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## ENERGY SUPPLY TECHNICAL WORK GROUP

### DRAFT "GROUP B" STRAW PROPOSALS MARCH 28, 2006

#	POLICY NAME	LONG LIST#	VOLUNTEER GROUP	EMAIL ADDRESSES
<b>A. RENEWABLE ENERGY</b>				
ES-1	Mandate(s) for Renewable Energy (RPS, etc.)	1.1	Burks, Griscom, Groenwold, Luce, Melton, O'Hare, [Sandia?]	<a href="mailto:jburks@pnm.com">jburks@pnm.com</a> <a href="mailto:dgriscom@rdcnm.org">dgriscom@rdcnm.org</a> <a href="mailto:kgroenwold@nmelectric.coop">kgroenwold@nmelectric.coop</a> <a href="mailto:benluce@nmccae.org">benluce@nmccae.org</a> <a href="mailto:dmelton@sacredpowercorp.com">dmelton@sacredpowercorp.com</a> <a href="mailto:craig.ohare@state.nm.us">craig.ohare@state.nm.us</a>
ES-2	Financial Incentives for Distributed Renewables	1.2, ~1.4, 1.5, ~1.9, 5.2, ~5.3	Ely, Griscom, Hoodenpyle, Luce, Melton, Pilz, Ramakka, Singer (RCI), Smith	<a href="mailto:wpilz@pnm.com">wpilz@pnm.com</a> <a href="mailto:dgriscom@rdcnm.org">dgriscom@rdcnm.org</a> <a href="mailto:agrienergy@hotmail.com">agrienergy@hotmail.com</a> <a href="mailto:benluce@nmccae.org">benluce@nmccae.org</a> <a href="mailto:dmelton@sacredpowercorp.com">dmelton@sacredpowercorp.com</a> <a href="mailto:jim_ramakka@nm.blm.gov">jim_ramakka@nm.blm.gov</a> <a href="mailto:tsinger@nrdc.org">tsinger@nrdc.org</a> <a href="mailto:smithgr1@bp.com">smithgr1@bp.com</a>
ES-3	Renewable energy transmission and storage	~1.9	Gregory, Ihle, Luce, Michel, O'Hare, [Sandia?]	<a href="mailto:sfgregory@spinn.net">sfgregory@spinn.net</a> <a href="mailto:jack.ihle@xcelenergy.com">jack.ihle@xcelenergy.com</a> <a href="mailto:benluce@nmccae.org">benluce@nmccae.org</a> <a href="mailto:stevensmichel@msn.com">stevensmichel@msn.com</a> <a href="mailto:craig.ohare@state.nm.us">craig.ohare@state.nm.us</a>
ES-4	Financial Incentives for Centralized Renewables	~(1.1, 1.2, 1.6)	Ely, Griscom, Hoodenpyle, Luce, Melton, Pilz, Ramakka, Singer (RCI), Smith	<a href="mailto:wpilz@pnm.com">wpilz@pnm.com</a> <a href="mailto:dgriscom@rdcnm.org">dgriscom@rdcnm.org</a> <a href="mailto:agrienergy@hotmail.com">agrienergy@hotmail.com</a> <a href="mailto:benluce@nmccae.org">benluce@nmccae.org</a> <a href="mailto:dmelton@sacredpowercorp.com">dmelton@sacredpowercorp.com</a> <a href="mailto:jim_ramakka@nm.blm.gov">jim_ramakka@nm.blm.gov</a> <a href="mailto:tsinger@nrdc.org">tsinger@nrdc.org</a> <a href="mailto:smithgr1@bp.com">smithgr1@bp.com</a>
ES-5	R&D including Energy Storage	~(1.3, 1.9)	Guthrie, Michel, [Sandia?]	<a href="mailto:gguthrie@lanl.gov">gguthrie@lanl.gov</a> <a href="mailto:stevensmichel@msn.com">stevensmichel@msn.com</a>

DRAFT "GROUP B" STRAW PROPOSALS, NM ENERGY SUPPLY TWG, 03/28/06

#	POLICY NAME	LONG LIST#	VOLUNTEER GROUP	EMAIL ADDRESSES
<b>B. CENTRALIZED NON-RENEWABLE ELECTRICITY</b>				
ES-6	Advanced Coal/Fossil Technologies (e.g., IGCC with carbon capture)	2.1, 2.2	Burks, Ely, Groenewold/[Sub?], Ihle, Luce, O'Hare, Potturi, [Sandia? (Dave Borns)], Singer (RCI)	<a href="mailto:jburks@pnm.com">jburks@pnm.com</a> <a href="mailto:sandra.ely@state.nm.us">sandra.ely@state.nm.us</a> <a href="mailto:kgroenewold@nmelectric.coop">kgroenewold@nmelectric.coop</a> <a href="mailto:jack.ihle@xcelenergy.com">jack.ihle@xcelenergy.com</a> <a href="mailto:benluce@nmccae.org">benluce@nmccae.org</a> <a href="mailto:craig.ohare@state.nm.us">craig.ohare@state.nm.us</a> <a href="mailto:prasad.potturi@state.nm.us">prasad.potturi@state.nm.us</a> <a href="mailto:tsinger@nrdc.org">tsinger@nrdc.org</a>
ES-7	Nuclear Relicensing & Upgrading	3.2	Groenewold, Kuswa, Michel, Miller	<a href="mailto:kgroenewold@nmelectric.coop">kgroenewold@nmelectric.coop</a> <a href="mailto:gwkuswa@sandia.gov">gwkuswa@sandia.gov</a> <a href="mailto:stevensmichel@msn.com">stevensmichel@msn.com</a> <a href="mailto:amiller@pnm.com">amiller@pnm.com</a>
<b>C. GRID &amp; DEMAND-SIDE POLICIES</b>				
ES-8	Incentives and Barrier Reductions for Combined Heat & Power (CHP)	4.1, 5.2	Barnes, Brinker (RCI), Griscom Hoodenpyle,	<a href="mailto:rbarnes@americanqvpsum.com">rbarnes@americanqvpsum.com</a> <a href="mailto:cbrinker@swenergy.org">cbrinker@swenergy.org</a> <a href="mailto:dgriscom@rdcnm.org">dgriscom@rdcnm.org</a> <a href="mailto:aagrienergy@hotmail.com">aagrienergy@hotmail.com</a>
ES-9	Demand-Side Management, Energy Efficiency, and Integrated Resource Planning (IRP) (Broad demand management of electricity and natural gas, focused on consumption, not peaks) <i>(Note: ES will leverage RCI's work on this option.)</i>	~(5.7, 5.9, 5.10) +	Burks, Gregory, Smith, Singer (RCI)	<a href="mailto:jburks@pnm.com">jburks@pnm.com</a> <a href="mailto:sfgregory@spinn.net">sfgregory@spinn.net</a> <a href="mailto:smithgr1@bp.com">smithgr1@bp.com</a> <a href="mailto:tsinger@nrdc.org">tsinger@nrdc.org</a>
ES-10	Transmission capacity and corridors	~5.3	Ihle, Michel, Ramakka	<a href="mailto:jack.ihle@xcelenergy.com">jack.ihle@xcelenergy.com</a> <a href="mailto:stevensmichel@msn.com">stevensmichel@msn.com</a> <a href="mailto:jim_ramakka@nm.blm.gov">jim_ramakka@nm.blm.gov</a>

DRAFT "GROUP B" STRAW PROPOSALS, NM ENERGY SUPPLY TWG, 03/28/06

#	POLICY NAME	LONG LIST#	VOLUNTEER GROUP	EMAIL ADDRESSES
<b>D. OIL &amp; GAS POLICIES</b>				
ES-11	CO2 Capture and Storage or Reuse (CCSR) in oil & gas and other operations; includes storage or reuse of power sector CO2 (see ES-6)	~(7.14, 2.2)	Ames, Ely, Epel, Fesmire, Gantner, Guthrie, Groenewold, Kuswa, Lee, Smith, Weaver, Zak	<a href="mailto:ames@westernlaw.org">ames@westernlaw.org</a> <a href="mailto:sandra.ely@state.nm.us">sandra.ely@state.nm.us</a> <a href="mailto:jbepel@duke-energy.com">jbepel@duke-energy.com</a> <a href="mailto:mark.fesmire@state.nm.us">mark.fesmire@state.nm.us</a> <a href="mailto:bgantner@br-inc.com">bgantner@br-inc.com</a> <a href="mailto:gguthrie@lanl.gov">gguthrie@lanl.gov</a> <a href="mailto:kgroenewold@nmelectric.coop">kgroenewold@nmelectric.coop</a> <a href="mailto:gwkuswa@sandia.gov">gwkuswa@sandia.gov</a> <a href="mailto:lee@nmt.edu">lee@nmt.edu</a> <a href="mailto:smithgr1@bp.com">smithgr1@bp.com</a> <a href="mailto:lany.weaver@state.nm.us">lany.weaver@state.nm.us</a> <a href="mailto:bdzak@sandia.gov">bdzak@sandia.gov</a>
ES-12	Methane reduction in oil & gas operations – Best Management Practices (BMPs) & Partner Reduction Opportunities (PROs)	~(7.4, 7.5, & 7.9 - 7.14)	Ames, Epel, Fesmire, Gantner, Groenewold, Smith, Weaver	<a href="mailto:ames@westernlaw.org">ames@westernlaw.org</a> <a href="mailto:jbepel@duke-energy.com">jbepel@duke-energy.com</a> <a href="mailto:mark.fesmire@state.nm.us">mark.fesmire@state.nm.us</a> <a href="mailto:bgantner@br-inc.com">bgantner@br-inc.com</a> <a href="mailto:kgroenewold@nmelectric.coop">kgroenewold@nmelectric.coop</a> <a href="mailto:smithgr1@bp.com">smithgr1@bp.com</a> <a href="mailto:lany.weaver@state.nm.us">lany.weaver@state.nm.us</a>
ES-13	CO2 reduction from fuel combustion in oil & gas operations	~(7.1, 7.2, 7.3)	Ames, Epel, Gantner, Ramakka, Smith, Weaver	<a href="mailto:ames@westernlaw.org">ames@westernlaw.org</a> <a href="mailto:jbepel@duke-energy.com">jbepel@duke-energy.com</a> <a href="mailto:bgantner@br-inc.com">bgantner@br-inc.com</a> <a href="mailto:jim_ramakka@nm.blm.gov">jim_ramakka@nm.blm.gov</a> <a href="mailto:smithgr1@bp.com">smithgr1@bp.com</a> <a href="mailto:lany.weaver@state.nm.us">lany.weaver@state.nm.us</a>
<b>E. EMISSIONS POLICIES</b>				
ES-14	GHG Cap & Trade (includes offsets policies)	(11.4, 11.2)	Burks, Green, Groenewold, Ihle, Luce, Michel, O'Hare, Singer (RCI), Tavaréz (RCI), Whaley (RCI)	<a href="mailto:jburks@pnm.com">jburks@pnm.com</a> <a href="mailto:gsgwin@aol.com">gsgwin@aol.com</a> <a href="mailto:kgroenewold@nmelectric.coop">kgroenewold@nmelectric.coop</a> <a href="mailto:jack.ihle@xcelenergy.com">jack.ihle@xcelenergy.com</a> <a href="mailto:benluce@nmccae.org">benluce@nmccae.org</a> <a href="mailto:stevensmichel@msn.com">stevensmichel@msn.com</a> <a href="mailto:craig.ohare@state.nm.us">craig.ohare@state.nm.us</a> <a href="mailto:tsinger@nrdc.org">tsinger@nrdc.org</a> <a href="mailto:itavarez@cabq.gov">itavarez@cabq.gov</a> <a href="mailto:don@navajo-refining.com">don@navajo-refining.com</a>

**ES-6: Advanced Coal/Fossil Technologies**

1. Policy Description:

a. Lay description of proposed policy action:

Advanced fossil technologies are more efficient than conventional fossil technologies and, therefore, have lower CO2 emission rates. Advanced fossil technologies combined with carbon capture and sequestration or reuse (CCSR) could enable zero or close to zero CO2 emissions. Policies for advanced fossil technologies may include mandates or incentives to use advanced coal technologies for new coal plants. A mandate might require that new coal plants achieve a certain CO2 emission rate that is only achievable with advanced technology. Alternatively, a mandate might require that all new coal plants be of a certain type, e.g., Integrated Gasification Combined Cycle (IGCC). A mandate might also be a requirement that a certain percentage of new coal plants be IGCC or employ advanced fossil technologies. Incentives may be in the form of direct subsidies or assistance in securing financing and/or off-take agreements. A combination of mandates and incentives is also possible.

b. Policy Design Parameters:

i. Implementation level(s) beyond BAU:

The volunteer group suggested as a first step to analyze the cost for all new coal plants in New Mexico (reflecting new demand growth and retirement of old fossil facilities) to be IGCC with CCSR at 1) 60% capture and storage and 2) 90% capture and storage. The group suggested that the analysis assume there would be no redundant gasifiers. The consensus of the group was that utilities could successfully manage reliability through other plants in the system rather than building in extra reliability for individual plants with redundant gasifiers.

- Deleted: Just
- Deleted: what it would cost for new coal to be IGCC
- Deleted: .
- Deleted: &
- Deleted: CCS
- Deleted: No redundant gasifiers.

ii. Timing of implementation:

See above.

iii. Implementing parties:

Utilities would meet the IGCC requirement.

iv. Other

- c. Implementation Mechanism(s): Indicate which mechanisms are to be used, and describe the specific approach that is proposed

[The group held off on selecting an implementation mechanism pending an evaluation of the costs.](#)

- i. Funding mechanisms and or incentives
- ii. Pilots and demos
- iii. Research and development

2. BAU Policies/Programs, if applicable:

- a. None.
- b.

3. Types(s) of GHG Benefit(s):

- a. CO<sub>2</sub>: By requiring that a certain percentage of coal be generated using IGCC with CCSR, a direct reduction in CO<sub>2</sub> emissions will occur. IGCC with CCSR is a zero-emission technology and would be displacing conventional coal generation.
- b. CH<sub>4</sub>
- c. N<sub>2</sub>O
- d. HFC's, SFC's
- e. Black Carbon: Because coal is not combusted directly in an IGCC plant, black carbon emissions from IGCC with CCSR are zero. To the extent that IGCC displaces existing generation from coal and oil, black carbon emissions will also decrease.

4. Types of Ancillary Benefits and or Costs, if applicable:

- a. IGCC with CCSR has significantly lower criteria air pollutant emissions than conventional coal, so this policy will lead to reductions in criteria air pollutants and, consequently, reduce health costs associated with these pollutants.
- b.

5. Estimated GHG Savings and Costs Per MMTCO<sub>2</sub>e:

- a. Summary Table of:
  - i. GHG potential in 2010, 2020
  - ii. Net Cost per MMTCO<sub>2</sub>e in 2010, 2020

- b. Insert Excel Worksheet showing summary GHG reduction potential and net cost
- 6. Data Sources, Methods and Assumptions:
  - a. Data Sources
  - b. Quantification Methods
  - c. Key Assumptions
- 7. Key Uncertainties if applicable:
  - a. Benefits
  - b. Costs
- 8. Description of Ancillary Benefits and Costs, if applicable:
  - a. Description of issue #1
  - b. Description of issue #2
  - c. Etc.
- 9. Description of Feasibility Issues, if applicable:
  - a. Description of issue #1
  - b. Description of issue #2
  - c. Etc.
- 10. Status of Group Approval:
  - a. Pending
  - b. Completed
- 11. Level of Group Support:
  - a. Unanimous Consent
  - b. Supermajority
  - c. Majority
  - d. Minority
- 12. Barriers to consensus, if applicable (less than unanimous consent):
  - a. Description of barrier #1

- b. Description of barrier #2
- c. Etc.

**ES-7: Nuclear Relicensing and Uprating**

1. Policy Description:

a. Lay description of proposed policy action:

Nuclear relicensing and uprating is an important issue in states with nuclear power plants. Because New Mexico does not have any nuclear power plants, it is not clear what if any GHG reductions a state policy along these lines will be able to accomplish.

The volunteer group suggested that New Mexico be involved in discussions of relicensing and uprating in surrounding states.

Some volunteer group members also recommended that the ES TWG alter this policy to include consideration of new nuclear plants in New Mexico.

Deleted:

b. Policy Design Parameters:

i. Implementation level(s) beyond BAU:

The volunteer group suggested that this option not be quantified.

ii. Timing of implementation: See above.

iii. Implementing parties: Utilities

iv. Other

c. Implementation Mechanism(s): Indicate which mechanisms are to be used, and describe the specific approach that is proposed

i. Information and education

ii. Technical assistance

iii. Funding mechanisms and or incentives

iv. Voluntary and or negotiated agreements

v. Codes and standards

vi. Market based mechanisms

vii. Pilots and demos

viii. Research and development

ix. Reporting

x. Registry

xi. Other?

2. BAU Policies/Programs, if applicable:
  - a.
  
3. Types(s) of GHG Benefit(s):
  - a. CO2:
  - b. CH4
  - c. N2O
  - d. HFC's, SFC's
  - e. Black Carbon:
  
4. Types of Ancillary Benefits and or Costs, if applicable:
  - a. Type of Ancillary Benefit or Cost #1
  - b. Etc.
  
5. Estimated GHG Savings and Costs Per MMTCO<sub>2e</sub>:
  - a. Summary Table of:
    - i. GHG potential in 2012, 2020, 2050
    - ii. Net Cost per MMTCO<sub>2e</sub> in 2012, 2020, 2050
  - b. Insert Excel Worksheet showing summary GHG reduction potential and net cost
  
6. Data Sources, Methods and Assumptions:
  - a. Data Sources
  - b. Quantification Methods
  - c. Key Assumptions
  
7. Key Uncertainties if applicable:
  - a. Benefits
  - b. Costs
  
8. Description of Ancillary Benefits and Costs, if applicable:
  - a. Description of issue #1
  - b. Description of issue #2

c. Etc.

9. Description of Feasibility Issues, if applicable:

- a. Description of issue #1
- b. Description of issue #2
- c. Etc.

10. Status of Group Approval:

- a. Pending
- b. Completed

11. Level of Group Support:

- a. Unanimous Consent
- b. Supermajority
- c. Majority
- d. Minority

12. Barriers to consensus, if applicable (less than unanimous consent):

- a. Description of barrier #1
- b. Description of barrier #2
- c. Etc.