

## 4CAQTF Power Plants Work Group 1 page fact sheet for November 7<sup>th</sup>, 2007 meeting

### Charter:

The Power Plant Work Group is charged with analyzing emissions mitigation strategies that can be achieved by power plants, both existing and proposed. For each mitigation strategy, the work group will document, to the extent possible given the group's timeframe and resources, the following: Description of the Strategy, Implementation, and Feasibility.

### Presentations:

#### Power Plants Work Group Session Presentations

1. "San Juan Generating Station (SJGS) Emissions Controls Current and Future," presented by Mike Farley (Public Service Company of New Mexico), May 9, 2006 in Farmington, NM
2. "Desert Rock Energy Project," presented by Dirk Straussfeld, Nathan Plagens (Sithe Global Power, LLC), and Gus Engheim (Wood Group), August 9, 2006 in Cortez, CO
3. "New Mexico Clean Energy Programs," presented by Louise Martinez, Bureau Chief of Energy Efficiency Programs New Mexico Energy, Minerals, & Natural Resources Department, November 8, 2006 in Farmington, NM.
4. "The Chemistry of Clean Coal, Energy for our Homes from our Homeland," Presented by Bill Green (New Mexico Environment Department – Air Quality Bureau), February 7, 2007 in Durango, CO
5. Clean Air Mercury Rule Update for States and Tribes, presented by Mark Jones (New Mexico Environment Department – Air Quality Bureau) and Mark McMillan (Colorado Department of Public Health and Environment), May 9, 2007 in Farmington, NM

#### Related Plenary Presentations:

1. "Overview of Mercury Issues," presented by Mark McMillan (Colorado Department of Public Health and Environment Mercury Program), August 9, 2006 in Cortez, CO
2. "Investing in Clean Energy – The Challenges and Opportunities," by Mike D'Antonio (Public Service Company of New Mexico), November 8, 2006 in Farmington, NM

### Additional Work:

Data Table for 4 Corners Area Electric Generating Units prepared from existing sources by the Power Plants Work Group  
[http://www.nmenv.state.nm.us/aqb/4C/Docs/4CAQTF\\_PowerPlant\\_WorkGroup\\_FacilityDataTableV10.pdf](http://www.nmenv.state.nm.us/aqb/4C/Docs/4CAQTF_PowerPlant_WorkGroup_FacilityDataTableV10.pdf)

### List of Power Plants Mitigation Options:

#### EXISTING POWER PLANTS: ADVANCED SOFTWARE APPLICATIONS

- Lowering Air Emissions by Advanced Software Applications: Neural Net

#### EXISTING: BEST AVAILABLE RETROFIT TECHNOLOGY (BART)

- Control Technology Options for Four Corners Power Plant
- Control Technology Options for San Juan Generating Station

#### EXISTING: OPTIMIZATION

- Energy Efficiency Improvements
- Enhanced SO<sub>2</sub> Scrubbing

#### EXISTING: ADVANCED NO<sub>x</sub> CONTROL TECHNOLOGIES

- Selective Catalytic Reduction (SCR) NO<sub>x</sub> Control Retrofit
- BOC LoTO<sub>x</sub>™ System for the Control of NO<sub>x</sub> Emissions

#### EXISTING: OTHER RETROFIT TECHNOLOGIES

- Baghouse Particulate Control Retrofit
- Mercury Control Retrofit

#### EXISTING: STANDARDS

- Harmonization of Standards

#### EXISTING: MISCELLANEOUS

- Emission Fund

#### PROPOSED POWER PLANTS: DESERT ROCK ENERGY FACILITY

- Desert Rock Energy Facility Stakeholder Funding to and Participation in Regional Air Quality Improvement Initiatives such as Four Corners Air Quality Task Force
- Emissions Monitoring for Proposed Desert Rock Energy Facility to be used over Time to Assess and Mitigate Deterioration to Air Quality in Four Corners Area
- Coal Based Integrated Gasification Combined Cycle (IGCC)
- Desert Rock Energy Facility Invest in Carbon Dioxide Control Technology
- Federal Land Manager Mitigation Agreement with Desert Rock Energy Facility

## **FUTURE POWER PLANTS**

- Integrated Gasification Combined Cycle (IGCC)
- Carbon (CO<sub>2</sub>) Capture and Sequestration (CCS)
- Negotiated Agreements in Prevention of Significant Deterioration (PSD) Permits
- Clean Coal Technology Public Education Program
- Utility-Scale Photovoltaic Plants
- Biomass Power Generation
- Bioenergy Center
- Nuclear

## **OVERARCHING: POLICY**

- Reorganization of EPA Regions

## **OVERARCHING: MERCURY**

- Clean Air Mercury Rule Implementations in Four Corners Area
- Federal Clean Air Mercury Rule (CAMR) Implementation on the Navajo Nation

## **OVERARCHING: AIR DEPOSITION STUDIES**

- Participate in and Support Mercury Studies

## **OVERARCHING: GREENHOUSE GAS MITIGATION**

- CO<sub>2</sub> Capture and Storage Plan Development by Four Corners Area Power Plants
- Climate Change Advisory Group (CCAG) Energy Supply Technical Work Group Policy Option Implementation in Four Corners Area

## **OVERARCHING: CAP AND TRADE**

- Declining Cap and Trade Program for NO<sub>x</sub> Emissions for Existing and Proposed Power Plants
- Four Corners States to join the Clean Air Interstate Rule (CAIR) Program

## **OVERARCHING: ASTHMA STUDIES**

- Chronic Respiratory Disease Study for the Four Corners area to determine relationship between Air Pollutants from Power Plants and Respiratory Health Effects

## **OVERARCHING: CROSSOVER OPTIONS**

- Install Electric Compression
- Economic-Incentives Based Emission Trading System (EBETS)
- Tax or Economic Development Incentives for Environmental Mitigation

## **List of Renewable Energy, Energy Efficiency, & Conservation Options:**

### **ENERGY EFFICIENCY**

- Advanced Metering
- Cogeneration/Combined Heat and Power
- Green Building Incentives
- Improved Efficiency of Home and Industrial Lighting
- Volunteer Home Audits for Energy Efficiency
- The Use and Credit of Energy Efficiency and Renewable Energy in the Environmental Permitting Process

### **RENEWABLE ENERGY**

- Expand the Renewable Portfolio Standards (RPS) to be Mandatory for Coops and Municipalities
- Four Corners States Adopt California Standards for Purchase of Clean Imported Energy
- Net Metering for Four Corners Area
- New Programs to Promote Renewable Energy Including Tax Incentives
- Promote Solar Electrical Energy Production
- Subsidization of Land Required to Develop Renewable Energy
- Use of Distributed Energy

### **CONSERVATION**

- Changes to Residential Energy Bills
- County Planning of High Density Living as Opposed to Dispersed Homes throughout the County
- Direct Load Control and Time-based Pricing
- Energy Conservation by Energy Utility Customers
- Outreach Campaign for Conservation and Wise Use of Energy Use of Energy

4CAQTF Power Plants Website / Information Headquarters:

[http://www.nmenv.state.nm.us/aqb/4C/powerplant\\_workgroup.html](http://www.nmenv.state.nm.us/aqb/4C/powerplant_workgroup.html)