DESERTROCK

Desert Rock Energy Project

www.desertrockenergyproject.com 3rd Edition

Most Advanced Technology for a Coal Fired Power Plant

Desert Rock Energy project is the cleanest, large-scale coal power plant in the US.

Sithe Global Power, LLC (Sithe) proposes to construct a hybrid, dry-cooled, coal-fired, 1,500-megawatt (MW) electrical-power-generating plant approximately 30 miles southwest of Farmington, New Mexico, on the Navajo Nation. Sithe is developing the project with the Diné Power Authority, an enterprise of the Navajo Nation. The project will have the lowest emission of any coal fired project in the U.S. and provide much needed construction and operations jobs to the area. The Project will generate over $50 million a year in revenue to the Navajo Nation through taxes and coal royalties.

This edition of the Desert Rock Energy Project newsletter presents the environmental attributes of this coal fired power plant including the efficient generation of electricity from coal, limited water usage, air pollution mitigation, and coal combustion by-product utilization. Also presented in this edition is the schedule for public meetings to discuss the Environmental Impact Statement. These meetings will be conducted by the Bureau of Indian Affairs who is the lead agency.❖

Humpbacked Ye'i. *- Navajo fertility deity representing prosperity for the Navajo People. (Ghaan'ask'idii)*

Efficiency Means Less CO_2

Desert Rock will emit 15-20% less CO_2 per ton of coal than subcritical power plants.

Two supercritical pulverized coal-fired boilers will operate using Navajo coal that contains a heat content of 8,910 btu/lb. The plant can turn 50 lbs of coal into enough electricity to serve the average home for a day. Very low emission rates have been proposed for this project including 0.06 lb/MMBtu for NOx and SO2 and 0.01 lb/MMBtu for filterable PM, all on a 24-hour average. Carbon dioxide (CO2) is one of several greenhouse gases that are part of the natural greenhouse effect that makes the Earth have a habitable temperature. Currently, CO_2 is not regulated as a pollutant; however, several states have enacted regulations on greenhouse gas emissions including carbon dioxide. Several Federal legislative proposals have been introduced as well, but each is in the very

continued on page 3

Central Consolidated School Board approves PILOT proposal by Desert Rock Energy Project. *See story on page 4*

Combustion Coal Byproducts are not *Really* Waste

Desert Rock is examining ways to utilize the fly ash, bottom ash and gypsum generated at the Plant.

Desert Rock will spend over $200 million during the life of the project to manage Coal Combustion By-Products or CCBs. These by-products include fly ash, bottom ash, and gypsum. These materials are simply residual materials remaining after the combustion of coal and are oftentimes incorrectly characterized as "waste materials". These byproducts actually have many uses.

1937 was the first year that the American Concrete Institute referenced "fly ash" as a potential construction material. In 1942, the Bureau of Reclamation used coal fly ash concrete to repair a tunnel spillway at the Hoover Dam. In 1946, the first commercial company was formed to market coal fly ash. Today, coal fly ash is used in a multitude of various products and is a valuable commodity. Coal fly ash is not considered a hazardous waste by the Environmental Protection Agency (EPA).

Desert Rock's scrubber system, which is designed to reduce over 98 percent of the Sulfur Dioxide (SO_2) emissions, will generate a byproduct that is commonly referred to as synthetic gypsum. This gypsum is used primarily in the production of drywall (sheetrock) but it is also used as an additive to Portland cement, a high strength gypsum cement (plaster), a soil amendment for agricultural applications, and even a raw material for the production of common chalks used in schools.

Fly ash from the baghouse, which controls particulate emissions, is the most widely used CCB from coal fired power plants. Fly ash produced from coal combustion in the Four Corners region provides a significant quality improvement to normal Portland Cement Concrete by increasing the strength and life of various cement products for roads and concrete foundations.

Making cement requires a great deal of energy and creates greenhouse gas emissions due to the heat necessary to make cement and other processes necessary to mine, crush, grind, and ship the cement. Producing cement requires natural material mining of valuable resources that use energy and impact the environment. Fly ash replaces a significant portion of the cement in Portland Cement Concrete mixtures thereby reducing pollution, reducing the impacts to the environment due to mining, and producing higher quality concrete. Some engineers are working towards concrete mixtures that contain 100-percent fly ash and no cement.

The third CCB generated at Desert Rock will be bottom ash. Tests performed on bottom ash have demonstrated that bottom ash quality as a road base equals or exceeds the values of aggregate (rocks or stones such as limestone). Bottom ash is a very lightweight material that drains moisture quickly. As such, bottom ash is economical to haul, is not particularly sensitive to freeze and thaw cycles, cheaper to produce than aggregate base, and it is a byproduct so it requires no additional energy or greenhouse gas emissions to produce.

Gypsum is used to make dry wall.

Desert Rock Energy has been working with local engineering laboratories to further research and development of CCB utilization. Desert Rock is also a member of the Coal Combustion Products Partnership. The Desert Rock Project is designed to contribute to the reduction of global greenhouses gases and manage byproducts responsibly.❖

Navajo EPA and Desert Rock Energy sign MOU to Develop Enforcement Plan for Voluntary Emission Reductions

Although not required by regulation, Desert Rock has agreed to reduce SO_2 and/or NO_x Emissions in the area and Limit Mercury Emissions from the Plant.

The Navajo Nation Environmental Protection Agency signed a Memorandum of Understanding (MOU) with Desert Rock Energy Company, LLC, on Tuesday, May 15, 2007. The MOU provides a framework to develop a compliance plan to enforce the Regional Air Quality Improvement Plan posed by Desert Rock Energy.

Through the Regional Air Quality Improvement Plan, Desert Rock will reduce pollutants in the San Juan area beyond what is required by the EPA Air Permit. This Plan was developed through consultations with the National Parks Service, the U.S. Forest Service, the U.S. Environmental Protection Agency, and the Navajo Nation Environmental Protection Agency. The Improvement Plan permits Desert Rock to reduce regional SO_2 and/or NO_x emissions and visibility impacts. In addition, the plan places a limit on Mercury emissions from the plant.

- At its own cost, Desert Rock will sponsor one or more projects at other power plants or sources located in proximity to the Desert Rock Energy Project to reduce SO2 emissions.
- If Desert Rock is not able to identify reduction projects at other power plants or other sources due to failure to secure an agreement with the receiving plant, or additional reductions are needed to meet the mitigation commitment, Desert Rock agrees to buy subject to a spending cap of $3,000,000 per year additional SO2 allowances from power plants located within 300 km of the Desert Rock Energy Project.
- Desert Rock agrees to reduce Mercury emissions by a minimum of 80%, but will also attempt to raise the control efficiency to 90% subject to the control being cost justified for the incremental control above 80%. Should a 90% reduction become feasible, Mercury emission will be cut in half from projected levels.
- Subject to plan limitations, Desert Rock will contribute up to $300,000 annually toward environmental improvement projects that would benefit the Four Corners area. ❖

continued from page 1

Carbon Emissions (cont')

early stages of development. Although these policies are still advancing, they are not going to affect the power provided by Desert Rock for some time. Desert Rock is committed to do what it can now to reduce CO_2 emissions by installing very efficient boiler technology. Desert Rock is also looking to the future by making sure the plant can be easily modified with CO_2 capture equipment when it is developed and technically feasible.

Desert Rock Energy Company is investigating several technologies to reduce, contain, and sequester CO_2. We are examining chemical absorption techniques that remove CO_2 from the flue gas of the plant. There exists a new technology (Oxygen Coal Combustion) that allows the chemical absorption process to run more efficiently and effectively. Oxygen Coal Combustion produces a concentrated CO_2 in the combustion process by supplying pure oxygen instead of air for combustion which reduces unwanted gases in the CO_2 stream. The Oxygen Coal Combustion process is based upon equipment and systems that are already commercially available and provide a system capable of near zero emissions with carbon storage. This brings up the next challenge: what to do with all of the CO_2 captured. The most likely scenario for CO_2 storage (sequestration) is to pipe it to systems that may already exist for enhanced oil and gas recovery or pipe the CO_2 to underground caverns or salt domes.

It is important to remember that the Desert Southwest region has one of the fastest growing electric demands in the US, needing up to 2,300 MW of new base load generation. The average age of a coal plant in the US is over 40 years old and many of these plants will the end of their life over the next 10 years.❖

Central Consolidated School Board Approves PILOT

The Central Consolidated School District (CCSD) in San Juan County unanimously approved the payment in lieu of taxes (PILOT) proposed by the Desert Rock Energy Project. The PILOT is part of a larger tax payment proposal that includes CCSD, San Juan County, and San Juan College. In April 2006, San Juan College unanimously supported their PILOT. Presently, the San Juan County Commissioners must provide the final approval of the plan.

Overall, the PILOT provides for payments exceeding $16 million to the County taxing authorities during construction of Desert Rock and payments of $151 million during 27 years of plant operations. In response to a request by the CCSD, the plan also provides an upfront payment of $8 million to fund new facilities, equipment, or services that may be required to address increased school enrollment during the construction of the project. With the plan, Desert Rock would be one of the County's largest tax payers.

"We are proud of our effort to help local schools in the Four Corners area provide much-needed revenue for better programs and new schools," said Dirk Straussfeld, Executive Vice President of Sithe Global. "With the existing approval of the San Juan College Board of Directors, we have taken a second major step toward making this great opportunity for the community a reality."❖

Official Warns of Crisis

Construction of new electrical generation in the West is projected to grow by 6 percent, while demand for electricity is projected to increase by 19 percent over the next 10 years, according to the Federal Energy Regulatory Commission. FERC commissioner Suedeen Kelly, speaking on her own behalf, said the situation is nothing short of a crisis. "There's not enough time to build our way out," Kelly told the Western Governors' Association. Kelly said Western states must band together to aggressively seek energy efficiency, and must immediately launch a massive and coordinated construction effort to link rural renewable energy and clean coal resources to high-load centers.

Environmental Impact Statement

The BIA is coordinating the EIS for Desert Rock.

EIS Progress

After more than two years of data gathering and analysis, the Draft EIS is available to the public for review. The draft EIS is a very detailed document over 1,000 pages. All interested parties have 60 days to comment from the Notice of Availability, which was published on June 22. Public hearings held by the BIA will be scheduled at the locations below to allow the public to comment. The BIA will then prepare and distribute the Final EIS and a Record of Decision later this year. For more detailed information on the meetings and the EIS process please log onto the Desert Rock Energy Project official website at **www.desertrockenergyproject.com** Where links to the EIS can be found.

Public Meeting Dates

- Farmington Civic Center
  July 17, 5pm – 8pm
- Cortez Area, Ute Mt. Casino
  July 18, 10am – 1pm
- Durango, Iron House Inn
  July 18, 5pm – 8pm
- Albuquerque, Indian Pueblo Cultural Center
  July 19, 1pm – 4pm
- Santa Fe, Larrazolo Auditorium
  July 20, 1pm – 4pm
- Shiprock Chapter House
  July 23, 10am – 1pm
- Nenahnezad Chapter House
  July 23, 5pm – 8pm
- Burnham Chapter House
  July 24, 10am – 1pm
- Sanostee, Veterans Memorial Center
  July 24, 5pm – 8pm
- Window Rock, Navajo Nation Museum
  July 25, 10am – 1pm❖