



CLEANER COAL GENERATION

Coal provides more than 40 percent of Texas' electricity. At the same time, the state ranks among the cleanest in the nation for emissions rates of key pollutants—nitrogen oxides, or NO_x, sulfur dioxide, or SO₂, and mercury—by electric generators. Luminant is proud to be part of the progress Texas is making to create an even cleaner energy future. The company brings a strong track record of exemplary compliance in meeting or outperforming all environmental laws, rules and regulations. Luminant is also making a substantial investment in new environmental control equipment and other improvements to operate in an increasingly environmentally sensitive manner.

Cleaner, Dependable Power

- Luminant's three new power units, fueled by lignite coal, help satisfy Texas' need for additional electric generating capacity.
- Sandow 5 in Milam County and the two Oak Grove units in Robertson County provide approximately 2,200 megawatts of low-cost baseload energy resources.
- A \$500 million investment in Best Available Control Technology means reduced emissions.
- Oak Grove 1 and 2 and Sandow 5 are the nation's first 100 percent lignite units with activated carbon sorbent injection technology to control mercury emissions. Luminant's public-private mercury research over the past decade contributed to the commercial readiness of this technology.

- Oak Grove's key emissions rates are the lowest of any Texas lignite plant and at least 75 percent lower than the national average for coal plants. The facility's environmental technology includes a national first for lignite plants—SCR equipment to reduce NO_x emissions.

Industry-Leading Voluntary Reductions

- Luminant has committed to the largest voluntary program ever undertaken by a power company to reduce key emissions from its legacy coal-fueled generation fleet.
- The \$1 billion retrofit program will offset 100 percent of NO_x, SO₂ and mercury emissions from the new coal-fueled units and will reduce key emissions across the legacy coal fleet.
- The program includes an array of technology retrofits and other improvements.
- Investment in new control equipment will further reduce NO_x emissions.
- Additional use of low-sulfur coal and coal-cleaning technology will further reduce SO₂.
- Activated carbon sorbent injection technology on all units will reduce mercury, and coal-cleaning technology will provide further reduction.
- The result will be a larger fleet of coal plants with lower emissions.

Luminant reclaimed land near Monticello



Sandow 5's Advanced Technology

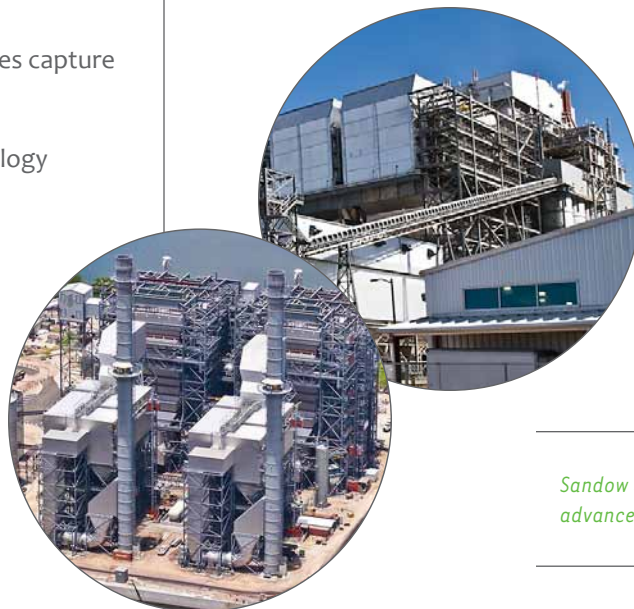
- Sandow 5's circulating fluidized-bed boilers employ advanced environmental technology to reduce emissions of NO_x and SO₂.
- Selective non-catalytic reduction equipment further reduces NO_x emissions. This technology uses an ammonia-forming chemical to break down NO_x into nitrogen and water.
- Limestone injected into the boilers combines with and removes sulfur, reducing SO₂ emissions. The polishing scrubber removes even more.
- Large, high-efficiency fabric-filter baghouses capture particulate matter.
- Activated carbon sorbent injection systems reduce mercury.

Oak Grove's Advanced Technology

- Oak Grove's selective catalytic reduction 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 SO₂ by injecting limestone slurry into the combustion gases, which combines with and removes the sulfur.
- Large, high-efficiency fabric-filter baghouses capture particulate matter.
- Activated carbon sorbent injection technology reduces mercury.

Yielding Results with SCRs

- Selective catalytic reduction technology is a key component 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.



Sandow 5 and Oak Grove employ advanced environmental controls