CLEANER COAL **GENERATION**

Luminant

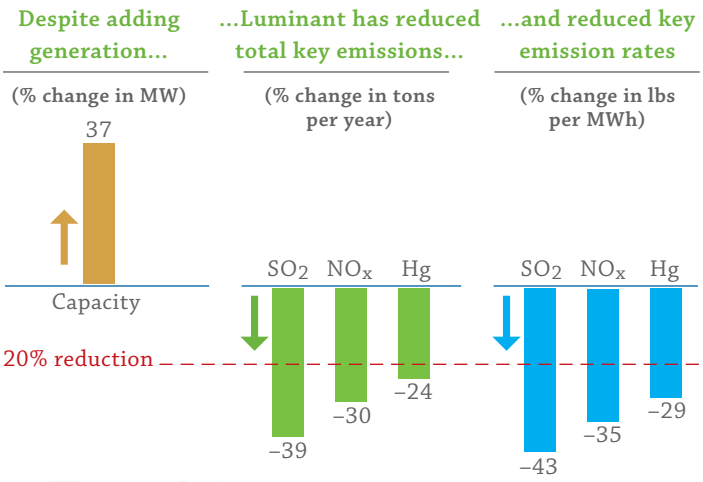
Coal provides about 70 percent of the energy Luminant produces for Texas consumers. In recent years, Luminant has added a significant amount of new coal generation. At the same time, the company has made substantial investments in new environmental control equipment and other improvements. The result is a much larger coal generation fleet with lower total key emissions and key emission rates. The company also brings a strong track record of exemplary compliance in meeting or outperforming all environmental laws, rules and regulations. As the state's largest power producer, Luminant is proud to be a leader in creating an even cleaner energy future for Texas.

Luminant's Lake Monticello, which provides cooling water for its Monticello plant, is a popular fishing destination.

Creating an Even Cleaner Energy Future

- Since 2009, Luminant has invested more than $1.6 billion in environmental control projects. They include equipping 2,200 megawatts of recent coal-fueled generation additions with advanced clean-air emission controls and implementing the largest voluntary control technology program ever undertaken by a power company to reduce key emissions across established coal units.
- As a result, Luminant has offset 100 percent of key emissions from its coal generation additions and reduced its generating fleet's nitrogen oxide, sulfur dioxide and mercury emissions by more than 20 percent from 2005 coal-fueled levels. At the same time, Luminant has increased its coal-fueled capacity by 37 percent.
- The Oak Grove and Sandow 5 additions are the nation's first 100 percent lignite units to use activated sorbent injection technology to control mercury emissions. Oak Grove is also the nation's first 100 percent lignite plant to be equipped with SCR – selective catalytic reduction – technology to reduce NO_x emissions. Oak Grove's key emission rates are the lowest of any Texas lignite plant and at least 63 percent below the national average for coal plants.
- Luminant's voluntary retrofit program has also equipped each established coal unit with sorbent injection systems to control mercury and new technology to control NO_x. Additional use of low-sulfur coal has further reduced sulfur.

LUMINANT COAL FLEET EMISSION REDUCTIONS 2012 vs. 2005



Eastern bluebirds benefit from Luminant's habitat restoration.

Sandow 5's Advanced Technology

- Sandow 5's circulating fluidized-bed boilers employ advanced environmental technology to reduce emissions of NO_x and SO_2.
- Selective non-catalytic reduction equipment further reduces NO_x emissions. This technology uses an ammonia-forming chemical to break down NO_x into nitrogen and water.
- Limestone injected into the boilers combines with and removes sulfur, reducing SO_2 emissions. The polishing scrubber removes even more.
- Large, high-efficiency fabric-filter baghouses capture particulate matter.
- Activated carbon sorbent injection systems reduce mercury emissions.

The Sandow 5 and Oak Grove generating units employ advanced emission controls.

Oak Grove's Advanced Technology

- Oak Grove's SCR technology reduces NO_x emissions, after an initial reduction by low-NO_x burners and over-fire air.
- Wet flue-gas desulfurization units, or scrubbers, remove SO_2 by injecting limestone slurry into the combustion gases. The slurry combines with the gases to remove the sulfur.
- Large, high-efficiency fabric-filter baghouses capture particulate matter.
- Activated carbon sorbent injection technology reduces mercury emissions.

Yielding Results with SCRs

- SCR technology is one of several key components of Luminant's continued progress in reducing NO_x emissions across its coal-fueled fleet.
- Luminant funded a project at the University of Texas at Arlington's Department of Industrial & Manufacturing Systems Engineering to research and design operational and management tools to maximize the performance of SCR technology for large-scale use.
- SCRs are similar to the catalytic converter on a car. The combustion gas is injected with an ammonia-forming chemical that then passes along a catalyst. The catalyst converts the NO_x to nitrogen and water, which are harmlessly emitted.

Bald eagles are often seen at Big Brown.

For more information on Luminant's environmental programs, visit **www.Luminant.com/Environment**