



UBS Warburg Grass Roots Chemical Conference

Growth in China

February 11, 2004



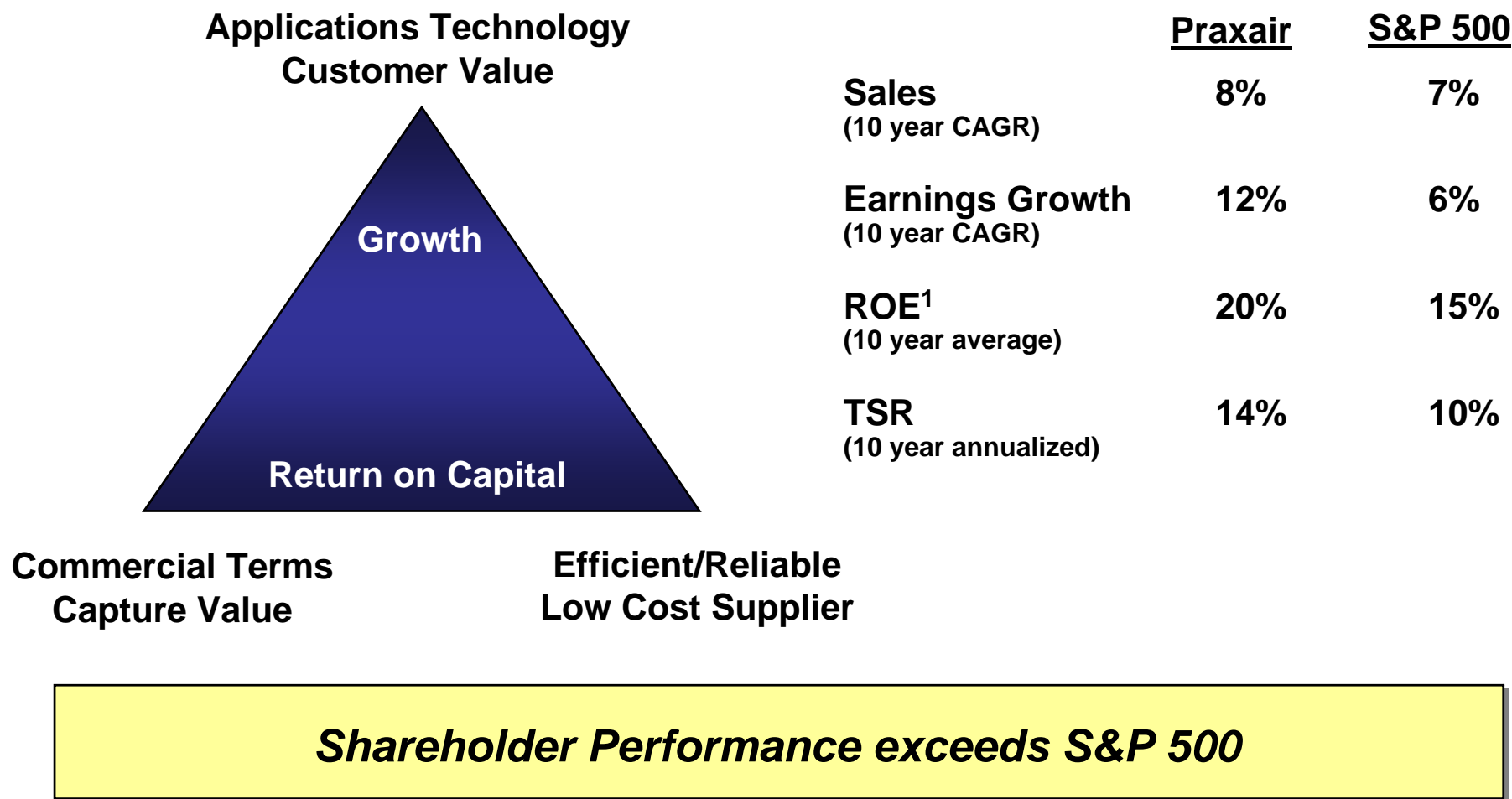
Stephen F. Angel, Executive Vice President

www.praxair.com

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.

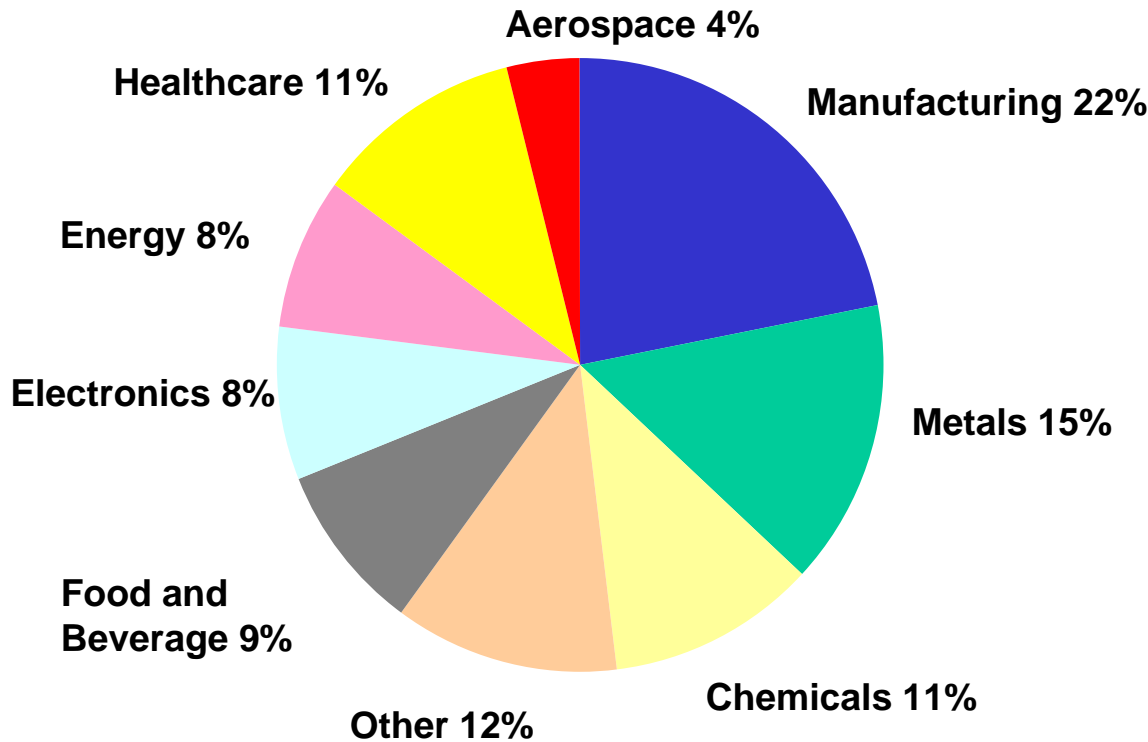
Operating Model Drives Growth and ROC



1. ROE = Net income before accounting changes/Shareholders Equity

Applications Technology Drives Growth

Praxair End Markets



Productivity
Cycle Time
Yield

Energy
Oxyfuel Combustion
Hydrogen

Environmental
Air Quality
Water Treatment

Commercial Terms Drive ROC

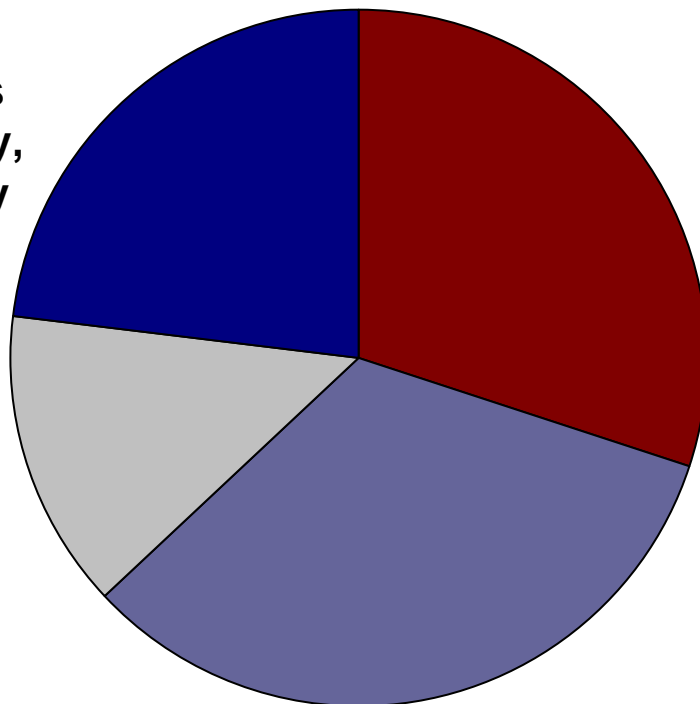
Sales by Distribution Method

On-Site 23%

- ◆ Take or pay contracts
- ◆ Escalation for: energy, inflation and currency

Merchant 30%

- ◆ Requirements contracts
- ◆ Escalation for energy and inflation via contract terms and price increases
- ◆ Switching costs



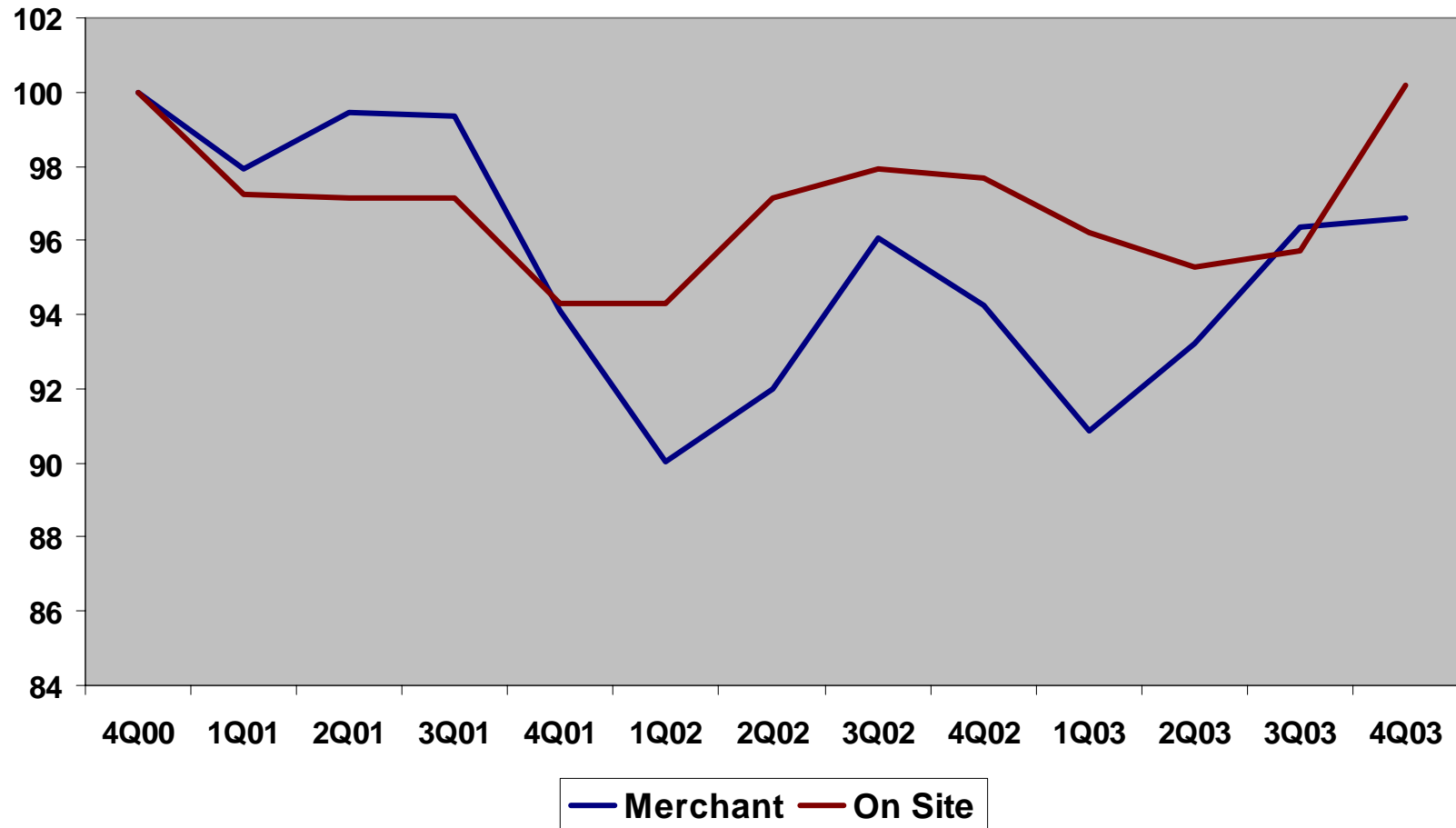
Other 14%

Packaged Gases 33%

- ◆ Annual contracts
- ◆ Cylinder rentals
- ◆ Service level

- ◆ *Price is a fraction of customer value*
- ◆ *Terms capture above average ROC*

North American Indexed Industrial Gas Volumes



North American Energy Procurement

2003 Energy Spend

Electric Power

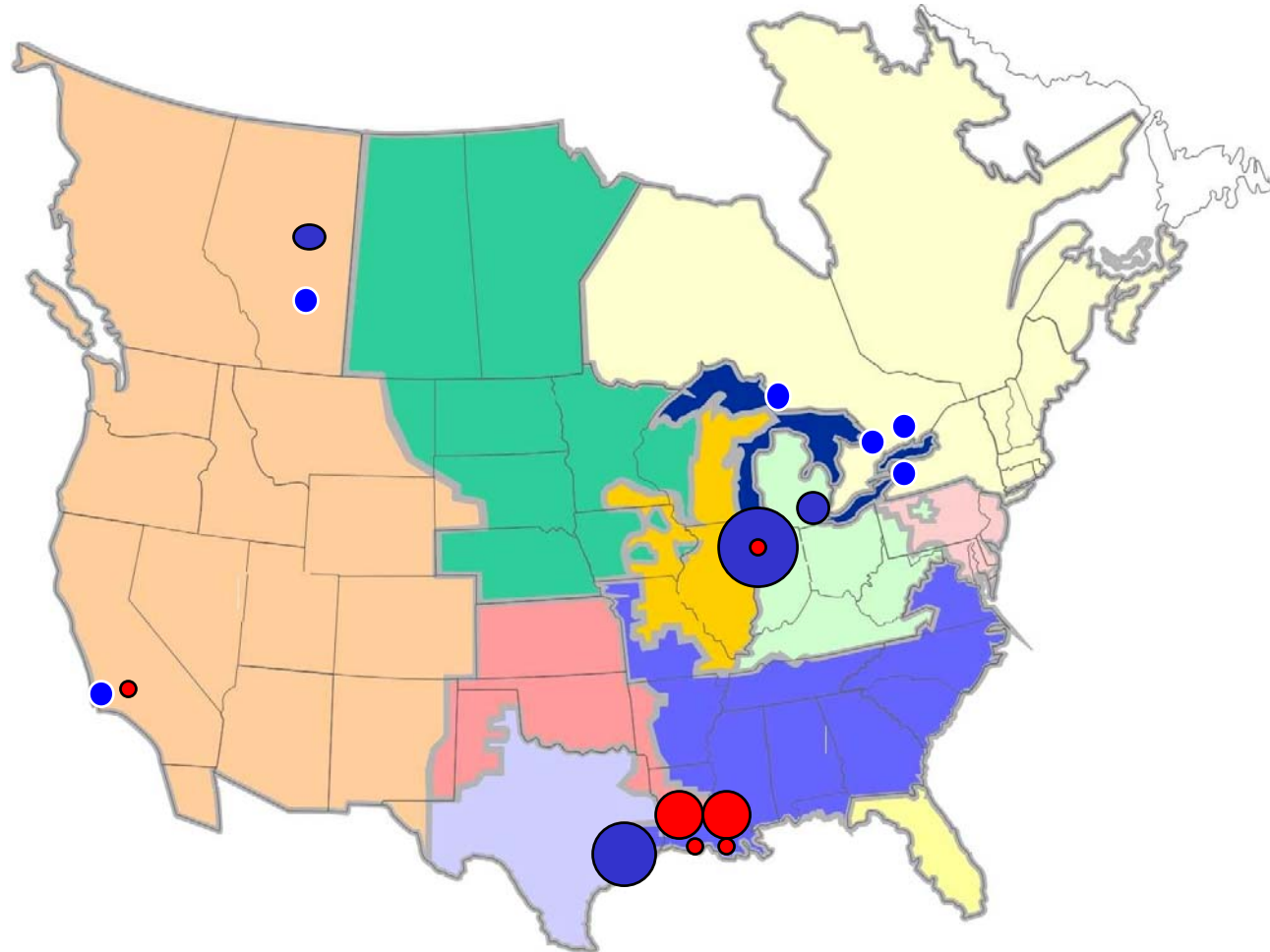
- \$ 340 MM
- 70 Plants / 34 Suppliers

Natural Gas

- \$ 250 MM
- HYCO = 88% of Volume

USA Power Supply by Fuel

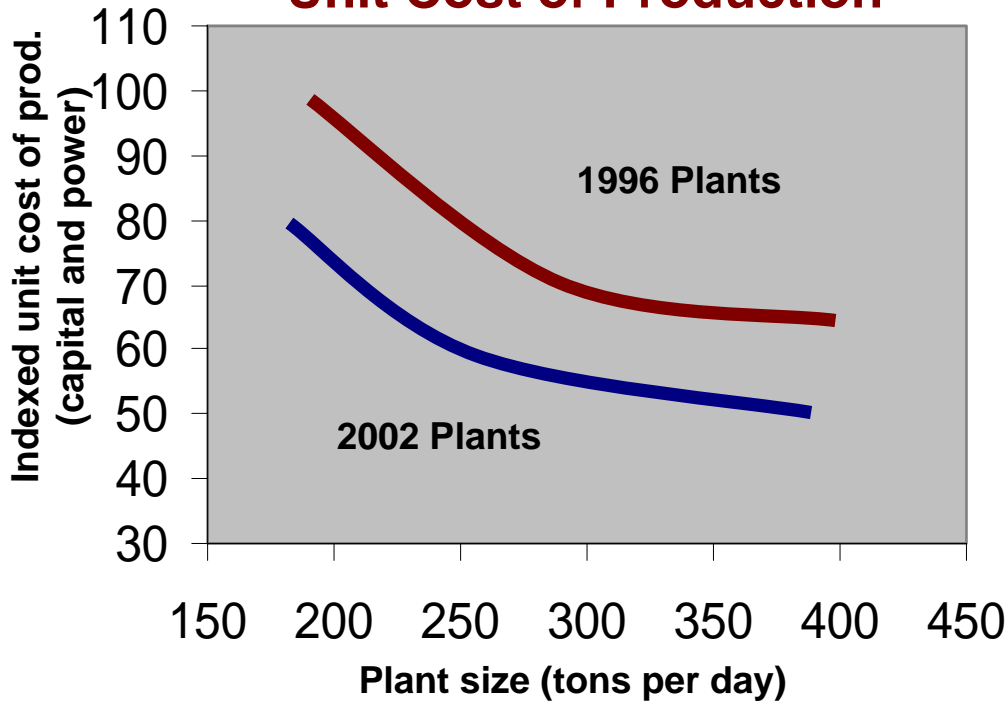
Fuel	Praxair
Coal	60%
Oil & NG	25%
Nuclear	10%
Hydro, etc.	5%



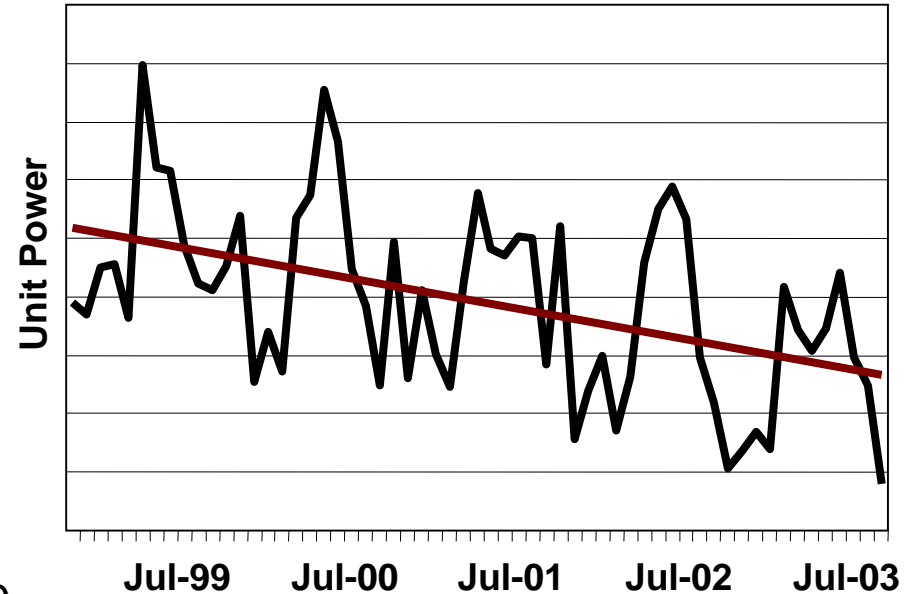
Colors on map denote North American power regions

Standardizing Plant Design and Driving Energy Efficiency

Unit Cost of Production



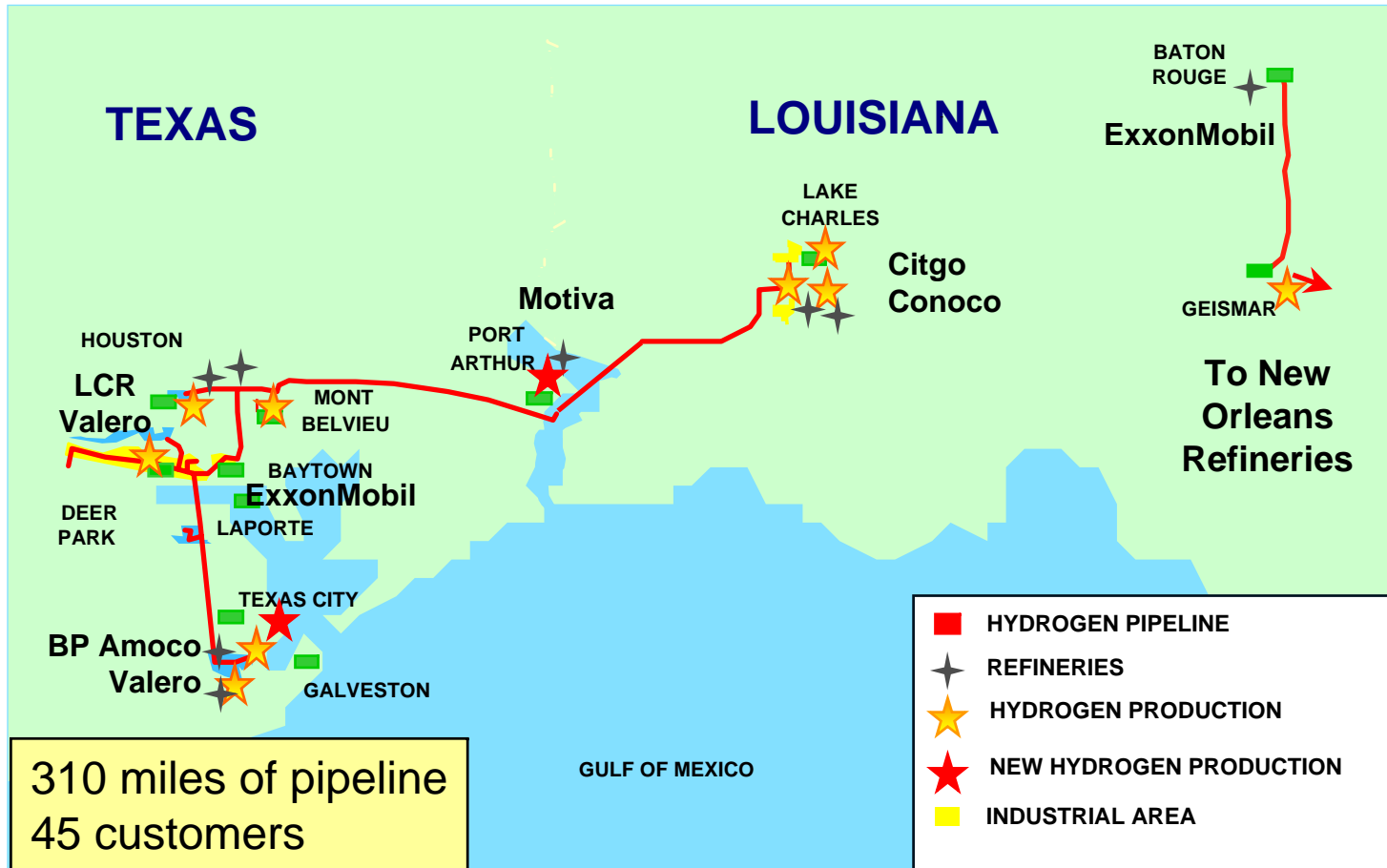
Merchant - North America



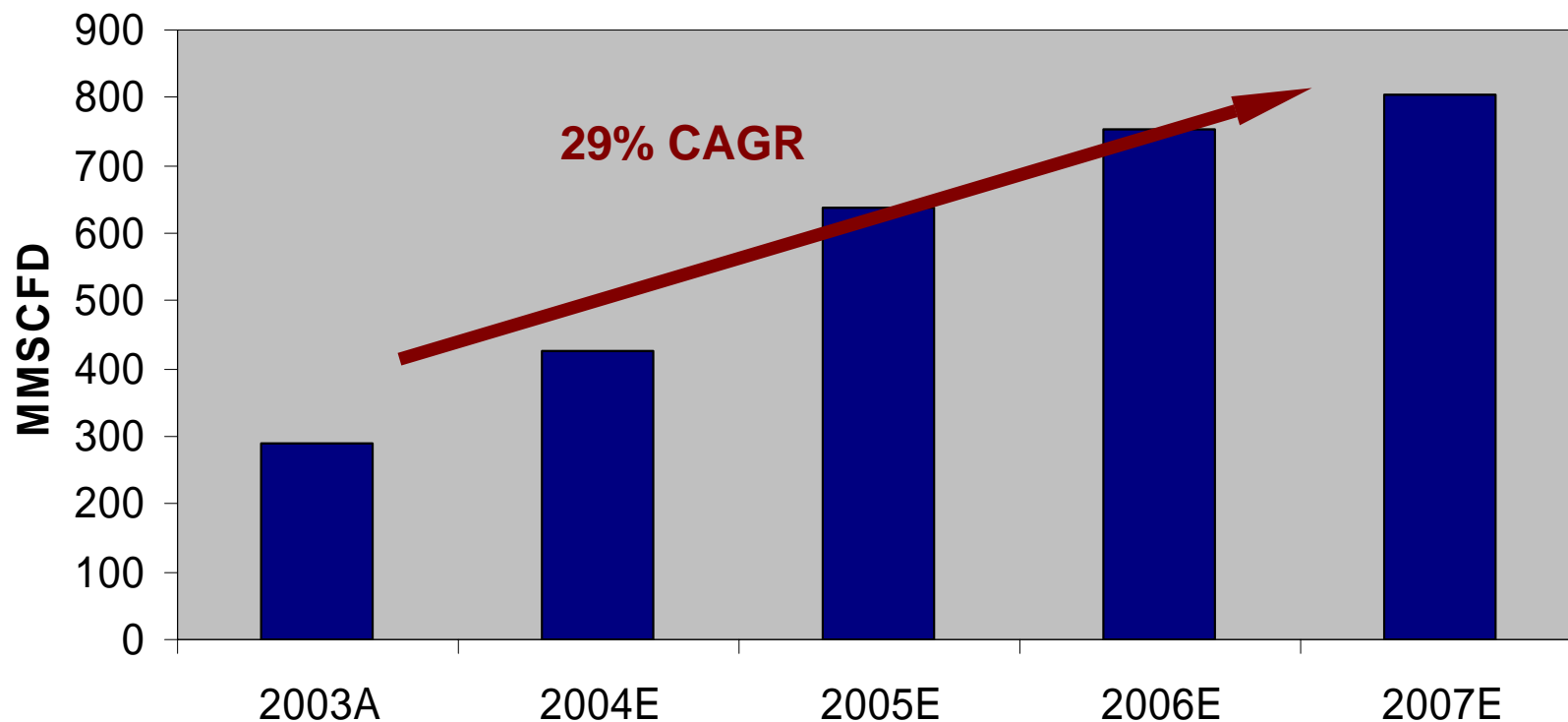
Unit cost of production has fallen 15-20%

Continuous improvement in energy efficiency

Best-Positioned For Gulf Coast Refinery Hydrogen



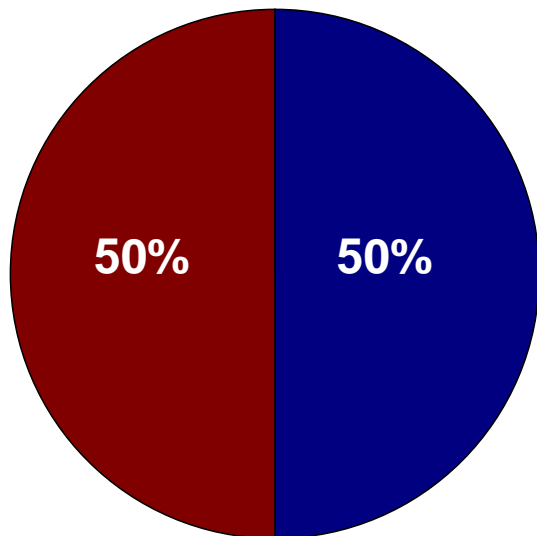
Praxair Gulf Coast Hydrogen Growth



Hydrogen volumes are expected to grow by 500mmscfd - 300mmscfd has been signed to date

Praxair 2003 Healthcare Sales

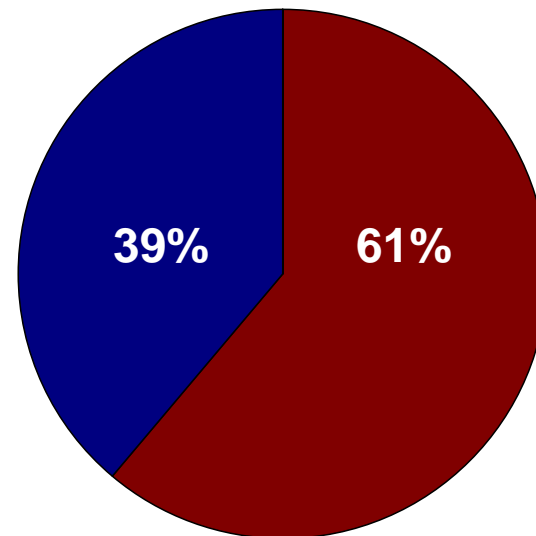
Global \$590MM



Regions

61% North America
 21% South America
 18% Europe/Asia

North America \$360MM



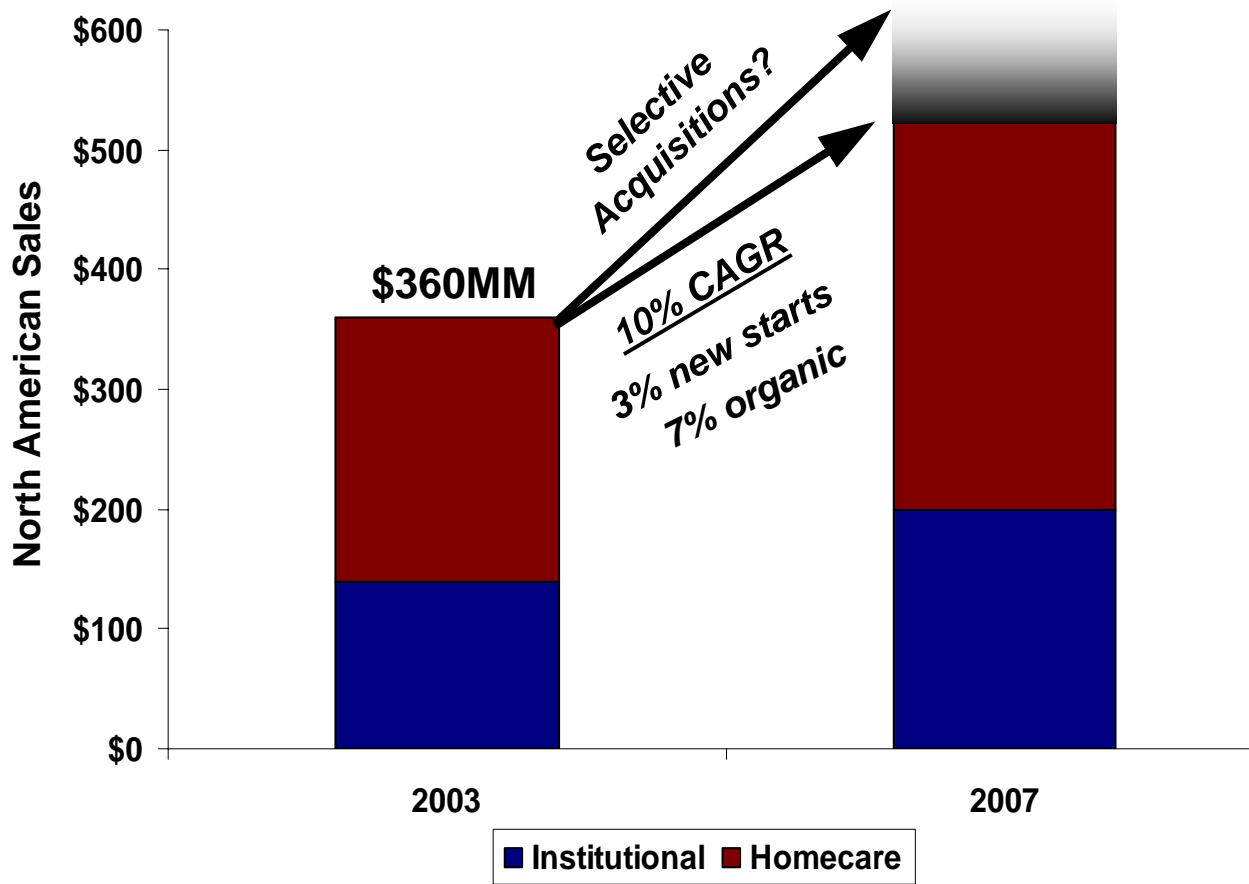
Homecare

106 Branches
 16 Acquisitions since 2000

Institutional

2,000 Hospital Customers
 20% Estimated Market Share

Healthcare: Multiple Growth Opportunities



Expected Growth Rates:

Organic Growth	7%
• Institutional	
• Homecare	
New Starts	3%
Acquisitions	<u>0-20%</u>
Total	10% +

Acquisition Discipline

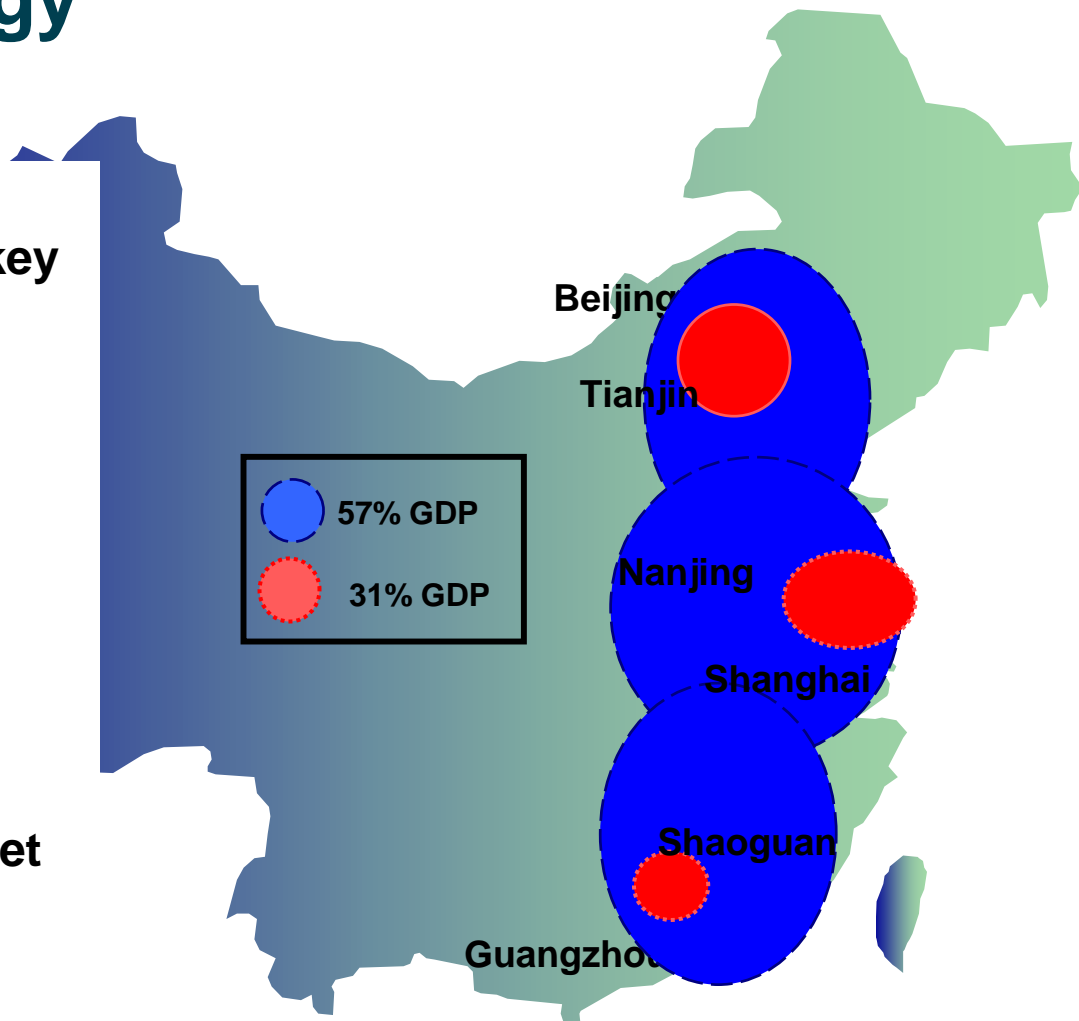
- ◆ High % respiratory
- ◆ Geographic overlap
- ◆ Valuation inclusive of rate cuts

Praxair China Strategy

- ◆ **Geographic Expansion**
 - ◆ Build leading position in 3 key corridors
 - ◆ Expansion into new developing enclaves

- ◆ **Selective Segmentation**
 - ◆ Metals
 - ◆ Chemicals
 - ◆ Electronics

- ◆ **Optimize Channels to the Market**

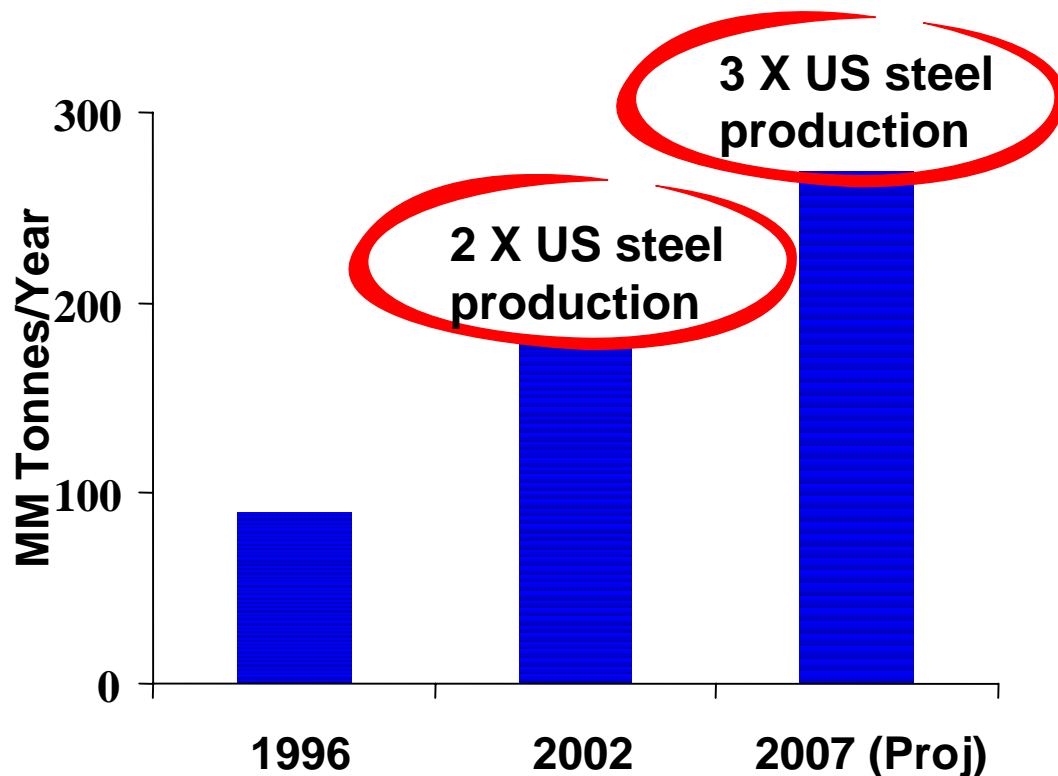


Maintaining a leadership position

China - Metals

- ◆ Demand driven by infrastructure and import substitution
- ◆ High quality customers:
 - ◆ Shaoguan Iron and Steel
 - ◆ Meishan Iron and Steel
 - ◆ Baoshan Iron and Steel

China Steel Production



Focusing on high quality producers in strategic geographies

China - Chemicals & Refining

Caojing Petrochemical Complex

- ◆ Praxair/Air Liquide 50/50 JV
- ◆ BP/ BAYER/ BAS/ Sinopec: \$8B+
- ◆ Air separation plant on-stream 10/2004
- ◆ HYCO plant on-stream 1/2005

Shell Nanhai Complex

- ◆ Shell/ CNOOC: \$4.3B+
- ◆ Air separation plant on-stream 5/2005
- ◆ Supplying merchant liquid to Guangdong province



Shanghai
Caojing

Shell/CNOOC
Nanhai

Developing strategic enclaves

China - Semiconductors

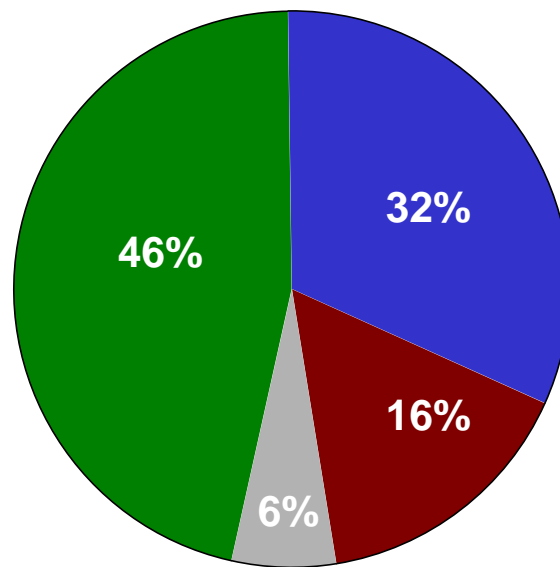
Shanghai Zhangjiang Technology Park

- ◆ 15 year contract to SMIC
- ◆ 15 year contract to Tailong

Beijing Technology Park

- ◆ Gas supply for SMIC's new 300mm wafer fab

**Contracted Chinese N₂ Market Share*
(200mm and 300mm fabs)**



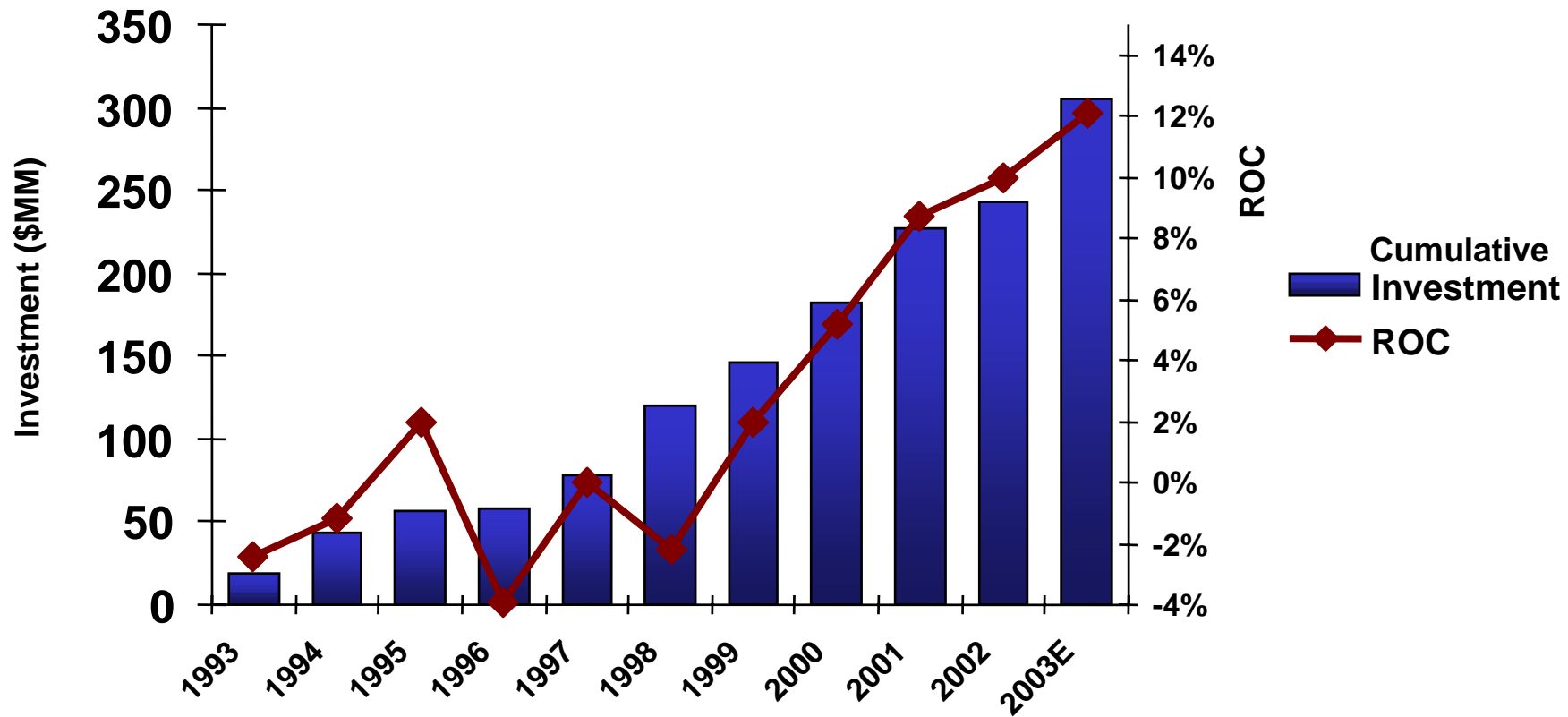
■ Praxair
 ■ Competitor A
 ■ Competitor B
 ■ Competitor C

Well positioned in a high growth market

* Praxair Estimate

China - Profitable Growth

Investment and Return on Capital



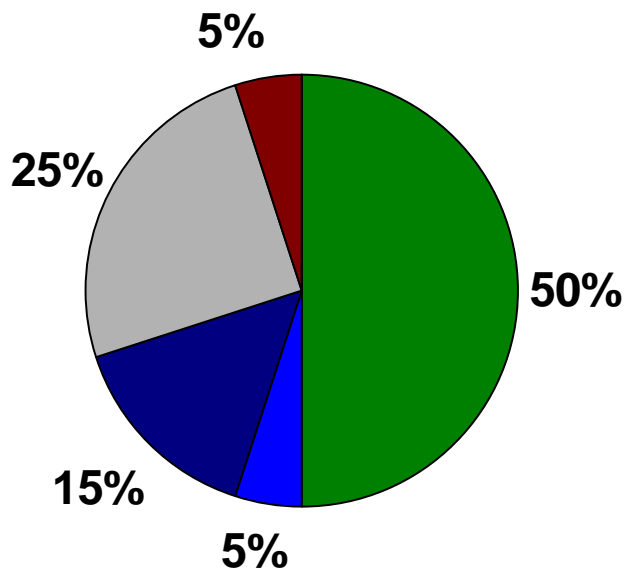
Improving return on capital

Capital Investment

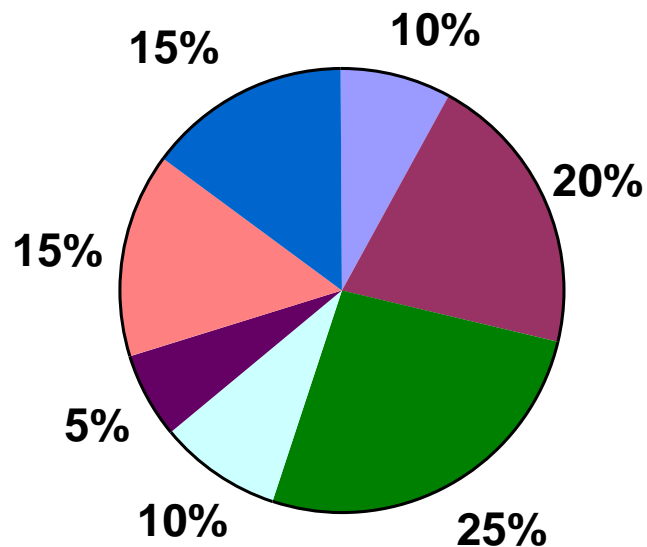
2004F: About \$700 MM

Growth 60% - Maint. 30% - Cost Reduction 10%

Growth CAPEX By Segment



Growth CAPEX By Market



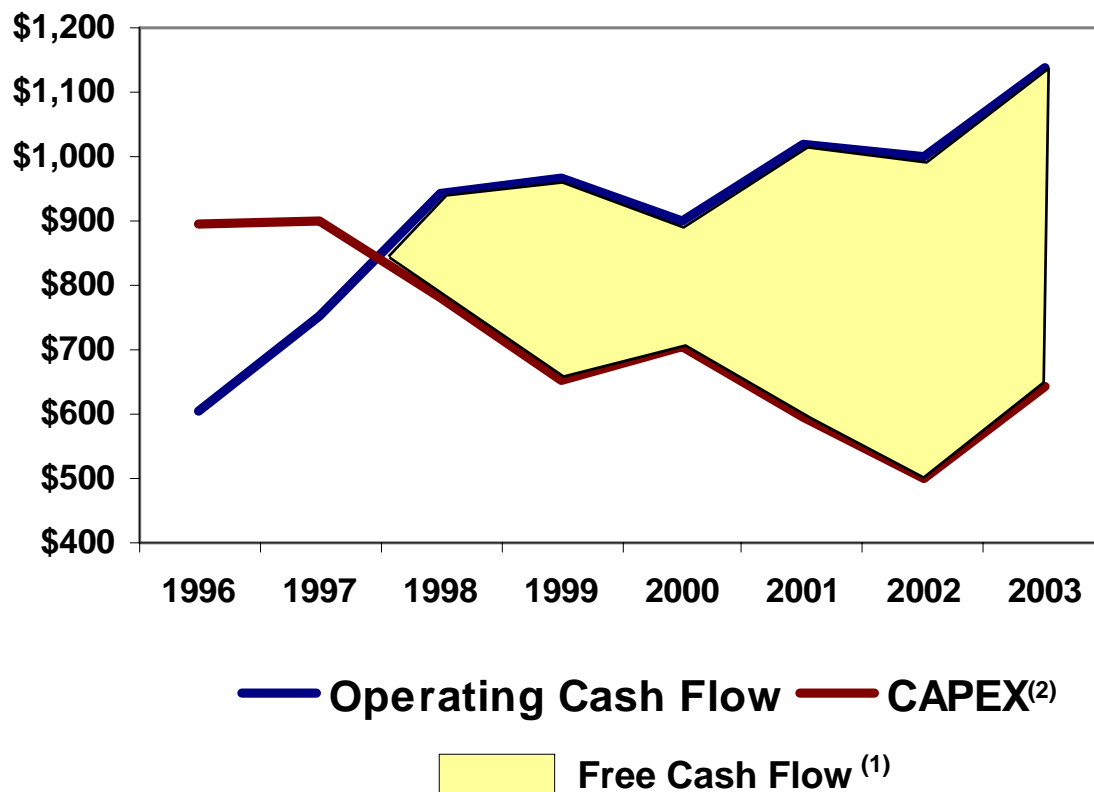
■ North America	■ South America
■ Europe	■ Asia
■ PST/Other	

■ Chemicals	■ Electronics
■ Energy	■ Food & Beverage/Healthcare
■ Manufacturing	■ Metals
■ Other	

Robust Free Cash Flow Generation

- ◆ Operating cash flow
11% CAGR
- ◆ Capital spending discipline - increased hurdle rates
- ◆ Uses of free cash flow
 - Dividends
 - Debt reduction
 - Selective acquisitions
 - Share repurchases

Free Cash Flow 1996-2003 (\$MM)



(1) Non-GAAP measure. Free cash flow equals operating cash flow minus capital expenditures.

(2) Excludes Leased Asset Purchase



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