



# WIND LEADERSHIP

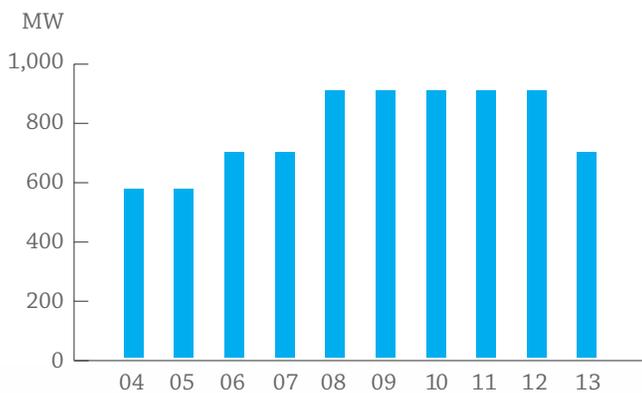
Luminant has been a leader in purchasing electricity from Texas wind generators since the industry's infancy. Our support of this renewable energy over more than three decades has helped Texas blow past every other state to become the unrivaled pacesetter in wind generation. But wind generation has its limitations. The wind does not always blow, especially at times of highest customer use, and electricity cannot yet be stored economically. While wind and other alternatives play a valuable role, reliable generation sources such as natural gas, coal and nuclear power are essential for meeting Texas' energy needs.



Texas is the unsurpassed leader in wind generation.

## WIND CAPACITY PURCHASES

Current capacity: 704 megawatts

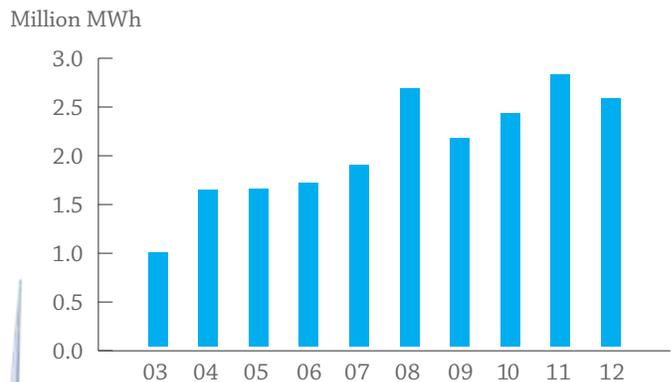


## Supporting Texas Wind Energy

- With a wind portfolio of more than 700 megawatts, Luminant is one of the largest purchasers in Texas and the nation.
- These purchases are enough to serve nearly 330,000 Texans.
- Luminant also purchases additional renewable energy credits to support discretionary sales of renewable power.
- Long-term purchased power agreements like Luminant's are the financial foundation that enables Texas wind plants to be built.
- With more than 12,000 MW of wind installation, Texas has experienced explosive growth and outdistances all other states.

## WIND ENERGY PURCHASES

Total wind energy purchases since 1991: 21.8 million megawatt-hours



Luminant's long-term purchases of wind power have helped the industry grow.



## Challenges to Harnessing the Wind



*Wind resources in Texas are vast, but wind power has limitations.*

- While Texas has vast, valuable wind resources, wind power does have its limitations.
- Wind's variability can make it challenging to integrate into the electrical grid and still maintain a stable power supply. And electricity cannot be stored economically on any commercial scale at this time.
- During the hottest part of summer days, when customer use is the highest, Texas winds are often calm. In 2012, wind generated 9.2 percent of the electricity in ERCOT, the electric grid that serves most of Texas. Still, the vast majority of the load is served by conventional generation.
- A lack of transmission lines to move wind power from remote West Texas to the state's big cities has also limited wind's role. Beginning in 2014, an ambitious transmission plan will enable almost 18,500 MW of wind generation to reach the market, dramatically increasing Texas' wind capacity.

## Investing in a Cleaner Future

- Luminant recently added almost 2,200 MW of coal-fueled generation equipped with advanced environmental technology and installed additional environmental control systems at its legacy coal facilities.
- As a result, Luminant has reduced its coal fleet's key emissions by more than 20 percent from 2005 levels while increasing fleet capacity by 37 percent.
- And evaluation of the expansion of up to 3,400 MW of new nuclear generation is underway. Nuclear power has the lowest air-emission rate – zero – of any conventional generation technology available.

## Tapping Other Renewable Resources

- Luminant's renewable energy portfolio also includes purchase of energy from multiple facilities fueled by landfill gas, with a total capacity of 11 MW.
- Additionally, Luminant is evaluating renewable technologies at its own facilities. One project includes algae production for development of biofuels. This demonstration project, based at the company's Martin Lake plant, includes development of technology to capture carbon dioxide from flue gas to enhance the growth of algae.
- Another zero-emission renewable project is testing technology to generate electricity using the water flowing from the discharge canal at Martin Lake.

*Martin Lake is testing renewable technology.*

