies are at risk as a result of supply chain disruptions. With other interested companies and government representatives, Praxair is working to develop recommendations as to how industry can responsibly mitigate supply risk (see SO5). Praxair has also created training modules in its Human Rights policy and approach. See HR3 (1).

Social- Human Rights

Extending Praxair's human rights commitment to contract drivers: Praxair Brazil (SAWM) issued an updated "Guidelines for Sustainable Supply" in 2012. The guidelines outline the expectation that suppliers: (1) adhere to SAWM values and sustainability principles, including a commitment to ethics, integrity, compliance with the law and sound business practices; (2) adhere to human rights; (3) prohibit discrimination or harassment; (4) use renewable resources; (5) protect and preserve biodiversity; and (6) take actions that contribute to local and social development. In 2012, selected sustainability criteria were included in the supplier selection process as a "tiebreaker" in the bid stage and as a requirement in contract terms.

In special regard to the issue of human rights and in recognition of SAWM's large truck distribution network, SAWM joined "Na Mão Certa" (On the Right Track) and the Corporate Pact against Sexual Exploitation of Children and Adolescents on Brazilian Roadways. This initiative of Childhood Brazil aims to mobilize governments, companies and civil society organizations to confront, in a more effective manner, child and adolescent sexual exploitation on Brazilian roadways. SAWM also encouraged its contract driving vendors to join Na Mao Certa. Praxair surveyed these contractors and established that 20 percent of them are signatories to the program and 100 percent are conducting training in this area.

HR3 Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained

HR3 (1): Human Rights Training

Departments/ businesses	Hours (estimated)	Percent
Sourcing associates & managers	100	100
Internal Audit & Security groups		
Praxair South America	4,800	100

In 2012, at least 19 percent of Praxair employees received training in the company's Human Rights policy. All sourcing associates and their managers received training in Praxair's Human Rights policy and Supplier Expectations in 2012. This annual training included 100 percent of the Security and Internal Audit organizations. In SAWM, training in human rights was included in their annual Compliance Day (mandatory for all employees).

NON-DISCRIMINATION

HR4 Total number of incidents of discrimination and corrective actions taken

Discrimination is prohibited by Praxair's policies. The Board of Directors has adopted an Ethics policy, and, pursuant to this policy, management has also developed Praxair's SBI in booklet form and a related program to provide additional, specific business conduct guidance to employees.

Praxair is committed to recruiting, hiring, compensating and promoting people based solely on their abilities, performance and qualifications for their jobs and to maintaining a professional work environment in which employees are treated with respect and dignity. As part of its commitment to equal employment opportunity, Praxair prohibits discrimination or harassment based on race, color, religion, gender, national origin, age, disability, veteran status, pregnancy or sexual orientation. This prohibition is applicable to all Praxair employees worldwide whether or not such behavior is prohibited by the laws wherever you work. Praxair is also committed to complying fully with applicable labor and employment laws wherever it operates.

Social- Human Rights

This information is distributed to Praxair employees worldwide to outline management's expectation of ethical conduct and integrity wherever Praxair does business. Employees are required to annually certify that they have read and understand the material.

Praxair takes these standards very seriously and any non-compliance, depending on the circumstances, can result in serious disciplinary action, up to and including termination of employment. Employees are actively encouraged to report suspected complaints and concerns, and are expected to report violations through any of a number of channels, including the Integrity Hotline. Reports through the Integrity Hotline may be made anonymously. Praxair's [complaint handling](#) procedures and policy are outlined on its website. All reports to the hotline are appropriately investigated and satisfactorily closed. It is a violation of Praxair policy for any person to retaliate against any individual who has reported an SBI matter in good faith.

The following table provides the aggregate number of hotline reports made during the last three years:

HR4 (1): Aggregate Number of Hotline Reports

	2009	2010	2011	2012
Number of reports	238	233	245	252

Of these reports, more than 77 percent were related to workplace issues not within the scope of the SBI. The remainder addressed a range of issues under the SBI, which were investigated and addressed where appropriate. The director of internal audits is responsible for maintaining and retaining complete records concerning the receipt of all targeted complaints, their reporting, investigation and final resolution. The director of internal audits, acting through the Corporate Security department, develops and maintains a control and follow-up system for targeted complaints, including, to the extent he/she deems appropriate, a written tracking system to ensure that each complaint is promptly followed up and resolved, accountabilities are assigned and communicated, and each step in the handling of the complaint is described in detail.

HR5 The right to exercise freedom of association and collective bargaining

HR6 The elimination of child labor

HR7 The elimination of forced or compulsory labor

These rights are referenced in Praxair's Human Rights policy. For actions taken, see HR2.

HR9 Total number of incidents of violations involving rights of indigenous people and actions taken

To the company's knowledge, in 2012, there were no determinations of Praxair's operations precluding employees from their rights to freedom of association, there was no likelihood of incidences of child labor or forced labor, and Praxair was not involved in any incidents of violation of the rights of indigenous people so no action was called for.

SECURITY PRACTICES

HR8 Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.

One-hundred percent of security personnel were trained in Praxair's Human Rights policy and its application to their work.

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Training was not provided to third-party security personnel. See HR3 (1).

ASSESSMENT

HR10 Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments, by country. Provide total number of operations.

Risk mapping software, in addition to existing tools to understand potential risks in this area, allows Praxair to identify regions with potential human rights risks. The company identifies regions where potentially extreme human rights risks might exist, such as the right to exercise freedom of association, child labor and forced or compulsory labor. Praxair maintains a current human rights review or human rights impact assessment for all countries where it operates or seeks to operate. This makes human rights assessments available on demand. The product is in use by the departments of Mergers and Acquisitions, Risk, Compliance and Government Relations, GPMM and Sustainable Development, and by Praxair Electronics. At this time, Praxair does not track or report the number of reviews conducted or the percentage of operations for which assessments have been obtained.

REMEDIATION

HR 11 Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms.

To our knowledge, in 2012, there were no grievances related to human rights filed through formal organizational grievance mechanisms by individuals or groups, internal or external to the organization.

Society

MANAGEMENT APPROACH

Employee community engagement is managed under the vice president, sustainable development. In late 2011, a new position of leader, community engagement, was created, reporting to this vice president. Public policy and compliance with policies prohibiting corruption or anti-competitive behavior is managed under the chief compliance officer.

HIGHLIGHTS

Throughout this report, information is provided about the integration of employee engagement, employee environmental engagement and community engagement as Praxair builds a culture of sustainability and aligns it with its brand of *making our planet more productive* and its culture of operational excellence. Employee participation in community engagement, and in environmental programs like Zero Waste and Earth Week, has grown exponentially since they were launched in 2010-2011. Praxair is reaping substantial benefits from these programs at multiple levels. As displayed in two of the feature stories on Zero Waste and biodiversity, employee engagement focuses on the local effects of global challenges to society and business.

GOALS AND PERFORMANCE

Community engagement targets are, by 2015: (1) show the cumulative benefit of community engagement by bringing direct benefits to one million people from a baseline year of 2010; and (2) demonstrate the social value of community engagement by achieving an annual ratio of at least 1:10 employees to beneficiaries. In 2012, Praxair community engagement benefitted more than 300,000 people, bringing its cumulative beneficiaries to 715,000, or 71.5 percent of the 2015 target. The 2012 ratio of employees to beneficiaries was 1:11, so the company has already reached its 2015 target for this measure; it will continue efforts to maintain it.

Increase organizational brand alignment through employee environmental engagement: This target is measured through the take-up of the facility Zero Waste program. In 2012, Praxair had a target of 50 sites to achieve zero waste. One hundred eighty-seven sites participated, and 89 achieved zero waste (i.e., they avoided more than 90 percent process waste going to landfill). Of the 89 sites, 49 of them achieved over 95 percent waste avoided from landfill. Praxair's 2015 target is to have 100 sites achieve zero waste status.

LOCAL COMMUNITIES

SO1 Percentage of operations with implemented local community engagement, impact assessments and development programs

[Praxair's community engagement program](#) has been formally in place for four years. The quality and quantity of both the projects and the reported data has increased each year. In 2012, Praxair employees spearheaded more than 237 projects across the globe. These projects represent the efforts of 165 sites, an increase from 136 sites in 2011. Frequently, sites collaborate on projects; in 2012, 20 percent of Praxair community engagement projects were sponsored by more than one site. The incidence of volunteerism — a measure of the number of times individual employees engaged with the community — grew from 16,590 in 2011, to 19,426 in 2012. Praxair published its third [Community Engagement Highlights](#) in late 2012, summarizing community engagement projects during the 2012 cycle.

One-hundred percent of Praxair businesses participate in volunteer community engagement activity. Prior to the start of community engagement efforts, project teams focus on desired outcomes from the projects. At the conclusion of each project, the team measures benefits, as reported by volunteers and/or beneficiaries. Increasingly, third parties help to validate project benefits. Sites are encouraged to build strong relationships with local communities. In order to identify and meet local needs, community engagement is frequently conducted with partners (local government agencies, suppliers, customers and community groups). These partnerships help deepen and extend Praxair's ability to help build resilient communities.

Community engagement within Praxair is considered a leadership activity and is initiated by employee volunteers. Projects are dictated by the needs of local communities combined with the desire and ability of local project teams to help address these needs. Praxair community engagement is a proactive outreach to help build community resilience. The company works with organizations who have approached it to help respond to local community concerns. One example is the company's support of STEM education in western New York, where Praxair's largest engineering and research and development facility is located. Nationwide, statistics show a disproportionately low representation of women in STEM fields. In 2006, few programs existed in Western New York to introduce girls to STEM careers. In response to an employee request, based upon the need identified by a local branch of AAUW, Praxair supported *Tech Savvy*. Over the past eight years, with the collaboration of Praxair volunteers working with AAUW, academia and others, the program has successfully introduced thousands of middle school girls and their families to STEM careers and has helped educational professionals in Western New York better inform girls about STEM. As a result of the program, girls have reported increased interest in STEM study, and past attendees have enrolled in engineering programs. At the end of 2012, the [Praxair Foundation](#) provided support to help launch this program nationally.

Needs assessment is a consideration for all community engagement projects. At Praxair's 2012 Sustainable Development Summit, attendees attended a training session on incorporating community needs assessments when determining projects. Guidance for needs assessment is included in the community engagement reporting tool.

Praxair has a healthy mix of established projects and a growing pipeline of new efforts launched to address changing needs. Approximately one of every 10 projects is more than 10 years old, and more than half of the 2012 projects were new initiatives. Community engagement projects are classified by focus area: environment, health, education/diversity and community support. These focus areas parallel the focus areas of the Praxair Foundation. See SO1 (1) and EC8. Examples of projects include:

- *Hogar San José*: In Bolivia, SAWM employees helped to address the needs of a local shelter for orphaned and

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abandoned children. Through personal efforts and fundraisers, employees helped to secure a safer dwelling. They helped to enhance the organization's long-term self-sustainability by providing skills-building sessions with the staff.

- *Heart to Heart*: In China, more than 120 employees raised funds to underwrite the healthcare costs for cardiac surgeries for three children. The employees' efforts were personally matched by the president of Praxair Asia.
- *Earth Week Mississauga*: In Canada, Praxair employees supported a decade-long effort to enhance tree canopies in the province of Ontario.
- *CANII: The Miracles Center*: In Puerto Rico, employees engaged throughout the year with a local organization that serves autistic children. Employees raised funds for the center's hyperbaric oxygen therapy department, painted the facility and personally engaged with the families served by the center.

In 2012, Praxair launched a new initiative to incorporate community engagement at company-sponsored meetings and conferences and to use these events to develop employee skills and company networks. In one example, new employees in the LTOP program joined more experienced engineering colleagues to install solar panels at Buffalo ReUse, a local not-for-profit organization involved in housing deconstruction and recycling of building materials: engineering expertise was essential to completion of this volunteer team task. Community engagement opportunities have been provided at over a dozen meetings since program inception, and these have spurred additional community engagement participation in locations around the company. Employees report new and enhanced relationships with colleagues and their communities, and community engagement is more embedded into the company culture.

Community engagement efforts seek to make a lasting impact on communities and to address enduring problems. Approximately 25 percent of these projects addressed specific UN MDGs for emerging economies, particularly in the areas of environment and sustainable development, issues of the poor and educational access.

- In nearly one-third of the projects, efforts were made to integrate the principles of sustainable development into country policies and programs and/or to reverse the loss of environmental resources.
- In approximately one-third of the projects sought to improve the lives of at least 100 million slum dwellers or to reduce, by half, those with income of less than \$1 per day.
- In 17 percent of the projects, teams focused on ways to ensure that all children receive a full course of primary education or to ensure equitable education between genders.

Enthusiasm for community engagement is complemented by Praxair's global award for Community Engagement. Introduced in 2009, this recognition from Praxair's CEO honors successful efforts that demonstrate a high level of commitment and impact. Exemplary projects from each business or region are recognized, along with five global winners. Award-winning project teams are honored at the company's Global Leadership Conference and receive a significant charitable donation. In 2012, the award criteria was further aligned strategically with the overall program goals to include a focus on projects that produce lasting outcomes, increase employee engagement and reinforce Praxair's mission of *making our planet more productive*. As an additional build to the award program, charitable awards, when possible, have been donated to the original beneficiary organization in order to enable the project teams to deepen their efforts and, ultimately, to increase impact to communities. Profiles of all the Community Engagement Award winners and honorable mention projects are published in the annual *Community Engagement Highlights*.

Impactful projects are the goal of all community engagement efforts. Praxair's Sustainable Development Materiality Assessment (SDMA) identified community engagement as a priority for Praxair and its stakeholders. Goals and targets are developed and maintained based on the SDMA, managed and reported in the Sustainable Development Management

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System (SDMS) and published in this report and the annual *Community Engagement Highlights*. Praxair's strong culture of execution complements its efforts to measure the impact of community engagement. As in prior years, Praxair measures and reports the social and environmental impact and outcomes, as well as the employee and company benefits, of community engagement based upon a methodology developed by the United Kingdom-based London Benchmarking Group (LBG) report, *Making a Difference*.

Inputs are measured by number of volunteers, number of sites participating and incidence of volunteerism. Community engagement saw a 21 percent increase in the number of sites participating and a 17 percent increase in the incidence of volunteerism. See SO1 (2).

Outputs are measured by number of beneficiaries, money raised and goods donated. Volunteers brought direct benefits to over 300,000 people, a 10 percent increase. See SO1 (3). Additionally, projects reported funds that employees and facilities raised or donated in support of community engagement. In addition to funding from the Praxair Foundation, employees and facilities raised or donated approximately \$925,000 in cash and in-kind donations, including food, clothing, trees/seedlings and other forms of in-kind support. This contribution included more than \$470,000 in cash contributions from employees and facilities. As a part of efforts to continually validate the program, this cash component of this reported contribution was independently verified for 2012.

Outcomes are reported as benefits to project recipients, employee volunteers and to the company. See SO1 (4). In 91 percent of projects, volunteers reported that community engagement created a positive impact on the attitudes of recipients, up from 78 percent in 2011. In 70 percent of projects, volunteers reported that community engagement provided recipients with job skills or opportunities for personal growth, up from 61 percent in 2011. In 80 percent of projects, volunteers reported that community engagement had a direct impact on the recipients' quality of life, up from 73 percent in 2011.

Employees benefitted also: in 80 percent of projects, volunteers reported that community engagement helped to increase personal growth and effectiveness, up from 73 percent in 2011. In 91 percent of projects, employees reported that volunteering helped increase their interpersonal development, a new metric added in 2012. In 73 percent of projects, volunteers reported that community engagement helped to increase management effectiveness, up from 58 percent in 2011. Further, in 46 percent of projects, employees reported learning and/or developing skills that were transferable to the workplace, another metric added in 2012. For example, in developing new employees in the LTOP program, community engagement has been identified by managers as contributing to the development of three critical competencies: planning, problem solving and action-orientation.

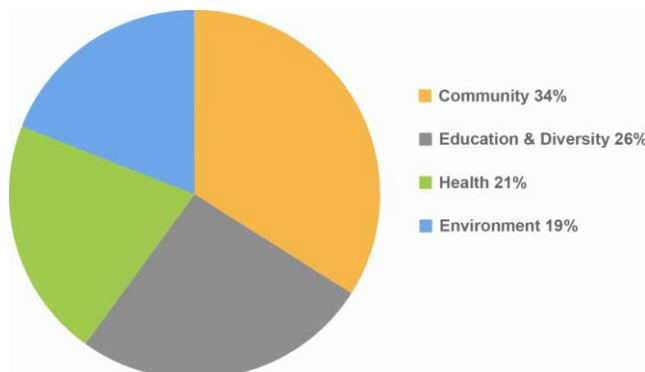
Community engagement affects how employees view Praxair and their communities. In 86 percent of projects, volunteers reported that community engagement positively impacted their outlook on Praxair and/or their job, up from 71 percent in 2011. In 85 percent of projects, volunteers reported that community engagement gave them a better awareness of the community, flat from 2011.

Benefits to Praxair are measured in terms of increased engagement with customers and employees and impact on reputation. In 39 percent of projects, volunteers reported that community engagement projects allowed better engagement with customers, up from 27 percent in 2011. In 81 percent of projects, volunteers reported that community engagement helped to build employee engagement, up from 67 percent in 2011. In 71 percent of projects, volunteers reported that community engagement projects were likely to enhance Praxair's reputation, flat from 2011. In approximately half of all projects, teams reported that third parties have provided validation of their efforts.

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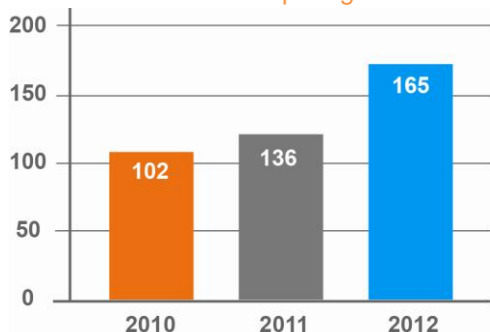
Community impact is a broad consideration at Praxair and extends beyond employee philanthropy. Environmental impact assessments are performed in advance of all Praxair capital investments. Ongoing monitoring is provided through Praxair's cycle of safety and environmental internal assessments. Praxair continues to consider ways to further reach and align with local communities.

SO1 (1): Community Engagement Projects by Focus Area

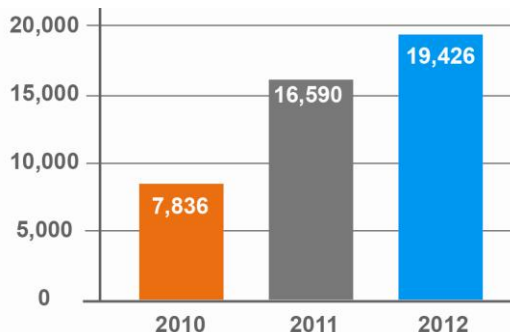


SO1 (2): Community Engagement Project Inputs

Number of Sites Participating

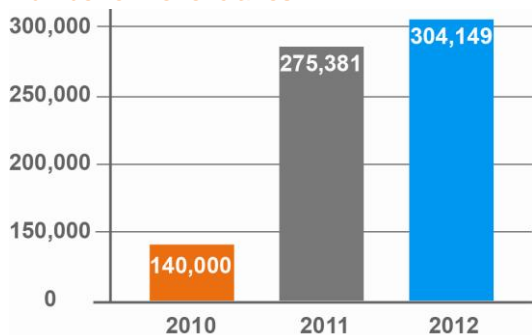


Incidence of Volunteerism



SO1 (3): Community Engagement Project Outputs

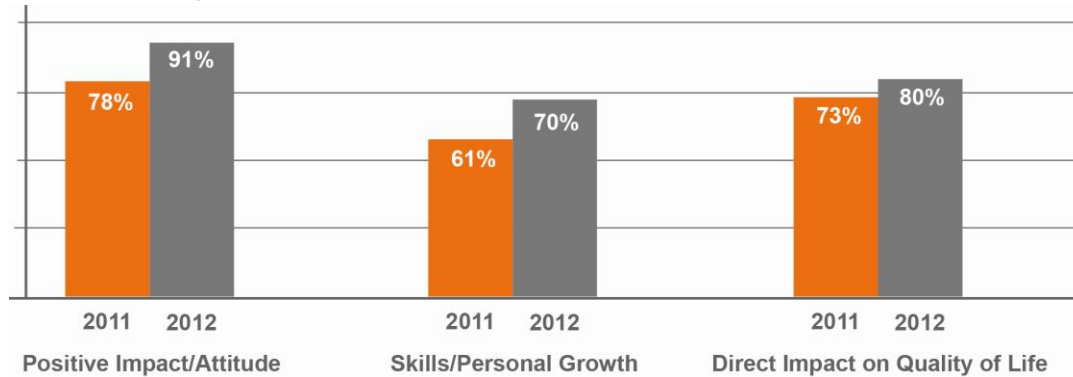
Number of Beneficiaries



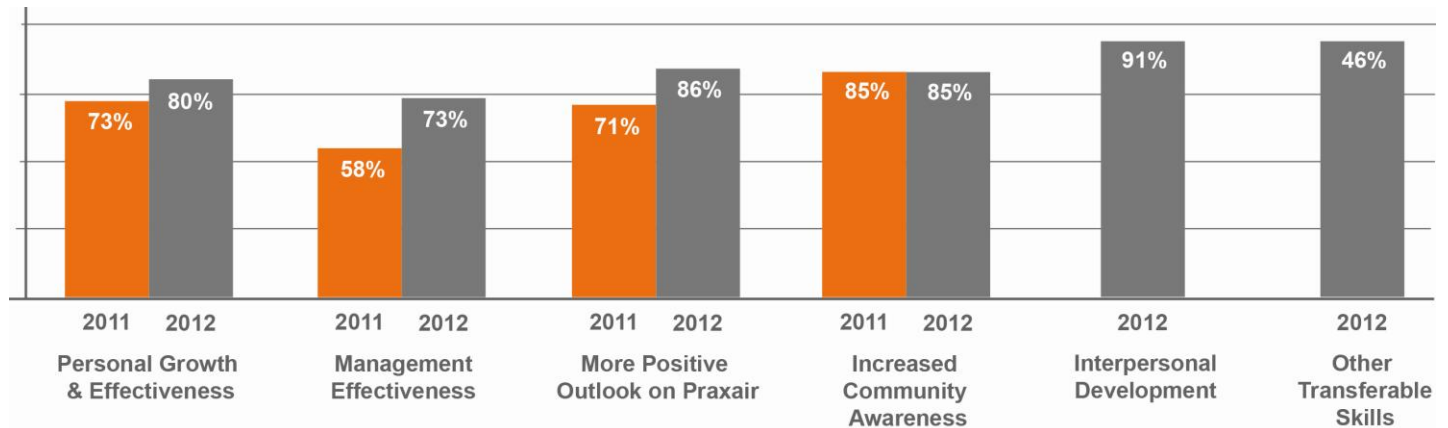
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SO1 (4): Community Engagement Project Outcomes

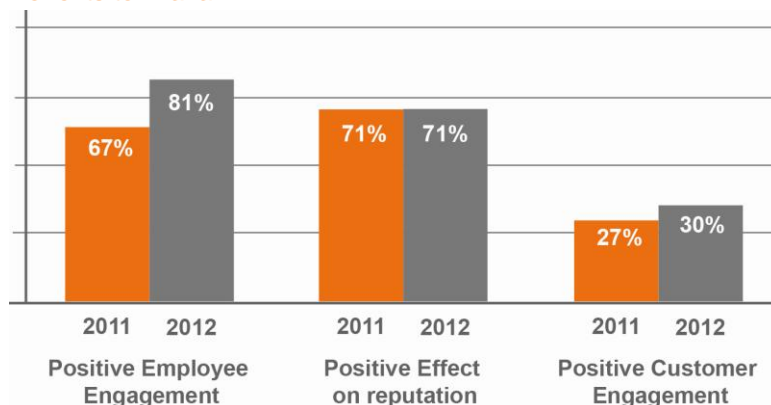
Benefits to Recipients



Benefits to Volunteers



Benefits to Praxair



SO9 Operations with significant potential or actual negative impacts on local communities

Praxair exercises great care to ensure that its investments in local communities are positive and that local communities perceive the company as a safe place to work and as a good employer. Praxair has had no reports of significant potential or actual negative impacts on local communities.

Rather, community engagement efforts have demonstrated tangible positive outcomes. See SO1. One example is the *Heroes for Education* project. In a concerted effort by employees in Praxair Mexico and Central America, 30 sites worked with 50 schools across the region. As a result, the program has improved the schools' operating budgets by 16 percent, freeing funds for innovation for community children.

SO10 Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities

Praxair is unaware of situations where it has had a negative impact on local communities; therefore it has not needed to implement prevention and mitigation measures.

ANTI-CORRUPTION

SO2 Percentage and total number of business units analyzed for risks related to corruption

Praxair administers an annual risk assessment that is circulated to all business managers globally and to all functional leaders and covers 100 percent of all business units. Potential risks related to corruption are an explicit focus.

SO3 Percentage and total number of management and non-management employees trained in organization's anti-corruption policies and procedures

Praxair has adopted a code of ethics that applies to the company's directors and all employees, including its chief executive officer, chief financial officer and controller. This code of ethics, the Compliance with Laws and Business Integrity and Ethics policy, has been approved by the Praxair Board of Directors. To assist employees and directors in complying with this code of ethics, management periodically develops specific standards implementing certain provisions of the code; these standards are contained in Praxair's SBI. The SBI is posted on Praxair's website in all country languages where Praxair operates.

One-hundred percent of salaried Praxair management and employees and some non-exempt employees are required to annually certify that they have read and understand Praxair's Compliance with Laws and Business Integrity and Ethics policy and the SBI, which includes a rigorous outline of the Foreign Corrupt Practices Act (FCPA). This is an online training and survey. In 2012, as in previous years, Praxair achieved 100 percent compliance with this requirement.

SO4 Actions taken in response to incidents of corruption

Praxair takes its SBI very seriously and non-compliance, depending on the circumstances, can result in serious disciplinary action up to and including termination of employment. Employees are actively encouraged to report suspected complaints and concerns, and are expected to report violations through any of a number of channels, including the Integrity Hotline. Reports through the Integrity Hotline may be made anonymously. It is a violation of Praxair policy for any person to retaliate against any individual who has reported an SBI matter in good faith.

The table at HR4 provides the aggregate number of hotline reports made during the last three years and a summary of the types of reports received. All hotline reports are handled promptly and issues identified are addressed. Further details are not provided in Praxair's public reporting as they are business confidential.

PUBLIC POLICY

SO5 Public policy positions and participation in public policy development and lobbying

Praxair engages in the development and implementation of public policy to ensure that its interests as a leading industrial company, and as a large employer, are appropriately represented. This activity includes frequent, direct interaction with government officials and stakeholders, or through industry groups and trade associations, to educate policy makers on issues that are important to the company. The company maintains a detailed oversight process to make certain that its activities are conducted in a legal, ethical and transparent manner. This includes oversight by the chief compliance officer and an annual program review by the Board of Directors. In addition, Praxair employees are provided with annual training regarding issues related to doing business with the government, complying with anti-trust and competition laws and the FCPA.

Energy Efficiency: Praxair, along with a coalition of companies, actively supports the Energy Savings and Industrial Competitiveness Act, which was introduced during the 112th Congress. This bipartisan bill contains a broad package of low-cost tools that would reduce barriers for businesses, homeowners and consumers looking to adopt off-the-shelf, energy-efficient technologies that will help them save money from advances in better insulation, computer-controlled thermostats and more efficient electric motors. In addition, the bill: (1) boosts private sector investment in building efficiency upgrades by expanding the Department of Energy's (DOE's) loan guarantee program; (2) helps manufacturers reduce energy use and become more competitive by working with states to establish a revolving loan program to help finance efficiency upgrades; (3) provides standards on outdoor lighting, residential heating and cooling systems and residential appliances; (4) works with states to strengthen national model-building codes to make new homes and commercial buildings more energy efficient; and (5) requires the federal government, the single largest energy user in the country, to adopt energy-saving techniques for computers, better building standards and smart metering technology.

Development and Commercialization of Advanced Biofuels: Praxair is an active participant in the Advanced Biofuels Association (ABFA), an organization focused on helping the United States transform to a low-carbon economy. The association is made up of 39 member companies, representing a wide range of technologies, feedstocks and molecules within the advanced biofuels industry, who are developing and commercializing technologies to provide renewable, lower-carbon fuels that will move the United States closer to achieving energy and economic security.

Praxair, through the ABFA, supports and advocates for public policies that are technology neutral, utilize sustainable feedstocks and offer subsidy parity to ensure that all viable advanced biofuels can compete with the benefit of a level playing field. The ABFA engages government at all levels to secure support for the advanced biofuels industry, allowing its member companies to commercialize their technologies and bring products to market that are competitive and compatible with petroleum-based fuels and by-products. Its members utilize algae, catalytic processes, gasification, synthetic biology, hydroprocessing, fermentation and other technology platforms. Many of the finished products will be hydrocarbon-based molecules that are fungible and can be used seamlessly in cars, trucks, buses, planes, boats and trains. These advanced fuels are consumer-ready and will not require significant changes to current infrastructure, such as separate pumps, new flex fuel cars or pipelines.

Helium Stewardship: Helium is relied upon by industrial, government and academic end users. It is used in the manufacturing of semiconductors and fiber optics as well as the operation of MRIs. It is used as a carrier gas for oxygen in synthetic breathing mixtures, and it also brings lift to balloons. Helium, however, is rare; it is only found in low

concentrations in certain natural gas fields in certain parts of the world. As a result of its historic stockpile of crude helium, the U.S. government owns helium volumes that represent 30 percent of the global market. In 1996, the U.S. Congress passed an act calling for the gradual sell-off of the helium reserve. The act expires in the near future and needs to be reauthorized. Praxair has educated policy makers regarding the importance of this natural resource and the need for responsible management so as to ensure availability for all end users. Praxair actively supported the Helium Stewardship Act of 2012.

Sourcing Non-Conflict Materials and Rare Earth Metals: "Conflict minerals" include tantalum, tin, tungsten and gold. The term was created because profits derived from their mining in certain regions have been linked to the financing of armed conflict, human rights abuses and violence, most notably in the Democratic Republic of Congo and its adjoining countries. The minerals are used in a variety of industries, including electronics and aerospace. Praxair takes seriously the allegations that some metals mined from illegitimate sources in "conflict" regions may be making their way into the general industry supply chain and that profits from this could potentially contribute to human rights violations. Praxair, therefore, strongly supports the EICC and its Code of Conduct. Praxair expects all of its suppliers to only source materials from environmentally and socially responsible sources and confirm this through a number of methods using reasonable due diligence, checklists and audits. Praxair supported the work of the SEC to develop a final Rule for Disclosing Use of Conflict Minerals and is developing the appropriate protocols to comply with the Rule. Also see HR2.

U.S.-Brazil CEO Forum: Established by the governments of the United States and Brazil in 2007, the forum includes the CEOs of 24 large companies, 12 from each country, and provides joint recommendations to the two governments on ways to strengthen the U.S.-Brazil economic relationship. The Forum's joint recommendations have advanced discussions between the two countries on important issues such as visa reform, customs procedures, education, energy, trade facilitation and infrastructure.

SO 6 Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country. There were no contributions made in Asia, Europe, South America or Mexico. In the United States, the Praxair PAC contributed \$122,400 to state and federal candidates for elected office representing both political parties.

ANTI-COMPETITIVE BEHAVIOR, COMPLIANCE

SO7 Total number of legal actions for anti-competitive behavior, anti-trust and monopoly practices and their outcomes, including any decisions or judgements

SO8 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations. Cases brought through dispute resolution mechanisms

No anti-trust regulatory or enforcement action was initiated in 2012. Also refer to the "Contingent Liabilities" section of Praxair's 2012 Annual Report, page 90.

Social- Product Responsibility

Product Responsibility

MANAGEMENT APPROACH

The most senior executive in charge of Praxair's product stewardship is the senior vice president and chief technology officer. The directors of product stewardship and process safety report into the SH&E organization.

HIGHLIGHTS

Approximately 98 percent of products that Praxair manufactures, such as oxygen, nitrogen, argon, helium and hydrogen, are non-toxic. However, the company still focuses on the remaining two percent. Praxair has strong personnel, product, process and distribution safety policies and procedures. R&D activities involving new products are managed globally, ensuring uniform regional communication pertaining to product safety issues. The process commits Praxair "to design and develop products that can be manufactured, transported, used and disposed of or recycled safely." It specifies procedures to define potential health, safety and environmental risks associated with each phase of a product's life, and product design features and management systems that will adequately control risks to within acceptable levels.

This product safety process applies to all products which Praxair manufactures that are offered for sale or lease by Praxair, its subsidiaries or joint ventures where Praxair has a controlling interest. It also includes products offered in conjunction with non-Praxair companies or distributed by Praxair on behalf of non-Praxair companies. Praxair's standard conforms to the International Council of Chemical Associations' (ICCA's) Global Chemical Management Policy. It has a clear commitment to lowering product toxicity and the level of toxicity of products used in the production process through limiting known or suspected high-priority toxicants or substituting them with safer chemicals. Training and awareness are reported as part of the steps defined in Praxair's customer, health and safety management system.

In addition, Praxair is rigorously focused on protecting employees, contractors, communities and the surrounding environment from exposure to explosive, flammable or toxic materials from its processes. Praxair has renewed its emphasis on process safety, on Inherently Safer Design (ISD) and Inherently Safer Technology (IST) (i.e., designing hazards out of the process so they don't need additional safeguards and eliminating the need to reduce or eliminate hazardous materials). A range of programs is being rolled out globally in support of these efforts.

Social- Product Responsibility

PR1 Life cycle stages in which health and safety impacts of products and services are assessed

Minimizing Product Risk

Praxair has a team of business, engineering, operations and safety professionals that examine the potential environmental, health and safety risks of every new product. The entire life cycle of the product — from raw material procurement through manufacturing, distribution, use and disposal — is reviewed.

Praxair uses the following key management system procedures to promote product safety. One-hundred percent of significant product or service categories are covered by and assessed for compliance with these procedures.

- *Risk Review:* Identify the potential risks in each phase of the product's life cycle, and the design features and management systems that minimize those risks.
- *Product Design Safety:* Consider how a product may be used or misused, and identify design features that could mitigate potential hazards.
- *Procurement Specification and Control:* Verify compliance with purchased material requirements and specifications.
- *Manufacturing Control:* Establish procedures and train personnel to ensure consistent product quality within product specifications.
- *Distribution and Installation Control:* Establish procedures and train personnel to ensure safe product deliveries, storage and customer application.
- *Hazard Communication:* Communicate information on the safe use and handling of each product in a timely manner through appropriate use of Safety Data Sheets (SDSs), product labeling, product use instructions, customer training and support.
- *Product Disposal:* Establish procedures to identify products that are no longer suitable for customer use and refurbish, replace or dispose of them in an environmentally safe manner.
- *Incident Reporting and Investigation:* Report, investigate and analyze incidents involving product misuse and disposal to learn more about product risks and to take corrective action.

Social- Product Responsibility

PR1 (1): Product Responsibility

Stage	Health and safety impacts of products and services are assessed for improvement at all product life cycle stages
Development of product concept	<p><i>Product Design Safety:</i> Design reviews consider the ways that the product may be used or misused and include design features that mitigate associated hazards and help protect customer safety.</p> <p><i>Risk Review:</i> New products are evaluated to identify potential health, safety and environmental risks associated with each phase of the product's life, as well as the product design features and management systems that will adequately control those risks, using Praxair's product risk review process.</p>
R&D	R&D evaluates commercialization projects, from ideation to launch, for environmental and health and safety impacts.
Certification	Praxair's product stewardship conforms to the RCMS [®] and is certified to that standard.
Manufacturing and production	Manufacturing control procedures are established, and personnel involved in the manufacturing process are trained to help ensure consistent product quality within product specifications.
Marketing and promotion	<p><i>Procurement Specification and Control:</i> The specifications for materials purchased from others are communicated to suppliers, and compliance with those requirements is adequately verified.</p> <p>Praxair's program on Safety Leadership: Training, Resources and Personal Commitment provides additional details.</p>
Storage distribution and supply	<i>Distribution and Installation Control:</i> Procedures are established, and personnel involved in product distribution and customer site equipment installation are trained to help ensure safe product deliveries, storage and customer application.
Use and service	<p><i>Incident reporting and investigation:</i> Incidents involving misuse and disposal of Praxair products are reported, investigated and analyzed to learn more about product risks and, if necessary, provide a basis for corrective action.</p> <p><i>Hazard Communication:</i> Information on the safe use and handling of each product, together with relevant health, safety and environmental protection information, is communicated to the customer in a timely manner through appropriate use of SDSs, product labeling, product use instructions, customer training and support upon request.</p> <p><i>Product Recall:</i> Procedures are established to help ensure that products already in the marketplace can be recalled or upgraded if necessary when previously unidentified risks associated with those products are discovered.</p>
Disposal, reuse or recycling	<i>Product Disposal:</i> When applicable, procedures are established to identify products or product components that are no longer suitable for customer use and, as appropriate, to refurbish, replace or dispose of them in an environmentally safe manner.

Social- Product Responsibility

PR2 Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes

For 2012, Praxair is not aware of reported incidents of non-compliance with regulations or voluntary codes concerning health and safety impacts of products and services during their life cycle.

PRODUCT AND SERVICE LABELING

PR3 Type of product and service information required by procedures and percentage of significant products and services subject to such information requirements

Under Praxair's product safety procedure, "each new product is evaluated to identify potential health, safety and environmental risks associated with each phase of the product's life, as well as the product design features and management systems that will adequately control those risks." Processes are in place to provide labels for 100 percent of significant product and service categories. For hazard communication, information on the safe use and handling of each product, together with relevant health, safety and environmental protection information, is communicated to the customer in a timely manner through appropriate use of [SDSs](#), product labeling, product use instructions, [customer training](#) and support upon request.

SDS Worldwide Library: SDSs have been prepared in accordance with either U.S. or European directives and are country-specific. Since the use of this information and the conditions of the use of the product are outside of Praxair's control, the user is obligated to determine the conditions of safe use of the product.

Chemicals of Concern and REACH: Praxair is in compliance with the REACH regulations promulgated by the European Union, which require complete information on the chemical properties, hazard profile and uses of all products manufactured in or imported into Europe. Praxair is also implementing activities required for compliance with the Globally Harmonized System for Classification and Labeling.

Praxair tracks the status of all substances that have to be registered through the European Chemicals Industry Association's REACH website. During the pre-registration phase, which ended on December 1, 2008, Praxair submitted more than 85 pre-registrations. (Some of the chemicals that were pre-registered will not require final registration due to business decisions that have occurred since December 2008.)

PR4 Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes

Praxair is unaware of any reported incidents of non-compliance with regulations or voluntary codes concerning product and service information and labeling pertaining to product safety in 2012.

PR5 Practices related to customer satisfaction, including results of surveys measuring customer satisfaction

Praxair's goal is to be the best performing in the industry as determined by its customers, and customer satisfaction is among the pillars of its global strategy. The company is committed to helping increase customer productivity, and, in many cases, its innovative technology solves environmental challenges, allowing its customers to do more with less. As an important measure of success, Praxair monitors customer satisfaction by business unit. Its weighted average customer satisfaction rate in 2012, covering 95 percent of global sales revenue, was 81 percent. Praxair seeks to:

- Meet customer expectations all of the time.

Social - Product Responsibility

- Deliver safe and environmentally acceptable products on time.
- Ensure employee and community safety.
- Improve customers' ease of doing business with Praxair.
- Remain committed to continuous quality improvement.

One example of a best-in-class customer relationship management (CRM) program is SAWM's *Cliente Mais* (Customer Plus). The program has resulted in exemplary customer satisfaction and helped customer retention rates surge. In 2004, at the program's start, customer retention rates were 92 percent. They reached 99 percent in 2010 and 2011, and 98 percent in 2012. The program provides an exclusive 24-hour call center, applications technical support provided by specialists, service quality evaluations, joint employee/customer training events and more. *Cliente Mais* has received ISO 9001 certification for both the Customer Plus program and the call center. It has become recognized as a customer service benchmark in Praxair's operations worldwide and serves as a model for several other regions. Mexico implemented the program in 2010, and has improved their customer satisfaction level from 3.83 to 4.43 on a scale of 1 to 5 since program inception.

Praxair has often been recognized for high performance as a supplier from customers and industry associations. One example of a supplier award is the "Achievement in Technology" award from the Fusheng Group in Taiwan. Praxair received this award for outstanding applications technology support in the third quarter of 2012. The company also maintains a high supplier rating with several suppliers.

Several additional initiatives support the global sales and customer management programs:

- *SalesInSight*. A global web portal that provides a global view of Praxair's customers from all businesses in all geographies, enhancing the sales team's ability to actively strengthen the customer relationship, leverage opportunities, improve productivity and offer foresight to enhance customer partnering opportunities.
- *Global Sales Airwaves site*: Provides opportunity for greater collaboration and information sharing among the global sales team in managing and supporting Praxair's largest customers.
- *Contracted CRM solution*. This was implemented in the North America call center to categorize all customer calls, measure them against a defined issue resolution workflow process and provide a direct link from customer feedback to the relevant functional group within Praxair. After extensive assessment of CRM solutions, a platform has been selected and a phased roll-out is planned, starting with PDI Shared Services and the call center in the United States, with USIG Business Development and Praxair Services, Inc., further out. This same CRM platform was launched during 2012 by Praxair Surface Technologies (PST) to further the account management and satisfaction programs and goals for their large multinational and strategic customers across the United States, Europe and Asia.
- A number of mobile sales tool apps for smartphones have been developed and launched in North America that provide the sales team with easier access to customer information. This enables faster resolution of issues and customer requests for information.
- Improvements have been made to Praxair Express, Praxair's customer portal for account and business information management, with additional improvements underway or planned during 2013. Improvements include the site's look and navigation, information download capability, search and catalog, video demo and training

Social- Product Responsibility

MARKETING COMMUNICATIONS

PR6 Programs for adherence to laws, standards and voluntary codes related to marketing communications, including advertising, promotion and sponsorship

All Praxair communications are governed by its SBI.

Marketing communications programs and materials, including product marketing information on Praxair's website, literature, news releases, trade shows, product packaging, etc., are required to be reviewed as needed by Praxair legal and compliance specialists as well as by Corporate Communications to ensure that they comply with local laws and regulations as well as Praxair policy. Praxair's internal marketing communication policy emphasizes communication with the media that is open, cooperative, consistent, business sensitive, proactive, accurate and on-the-record. Praxair does not adhere to additional voluntary codes relating to marketing communications.

Praxair only sells products that are fully compliant in all of the markets it serves. There is regulatory and customer concern, particularly in the electronics industry, that materials do not contain products that originate in conflict regions. Praxair works with the EICC and GeSI to ensure supplier conformance to the EICC Code of Conduct. See HR2 and SO5.

PR7 Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion and sponsorship by type of outcomes

In 2012, no incidents of non-compliance concerning marketing communications were identified.

CUSTOMER PRIVACY

PR8 Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data

Praxair's SBI has a section on information security that defines how important it is for employees to follow the law and comply with Praxair procedures, protocols and guidelines. This issue has been strongly prioritized in recent years because of new complexities being created by the proliferation of electronic communication; thus, the policies and training provided have increased.

Praxair's 2012 Annual Report, page 9, identifies the risk that the company may be subject to information technology system failures, network disruptions and breaches in data security. Praxair relies on IT systems and networks for business and operational activities, and also stores and processes sensitive business and proprietary information in these systems and networks. These systems are susceptible to outages due to fire, flood, power loss, telecommunications failures, viruses, break-ins and similar events or breaches of security. Management has taken steps to address these risks and concerns by implementing advanced security technologies, internal controls and network and data center resiliency and recovery processes. Despite these steps, however, operational failures and breaches of security from increasingly sophisticated cyber threats could lead to the loss or disclosure of confidential information, result in regulatory actions and have a material adverse impact on Praxair's operations, reputation and financial results. As far as it can determine, there have not been substantiated complaints regarding breaches of customer privacy and losses of data.

COMPLIANCE

PR9 Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services

Praxair is unaware of any significant penalties imposed in 2012 resulting from the use of its products.



Statement GRI Application Level Check

GRI hereby states that **Praxair, Inc.** has presented its report “Praxair Sustainable Development Report: 2012 Data Year” to GRI’s Report Services which have concluded that the report fulfills the requirement of Application Level A+.

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

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

Amsterdam, 26 June 2013

Nelmar Arbex
Deputy Chief Executive
Global Reporting Initiative



The “+” has been added to this Application Level because Praxair, Inc. has submitted (part of) this report for external assurance. GRI accepts the reporter’s own criteria for choosing the relevant assurance provider.

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

Disclaimer: Where the relevant sustainability reporting includes external links, including to audio visual material, this statement only concerns material submitted to GRI at the time of the Check on 21 June 2013. GRI explicitly excludes the statement being applied to any later changes to such material.

1. Strategy and Analysis			
Profile	Description	Reported	Cross-reference/Direct Answer
1.1	Statement from the most senior decision-maker of the organization.	●	See CEO Message
1.2	Description of key impacts, risks, and opportunities.	●	See section 1.2 of the report
2. Organizational Profile			
Profile	Description	Reported	Cross-reference/Direct Answer
2.1	Name of the organization.	●	Praxair, Inc.
2.2	Primary brands, products, and/or services.	●	See section 2.2/2.3 of the report for a description of our products and services
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	●	See section 2.2/2.3 of the report for a description of our products and services
2.4	Location of organization's headquarters.	●	Danbury, Connecticut, USA
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	●	See section 2.5 of the report
2.6	Nature of ownership and legal form.	●	Praxair is a publically traded company.
2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	●	Praxair serves approximately 25 industries as diverse as healthcare and petroleum refining; computer-chip manufacturing and beverage carbonation; fiber-optics and steel making; and aerospace, chemicals and water treatment. See section 2.7 of the report.
2.8	Scale of the reporting organization.	●	See section 2.8 of the report. As of December 31, 2011, Praxair had 26,539 employees worldwide. Net sales were \$11,224 million. 2012 Annual Report, page 5 and inside front cover. See section 2.8 (pages 21-22) of the report.
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	●	See section 2.9 of the report and pages 20-21 of the 2012 Annual Report.
2.10	Awards received in the reporting period.	●	See chart of awards in section 2.10 of the report. DJSI, CDP, Maplecroft and SAM awards are listed; others are available on the Praxair Web site.
3. Report Parameters			
Profile	Description	Reported	Cross-reference/Direct Answer
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	●	January 1, 2012 to December 31, 2012
3.2	Date of most recent previous report (if any).	●	2012 (2011 data)
3.3	Reporting cycle (annual, biennial, etc.)	●	annual
3.4	Contact point for questions regarding the report or its contents.	●	Riva Krut, VP and Chief Sustainability Officer, Praxair Email: Riva_krut@praxair.com or sustainability@praxair.com Tel: 203-837-2337

3.5	Process for defining report content.	●	See section 3.5 of the report. The list of material issues on which Praxair reports is validated by the Sustainable Development Council (senior managers from all corporate functions) and the business Sustainable Development Coordinators. A review of the report occurs in Q3 along with the review of our SDMS. The findings inform and contribute to the identification step in the next reporting cycle. This process for defining report content is repeated annually.
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	●	We report consolidated data from entities where Praxair is the majority shareholder (more than 50 percent) and joint ventures where we have management control. See Section 3.6/3.7/3.8.
3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	●	We exclude all data from entities where we have minority ownership or no management control. See Section 3.6/3.7/3.8.
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	●	We report on joint ventures where we have management control. See Section 3.6/3.7/3.8.
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.	●	Data measurement methodologies are described as appropriate throughout the report. Various databases are managed across Praxair to accurately capture and aggregate data. See section 3.9 of the report for more information.
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g., mergers/acquisitions, change of base years/periods, nature of business, measurement methods).	●	See Table 3.10 (1) for a list of re-statements.
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	●	There were no other significant changes beyond what is reported in 3.10.
3.12	Table identifying the location of the Standard Disclosures in the report.	●	The GRI Index is provided as an annex to Praxair's Sustainable Development Report.
3.13	Policy and current practice with regard to seeking external assurance for the report.	●	Praxair's Annual Report was externally audited by independent auditors. Some of this information is reproduced in this report. Selected environmental data (air emissions, energy, fuel, water, GHG, GHG from contractor driving, and our Zero Waste program) received an independent Limited Assurance from Carbon Verification Service.
4. Governance, Commitments, and Engagement			
Profile	Description	Reported	Cross-reference/Direct Answer
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	●	The ultimate authority to manage Praxair rests with the Board of Directors. See section 4.1 of the report for a full description of Praxair's governance structure.

4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	●	The Chairman of the Board, Steve Angel, is also the CEO.
4.3	For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	●	Praxair has a unitary board structure with one executive member; the rest are independent. Two of the 11 board members are female. Independence standards are defined on the Praxair website.
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	●	Praxair's Corporate Governance and Board Practices include its policy for communications with the Board. The Board has established procedures to enable a shareholder or other interested party to direct a communication to the Board of Directors. Such communications may be confidential or anonymous and may be communicated by mail, e-mail, through its Investor Relations Department or by telephone. Information on how to submit communications to the Board, and how they will be handled, is included on Praxair's website.
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	●	See section 4.5 of the report. Praxair's 2013 Notice of Meeting and Proxy Statement, page 38-9, outlines executive compensation objectives that link pay to financial and non-financial performance, including social and environmental performance: Alignment of Executive Compensation Programs with Praxair Business Objectives.
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	●	A comprehensive process for ensuring the avoidance of conflicts of interest is provided in Praxair's 2013 Notice of Meeting and Proxy Statement, page 13 and following. Potential conflicts of interest can be self-identified by the director or executive officer or may arise from internal audits, the integrity hotline or other referrals, or through periodic due diligence conducted by the Corporate Secretary's office. The Governance and Nominating Committee then examines the facts and circumstances of each matter referred to it and makes a final determination as to appropriate action.
4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	●	See section 4.7 of the report and Praxair's 2013 Notice of Meeting and Proxy Statement beginning on page 22.
4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	●	Mission: Making Our Planet More Productive See section 4.8 of the report.

4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	●	The Board Governance and Nominating Committee is charged with overseeing Praxair's identification of key issues for the management of economic, social and environmental performance. The full board ensures that Praxair complies with national and international law, with Praxair's Standards of Business Integrity and other Praxair policies or external standards and codes to which Praxair subscribes, such as Responsible Care®. The Board reviews safety and compliance performance at each board meeting; and sustainability performance at least once a year (twice in 2012).
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	●	See section 4.10 of the report and Praxair's 2013 Notice of Meeting and Proxy Statement pages 11-15.
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	●	Praxair supports the precautionary principle. Praxair uses a well-defined science-based process for assessing and managing risks in the face of uncertainty. Decision-making requires a systematic evaluation of risk and benefits. See section 4.11 of the report.
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	●	See section 4.12 of the report. Praxair subscribes to Responsible Care®, the Electronics Industry Code of Conduct/GeSI, and the Climate Disclosure Standards Board.
4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization: * Has positions in governance bodies; * Participates in projects or committees; * Provides substantive funding beyond routine membership dues; or * Views membership as strategic.	●	Praxair lists membership in associations in section 4.13, including the American Chemistry Council and the Compressed Gas Association, among others.
4.14	List of stakeholder groups engaged by the organization.	●	Our principle corporate stakeholders are: Customers, shareholders, suppliers, employees and prospective employees, and communities where we operate. In addition, for this report and for Praxair's sustainable development program, stakeholders include investors and analysts, including the Socially Responsible Investment (SRI) community; regulators and government agencies; technical, academic, professional, public policy and civil society organizations, and potential employees, with an interest Praxair's activities in corporate responsibility and sustainable development. See section 4.14/4.15 of the report.
4.15	Basis for identification and selection of stakeholders with whom to engage.	●	See section 4.14/4.15 and 4.16 of the report. Praxair's approach to identifying and selecting stakeholders is covered in the Mission Statement of Praxair's Corporate Sustainable Development Council and is drawn from the GRI Guidelines.
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	●	See section 4.16 of the report.

4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	●	See section 4.17 in the report.
Disclosures on Management Approach (DMAs)			
Profile	Description	Reported	Cross-reference/Direct Answer
DMA EC			
Aspects	Economic performance	●	See Economic Disclosures, Management Approach and Goals and Performance, pages 40-41. See also section on Economic Performance, pages 41-44. See also Praxair's 2012 Annual Report
	Market presence	●	See Economic Disclosures, Management Approach and Goals and Performance, pages 40-41. See also section on Market Presence, pages 45-48. See also Praxair's 2012 Annual Report
	Indirect economic impacts	●	See Economic Disclosures, Management Approach and Goals and Performance, pages 40-41. See also section on Indirect Economic Impacts, page 48-49. See also Praxair's 2012 Annual Report
DMA EN			
Aspects	Materials	●	See Environment Chapter, section on Management Approach including Goals and Performance, Policy, Organizational Responsibility, etc. See also section on Materials.
	Energy	●	See Environment Chapter, section on Management Approach including Goals and Performance, Policy, Organizational Responsibility, etc. See also section on Energy.
	Water	●	See Environment Chapter, section on Management Approach including Goals and Performance, Policy, Organizational Responsibility, etc. See also section on Water.
	Biodiversity	●	See Environment Chapter, section on Management Approach including Goals and Performance, Policy, Organizational Responsibility, etc. See also section on Biodiversity.
	Emissions, effluents and waste	●	See Environment Chapter, section on Management Approach including Goals and Performance, Policy, Organizational Responsibility, etc. See also section on Emissions, effluents and waste.
	Products and services	●	See Environment Chapter, section on Management Approach including Goals and Performance, Policy, Organizational Responsibility, etc. See also section on Products and services.

	Compliance	●	See Environment Chapter, section on Management Approach including Goals and Performance, Policy, Organizational Responsibility, etc. See also section on Compliance.
	Transport	●	See Environment Chapter, section on Management Approach including Goals and Performance, Policy, Organizational Responsibility, etc. See also section on Transport.
	Overall	●	See Environment Chapter, section on Management Approach including Goals and Performance, Policy, Organizational Responsibility, etc. See also section on Costs.
DMA LA			
Aspects	Employment	●	See Social, Social Commitment and Goals and Performance. See Social -Labor, Management Approach and Goals and Performance. See section on Employment.
	Labor/management relations	●	See Social, Social Commitment and Goals and Performance. See Social -Labor, Management Approach and Goals and Performance. See section on Labor/management relations.
	Occupational health and safety	●	See Social, Social Commitment and Goals and Performance. See Social -Labor, Management Approach and Goals and Performance. See section on Health and Safety.
	Training and education	●	See Social, Social Commitment and Goals and Performance. See Social -Labor, Management Approach and Goals and Performance. See section on Training and Education.
	Diversity and equal opportunity	●	See Social, Social Commitment and Goals and Performance. See Social -Labor, Management Approach and Goals and Performance. See section on Diversity.
	Equal remuneration for women and men	●	See Social, Social Commitment and Goals and Performance. See Social -Labor, Management Approach and Goals and Performance. See section on Equal Remuneration.
DMA HR			
Aspects	Investment and procurement practices	●	See Social, Social Commitment and Goals and Performance. See Human Rights, Management Approach and Goals and Performance. See section on Investment and Procurement Practices.
	Non-discrimination	●	See Social, Social Commitment and Goals and Performance. See Human Rights, Management Approach and Goals and Performance. See section on Non-discrimination.

	Freedom of association and collective bargaining	●	See Social, Social Commitment and Goals and Performance. See Human Rights, Management Approach and Goals and Performance. See section on Other Human Rights.
	Child labor	●	See Social, Social Commitment and Goals and Performance. See Human Rights, Management Approach and Goals and Performance. See section on Other Human Rights.
	Prevention of forced and compulsory labor	●	See Social, Social Commitment and Goals and Performance. See Human Rights, Management Approach and Goals and Performance. See section on Other Human Rights.
	Security practices	●	See Social, Social Commitment and Goals and Performance. See Human Rights, Management Approach and Goals and Performance. See section on Security Practices.
	Indigenous rights	●	See Social, Social Commitment and Goals and Performance. See Human Rights, Management Approach and Goals and Performance. See section on Other Human Rights.
	Assessment	●	See Social, Social Commitment and Goals and Performance. See Human Rights, Management Approach and Goals and Performance. See section on Assessment.
	Remediation	●	See Social, Social Commitment and Goals and Performance. See Human Rights, Management Approach and Goals and Performance. See section on Remediation.
DMA SO			
Aspects	Local communities	●	See Social, Social Commitment and Goals and Performance. See Society, Management Approach and Goals and Performance. See section on Local Communities.
	Corruption	●	See Social, Social Commitment and Goals and Performance. See Society, Management Approach and Goals and Performance. See section on Anti-Corruption.
	Public policy	●	See Social, Social Commitment and Goals and Performance. See Society, Management Approach and Goals and Performance. See section on Public Policy.
	Anti-competitive behavior	●	See Social, Social Commitment and Goals and Performance. See Society, Management Approach and Goals and Performance. See section on Anti-Competitive Behavior/Compliance.
	Compliance	●	See Social, Social Commitment and Goals and Performance. See Society, Management Approach and Goals and Performance. See section on Anti-Competitive Behavior/Compliance.

DMA PR			
Aspects	Customer health and safety	●	See Social, Social Commitment and Goals and Performance. See Product Responsibility, Management Approach. See section on Customer Health and Safety.
	Product and service labeling	●	See Social, Social Commitment and Goals and Performance. See Product Responsibility, Management Approach. See section on Product and Service Labeling.
	Marketing communications	●	See Social, Social Commitment and Goals and Performance. See Product Responsibility, Management Approach. See section on Marketing Communications.
	Customer privacy	●	See Social, Social Commitment and Goals and Performance. See Product Responsibility, Management Approach. See section on Customer Privacy.
	Compliance	●	See Social, Social Commitment and Goals and Performance. See Product Responsibility, Management Approach. See section on Compliance.

Performance Indicators			
Profile	Description	Reported	Cross-reference/Direct Answer
ECONOMIC			
Economic Performance			
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	●	See Key Figures Table Annual Report, and charts in EC1.
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	●	See section EC2 of the report, Annual Report and 2013 Carbon Disclosure Project response
EC3	Coverage of the organization's defined benefit plan obligations.	⊙	See section EC3 and Annual Report
EC4	Significant financial assistance received from government.	⊙	No government has a position in Praxair's shareholding structure
Market presence			
EC5	Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.	⊙	Praxair's compensation policy assigns jobs into pay levels based on job descriptions so that people performing the same type of job functions are in the same pay range, regardless of age, gender and race. To help ensure that our compensation policy is being appropriately administered, Praxair conducts annual pay equity analyses in the United States and in other countries where required by law. Specific salary information is confidential.

EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	●	See section EC6. The most significant sets of suppliers from the point of view of local sourcing are facility construction contractors and contract drivers. Installation of new equipment, as well as ongoing maintenance is largely performed by local suppliers. One hundred percent of contract drivers who haul our products are sourced in local regions, i.e. at a state or national level. Praxair's distribution fleet in Asia, Europe and South America is mainly contractor drivers.
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	●	See section EC7. Consistent with our growth goals in emerging economies, Praxair has a commitment to source and develop local talent. We have a preferred practice of hiring local leadership that understands the culture and business practices.
Indirect economic impacts			
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	●	See section EC 8 and 9. Praxair uses a methodology based upon that developed by the London Benchmarking Group (LBG) to evaluate the indirect economic, environmental and social impacts of our community engagement activity: please see also SO1, SO8, SO9.
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	●	See section EC 8 and 9. Praxair uses a methodology based upon that developed by the London Benchmarking Group (LBG) to evaluate the indirect economic, environmental and social impacts of our community engagement activity: please see also SO1, SO8, SO9.
ENVIRONMENTAL			
Materials			
EN1	Materials used by weight or volume.	⊙	Input materials, other than byproduct CO2 and hydrogen, are generally from nonrenewable sources and are mainly used to construct our facilities. Praxair estimated the worldwide weight of capital equipment (steel and aluminum in various equipment and components) to be 544,000 metric tons in 2012. (see also EN17). The volume of direct materials (gases) sold is considered confidential business information. See Materials/EN1 and EN2.
EN2	Percentage of materials used that are recycled input materials.	●	Most of our significant material inputs (as measured in EN1) are not from recycled materials. We provide examples of recycled materials in EN2.
Energy			
EN3	Direct energy consumption by primary energy source.	●	See Chart EN3(1)
EN4	Indirect energy consumption by primary source.	●	See EN4 and Chart EN4(1)
EN5	Energy saved due to conservation and efficiency improvements.	●	see section EN5 of the report

EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	●	see section EN6 of the report
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	●	see section EN7 of the report
Water			
EN8	Total water withdrawal by source.	●	See Chart EN8(1) and related text
EN9	Water sources significantly affected by withdrawal of water.	●	See section EN9 of the report
EN10	Percentage and total volume of water recycled and reused.	●	99% of the water that Praxair used was recycled numerous times through cooling towers before discharge.
Biodiversity			
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	●	Praxair has identified one production site near an IUCN protected area: Iguatama facility in Brazil, near the Sao Francisco River. See section EN11, EN15 and feature story.
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	●	See EN11 for how Praxair manages the risk to biodiversity impacts from construction. To our knowledge, there has been no significant direct or indirect negative impact on species or areas. Positive impacts from two projects are described at EN13 and EN14.
EN13	Habitats protected or restored.	⊙	In 2010-2011, Praxair performed an initial scan of our larger facilities against a world map of areas at risk of biodiversity loss. The only site we found that overlapped with the IUCN Red List was near our Iguatama facility in Brazil, near the Sao Francisco River. The river is on the IUCN Red list because the Sao Francisco Sparrow is categorized near threatened.
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	●	Praxair requirements for investment approval involve an environmental impact assessment and consideration of site environmental conditions (soil, water). External stakeholders, particularly local authorities, are included in these assessments where appropriate (see EN11/12). Biodiversity has not been identified as a specific business risk; therefore, specific targets and objectives, methodologies and monitoring processes have not been set. See EN14 for information on employee community engagement efforts directed at environmental conservation and education.
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	●	Praxair performed an initial scan of our larger facilities against a world map of areas at risk of biodiversity loss. The only site we found that overlapped with the IUCN Red List was near our Iguatama facility in Brazil, near the Sao Francisco River. The river is on the IUCN Red list because the Sao Francisco Sparrow is categorized near threatened. Restoring habitats is considered to be the best strategy to allow the sparrow to return to previous levels. Please see above for action that Praxair took at this

			site. See also the feature story for information on the Karner blue butterfly project.
Emissions, Effluents and Waste			
EN16	Total direct and indirect greenhouse gas emissions by weight.	●	See Chart EN16(1). The GHG emissions information has been prepared with reference to the World Resources Institute/World Business Council for Sustainable Development Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition (the GHG Protocol®) and the framework being developed by the Carbon Disclosure Standards Board (CDSB), called the Climate Change Reporting Framework (CCRF). Praxair is an Associate Member of the CDSB. A summary of the key disclosure policies is set out in EN16 together with an explanation of where changes have been made from policies in the previous year.
EN17	Other relevant indirect greenhouse gas emissions by weight.	●	See Table EN17(1) and section EN17
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	●	See section EN18 of the report
EN19	Emissions of ozone-depleting substances by weight.	●	See Table EN19(1)
EN20	NOx, SOx, and other significant air emissions by type and weight.	●	See Charts EN20(1) on NOx, EN20(3) on SOx, and EN20(4) on VOCs. In the United States, Praxair reports on- and off-site releases as part of the SARA Toxics Release Inventory (TRI). In 2012, Praxair released 194,826 pounds of reportable chemicals, compared to 160,219 pounds in 2011 (a 22 percent increase). This number reflects a 19 percent increase in on-site releases. The increase was principally because of increased production at a site in Louisiana.
EN21	Total water discharge by quality and destination.	⊙	Praxair did not have any unplanned water discharges in 2012. Planned discharges of effluent or process water require permits and are reported as required by law; potential unplanned discharges are also required by law to be reported to the governing agency. Praxair does not consolidate planned discharge volumes or report them.
EN22	Total weight of waste by type and disposal method.	●	See Chart EN22(1). In 2011, Praxair began reporting information on where waste is disposed. In 2012, 26 percent of our waste was hazardous waste. Of the total waste generated in 2012, 89 percent was diverted from landfill either by recycling or repurposing; this is a 20 percent increase in recycling from 2011.
EN23	Total number and volume of significant spills.	●	There were 107 spills recorded in the US and Canada for 2012. None were deemed significant and no spills are reported in Praxair's 2012 Annual Report.

EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	●	Praxair does not transport, import or export hazardous waste across international borders.
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	⊙	Refer to biodiversity issues reported in EN9 and EN11 through EN15.
Products and Services			
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	●	See examples in section EN26 on how Praxair products and services mitigate environmental impacts.
EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	●	Praxair delivers most of its product in pipelines or bulk cylinder trucks. Since the products are consumable, there is nothing to reclaim and no packaging material for the majority of our products. Metal cylinders, which last for roughly 40 years and are returnable, are used for the packaged gas business. In addition, our GPMM organization has launched an Asset Management program that is actively identifying idle assets (e.g., cylinders) to ensure that they are put back into use rather than purchasing new materials. The program actively tracks all assets, is well reported and is yielding good results. All in all, Praxair produces very little packaging waste.
Compliance			
EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	●	See Chart EN28(1). Praxair maintains an outstanding record of global environmental compliance, which we measure and report by the cost of worldwide penalties. The total monetary value of environmental penalties in 2012 was \$48,085. There were no non-monetary sanctions of actions brought through dispute resolution mechanisms.
Transport			
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	●	See section EN29. Praxair product is transported in pipelines, bulk trucks and packaged gas trucks. Truck transportation is a material sustainable development issue for Praxair and in 2012 was elevated to the third most important environmental priority, up from sixth in 2011. Praxair and our contractors drove 275 million miles in 2012 – a three percent increase over 2011. This is equivalent to driving more than 30 times around the earth each day. Praxair drivers accounted for 129 million of these miles (47 percent); contract drivers drove 146 million miles – the same ratio as in 2011. Principal environmental impacts from driving are GHG, SO ₂ and NO _x emissions. Principal safety aspects are vehicle accidents, reported in LA7. Praxair reports safety and environmental metrics for both Praxair drivers and contractor drivers. See EN17 and EN20 for distribution environmental targets.

Overall			
EN30	Total environmental protection expenditures and investments by type.	⊙	Environmental protection costs in 2012 included approximately \$18 million in capital expenditures and \$25 million of expenses. Praxair anticipates that future annual environmental protection expenditures will be similar to 2012, subject to any significant changes in existing laws and regulations. Based on historical results and current estimates, management does not believe that environmental expenditures will have a material adverse effect on the consolidated financial position, the consolidated results of operations or cash flows in any given year.
SOCIAL			
SOCIAL: Labor			
Employment			
LA1	Total workforce by employment type, employment contract, and region, broken down by gender.	⊙	The number of employees as of Dec. 31, 2011, was 26,539. Overall, 79% of Praxair employees are men and 21% are women. See Chart LA1(1) and Employment section.
LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region.	⊙	Praxair's global turnover rate was 12%. In South America, male turnover rate was 10 percent; females was 3 percent.
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	●	Life insurance, health care, disability/invalidity coverage, maternity/paternity leave, retirement provision, stock ownership and other benefits are standard for full-time employees of the organization. These benefits are not in all cases provided to temporary or part-time employees. See LA3.
LA15	Return to work and retention rates after parental leave, by gender.	⊙	100% of Praxair employees of either gender are entitled to parental leave, the terms vary by county.
Labor/ Management Relations			
LA4	Percentage of employees covered by collective bargaining agreements.	●	In 2012 union representation was about 40%. See LA4 for a regional breakdown.
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	⊙	Praxair makes every effort to be proactive and to provide reasonable notice to all employees if a significant change occurs, and we have a good record of employee relations in countries where we do business.
Occupational Health & Safety			
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	○	
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender.	⊙	See Charts LA7(1) and LA7(2) See section on LA7. There were two employee fatalities in 2012.

LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	●	See section LA8. Praxair's Safety and Medical departments offer periodic educational programs that address hazards in the workplace especially the danger of hypoxic (i.e., low oxygen) environments such as those encountered with confined space entry. The Safety and Medical departments also respond to scares of global pandemics, such as Avian Flu, and provide a risk assessment. Education events and materials are provided to employees, families and contractors. Praxair offers annual free flu shots for employees.
LA9	Health and safety topics covered in formal agreements with trade unions.	○	
Training			
LA10	Average hours of training per year per employee by gender, and by employee category.	◎	See Tables LA10 (1) and LA10 (2). The average Praxair employee (facilities and offices) received 42 hours of formal safety training in 2012. Facility employees received an average of 46 hours of training, and office employees received 15 hours.
LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	●	See LA11. As noted in LA10, employees can receive tuition reimbursement for eligible studies such as an MBA. Several learning and development tools made available to employees allow employees to develop professional and interpersonal skills. Praxair financial services vendor routinely offers on-line and in-office seminars on financial planning, including financial planning for employees approaching retirement.
LA12	Percentage of employees receiving regular performance and career development reviews, by gender.	●	100%
Diversity and Equal Opportunity			
LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	◎	See Table LA13(1). Globally, the percentage of salaried women is 18% of employees
Equal remuneration for women and men			
LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	◎	Praxair's compensation policy assigns jobs into pay levels based on job descriptions so that people performing the same type of job functions are in the same pay range, regardless of age, sex, and race. To ensure that our compensation policy is being appropriately administered, Praxair conducts annual pay equity analyses in the U.S., and in other countries where required by law, as part of its annual salary adjustment process
SOCIAL: Human Rights			
Investments and Procurement Practices			

HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.	●	When making investment decisions, Praxair routinely exercises due diligence and aims to exclude any relationships or practices that may contravene human rights. We utilize a subscription service to a human rights assessment tool that allows us to query for types of potential human rights concerns by geography. Praxair does not maintain records of when and how much the subscription service was used.
HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken.	●	See section HR2.
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	●	See Table HR3(1). In 2012, 100 percent of sourcing associates and their managers (200 employees) received training in Praxair's human rights policy and Supplier Expectations. In 2012, this annual training was extended to 100% of the Security and Internal Audit organization and delivered as an hour-long seminar by the VP Sustainable Development.
Non-Discrimination			
HR4	Total number of incidents of discrimination and corrective actions taken.	●	See Section HR4 including table. Praxair takes the Standards of Business Integrity very seriously and non-compliance, depending on the circumstances, can result in serious disciplinary action up to and including termination of employment. Employees are actively encouraged to report suspected complaints and concerns, and are expected to report violations through any of a number of channels, including the Integrity Hotline.
Freedom of Association and Collective Bargaining			
HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.	●	Praxair's supplier management program imposes strong prequalification requirements on vendors. See section HR2.
Child Labor			
HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	●	Praxair's supplier management program imposes strong prequalification requirements on vendors. See section HR2.
Prevention of Forced and Compulsory Labor			
HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	●	Praxair's supplier management program imposes strong prequalification requirements on vendors. See section HR2.
Security Practices			
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	●	100% of security personnel were trained in Praxair's Human Rights policy and the application to their work. Training was not provided to third-party security personnel.
Indigenous Rights			

HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	●	No incidents of violations involving the rights of indigenous people were reported, and no action was called for. See HR9.
Assessment			
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.	◎	Praxair's subscription to new risk mapping software allows us to identify regions with potential human rights risks in addition to existing tools to understand potential risks in this area. The subscription service is used to identify regions where potentially extreme human rights risks might exist, such as the right to exercise freedom of association, child labor and forced or compulsory labor. It provides and maintains a current human rights review or human rights impact assessment, for all countries where Praxair operates or seeks to operate. This makes human rights assessments available on demand. If Praxair seeks additional information, we engage with the vendor. The product is in use by the departments of Mergers and Acquisitions, Risk, Compliance and Government Relations, Procurement, Sustainable Development, Compliance and by the Praxair Electronics business. At this time Praxair does not track or report the number of reviews conducted or percentage of operations for which assessments have been obtained. See section HR10.
Remediation			
HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms.	●	To our knowledge, in 2012, there were no grievances related to human rights filed through formal organizational grievance mechanisms by individuals or groups, internal or external to the organization.
SOCIAL: Society			
Local Communities			
SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	●	See section SO1, including Charts SO1 (1)-(4). We describe the different types of programs that Praxair has implemented.
SO9	Operations with significant potential or actual negative impacts on local communities.	●	We have had no reports of significant potential or actual negative impacts on local communities.
SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	●	Praxair has not needed to implement prevention and mitigation measures.
Corruption			
SO2	Percentage and total number of business units analyzed for risks related to corruption.	●	Praxair administers an annual risk assessment that is circulated to all business managers globally and to all functional leaders and covers 100 percent of all business units (eight companies or regions). Potential risks related to corruption are an explicit focus.
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.	●	100% (26,539 employees)

SO4	Actions taken in response to incidents of corruption.	●	Praxair takes its Standard of Business Integrity very seriously and non-compliance, depending on the circumstances, can result in serious disciplinary action up to and including termination of employment. See section SO4.
Public Policy			
SO5	Public policy positions and participation in public policy development and lobbying.	●	See section SO5. Praxair participates in public policy development and lobbying, for example in energy efficiency, helium stewardship, and rare earth metals.
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	●	There were no contributions made in Asia, Europe, South America or Mexico. In the United States, the Praxair PAC contributed \$122,400 to state and federal candidates for elected office representing both political parties.
Anti-Competitive Behavior			
SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	●	No anti-trust regulatory or enforcement action was initiated in 2012. See also the Contingent Liabilities section of Praxair's 2012 Annual Report, page 90.
Compliance			
SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	●	No anti-trust regulatory or enforcement action was initiated in 2012. See also the Contingent Liabilities section of Praxair's 2012 Annual Report, page 90.
SOCIAL: Product Responsibility			
Customer Health and Safety			
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	●	The risks associated with the use and potential misuses of Praxair products are identified and controlled to acceptable levels throughout all stages of the product lifecycle including product design, manufacture, marketing, distribution, use, recycle, and disposal. See section PR1 of the report for more information.
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	●	In 2012, Praxair is not aware of reported incidents of non-compliance with regulations or voluntary codes concerning health and safety impacts of products and services during their life cycle.
Product and Service Labeling			
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	●	Labels are provided for all significant product and service categories. See section PR3 for information on the type of information required.
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	●	Praxair is unaware of any reported incidents of non-compliance with regulations or voluntary codes concerning product and service information and labeling pertaining to product safety in 2012.
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	●	Our weighted average customer satisfaction rate in 2012, covering 95% of global sales revenue, was 81%. See section PR5 for more information on practices in place to assess and maintain customer satisfaction.
Marketing Communications			

PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	●	Marketing communications programs and materials – including product marketing information on our website, literature, news releases, trade shows, product packaging, etc. – are required to be reviewed by Praxair Legal and Compliance specialists as well as by Corporate Communications to ensure that they comply with local laws and regulations as well as Praxair policy. Praxair does not adhere to additional voluntary codes relating to marketing communications. Praxair does not sell products that are banned in certain markets. See section PR6.
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	●	In 2012, no incidents of non-compliance concerning marketing communications were identified.
Customer Privacy			
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	●	As far as we can determine, there have not been substantiated complaints regarding breaches of customer privacy and losses of data. See section PR8.
Compliance			
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	●	Praxair is unaware of any significant penalties resulting from our products' use in 2012.



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