

Tenaska Trailblazer Energy Center To Be Environmental Leader

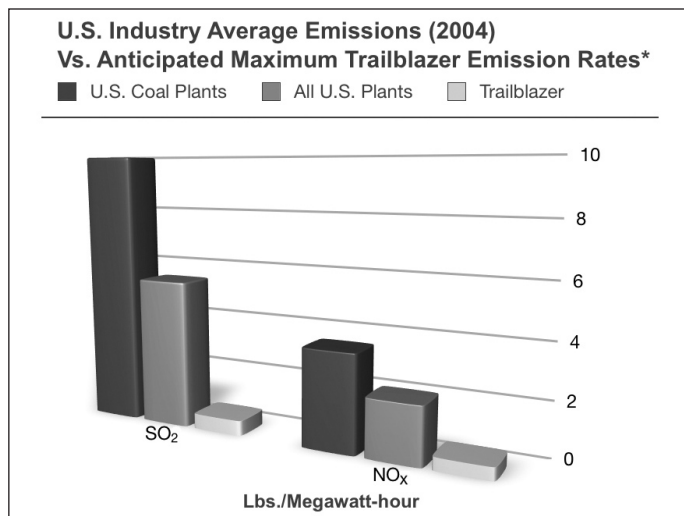
Tenaska Trailblazer Energy Center will be the first new conventional, coal-fueled, commercial power plant in the United States to capture carbon dioxide (CO₂) rather than release it into the atmosphere, but Trailblazer's environmental protection features won't stop there.

Tenaska's commitment to clean energy at the Trailblazer Energy Center goes well beyond carbon management, according to Greg Kunkel, Tenaska vice president of environmental affairs.

"In all of its projects, Tenaska recognizes its environmental responsibility to its community partners and as a power producer," Kunkel said. "We take that responsibility seriously."

The Trailblazer Energy Center's maximum emission rates, as proposed in Tenaska's request for an air quality permit in Texas, are projected to be far lower than the average emissions from coal plants nationwide. For example, sulfur dioxide (SO₂) emissions are projected to be less than five percent of the national average for coal-fueled plants, and nitrogen oxide (NO_x) emissions are projected to be less than 13 percent of the national average for coal-fueled plants.

Kunkel said the Tenaska Trailblazer Energy Center will use Best Available Control Technology (BACT) to meet all Texas and federal environmental standards,



Tenaska's Trailblazer Energy Center is anticipated to emit far less sulfur dioxide (SO₂) and nitrogen oxide (NO_x) than the national averages for U.S. coal-fueled and all electric generators. *Sources: Requested Rates in Tenaska Texas Commission on Environmental Quality Air Permit Application; EPA, eGRID2006 Version 2.1, April 2007

including the more stringent standards outlined for SO₂, NO_x and mercury in Texas' 2007 Advanced Clean Energy Project legislation.

The energy center will include state-of-the-art technology, some new and some improved versions of the equipment long used at power plants. Fabric filters will remove particles from the exhaust, scrubbers will remove SO₂, and a catalytic system will remove NO_x. Mercury emissions will be controlled using Maximum Achievable Control Technology (MACT) by injecting activated carbon into the exhaust. The lead concentration surrounding the plant due to emissions from the energy center is expected to be, at most, about

three percent of the national ambient air quality standard. This is the U.S. Environmental Protection Agency (EPA) standard which facilities must meet in order to obtain air quality permits. Advanced technology, using supercritical steam—steam pressurized to achieve higher temperatures—and low-sulfur coal from the Powder River Basin, will all increase the efficiency of the plant and keep emissions very low.

In addition to air emissions, the plant will produce solid waste, including gypsum, bottom ash and fly ash. All these products can be safely landfilled on site. Some or all of them may have a commercial value. Gypsum can be used to make drywall and,

along with fly ash and bottom ash, can be used in construction materials, including cement.

Tenaska has a noteworthy environmental track record. In 2006, Tenaska was listed in benchmarking studies by the Natural Resources Defense Council, a national environmental advocacy organization, as having the best record in the United States for fleetwide average emissions of NO_x and CO₂ and the third best record for SO₂. Moreover, the Trailblazer plant will be designed to capture 85 to 90 percent of the CO₂ it produces. The captured CO₂ will then be dehydrated, compressed and delivered via pipeline to West Texas oil fields for use in enhanced oil recovery (EOR) efforts. CO₂, injected into geologic formations as part of EOR, has been used to boost oil production in the Permian Basin for more than 30 years.

To help answer questions about the Tenaska Trailblazer Energy Center, the company has established a Web site, www.tenaskatrailblazer.com, which is updated periodically. For more information about Tenaska, visit www.tenaska.com.

This article is part of a series of special reports from Tenaska to the Sweetwater Reporter, addressing specific topics related to the Tenaska Trailblazer Energy Center.