

Energy Efficient Plant Certification Program: A Texas Industries Perspective

March 6, 2007

*Presented
by the
Chemical and Refining Advisory
Committee of Texas Industries
of the Future*



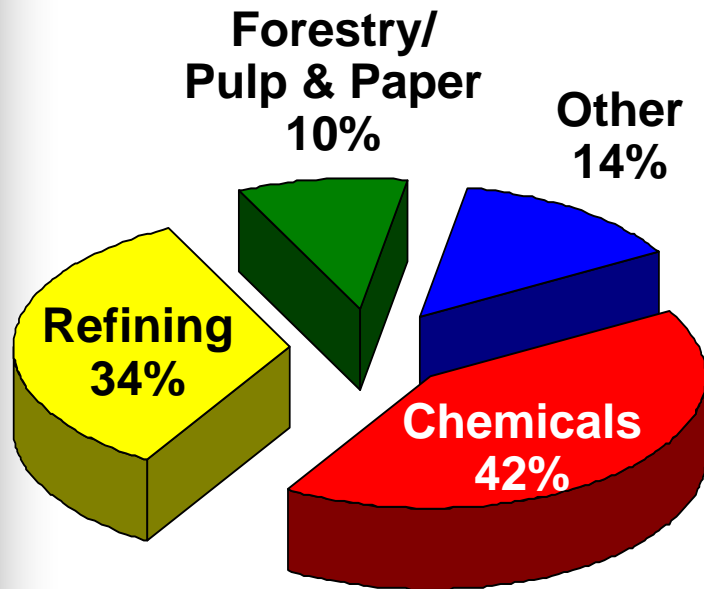
Texas Industries of the Future

The Texas Industries of the Future Chemical and Refining Advisory Committee

- Chevron Phillips Chemical Co., LP
- ExxonMobil
- Rohm & Haas Texas, Inc.
- Shell Global Solutions
- South Texas Section of AIChE
- Sterling Chemicals
- Tesoro Corporation
- Texas A&M
- Texas Commission on Environmental Quality
- Texas Petrochemicals LP
- The Dow Chemical Company
- The University of Texas
- Valero Energy Corporation



Why Texas Industrial Plants Are Active?

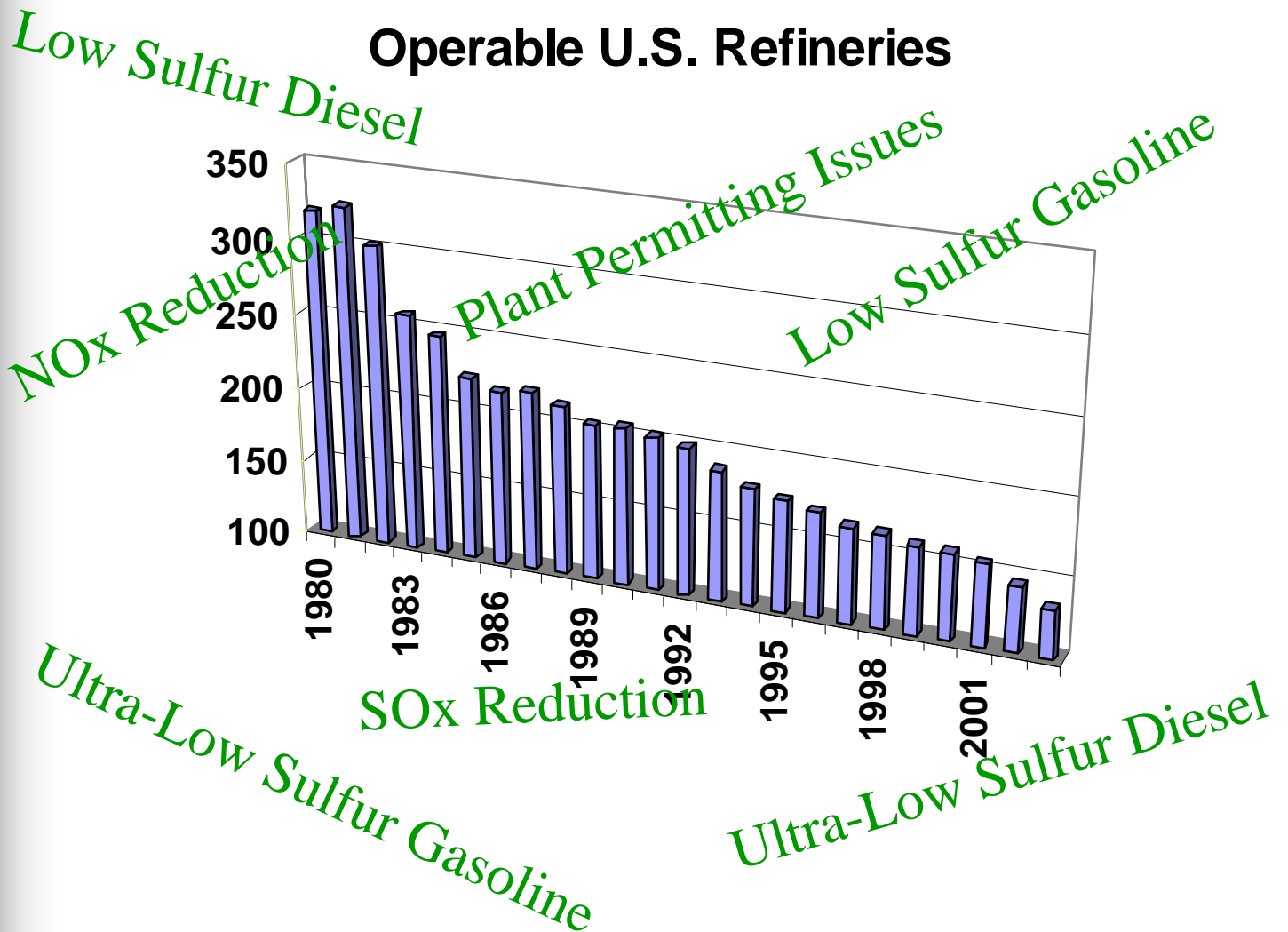


Percentage of Total Energy Use by Type of Texas Industry

- Texas is the leading industrial energy user in the US
- Texas consumes almost 20% of the energy used by industry in the U.S.
- 53% of the energy used in Texas is consumed by the industrial sector



Historical Trend In Refining Industry



Valero Houston Refinery

303 Acres Along The Houston Ship Channel
136,000 BPD Feedstock Capacity
4 Fired Boilers
2 Cogeneration Units
30 million SCFD Fuel Gas
24MW Electrical Demand
121% of Average U.S. Energy Intensity



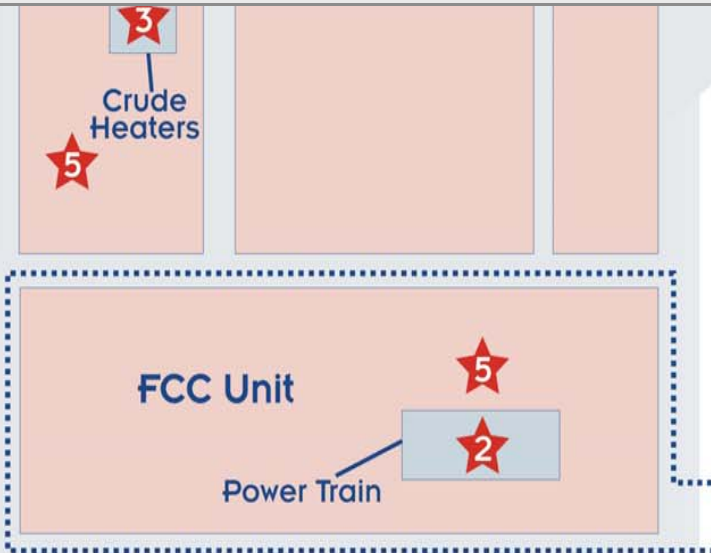
Technologies

DOE Partnership

Industrial Assessment By Texas A&M
Conduct Survey of Energy Systems
Study Feasibility of Opportunities
Install Off-line Energy Management System
Implement Energy Savings Plan

System Assessments and DOE Workshops:

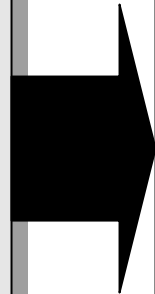
Rotating Equipment
Fired Heaters
Compressed Air
Steam Systems



Promotion of Energy Technology

2003-- Advisory Committee looked at ways to promote energy efficiency:

2003 Texas Technology Showcase Participants



2006 Texas Technology Showcase Participants



STERLING
CHEMICALS





Texas Industries of the Future



Texas Industrial Energy Management Forum

Motivating Energy Performance - Houston, April 6, 2006

From Plant Basics to the Global Perspective - Houston, October 6, 2005

Texas Industrial Energy Management Forum - Beaumont, April 7, 2005

Award Winning Technologies, Projects, and Programs - March 3, 2005

Energy Program: Building Success from Process to Corporate - Nov. 4, 2004

Identifying New Opportunities - March 4, 2004

How to Cope with Rising Energy Costs - November 6, 2003

Model for Energy Efficiency Program



OSHA Voluntary Protection Program

- A national program initiated in 1982
- Average VPP worksite has a Days Away Restricted or Transferred (DART) case rate of 52% below the average for its industry.
- Texas has the largest number of members in the VPP.
- Successful because it makes safety “everyone’s job”.

Benefits For a Energy-Efficiency Plant Certification Program

Review:

2003 Texas Showcase Led To Texas Industries Of The Future Setting Goal For More Recognition For Plants With Successful Energy Efficient Programs.

Next:

The Benefits The Committee Hopes To Achieve.

Benefits For a Energy-Efficiency Plant Certification Program

The Benefits

- Plants will see REAL reductions in energy use, cost and environmental footprint, improving their economic sustainability and keeping manufacturing here in the US.
- The structure of the program will support sustainable energy efficiency efforts—not sliding back to “business as usual” when energy prices go down.
- Plants have a common mechanism for communicating about progress re: greenhouse gas and energy efficiency with stakeholders.

Benefits For a Energy-Efficiency Plant Certification Program

The Benefits (cont.)

- Tiered membership structure allows sites to begin where they are, and recognizes them for continuous improvement, fueling organizational commitment and action around energy efficiency.
- Provides a recognized structure for energy efficiency progress at the plant level, leveraging DOE tools and other national efforts.
- Fosters an energy-efficiency culture at the plant.
- Add incentives for efficiency projects.



Texas Pilot Program (2007-2008)

Current Plan

- Develop information needs, performance criteria, and gap assessment methodology.
- Work with five Texas plants to apply the methodology.
- Determine value realized by participating plants (energy savings, cost savings, management system changes, environmental improvement.)



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