Sustainable Energy in Texas

Clean, Safe Energy That's Renewable and Efficient

Did you know ... that the price of photovoltaic electricity has dropped dramatically from $15 per kilowatt-hour in 1975 to less than 25¢ per kilowatt-hour today; the cost of wind energy has dropped over 50%?

And... that Texas is ranked second among states for total photo-voltaic power generation and seventh for total solar hot water use?

Jobs in Sustainable Energy

The U.S. Department of Energy's (DOE's) National Renewable Energy Laboratory (NREL) leads the nation in research and development and lab-scale demonstration of sustainable energy technologies. In FY 1997, a total of $582,000 in research contracts, service subcontracts, and procurements was awarded to Texas organizations by NREL.

NREL's many programs help facilitate technology development with interested consumers and potential partners from industry, business, academia, and the global community. NREL's alternative energy technologies, which are clean and green, include:

- Photovoltaics
- Wind
- Biofuels
- Biomass power
- Hydrogen
- Superconductivity
- Solar thermal
- Geothermal
- Hybrid vehicles
- Building energy systems
- Industrial applications of solar power.

NREL has cooperative research and development agreements (CRADAs) with the following organizations in Texas (total dollar value shown; some partnership work has been completed):

SEMATECH - $574,450
Texas Instruments - $600,000

DOE's Federal Energy Management Program (FEMP) activities could add nearly 900 jobs each year and save people in Texas an estimated $46.5 million in annual energy costs.

Clean Energy = Clean Environment

The clean electricity generated from renewable energy sources in Texas from both utility and nonutility generators displaces about 630 tons of carbon dioxide (measured in carbon units) per year that would be emitted by coal-fired power plants.

Between March 1996 and March 1997, the U.S. Environmental Protection Agency's Green Lights and Energy Star programs helped save 800 million kilowatt-hours in Texas. This saved consumers in the state at least $55 million in energy bills and prevented 1.35 billion pounds of carbon dioxide from entering the atmosphere. Projected cost savings through the year 2000 resulting from energy investments already made is $213.4 million.

Economic Benefits

In 1996, DOE's Office of Energy Efficiency and Renewable Energy (EE) invested $9.7 million in Texas. Texas's consumer energy cost savings from EE research and development are estimated to be more than $2 billion.[1]

- There are nearly 100 businesses in Texas specializing primarily in renewable energy-related products and services.
- State weatherization programs, aided by federal funding from the U.S. Department of Energy, helped more than 1,519 low-income and other disadvantaged Texas families in FY 1997.
- EE formed a partnership with 3M Corporation in Austin to develop a no-solvent coating process that uses ultraviolet light. The project will reduce volatile organic compound emissions and

Did you know... that much of the rich Texas wind and solar potential lies in the rural regions of west and south Texas, where jobs and economic development are sorely needed?

And... that despite its reputation as an oil state, Texas is now an energy importer, buying electricity from other states?

save $159 million annually by 2010 for industries using this coating process.

- EE's Clean Cities program provided $200,000 to the Natural Gas Vehicle Technology Center in Austin to evaluate the performance and emissions of light-duty vehicles converted to run on compressed natural gas and liquefied petroleum gas. Clean Cities also granted the Texas State Energy Office $95,000 to develop an alternative fuels implementation plan at the new Austin airport.
- Since 1991, the Metropolitan Transit Authority of Houston (Metro) has run a pilot program of 14 buses on liquefied natural gas (LNG). In March 1993, because of this pilot program's success, Metro began operating a total of 42 buses on LNG and has continued to add to the fleet. Metro now has the largest fleet of LNG-fueled buses in the world.
- FEMP negotiated with Veterans Administration Headquarters to accelerate an energy-savings performance contract with Texas Utilities to design and construct a comprehensive thermal storage system at the Veterans Affairs Medical Center. The project will achieve almost $233,000 in energy savings per year.
- A government-industry partnership is bringing clean, environmentally beneficial wind power to an area in west Texas. The U.S. Department of Energy and the Electric Power Research Institute have entered into a $5.6 million agreement with a municipal utility to construct and operate a 4,500-kilowatt wind power project at two sites, one near Brownfield, and the other near Lubbock. The costs of renewable energy sources such as wind power are declining steadily, making wind and other renewables more competitive as clean energy alternatives that will help reduce greenhouse gases.

Want More Information?

Office of Energy Conservation Consumer Hotline
800-OEC-6662

Energy Efficiency and Renewable Energy Clearinghouse (EREC)
800-363-3732
http://www.eren.doe.gov

National Renewable Energy Laboratory (NREL)
800-644-NREL
http://www.nrel.gov

Federal Energy Management Program (FEMP)
http://www.eren.doe.gov/femp/

National Association of State Energy Officials
http://www.naseo.org/

U.S. Environmental Protection Agency's (EPA) Green Lights and Energy Star
http://www.epa.gov/energystar.html

[1]Based on a GAO review and validation of the energy savings of EE research and development success stories.

Questions?
Call Katherine Hamilton, Manager, Government Relations
202-651-7521

National Renewable Energy Laboratory
NREL is a national laboratory of the U.S. Department of Energy (DOE), managed for DOE by Midwest Research Institute

BR-24-710