



## ***Texas Industries of the Future***

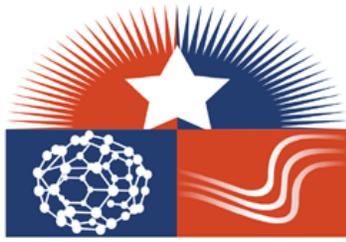
### **Texas Industries of the Future Chemical and Refining Sectors Strategic Plan 2010-2020**

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# ***Texas Industries of the Future***

## **Vision of Texas Industries of the Future**

*Texas industries will be world class and sustainable in balancing environmental, economic, and social aspects.*

## **Background on Texas Industrial Energy Use**

Texas' industrial sector is the most energy intensive of all states, as a result of the significant presence of chemical manufacturers and refineries. Below is a summary of statistics on Texas industrial energy use and value of shipments.

- Fifty percent of the energy used in Texas is consumed by the industrial sector. Nationally, only 32% of the energy used is consumed by industry.<sup>1</sup>
- Texas has the highest percentage of large energy intensive plants, at 8% of the US total. California is next, at 5% percent of the US total. (DOE large plant list, State Partnership Solicitation, 2006).
- Texas consumes 18% of the energy used by industry in the US. The next largest industrial energy consumer is Louisiana, at 7% of the US total.<sup>2</sup>
- Industrial energy usage in the South Census region, which includes Texas, is dominated by two sectors: chemicals and refining. They constitute 52% of industrial energy usage in the South Census region.<sup>3</sup>
- Texas's 27 petroleum refineries can process more than 4.7 million barrels of crude oil per day, and they account for more than one-fourth of total U.S. refining capacity.<sup>4</sup>
- In 2006 Texas refineries and chemical plants accounted for 17% and 15% respectively of the value added by manufacturing in these sectors nationally.<sup>5</sup>

## **Mission of the Program (Chemicals and Refining Sectors)**

From 2010 to 2020, Texas Industries of the Future is committed to working with Texas industries to facilitate progress towards energy intensity reduction goals set by the US DOE and the Energy Policy Act of 2005

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<sup>1</sup> Energy Information Administration, State Energy Data 2007, Table S1

<sup>2</sup> EIA, State Energy Data 2007, Table S6

<sup>3</sup> EIA, MECS data, 2006, Table 3.2

<sup>4</sup> EIA, State Energy Profiles, updated January 2010

<sup>5</sup> US Census Bureau, Sector 31: Annual Survey of Manufacturers: Geographic Area Statistics: Statistics for All Manufacturing by State: 2006 and 2005.

## **Strategies of the Program<sup>6</sup>**

1. Increase the development and adoption of technologies and best practices that improve energy efficiency and environmental performance and reduce cost in the chemical and refining industries.
2. Increase industry and government awareness of the benefits and the need for integration of industry energy efficiency and environmental technology and practice improvements.
3. Strengthen partnerships among Texas industries, universities, associations, governments, and NGOs, so as to focus research and projects on high priority areas.

### **Tasks by Strategy**

1. Increase the adoption of technologies and best practices that improve energy efficiency and environmental performance and reduce cost in the chemical and refining industries.
  - a. Develop a Best Practice check list, with a focus on sustaining energy efficiency at low utilization rates.
  - b. Develop a Focus Area in waste heat, to include the development of evaluation tools, expertise development and feasibility analysis.
  - c. Develop a Focus Area in cooling system optimization, to include assessment protocol development, assessments, and best practices documentation.
  - d. Conduct a third Technology Showcase, as a component of other energy conferences.
  - e. Offer/promote four trainings per year on Best Practices in energy systems, management, or technologies.
  - f. Conduct at least two Texas Industrial Energy Management Forums annually (jointly with South Texas AIChE and other organizations).
  - g. Pilot the national energy-efficiency certification program at 5 sites in Texas in 2008-2011.
  - h. Network with manufacturing and business organizations in the state to promote energy efficiency tools and resources to small and medium sized facilities.
  - i. Organize an energy management session at the regional Process Technology Conference (hosted by AIChE).
  - j. Demonstrate Superior Energy Performance, the national energy-efficiency certification program, and ISO 50001 at five Texas plants (2011-2013).

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<sup>6</sup> It is the policy of Texas Industries of the Future to conduct all activities (including those of its committees, subcommittees, work groups and task forces, if any) in strict compliance with all applicable antitrust and competition laws. Texas Industries of the Future expects all participants in its activities, including invited guests, to also comply.

- k. Facilitate communication with suppliers of specific energy system equipment to increase the suppliers' knowledge of industry's needs, encourage research to meet these needs re: cost and efficiency, and increase end-user awareness of what is currently available.
  1. Identify technologies. Identify specific technologies and features of interest to industry that do not appear to be available.
  2. Increase end-user awareness of existing technology. Organize a Technology Showcase of vendors that have technologies that meet the criteria that have been identified by end-users.
  3. Increase supplier awareness of industry needs. Hold a meeting with suppliers of selected equipment in order to communicate industry's needs and determine whether there are common barriers to advancing the technology that could be addressed through a coordinated initiative.
2. Increase industry and government awareness of the benefits and the need for integration of industry energy efficiency and environmental technology and practice improvements.
  - a. Coordinate with Texas Chemical Council to offer an energy efficiency component to their annual EHS seminar.
  - b. Promote awareness and participation in NGO and government-sponsored energy efficiency and environmental improvement awards, so as to recognize Texas' industrial leaders in energy efficiency.
  - c. Conduct education and awareness on the greenhouse gas issue as it pertains to Texas industries and efficiency.
3. Strengthen partnerships among Texas industries, universities, associations, governments, and NGOs, so as to focus research and projects on high priority areas.
  - a. Develop a Focus Area in waste heat, to include the development of evaluation tools, expertise development and feasibility analysis. (same as 1b).
  - b. Develop a Focus Area in cooling system optimization, to include assessment protocol development, assessments, and best practices documentation. (same as 1c).

### **Performance Indicators for 2015 (mid-point evaluation)**

- 30% of the top energy using plants in Texas have attended a Texas IOF/DOE training, conference, forum or workshop (2010-2014).
- Energy intensity of Texas chemicals and refining sectors is decreasing (decrease in Btu per unit of output).

- Texas Industry recognized by DOE/EPA as a leader in energy management.
- From 2010 to 2014, increase of 500% in the number of entities from Texas that become US DOE “Save Energy Now” Leaders or are part of corporations that are Leaders.