

Renewable Energy in Texas

Summary

A major player in the energy industry, Texas is the country's largest producer of energy and is the only state with its own power grid. It also leads the nation in wind power generation, with more than twice the installed capacity of the second best state for wind power, California. In recent years, Texas has begun updating its power grid to facilitate more renewable energy generation, by adding new high-voltage power lines and applying smart grid and microgrid technologies. The state exceeded its renewable generation requirement 16 years ahead of schedule, but has not met its goal of installing 500 MW of new, non-wind renewable energy facilities. In particular, the state has a nationally notable solar resource potential, but with few financial incentives to support installations, the pace of development may remain behind other solar leaders.

Installed Renewable Energy Capacity, 2012			
Wind Power	12,214 MW	Marine Power	0 MW
Solar Photovoltaic	140.3 MW	Biomass & Waste	463 MW
Solar Thermal Electric	0 MW	Ethanol	355 mGy
Geothermal Power	0 MW	Biodiesel	592 mGy
Hydropower	698 MW	Totals	13,515 MW; 947 mGy

Sources: See User's Guide for details

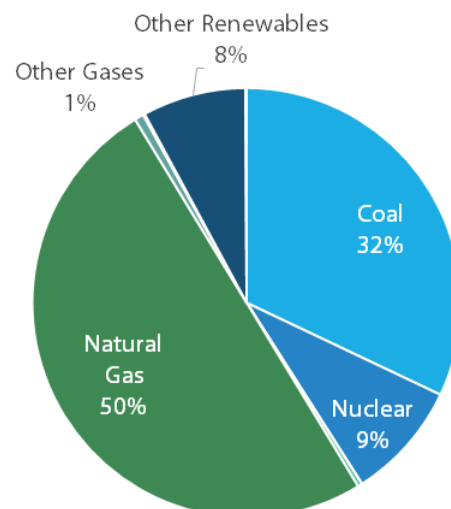
Market Spotlight

- ▶ The Fort Bliss Army Base unveiled the Army's first microgrid in May 2013, which integrates renewable energy, local power, energy storage, and load management to provide uninterrupted, continuous power to the base. Additionally, plans have begun to build a 20 MW solar PV project on the base, which is expected to be complete by 2015.
- ▶ A massive \$7 billion transmission line project, totaling over 3,500 miles of transmission lines, was expected to be completed at the end of 2013. The transmission lines are designed to carry about 18.5 GW of wind power from wind turbines located in West Texas to population centers in the east of the state.
- ▶ A 41 MW solar PV project was commissioned in July 2013 near Alamo. The project is the first phase of the larger 400 MW Alamo Solar Project, which is slated for completion in 2016.
- ▶ In June 2013, a biodiesel plant in New Boston opened with a production capacity of 15 million gallons per year, which uses poultry fat from local processors to create biofuel.
- ▶ Texas continues to set new records for wind power use. On November 10, 2013 at 10:21 a.m., wind power output provided nearly 26% of the state electric grid's (ERCOT's) system load, breaking a previous record set in June 2012.¹³

Economic Development

Employment	2011	
Green Goods & Services Jobs	227,532	
Investment (Grossed-up)	2011	2012
Asset Finance	\$1.09bn	\$2.27bn
Venture Capital & Private Equity	\$217.7m	\$65.8m

Sources: Bureau of Labor Statistics (BLS); Bloomberg New Energy Finance (BNEF). See User's Guide for details.



Electricity Generation, 2012 (EIA)

Updated January 2014

¹³ http://www.ercot.com/news/press_releases/show/26342

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State Policy

Renewable Generation Requirement	<ul style="list-style-type: none"> ▶ 5,880 MW by 2015; goal of 10,000 MW by 2025 (reached 2025 goal 16 years ahead of schedule) ▶ Investor-owned utilities (IOUs), retail electric suppliers are eligible; municipal utilities and co-ops may opt-in ▶ Non-wind goal of 500 MW (compliance value doubled for non-wind renewable energy) ▶ Capacity must be located in state
Interconnection Standards	<ul style="list-style-type: none"> ▶ IOUs ▶ System capacity limit of 10 MW ▶ External disconnect switch required; additional insurance required for certain systems
Loans	<p>LoanSTAR Revolving Loan Program:</p> <ul style="list-style-type: none"> ▶ Low-interest loans for energy-related, cost-reduction retrofits at state, public school district, public college district, and tax-district supported public hospital facilities ▶ Applicants repay loans through energy cost savings realized from project ▶ Maximum incentive of \$7.5m; project must have composite payback of ten years or less ▶ Program budget of \$190m
Tax Incentives	<p>Property Tax Exemption:</p> <ul style="list-style-type: none"> ▶ For the appraised property value from the installation or construction of a wind, solar, or biomass energy device <p>Solar and Wind Energy Business Franchise Tax Exemption:</p> <ul style="list-style-type: none"> ▶ For companies that exclusively manufacture, sell, or install solar or wind energy devices ▶ No ceiling on exemption <p>Solar and Wind Energy Device Franchise Tax Deduction:</p> <ul style="list-style-type: none"> ▶ Cost of a solar energy device may be deducted from franchise tax (10% of amortized cost of the system from a corporation's appropriated margin) <p>Diesel Fuel Blend Tax Exemption:</p> <ul style="list-style-type: none"> ▶ Biodiesel or ethanol portion of blended fuel containing taxable diesel exempt from the diesel fuel tax
More Info	<ul style="list-style-type: none"> ▶ DSIRE Database: www.dsireusa.org/incentives/index.cfm?state=TX ▶ Public Utility Commission (RPS): www.puc.texas.gov/agency/rulesnlaws/subrules/electric/25.173/25.173ei.aspx ▶ State Energy Conservation Office: www.seco.cpa.state.tx.us ▶ Governor's Energy Page: www.governor.state.tx.us/priorities/infrastructure/energy ▶ ERCOT: www.ercot.com