

## Assurance Statement

### To the Management of Praxair and its Stakeholders:

#### Responsibilities

Responsibility for producing Praxair's 2016 Sustainable Value Report ("Report") rests solely with Praxair. The Report covers activities occurring primarily from January 1, 2015 to December 31, 2015.

Upon being retained, Carbon Verification Service conducted a conflict of interest review to ensure that its assurance would be free of bias and would be done on an independent basis. Carbon Verification Service is not owned or operated by any other entity. Carbon Verification Service was not responsible for preparation of any part of the Report, nor has it undertaken any projects that would conflict with its independence. Carbon Verification Service provides only assurance services. It does not provide consulting services to any client. Consequently, Carbon Verification Service is, and remains, an independent assurer of the content and processes pertaining to the Report.

Carbon Verification Service agreed to provide Sustainability Assurance Services in accordance with the AccountAbility AA1000 Assurance Standard (2008) and is licensed by AccountAbility to use the AA1000 Assurance Standard Marking. One of the Lead Verifiers was trained and certified as an Associate Sustainability Assurance Practitioner to AccountAbility criteria. Carbon Verification Service is also accredited by the State of California Air Resources Board (CARB) as a verification body. Each of the verifiers who participated in this assurance is also accredited by CARB as Lead Verifiers. To receive accreditation by CARB as a Lead Verifier requires appropriate education, experience and passing a CARB-administered verification exam.

#### Assurance Standard

This engagement was performed in accordance with AccountAbility's AA1000AS (2008) assurance standard, where the format of the engagement was structured to meet the AA1000AS Type 2 (Moderate) requirements. The focus in a moderate level of assurance engagement is on the plausibility of the data. The level of effort required is less extensive than the effort necessary to achieve a high level of assurance.

#### Assurance Scope

Carbon Verification Service, LLC, was commissioned by Praxair Inc. to provide independent third-party assurance of certain content within its 2016 Report. The type of assurance provided was Type 2, moderate level. The scope of the assurance included:

- An assessment of Praxair's materiality determination process and whether or not it conforms to the AA1000APS (2008) principles of Inclusivity, Materiality and Responsiveness;
- Whether or not select KPI assertions in Praxair's Report are accurate and reliable in accordance with the AA1000APS (2008) standard; and
- Whether or not Praxair's priority factors are in general alignment with the Global Reporting Initiative GRI (G4), United Nations Sustainable Development Goals (UNSDGs), Responsible Care Management System (RCMS), and Sustainability Accounting Standards Board (SASB) frameworks.

### **Disclosures Covered by This Assurance Statement**

Praxair retained Carbon Verification Service, LLC to provide assurance of certain Key Performance Indicator (KPI) assertions within its 2016 Sustainable Value Report. These assertions included greenhouse gas (GHG) emissions, year-over-year change in Scope 2 GHG emissions, energy use, water use, air emissions, zero landfill, chemical oxygen demand (COD), lost time injury rates and community engagement.

Praxair reported Scopes 1 and 2 GHG emission data for its global facilities, including air separation units, hydrogen production, carbon dioxide production, packaged gases, electronics, surface technologies, trucking and corporate offices. The GHGs reported included the six Kyoto Protocol GHGs (CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>O, HFCs, SF<sub>6</sub>, and PFCs). Scope 3 GHG emissions were not subject to verification, except for contractor driving.

The scope of the assurance also included Praxair's global consumption of energy including natural gas, diesel and electricity as well as water consumption. Based upon its company-wide usage of fossil fuels, NO<sub>x</sub>, SO<sub>x</sub> and VOC emissions were also assured by Carbon Verification Service. Praxair's "Zero Landfill" results, chemical oxygen demand discharges, lost time injury and illness rates, and community engagement assertions were also subject to assurance by Carbon Verification Service.

### **Criteria for Report Preparation**

Carbon Verification Service assessed conformance of Praxair's GHG emission inventory with *The Greenhouse Gas Protocol®: A Corporate Accounting and Reporting Standard*, Revised Edition, developed by the World Resources Institute and the World Business Council for Sustainable Development.

Consensus protocols for the verification of the KPI metrics, other than GHG emissions, do not currently exist. Carbon Verification Service utilized the same principles prescribed by AA1000AS (2008) to guide the assurance of this data.

The assurance was based on site visits to Praxair's corporate headquarters in Danbury, CT, hydrogen production plants in St. Charles, LA and Ontario, CA, and an Air Separation Unit in Deer Park, TX. Review of documentation from seven other locations was also performed. The 10 sites represented a sample of Praxair's major business units and geographic regions, and accounted for approximately 25% of Praxair's global Scope 1 and Scope 2 greenhouse gas (GHG) emissions. Review of the data and associated documentation supported assurance of the global KPI data.

### **Assurance Methodology and Limitations**

The process used in performing the assurance was based on AccountAbility's AA1000AS (2008) guidance. The approach to assurance included:

- A review of Praxair's materiality determination procedure and process.
- A review of the information collection and reporting procedures undertaken by Praxair.
- A review of sustainability data assertions for any significant errors and/or anomalies within stated assertions; and
- Review of whether or not Praxair's priority factors are in general alignment with the Global Reporting Initiative GRI (G4), United Nations Sustainable Development Goals (UNSDGs), Responsible Care Management System (RCMS) and Sustainability Accounting Standards Board (SASB) frameworks.

The assurance process was limited to the content and assertions made within Praxair's Report for the period

under review, and did not include a comprehensive analysis of the accuracy, reliability, completeness and/or consistency of all the data presented by Praxair. Rather, certain data presented within the Report was subject to sampling and verification. The process included reviewing policies and procedures for governance, materiality determination, and stakeholder engagements, and included interviews with internal stakeholders to arrive at our assurance opinion.

### **Findings and Conclusions**

Based upon the assurance work performed from March through June 2016, nothing came to our attention that prevented Carbon Verification Service, LLC from concluding that:

- Praxair has applied the AccountAbility AA1000APS (2008) principles of Inclusivity. Praxair has a process to identify the issues to be included in the SV Report including consultations with internal and external stakeholders. Praxair relies, in large measure, upon the input of organizations such as CDP, Global Reporting Initiative, United Nations Sustainable Development Goals and the Responsible Care Management Standard. These organizations represent the collective view of a large number of individual stakeholders.
- Praxair has applied the AccountAbility AA1000APS (2008) principles of Materiality. Based upon the views of stakeholders, Praxair has in place a Sustainable Development Materiality Analysis to evaluate and select the issues that are material to it. These issues are known within Praxair as Priority Factors. It is our opinion, that as a result of implementing its Sustainable Development Materiality Analysis, no material issues have been omitted.
- Praxair has applied the AccountAbility AA1000APS (2008) principles of Responsiveness. Praxair annually reports its progress on its targets for each of its Priority Factors in its public Sustainable Value Report. It reviews progress on achieving its targets and re-sets its targets on a 5-year basis. In addition, through regular engagement with stakeholders, it has an on-going program to identify and respond to emerging stakeholder concerns.
- The selected sustainability data assertions are accurate and reliable;
- Praxair's Priority Factors are in general alignment with the GRI G4, UNSDGs, SASB and RCMS frameworks; and
- Praxair's KPI assertions, which appear in the table below, are materially correct and are a fair representation of data and information and have been prepared in accordance with accepted standards and practice.

### **Recommendations**

The following recommendations are offered for Praxair's consideration in future reporting:

With respect to the principle of Inclusivity:

- Use the AccountAbility's AA1000AS (2008) Assurance Standard and AA1000 Stakeholder Engagement Standard in part as a model to develop a Praxair procedure that describes how the organization manages and reports on sustainability. This will help to better define how Praxair addresses Inclusivity, as well as Materiality, and Responsiveness.
- Undertake some additional stakeholder engagement at the local/site level to check whether the proxy model of stakeholder engagement (using GRI, SASB, UNGC, DJSI) is capturing all significant material issues. This will also enhance inclusiveness, and perhaps responsiveness. Such additional engagement may also present the opportunity for capacity building in engagement itself.

With respect to the principle of Materiality:

- Consider developing science-based targets for GHG emission reductions.

With respect to the principle of Responsiveness:

- Clarify usage and simplify the language used when describing sustainability. A range of terms are used in the provided documentation: sustainability, sustainable development, social responsibility, etc. to denote similar, the same or overlapping constructs.

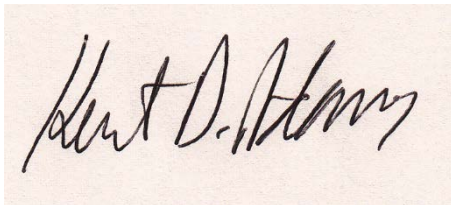
For Carbon Verification Service, LLC



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Date: June 27, 2016

**PRAXAIR'S ASSERTIONS**

Praxair reported the following KPI values:

Metric	2015 Value	Units of Measure
GHG Emissions Scope 1	8,199,000	Metric Tons CO <sub>2</sub> e
GHG Emissions Scope 2	12,640,000	Metric Tons CO <sub>2</sub> e
Proportion of reported Scope 1 and 2 emissions verified	100	%
GHG Emissions Scope 3 - Contractor Driving	260,000	Metric Tons CO <sub>2</sub> e
Electricity Consumption	22,960,000	MWh
Natural Gas Consumption	2,796,000	MWh
Diesel/Gas Oil	354,000	MWh
Steam	806,000	MWh
Distillate Fuel Oil #2	5,000	MWh
Water Use (not including once-through cooling water)	58,000,000	Cubic meters
NO <sub>x</sub> Emissions	1,690	Metric Tons
SO <sub>x</sub> Emissions	29	Metric Tons
VOCs	456	Metric tons
Zero Landfill	112,568,000	Lbs. of waste not landfilled
Chemical Oxygen Demand	817	Metric Tons
Lost Time Injury Frequency Rate	0.042	Lost time injuries per 200,000 hours worked
Lost Time Injury Frequency Rate	0.211	Lost time injuries per 1,000,000 hours worked
Occupational Illness Frequency Rate	0.003	Occupational Illness Cases per 200,000 hours worked
Occupational Illness Frequency Rate	0.015	Occupational Illness Cases per 1,000,000 hours worked
Contractor Lost Time Injury Frequency Rate	0.0	Lost time injuries per 200,000 hours worked
Community Engagement: cash raised or donated by employees and facilities	Approx. 776,000	USD
Year-over-Year Change - Scope 2 Emissions	1	%