

# ENERGY AND THE ENVIRONMENT

## LCRA's Electric Generation Business

### Service Area:

All or part of 55 counties

### Wholesale Electric Customers:

Forty-three wholesale electric customers, including eight electric cooperatives, 34 city-owned utilities and one investor-owned utility/former co-op serve more than 1.1 million residents in Central and South Texas

### Power Plants:

Three natural gas-fired plants, one coal-fired plant, one natural gas-fired peaking unit under construction, and equity partner in one coal-fired plant under construction

### Renewable Energy Resources:

Hydroelectric generation from the Highland Lakes and purchased wind power from West Texas and the Texas Gulf Coast

### More info?

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LCRA electricity serves more than 1.1 million people in one of the nation's fastest growing regions through 43 wholesale customers in a service area spanning all or part of 55 Texas counties. As an environmentally responsible provider of public services, LCRA must provide competitively priced electricity in a way that minimizes impact on the environment and natural resources. That's a delicate balancing act that LCRA strives to fulfill every day.

## LCRA has taken these steps to provide reliable, environmentally responsible power to the people of Texas:

### Renewable Energy

LCRA began providing electricity for Central Texans in the late 1930s, using the renewable water resource of the Colorado River to produce hydroelectric power. Over the past 75 years, LCRA has continued its leadership in renewable energy, including:

- **Hydro:** LCRA owns and operates units at the [six Highland Lakes dams](#) that can generate up to 292 megawatts (MW).
- **Wind:**
  - In 1995, LCRA invested in the first wind power project in Texas. LCRA now purchases 116 MW from [three West Texas wind farms](#).
  - In 2010, LCRA will add 200 MW of renewable wind power from [a new project](#) on the Texas Gulf Coast.
  - LCRA has joined other transmission service providers to build the infrastructure that will bring more wind power from West Texas to more densely populated areas of the state through [Competitive Renewable Energy Zones](#).
  - In 2009, LCRA installed a residential-sized wind turbine at its McKinney Roughs Nature Park near Bastrop as part of a demonstration project to educate park visitors about renewable energy.
- **Biogas:** LCRA played a key role in the start-up of Texas' first large-scale commercial biogas facility. While LCRA no longer purchases fuel from the facility, it did purchase all of the renewable natural gas generated during the facility's first year of operation.
- **Solar:**
  - LCRA has a 21.6-kilowatt solar energy system on its Environmental Laboratory in Austin, one of the largest projects in Austin Energy's Solar Rebate Program. McKinney Roughs Nature Park also uses a photovoltaic panel to offset on-site energy use and to educate park visitors.

- LCRA has been involved since 2005 in the State Energy Conservation Office's Solar for Schools program, working with nearly half of LCRA's wholesale electric customers to bring photovoltaic arrays and solar education programs to dozens of schools in Central Texas.
- LCRA's wastewater treatment plant in Lometa soon will run on solar power. A grant from the Office of Rural Community Affairs and in-kind services from LCRA will enable 50 kilowatts of solar panels to be installed at the plant. The solar installation – one of the largest in Texas – could reduce the plant's annual energy bill by as much as 50 percent.

### **Coal and LCRA's Generation Mix**

Coal-fired power has played an important role in LCRA's ability to help its wholesale electric customers maintain competitive prices. The [Fayette Power Project](#) (FPP) is an important part of a diverse portfolio of generation resources that has served LCRA's customers well for many decades.

- In 2009, FPP produced 50 percent of the electricity that LCRA provided its electric customers; LCRA's natural gas-fired units and purchased power provided 47 percent; and renewable sources – wind and hydroelectric – provided 3 percent.
- In 2012, LCRA will add 200 MW of coal-fired generation from the [Sandy Creek Energy Station](#) that is under construction near Waco.

### **Efficient, Reliable and Environmentally Responsible Power**

In addition to operating its electric generating facilities efficiently and in an environmentally responsible manner, LCRA has committed millions of dollars to further improve emissions of its power plants. All of LCRA's fossil-fueled electric generation facilities maintain better air quality standards than required by the U.S. Environmental Protection Agency and the Texas Commission on Environmental Quality.

- **Coal Units:** Since receiving a flexible air quality permit in 2002, FPP has been adding scrubbers that will remove about 95 percent of sulfur-dioxide (SO<sub>2</sub>) emissions from that plant's two older units, which have been in operation since 1979 and 1980, respectively. Nitrogen-oxide emissions from the plant have dropped by about 65 percent. FPP also is upgrading the scrubber that cleans SO<sub>2</sub> emissions from the plant's third unit, which has been in operation since 1988.
- **Natural Gas Units:** LCRA's Lost Pines Power Park (which includes the three-unit gas-fired Sim Gideon Power Plant, built between 1965 and 1971, and a modern combined cycle gas-fired plant, Lost Pines 1 Power Project, built in 2001) participated in an Early Action Compact to help delay ozone-related nonattainment in the five-county region around Austin. The site of the two plants now emits less nitrogen oxides than allowed under state law or that agreement.

### **Carbon Dioxide Emissions**

LCRA is taking steps to reduce its carbon footprint, including:

- Exploring new, zero-emission technologies and ways to reduce existing emissions.
- Developing energy efficiency and conservation partnerships with wholesale electric customers to help offset the need to build or buy power to meet future demand.
- Offering wholesale electric customers a time-of-use price so they can promote energy conservation at the commercial and retail levels.
- Maintaining a diverse generation portfolio and seeking cost-effective opportunities to add additional renewable power.