



Renewable Energy and Your Electric Utility



RENEWABLE ENERGY
THE INFINITE POWER
OF TEXAS

SECO FACT SHEET NO. 20

Government Publications
Texas State Documents

JUN 17 2003

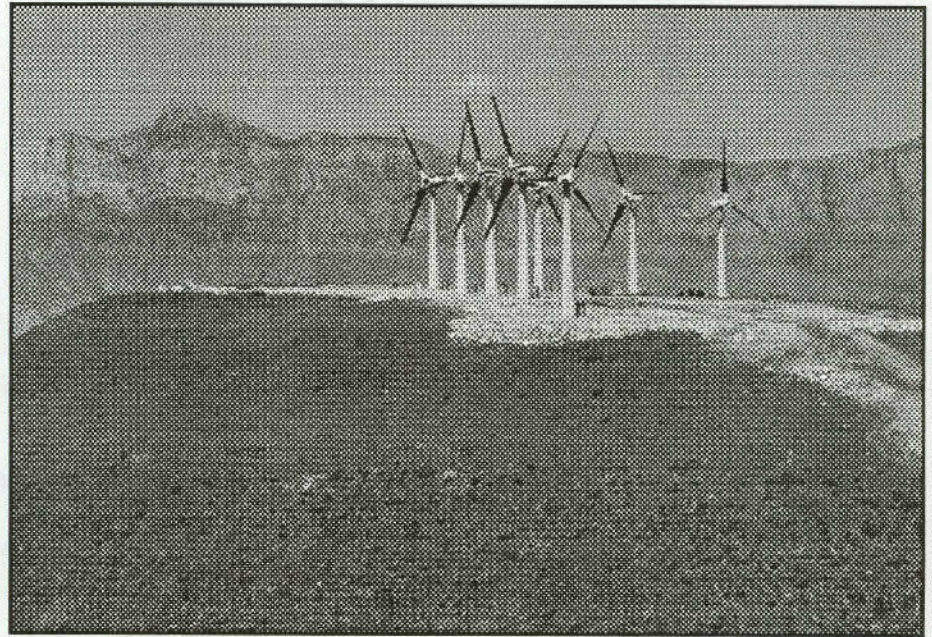
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HIGHLIGHTS

- ◆ Renewables account for less than 1% of electricity consumption in Texas
- ◆ Texas customers want clean, affordable energy from renewable sources
- ◆ You can encourage your utility to invest in "green" electricity

SUMMARY

Consumers want clean, renewable energy. And Texas — with more renewable potential than any other state — has it. A 1998 poll of Houston residents found that 86% wanted their utility to use more renewable sources. In other recent polls, 80% to 90% of customers from four of the state's largest utilities said they would pay more for renewable energy. Fortunately, renewables are becoming cost-competitive with traditional methods of electricity production. Public opinion and input will play an important role in determining how utilities incorporate renewable resources.



SOURCE: LOWER COLORADO RIVER AUTHORITY

Clean, low cost electricity for Texas *New wind farms similar to this one in the west Texas mountains near Van Horn, could become a major source of home-grown power in the future.*

RENEWABLES HAVE ROOM TO GROW

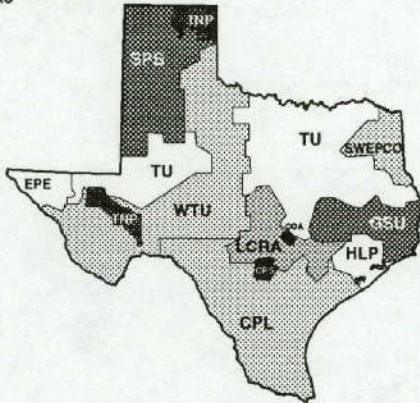
Whether the resource is wind, solar or biomass, Texas utilities have only begun to corral the state's vast energy potential. Less than 1% of the \$15 billion worth of electricity sold in Texas every year comes from renewable sources. And if you don't count the 643 megawatts of hydropower that have been around for decades providing the lowest cost

electricity available, renewable resources account for less than 0.1% of the electricity generated in Texas.

Some utilities across the state are looking to change those meager statistics by adding more green capacity. In fact, the amount of wind-generated electricity in Texas is expected to at least quadruple by the year 2000. Renewables are growing more attractive for a simple reason:

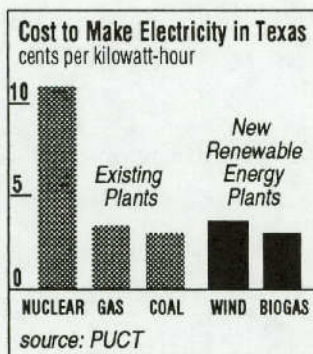


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Electricity from Texas renewables

Utilities in Texas currently generate less than 1% of their electricity from renewable energy sources. The national average is 10%. Texas hydropower accounts for about 1% of capacity, while solar, wind and biomass combined amount to about 0.1%. Utilities such as Central and South West Services and Texas Utilities are responding by signing contracts for more renewable energy.



Renewable energy is affordable

Clean electricity from landfill gas and wind plants cost in the same range as electricity from new coal and gas plants (all are about 3-4 cents/kWh). Other small-scale renewable energy systems such as photovoltaics, solar water heaters and ground source heat pumps are competitive for many household and specialized end-use energy applications.

UTILITY	RESIDENTIAL RATE (cents/kWh)	SYSTEM CAPACITY (MW)	RENEWABLE CAPACITY (MW)	PERCENT RENEWABLE (%)
Texas Utilities (TU)	8.2	21,700	1	0.005%
Houston Lighting & Power(HLP)	9.0	14,700	0	0
Gulf States Utilities (GSU)	7.7	6,700	0	0
Central Power & Light (CPL)*	8.5	4,300	0	0
Southwestern Public Service Co. (SPS)	6.3	3,900	1	0.03%
Southwestern Electric Power Co.(SWEPCO)*	6.5	4,400	0	0
City Public Service of San Antonio (CPS)	6.5	4,400	0	0
Lower Colorado River Authority (LCRA)	n/a	2,100	25	1.2%
City of Austin Electric Utility (COA)	6.9	2,400	13	0.5%
West Texas Utilities (WTU)*	8.0	1,400	8	0.6%
El Paso Electric (EPE)	10.1	1,200	0	0
Texas-New Mexico Power Co. (TNP)	9.1	1,000	0	0
TEXAS TOTAL		65,000	48	0.07%

* Central and South West Services (CSW) utility service company

price. Wind power and landfill gas-to-energy projects are now cheaper than new coal or nuclear plants. And while these renewable sources may still be slightly more expensive than the latest combined cycle natural gas-fired technologies, some utilities are convinced the time to invest in renewables is now.

RENEWABLE ADVANTAGES

Renewable energy sources are virtually pollution-free, have no fuel costs and use local resources. Unlike fossil and nuclear plants, renewables are a low risk choice because they don't have "extras" that end up costing consumers more in the long run.

Examples of extra costs that can crop up in the future are higher than expected fuel prices and compliance with new laws protecting public health and the environment. Coal and gas plants may face new regulations designed to limit greenhouse gas emissions or reduce air pollution. If this happens, customers will have to pay more for their electricity. Renewables lessen such risks while offering economic benefits to Texas. Communities such as Van Horn and Brownfield have attracted renewables development to their area to gain local jobs and increase property tax revenues. When such risks and benefits are taken into account, investing in

renewables makes fiscal sense today.

GREEN PRICING

Some companies are beginning to capitalize on consumer interest in clean energy by offering electricity derived from renewable sources at a premium price. Two utilities in Texas have begun marketing green pricing programs. In October 1997, West Texas Utilities began delivering green electricity through its "Clear Choice" pilot program in San Angelo. Customers are charged 10 cents per kilowatt hour, or about 25% more than the utility's standard rate of 8 cents per kilowatt hour, for power from renewable sources. The city of Austin's utility gives customers the opportunity to promote PV development through its "Solar Explorer" program. Donations of \$3.50 per month are accumulated to facilitate PV installations throughout the local community. The first installation is expected in 1998.

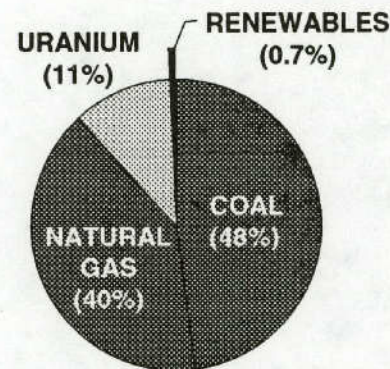
A more traditional approach to greening a utility is simply to add clean resources into the fuel mix. With this method, the cost of new renewable energy sources are spread around to everyone benefiting from clean, low-risk energy. Based on

input obtained from its customers, Central & South West Services has embarked on a program to address their customers' demand for renewable power. The company is building a 75 MW wind plant near McCamey and installing 19 photovoltaic systems at schools throughout its service area. Meanwhile, Texas Utilities Electric Company is adding a 40 MW wind farm near Big Spring. As with fossil and nuclear plants in the past, the cost of these new renewable energy facilities are being spread around to all customers.

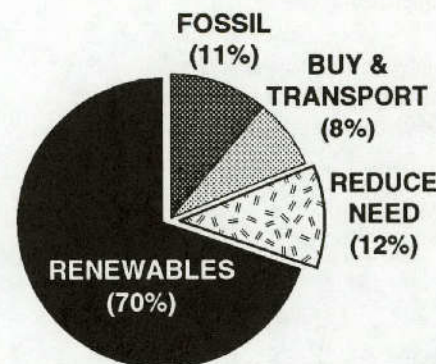
WHAT'S YOUR UTILITY DOING?

The utility industry is rapidly changing. Competition and an uncertain regulatory environment are forcing utilities to adapt to consumer demands and market pressures. Green electricity could play a part in every electric company's future.

To find out what your utility is doing to promote renewable energy, contact them directly through the list on the back page of this sheet or contact the Public Utility Commission of Texas.



S U P P L Y



D E M A N D

Texas Renewables: Supply & Demand *Utility customer opinion polls suggest that Texans prefer electricity derived from clean renewable energy sources. At present, there is a large gap between customer interest in renewables and its inclusion in the fuel mix.*

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ORGANIZATIONS

American Solar Energy Society
2400 Central Ave., G-1
Boulder, CO 80301
303 / 443-3130

American Wind Energy Association
122 C Street, N.W.
Washington, D.C. 20001
(202) 383-2505
<http://www.econet.org/awea>

City of Austin Utility
(512) 322-6300

CADDET
Center for Renewable Energy
1617 Cole Blvd
Golden, CO 80401-3393
(303) 275-4373
<http://www.caddet.co.uk/>

National Renewable Energy Laboratory
1617 Cole Blvd.
Golden, CO 80401-3393
<http://www.nrel.gov>

Public Utility Commission of Texas
(512) 936-7120

Texas Solar Energy Society
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512 / 326-3391
e-mail: info@txses.org
<http://www.txses.org>

Texas Renewable Energy Industries Association
P. O. Box 16469
Austin, TX 78761
512 / 345-5446

RESOURCES

TEXAS RENEWABLE ENERGY EDUCATION CAMPAIGN

Texas is in the midst of a major campaign to develop thought-provoking educational materials on renewable energy. The campaign includes: (1) the first-class video, "The Infinite Power of Texas," (2) 20 fact sheets for students and adults, and (3) a powerful World Wide Web site on the Internet. Begin your search for Texas-specific information on renewable energy at:
<http://www.InfinitePower.com>

INTERNET SITES:

<http://www.InfinitePower.com/factsheets/fs20.html>

Center for Renewable Energy and Sustainable Technology (CREST)
A comprehensive educational resource for renewables. A good place to start your search.
<http://solstice.crest.org>

Department of Energy. Web pages run by the Department of Energy on everything from cooling your home naturally to selecting a new water heater.
www.eren.doe.gov/erec/factsheets/factsheets.html

Florida Solar Energy Center. Information on photovoltaics, batteries, alternative buildings systems, solar heaters. The center is developing a test house which relies exclusively on PV power. www.fsec.ucf.edu

El Paso Solar Energy Association. Lots of good information. www.epsea.org

BOOK:

Texas Renewable Energy Resource Assessment: Survey, Overviews, and Recommendations.
Virtus Energy Research Associates, 1995. ISBN 0-9645526-0-4. Detailed summary of each renewable energy resource in Texas. (source: SECO, 512-463-1889)

POSTER:

Our Energy Sources Are Outstanding in the Field. (source: SECO, 512-463-1889)
(web version: www.infinitepower.com/poster1.html)



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