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.
Key Messages

- Best positioned for North America growth
- Highly accretive growth with any incremental economic improvement
- Latin America pressure near-term, continued strong cash flow & margins
- Balanced portfolio for downside protection
- Margin expansion from price + productivity > costs
- Improving on industry-leading return on capital
- Strong free cash flow funds growing shareholder returns

Continued high quality, disciplined growth and capital allocation
Overview

- Industrial Gas (IG) major, largest in Americas
- Industry-leading 22% operating margin and return on capital 13%*
- IG critical to customer but small part of costs … reliable supply is key
- Long-term contracts with take-or-pay clause
- Integrated across supply modes
- Diverse end markets and geographies

Differentiators

- Disciplined investments in core IG drive density & returns
- Execution culture
- Constant focus on price and productivity
- Strong cash flow generation and disciplined capital allocation

Consistently leading the industry in profitability and return on capital
# Industrial Gas Industry Advantages

<table>
<thead>
<tr>
<th></th>
<th>Industrial Gases</th>
<th>Commodity Chemicals</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Competitive Field</strong></td>
<td>Local</td>
<td>Global</td>
</tr>
<tr>
<td><strong>Distribution</strong></td>
<td>Integrated system</td>
<td>Limited scope</td>
</tr>
<tr>
<td><strong>Price</strong></td>
<td>Contract</td>
<td>Spot</td>
</tr>
<tr>
<td><strong>Customers</strong></td>
<td>Small part of buy</td>
<td>Significant attention</td>
</tr>
<tr>
<td><strong>Raw Materials</strong></td>
<td>Stable</td>
<td>Volatile</td>
</tr>
<tr>
<td><strong>Growth</strong></td>
<td>Steady</td>
<td>Cyclical</td>
</tr>
<tr>
<td><strong>Return on Capital</strong></td>
<td>High</td>
<td>Low</td>
</tr>
</tbody>
</table>
What We Do and Products We Supply

We supply customers with atmospheric, process and specialty gases, high-performance coatings, and related services and technologies

- **Atmospheric Gases**
  - Produced when air is purified, compressed, cooled, distilled and condensed
  - Oxygen, nitrogen, argon and rare gases

- **Process & Specialty Gases**
  - Produced as by-products of chemical production or recovered from natural gas
  - Carbon dioxide, helium, hydrogen, semiconductor process gases, and acetylene
# Industrial Gases Product Lines

## How We Produce and Deliver

<table>
<thead>
<tr>
<th>Products</th>
<th>Sources</th>
<th>Feedstocks</th>
<th>Distribution Modes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Local</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxygen Nitrogen</td>
<td>Air Separation</td>
<td>Air + Power</td>
<td>✔️ ✔️ ✔️</td>
</tr>
<tr>
<td>Argon</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hydrogen</td>
<td>Steam-Methane Reforming</td>
<td>Natural Gas or Crude Hydrogen</td>
<td>✔️ ✔️ ✔️</td>
</tr>
<tr>
<td>Carbon Dioxide</td>
<td>By-product</td>
<td>Crude Carbon Dioxide</td>
<td>✔️ ✔️</td>
</tr>
<tr>
<td><strong>National</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Helium</td>
<td>US Government Helium Reserve</td>
<td>Natural Gas Fields</td>
<td>✔️ ✔️</td>
</tr>
<tr>
<td>Rare Gases</td>
<td>Air Separation</td>
<td>Air + Power</td>
<td>✔️</td>
</tr>
</tbody>
</table>

**Processes for management of diverse and complex set of products**
Production / distribution density drives higher profitability and ROC

Select Geographies and Integrated Supply

Three supply modes

- **Onsite / Pipeline**: 27%
  - 15-year take-or-pay contracts
  - Indexed to energy, inflation and currency

- **Merchant / Liquid**: 34%
  - Exclusive supply contracts, 3-7 years
  - Sourced as by-product from on-site

- **Packaged**: 30%
  - Cylinder rental and specialty gas focus
  - Sourced as by-product from bulk

North America: 52%
South America: 17%
Europe: 13%
Asia: 13%

% of 2013 sales
Excludes Surface Technologies segment
Manufacturing 24%
- Cutting – O₂
- Welding – O₂, N₂, Ar, H₂, He, blends
- Glass – O₂, N₂, Ar, H₂, He
- Automotive – O₂, N₂, Ar, H₂, He, Xe, Ne

Metals 17%
- Steel production – O₂
- Stainless steel – Ar, O₂
- Metal finishing / coating – H₂
- Inerting – Ar, N₂

Energy 13%
- Refining – H₂
- Natural gas fracturing – N₂
- Enhanced oil recovery – N₂, CO₂
- LNG in Brazil

Chemicals 10%
- Production – O₂, N₂, H₂
- Coal gasification – O₂
- Syngas production – CO
- Process control – specialty gases

Electronics 8%
- Semiconductor – process gases
- Photovoltaics – N₂, Ar, SiH₄
- Flat panel - O₂, N₂, Ar, H₂, He, NH₃

Healthcare 8%
- Hospitals – O₂, N₂, CO₂
- MRI – He
- Sterilization – sterilant gases
- Anesthesia – N₂O

Food & Bev 8%
- Carbonation – CO₂
- Freezing – N₂, CO₂
- Inerting – N₂
- Hydrogenation – H₂

% of 2013 sales
Secular Growth Drivers…

...provide sustainable growth
Select Geographic Footprint

52% Sales
- Largest integrated system
- Manufacturing & energy
- Packaged gas M&A

13% Sales
- Right sized costs
- Leverage to recovery

17% Sales
- Unrivalled network
- Developing middle class
- Infrastructure

#1 industrial gases supplier in the Americas

% of 2013 sales
Excludes Surface Technologies segment
The Americas: Unrivalled Integrated Supply Networks

Solid growth fundamentals:
- manufacturing, energy, chemical and metals
- Packaged gas acquisition opportunities
- Strong petchem proposal activity

Growth opportunities
- Expanding domestic demand and infrastructure projects
- Vast mineral and hydrocarbon resources
- #1 or #2 position in eight out of nine countries

Growing & Building Density

Best Positioned & Preferred Supplier
Shale Impacts on Praxair and U.S. Customers

Chemicals 10%
- Low-cost natural gas feedstock
- New chemical plant investment
- Packaged gas opportunities

Energy 19%
- Low-cost natural gas/lower hydrogen costs
- Availability of light/sweet
- Less dry gas fracking

Metals 13%
- Low-cost natural gas/lower power costs
- More natural gas in blast furnace requires higher oxygen intensity
- Energy infrastructure build-out

Manufacturing 30%
- Lower power costs
- Increased competitiveness
- Merchant and packaged gas
- Demand from energy market

Improved fundamentals and competitiveness for ~75% of U.S. customers

% of 2013 Praxair North America sales
Potential for $1B to $2B in IG industry capex going forward
Praxair in South America

- Deep, experienced organization
  - 5,500 employees: 4,300 in Brazil

- Unrivaled network
  - 90+ plants remotely monitored
  - 8,000+ deliveries daily
  - 300+ sales locations

- Outstanding customer retention rate (99%)

- Growing faster than competitors

Sales of $2B / IG Market = $4.5B

Praxair Presence

Building presence for over 100 years
Europe and Asia Segments

2013 Sales $1.5B
13% of Praxair

- Rightsized costs in the South
- Density and efficiency improvement with Italian acquisition & France divestiture
- Growing in the North, entering Russia

Growth Opportunities
- Refining
- Chemicals
- Environmental
- Application technologies
- Energy efficiency

Margin upside with recovery
Density focus…profitable growth
China Macro & Opportunities

IG Consumption Per Capita (% of US)
- US: 100%
- China: 20%

Decades of organic growth

Macro Environment
- Slower overall economic growth
- Rebalancing industrial sector
- Government policy driving environmental compliance and technology-intensive industries
- Faster growth inland

Opportunities
- Refining
- Chemicals
- Energy efficiency
- Environmental protection

Praxair China Sales
- Base Growth
- New Projects
- Double-digit% CAGR (2012-2017F)

Strong outlook for industrial gases

Source: Spiritus, Praxair internal analysis
Praxair China Versus Other Majors

OP Margin %

Praxair
Comp A
Comp B
Comp C

PX profitability advantage driven by disciplined approach to the market and density strategy

Source: Praxair internal analysis
Praxair Capex Investment Criteria

Criteria: Lower Risk ← Standard Global Hurdle Rate → Higher Risk

Guaranteed Cash Flows: Cost Reduction – Take or Pay – Merchant

Customer & Asset: Counter-party risk
Underlying asset viability

Sovereign Risks: Foreign exchange volatility
Contractual enforcement
Ease of doing business

Execution: Product line offering
Execution complexity

Strategic Alignment: Density & integrated supply systems
– Stand alone plants – Opportunistic
Sample Project Return on Capital

- Annuity-based business model
- Accretive to ROC within ~5 years
- Successive renewals

Praxair Consolidated Return on Capital Average

<table>
<thead>
<tr>
<th>Economic Term (years)</th>
<th>-2</th>
<th>-1</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16+</th>
</tr>
</thead>
<tbody>
<tr>
<td>Investment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Initial Contract Term</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Renewal</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Strong Backlog - $1.9B Capital

Bid activity strongest in North America and Asia

2Q14 project in backlog
ASU – Air Separation Unit

North West Redwater 2,000 TPD ASU
Vale 400 TPD ASU
Antwerp 1,300 TPD ASU
CSP 2,400 TPD ASU
KuibyshevAzot JV 1,400 TPD ASU
Evraz NTMK 3,000 TPD ASU
Yankuang Guohong 3,000 TPD ASU
Taewoong Steel 180 TPD ASU
Oxiranchem 500 TPD ASU
Jinling Huntsman 900 TPD ASU
Jinlong Copper 700 TPD ASU
Chongqing 5,000 TPD ASU
JSW Bellary 1,800 TPD ASU
Technology Overview

Priorities

- ASU and HyCO cost reduction
- Product line designs for high construction costs
- Sustain productivity savings
- Operational efficiency
- Enhanced reliability
- New growth applications for developed markets
- Migrate applications to emerging markets

Impact

- ~3% per year lower cost to serve
- 5% per year
- Drive top-line growth

Technology programs aligned with business priorities
## Productivity Sources Over the Next Several Years

**Target a 5% Minimum Reduction in Cost Stack Annually**

<table>
<thead>
<tr>
<th>Category</th>
<th>Sources</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plant Efficiency</strong></td>
<td>- Turbomachinery upgrades</td>
</tr>
<tr>
<td></td>
<td>- Cold box optimization</td>
</tr>
<tr>
<td></td>
<td>- Advanced predictive control monitoring</td>
</tr>
<tr>
<td><strong>Distribution and Customer Service</strong></td>
<td>- Dynamic tour scheduling</td>
</tr>
<tr>
<td></td>
<td>- Tank optimization</td>
</tr>
<tr>
<td></td>
<td>- Fuel efficiency; on-board computers</td>
</tr>
<tr>
<td><strong>Packaged Gases</strong></td>
<td>- Network optimization and improved facilities workflow</td>
</tr>
<tr>
<td></td>
<td>- Mobile filling station / automation</td>
</tr>
<tr>
<td></td>
<td>- Asset tracking</td>
</tr>
<tr>
<td><strong>Reliability</strong></td>
<td>- Migrate new reliability technologies</td>
</tr>
<tr>
<td></td>
<td>- Global preventive and predictive maintenance program</td>
</tr>
<tr>
<td></td>
<td>- Vibration monitoring platform</td>
</tr>
<tr>
<td><strong>Business Process and Procurement</strong></td>
<td>- Sourcing contract management</td>
</tr>
<tr>
<td></td>
<td>- Low-cost country sourcing</td>
</tr>
<tr>
<td></td>
<td>- Global business process replication</td>
</tr>
</tbody>
</table>

Productivity is sustainable
Distribution Productivity Examples

Minimize Cost Per Mile

- Driver behavior
- Buying strategy
- Tire technology
- Miles actual versus planned
- Site opportunity time
- Driver utilization
- Road Calls / breakdowns
- Corrective / preventive ratio
- Accidents

Maximize Pounds Per Mile

(pounds per trip ÷ miles per trip)

- Fuel 40%
- Driver 35%
- Maint. 10%
- Other 15%

Pounds Per Trip Indicators
- Trailer size
- Loading trailers to capacity
- Delivering full loads
- Delivering at optimal levels
- Residual volume decisions
- Tank sizing
- Forecasting accuracy

Miles Per Trip Indicators
- Number of deliveries
- Inter-customer miles
- Sequencing of deliveries

Daily business changes create continuous opportunities
Growth from diverse sources... continued leverage down the P&L
### Growth Outlook

#### % Year-over-Year Growth

<table>
<thead>
<tr>
<th>Metric</th>
<th>Growth Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>High single-digit</td>
</tr>
<tr>
<td>Operating Profit</td>
<td>Sales growth</td>
</tr>
<tr>
<td>EPS</td>
<td>Low double-digit</td>
</tr>
</tbody>
</table>

- Base growth 2-3%
- Project backlog ~3%
- Price 1-2%
- Acquisitions ~1%
- Excludes FX
- Productivity + pricing > costs
- Improved asset utilization
- 1-2% share count reduction

**Generating strong cash flow**
We Generate Stronger Cash Flow and...

% of Sales (5-yr average)

Operating Cash Flow: 25% (Praxair) vs. 18% (Industry Average)
Capex: 16% (Praxair) vs. 12% (Industry Average)
Dividends: 6% (Praxair) vs. 6% (Industry Average)
Net Repurchases: 4% (Praxair) vs. -1% (Industry Average)

...reinvest and return to shareholders at a greater rate

Source: Factset (2009-2013); Industry ex-Praxair
Balanced use of cash to maximize return to shareholders

Cash Flow Projections (2013-17F Cumulative)

- Cash Flow Generated from Operations
  - $17 billion (24% of sales)

- Cash Flow Distributed
  - $7 billion (10% of sales)

- Cash Flow Invested
  - $10 billion (14% of sales)
Sustaining a Competitive Advantage

- Select geographies – best footprint
- Core industrial gas
- Sale of gas model
- Integrated supply
- Build density

- High performers
- Disciplined operators
- Detail-oriented
- Nimble and adaptable
- Excellent leaders
- Non-hierarchical

- Product line advantage
- Total cost of ownership
- Customer innovation

Strategic Focus

Technology

People

Execution

High performance culture…drives future results
Consistent Outperformance

- Strategic Focus
- Operational Excellence
- Disciplined Capital Allocation

Operating Margin* (% of sales)

<table>
<thead>
<tr>
<th>Year</th>
<th>Praxair</th>
<th>Industry Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>14%</td>
<td>9%</td>
</tr>
<tr>
<td>1996</td>
<td>22%</td>
<td>9%</td>
</tr>
<tr>
<td>2000</td>
<td>15%</td>
<td>14%</td>
</tr>
<tr>
<td>2004</td>
<td>11%</td>
<td>9%</td>
</tr>
<tr>
<td>2008</td>
<td>13%</td>
<td>9%</td>
</tr>
<tr>
<td>2013</td>
<td>22%</td>
<td>15%</td>
</tr>
</tbody>
</table>

Operating Cash Flow Growth

<table>
<thead>
<tr>
<th>Year</th>
<th>Praxair</th>
<th>Industry Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>1992</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>1996</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>2000</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>2004</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>2008</td>
<td>1.0</td>
<td>1.0</td>
</tr>
<tr>
<td>2013</td>
<td>2x</td>
<td>1.0</td>
</tr>
</tbody>
</table>

Return on Capital

<table>
<thead>
<tr>
<th>Company</th>
<th>10 year average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Praxair</td>
<td>13%</td>
</tr>
<tr>
<td>Comp 1</td>
<td></td>
</tr>
<tr>
<td>Comp 2</td>
<td></td>
</tr>
<tr>
<td>Comp 3</td>
<td></td>
</tr>
</tbody>
</table>

Source: Factset
Industry Average ex-Praxair
*Praxair non-GAAP measure; refer to Annual Report for reconciliation

Leading value creation in the industry
Sustainable Development Aligned with Business Strategy

2013 Achievements

<table>
<thead>
<tr>
<th>Business Drivers</th>
<th>Economic</th>
<th>Environmental</th>
<th>Social</th>
</tr>
</thead>
<tbody>
<tr>
<td>ENERGY</td>
<td></td>
<td>2X GHG benefit vs. total GHG emissions</td>
<td>Safety Record 5X better than U.S. industry average</td>
</tr>
<tr>
<td>ENVIRONMENT</td>
<td>$3 Billion revenue from Eco-Portfolio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EMERGING ECONOMIES</td>
<td></td>
<td>&gt;50 million people served with safe drinking water</td>
<td></td>
</tr>
<tr>
<td>EXECUTION</td>
<td>Sustainable Productivity more than 20% of total productivity savings</td>
<td></td>
<td>&gt;1 Million beneficiaries from community engagement (cumulative, 2009-2013)</td>
</tr>
</tbody>
</table>

Praxair has been a member of Dow Jones Sustainability Indices for 12 consecutive years
Praxair has been a member of CDP for 7 consecutive years