Lehman Brothers Global Chemical Industry Leaders Conference

Becoming The Investment In Industrial Gases, Surface Technologies, and Services

April 4th, 2003

Stephen F. Angel, Executive Vice President
Forward Looking Statements

The forward-looking statements in this presentation concerning revenue, earnings, return on capital, volume, growth, economic growth rates, stock price performance, and the value of future product and service offerings involve risks and uncertainties, and are subject to change based on various important factors. These include the impact of changes in worldwide and national economies, availability and cost of power and other energy materials and the ability to recover these costs, pricing fluctuations in foreign currencies, changes in interest rates, the continued timely development and acceptance of new products and processes, the impact of technologies, competitive products and pricing, and the impact of tax and other legislation and regulation in the jurisdictions in which the company operates.
Outperformance

Operating Model ➔ Earnings and Shareholder Return

♦ Comparative EPS Growth

<table>
<thead>
<tr>
<th></th>
<th>2001</th>
<th>2002</th>
<th>Ex GW</th>
</tr>
</thead>
<tbody>
<tr>
<td>Praxair</td>
<td>0%</td>
<td>11%</td>
<td>4%</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>-20%</td>
<td>5%*</td>
<td>1%*</td>
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</tbody>
</table>

♦ Comparative Stock Total Return

<p>| | |</p>
<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>Praxair</td>
<td>6%</td>
</tr>
<tr>
<td>Basic Materials Index</td>
<td>-5%</td>
</tr>
<tr>
<td>S&amp;P 500</td>
<td>-22%</td>
</tr>
</tbody>
</table>

*Praxair estimate
Improving Return on Capital

NOPAT ROC*

* Ex gains, Ex goodwill, Ex special charges
Six Sigma Implementation

1998
- PST initiates Six Sigma in response to customers

1999
- Pilot launched in North American industrial gases business

2000
- Six Sigma fully deployed throughout Canada, Mexico and the U.S.

2001
- Initiative expanded to Asia, Europe and South America

2002
- 1200 employees trained; 850 projects in pipeline; 340 delivering savings of $34 MM in 2002

2003
- Expecting $50M in savings from Six Sigma in 2003

Now a key driver of $100MM per year productivity goal
Praxair Strong Number One Position

Texas City to Lake Charles (3.8 MMBPD Refining Capacity)

<table>
<thead>
<tr>
<th></th>
<th>Praxair H2 Connect</th>
<th>Praxair H2 Primary Supplier</th>
<th>Competitive H2 Connect</th>
<th>Competitive H2 Primary Supplier</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>86%</td>
<td>55%</td>
<td>57%</td>
<td>18%</td>
</tr>
</tbody>
</table>

Praxair has won over 80% of the new hydrogen supply awarded in this area in the last year.
Praxair Gulf Coast Hydrogen Growth

300 MMSCFD Signed - 200 MMSCFD Anticipated
Praxair Healthcare Sales

Global $550MM

- Hospital 50%
- Homecare 50%

North America $350MM

- Hospital 35%
- Homecare 65%

In North America homecare sales are expected to have an 8% organic growth rate
Hospital To Home Strategy

Leverage #1 hospital position to increase share of homecare patient referrals
<table>
<thead>
<tr>
<th>Stage</th>
<th>Number</th>
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</thead>
<tbody>
<tr>
<td>Opportunities</td>
<td>98</td>
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<tr>
<td>Prescreened</td>
<td>65</td>
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<tr>
<td>Detailed Review</td>
<td>46</td>
</tr>
<tr>
<td>Financial Analysis</td>
<td>26</td>
</tr>
<tr>
<td>LOI/Due Diligence</td>
<td>7</td>
</tr>
<tr>
<td>Closed Deals</td>
<td>5</td>
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</table>
## Electronics

<table>
<thead>
<tr>
<th></th>
<th>1995</th>
<th>2000</th>
<th>Today</th>
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<tbody>
<tr>
<td><strong>Process Consumables</strong></td>
<td>• Specialty Gases</td>
<td>• Specialty Gases</td>
<td>• Specialty Gases</td>
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<tr>
<td></td>
<td>• Disk Polish</td>
<td>• Disk Polish</td>
<td>• Disk Polish</td>
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<tr>
<td></td>
<td></td>
<td>• PVD Targets (MRC)</td>
<td>• PVD Targets</td>
</tr>
<tr>
<td><strong>Facilities Infrastructure</strong></td>
<td>• Bulk and Onsite Gases</td>
<td>• Bulk and Onsite Gases</td>
<td>• Bulk and Onsite Gases</td>
</tr>
<tr>
<td></td>
<td>• Gas Delivery Systems</td>
<td>• Gas Delivery Systems</td>
<td>• Gas Delivery Systems</td>
</tr>
<tr>
<td></td>
<td>• Site Services</td>
<td>• Total Gas &amp; Chemical Management.</td>
<td>• Total Gas &amp; Chemical Management.</td>
</tr>
<tr>
<td><strong>Chamber Components</strong></td>
<td></td>
<td></td>
<td>• Bulk Specialty Gas Systems</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Infrastructure Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Uptime™ Delivery System</td>
</tr>
<tr>
<td><strong>Logistics</strong></td>
<td></td>
<td></td>
<td>• Ceramic Coatings</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Anodized Components</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Electrostatic Chucks (Dorsey Gage)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Component Logistics (CSF)</td>
</tr>
</tbody>
</table>
Outlook for Semiconductor Industry

♦ The industry is at three key technology inflection points

♦ Inflection points create opportunities

**New Technology**
- wafer size: 200 mm to 300 mm
- line width to < 0.10 micron
- interconnects from Al to Cu

**New Products**
- 300mm ceramic coated chucks
- supercritical CO₂
- 300mm copper and tantalum targets
- CMP slurries, pads
- CVD precursors
Praxair Metals Technologies

Industry Credibility - Licensing Metals Technologies

♦ AOD Stainless Steel
  – Greater Than 75% Market Penetration

♦ BOF CoJet®
  – Market Opportunity - 500MM Tons
  – 2 Installations US, 1 license SA
  – Growing Patent Portfolio
  – Savings - up to $5/Ton

♦ EAF CoJet®
  – Market Opportunity - 280MM Tons
  – Market Penetration - 10%+
  – Savings - $2-4/Ton
Environmental Solutions

♦ NOx emissions from coal fired utilities must be reduced
  - EPA mandate in 19 states
  - Full compliance by 2005
  - Most utilities require retrofit
  - Additional reductions targeted by 2008

♦ Controlled oxygen injection is low cost solution
  - Simple retrofit with minimal downtime
  - Reduces NOx by allowing more fuel-rich primary combustion
  - Optimally supplied using VPSA
  - Patents pending
China

**Environmental Drivers**
- WTO official entry
- FDI/year > $50B
- Stable currency
- GDP growth > 8%
- Industrial growth > 11%
- Rapid growth in steel, automotive, electronics and CPI segments

**Total Gases Market: $1.5 B**

- Local 24%
- Praxair
- Global IG Companies 20%
- Captive 56%
China Strategy

- Solidify leading market position in 3 key corridors
- Secure position in developing enclaves
- Ramp on-site capabilities
- Grow high value products... argon, specialty, helium, medical gases
- Focus on high return electronics segments... SCPG, materials, services
China Key Business Ventures

**Semiconductors**
- Shanghai’s Zhangjiang High-Tech (Z-J Park)
  - 15 year contract to SMIC
  - 15 year contract to ACE Semiconductor Co.

**Steel**
- Shaoguan Iron and Steel
- Meishan Iron and Steel
- Baoshan Iron and Steel

**Chemicals**
- SCIPiG
  - Praxair/Air Liquide 50/50 Joint Venture
  - 2005 Start-ups of multiple integrated petrochemicals facilities

![China Crude Steel Production Graph](image-url)
Praxair Europe

- Sales $589MM
- More than 100,000 customers
- 3 key pipeline enclaves
  - Asturias
  - Ravenna
  - Antwerp
- 4 specialty gas plants
- 28 air separation plants
- Over 1.2 million gas cylinders
- 1960 employees

Strong market position in the two fastest growing European countries, Spain and Italy
Strong Results in Europe

![Graph showing growth in Sales, Fixed Costs, Operating Profit (OP), and Net Income After Tax (NIAT) from 2000 to 2003.]
Improving Free Cash Flow

- Capital spending reduced 45% from 1997 peak
- Commitment to less capital intensive growth platform
- Uses of free cash flow
  - Debt reduction
  - Homecare, electronics, services acquisitions
  - Share repurchases

Free Cash Flow 1996-2002 ($MM)