

Energy Development and Transmission Committee

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Federal Legislation – House – Waxman-Markey Bill

- ★ RES – 20% by 2020
- ★ GHG reduction below 2005 levels
 - 17% by 2020; 83% by 2050
- ★ Allowance allocation
 - 40% of all allowances allocated to local distribution companies
 - 50% based on retail sales
 - 50% based on CO₂ emissions
- ★ Includes funding for Carbon Capture and Storage (CCS)
- ★ Clean Air Act and State Preemption
- ★ At LEC urged Pomeroy to vote “no” and he did so

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Federal Legislation – Senate – Kerry-Boxer Bill

- ★ No renewable energy standard
- ★ GHG reduction below 2005 levels
20% by 2020; 83% by 2050
- ★ Allowance allocation – same as House bill
- ★ Includes funding for Carbon Capture and Storage (CCS)
- ★ Weak state preemption ... no Clean Air Act
- ★ Price collar - \$11 floor ... \$28 ceiling

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Federal Legislation – Senate – Energy Bill

★ Approved by Energy and Natural Resource Committee in June

Includes RES – 15% by 2021

- Advanced coal powered plants with CCS excluded from baseline
- Clean coal technology development eligible for funding from alternative compliance fee

Establishes federal indemnity program for long-term CO₂ sequestration

- Applies to 10 commercial-scale projects

Consider Renewables and Location Constrained Resources

- Fossil-fuel electricity plants
- Equipped with CO₂ capture technology
- CO₂ storage or beneficial reuse



Economic Impact of House Bill

★ ACCF/NAM Economic Study – North Dakota

Job loss – 5,310 to 7,231 in 2030

Decrease in disposable income - \$116 to \$234 – 2020; \$762 to \$1,252 – 2030

Increase in residential electricity prices – 5% to 7.9% - 2020; 31.4% to 50% - 2030

Decrease in gross state product - \$213 to \$366 million – 2020; \$2.2 to \$3.1 billion – 2030

Decrease in coal Production – 73.5% to 81.2% - 2030

See attached study summary for ND

*Study conducted by American Council for Capitol Formation
and National Association of Manufacturers*

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Other Federal Issues

- ★ **CO₂ Regulation**
- ★ **Mercury**
- ★ **Air Quality**
- ★ **Coal Combustion Products**
- ★ **Stream Buffer Zone**
- ★ **Clean Water Restoration Act**

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EPA Regulatory Initiatives

★ Regulation of CO₂ emissions

Endangerment Finding:

- In March filed proposed finding declaring greenhouse gases a significant threat to human health
- Proposed listing GHGs as pollutants under the Clean Air Act
- Initial rules will be on vehicles (early March 2010)
- Proposed rules – comments on “tailoring” major source thresholds
 - 25,000 tons/year rather than required 250 tons
 - Comments due at end of December



EPA Regulatory Initiatives

★ Mercury

March 2005 – Clean Air Mercury Rules adopted

- Included an adjustment factor for lignite
- Regulation was to begin in 2010

February 2008 – Rules were rejected by Federal Court

EPA developing plan for new rules

- Soliciting information from plants, including ND plants



EPA Regulatory Initiatives

★ Air Quality

PSD – air modeling issues

Regional Haze Rule

- **Require emission controls known as Best Available Retrofit Technology (BART)**
- **Dept. of Health finalizing its State Implementation Plan for regional haze**
- **Must submit by Jan. 2010**



EPA Regulatory Initiatives

★ Coal Combustion Byproducts –

The solid residue left when combustible material is thoroughly burned includes:

- Fly ash; Bottom ash; Boiler slag



EPA Regulatory Initiatives

★ Coal Combustion Byproducts –

EPA considering the possibility of regulating as a hazardous waste

- Four separate determinations made by EPA that CCB are not hazardous waste

Conrad circulated letter urging EPA to refrain from new regulation – Pomeroy signed similar letter in House

EPA plans to issue proposed rules before the end of the year.



Office of Surface Mining- Initiative

★ Stream Buffer Zone Rule

Six year process led to new rule at end of 2008

New administration wants to review the rules once again

In ND – 10.6 million tons of coal could be impacted by change to present rule



Other Federal Legislative Efforts

★ Clean Water Restoration Act

Dubbed “the birdbath bill”

- Passed by Senate Energy and Public Works Committee in June

Changes definition of “navigable waters” in Clean Water Act

- Federal government would take over jurisdiction of ALL waters anywhere in the U.S., including small isolated wetlands currently subject to state control



CCS Initiatives - NDIC Investment

NDIC Funding Commitment

★ Carbon capture-related projects:

Carbozyme membrane technology	\$260,000
Partnership for CO ₂ capture	300,000
Canadian Clean Power Coalition	130,000
AVS Carbon Capture FEED	2,700,000
Existing plant study	<u>462,000</u>
	\$3,852,000

★ Carbon storage-related projects:

PCOR Phase II	\$720,000
PCOR Phase III	<u>2,400,000</u>
	\$3,120,000

★ Total CCS commitment



\$6,972,000



Lignite Study Initiatives

Three (3) Lignite Studies Using Non-matching NDIC Funds

- ★ Beneficiated Lignite Marketing Study
- ★ Lignite-Based Advanced Generation Technology Systems
- ★ CO₂ Capture Technologies & Costs Associated with Lignite-Based Power Plants



Lignite Study Initiatives

Beneficiated Lignite Market Study

- ★ **Contractor: EERC – Worley Parsons Team**
- ★ **Objective:**
 - Evaluation of technology options & providers;**
 - Analyze market for beneficiated ND lignite; &**
 - Identify potential users for market growth**
- ★ **Cost: \$150,000 NDIC + \$75,150 EERC / DOE**
\$225,150 Total Project Cost
- ★ **Duration: 8/1/09 – 4/30/10 (9 months)**



Lignite Study Initiatives

Study of Lignite-Based Advanced Generation Technology Systems

- ★ Contractor: Burns & McDonnell – Microbeam Technologies, Inc. Team
- ★ Objective: Complete advanced lignite generation technologies assessment for new 500-750 MW base load unit using upgraded as well as non-upgraded lignite
- ★ Cost: \$140,000 NDIC
- ★ Duration: 8/1/09 – 1/31/10 (6 months)



Lignite Study Initiatives

Study of Carbon Dioxide Capture Technologies & Costs Associated with Lignite-Based Electrical Generating Stations

- ★ Contractor: The Shaw Group (Stone & Webster, Inc.)

- ★ Objective:

Complete a study showing most promising CO₂ capture systems applicable to existing fleet of ND lignite-fueled power plants

Units to be evaluated: MRY 1&2, Coyote, LOS 1&2, CCS 1&2, Heskett 1&2

- ★ Cost: \$462,000 NDIC

- ★ Duration: 8/1/09 – 3/31/10 (8 months)



Federal Legislative Program

★ U.S. Lignite Energy Coalition

Gulf Coast Lignite Coalition; Missouri and Louisiana

Objective:

- **Promote the use of lignite**
- **Develop strategy on Federal issues of mutual interest**

Provides access to 52 members of Congress

