Eastern Interconnection
States’ Planning Council: Formation and Future

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EPA Webinar

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Why do this now?

The United States operates on electricity.
Population distribution in the US.
Why do this now?

ELECTRICITY MUST BE:
--RELIABLE
--AFFORDABLE
--ENVIRONMENTALLY SENSITIVE
Interdependence

Artist Rendition of 14.8.2003 blackout, at time of voltage collapse
In addition to the demands placed on electricity, the construction of the electricity delivery system – the “power line grid” – has not kept pace with today’s demands for electricity.

Public policies regarding renewable energy use and renewable energy located far from major population centers exacerbate the issue.
Renewable Requirements in the States - NOT A UNIFORM REQUIREMENT!

DSIRE: www.dsireusa.org

January 2009

Renewables Portfolio Standards

- NV: 20% by 2015
- NE: 10% by 2025 (large utilities)
- ND: 10% by 2015
- NH: requirement varies by utility; 10% by 2015 goal
- NJ: 22.5% by 2021
- NM: 20% by 2020 (10 Us)
- NV: 20% by 2020 (large utilities)
- NC: 25% by 2025
- NY: 24% by 2013
- OH: 25% by 2025
- OR: 25% by 2025 (large utilities)
- PA: 18% by 2020
- VT: (1) RE meets any increas in retail sales by 2012;
  (2) 3% RE CHP by 2017
- WI: 10% by 2015
- IL: 25% by 2025
- IA: 10% by 2015
- KY: 10% by 2020
- LA: 10% by 2020
- ME: 10% by 2015 + 1,100 MW by 2015
- MA: 15% by 2020 + 1% annual increase (Solar Renewables)
- MI: 15% by 2021
- MN: 25% by 2025
- MO: 15% by 2021
- MS: 10% by 2020 (co-ops & large munis)
- MT: 15% by 2015
- NE: 20% by 2020
- ND: 10% by 2015
- OH: 25+ by 2025
- OR: 25% by 2025 (large utilities)
- PA: 18% by 2020
- RI: 18% by 2020
- SC: 20% by 2020
- SD: 10% by 2015
- TN: 10% by 2020
- TX: 5,880 MW by 2015
- VA: 12% by 2022
- WA: 15% by 2020
- WY: 15% by 2015 (large utilities)
- WV: 10% by 2020
- WI: 25% by 2025
- WY: 15% by 2015 (large utilities)
- WY: 15% by 2015 (smaller utilities)
- DC: 20% by 2020

- Solar hot water eligible
- Minimum solar or customer-sited RE requirement
- Increased credit for solar or customer-sited RE
- Includes separate tier of non-renewable "alternative" energy resources

28 states have an RPS;
5 states have an RE goal
Wind Resources in the U.S.
The first of its kind...

“The objective of this Funding Opportunity Announcement is to facilitate the development or strengthening of capabilities in each of the three interconnections in the lower 48 states of the United States, to prepare analyses of transmission requirements under a broad range of alternative futures and develop long-term interconnection-wide transmission expansion plans.”

Department of Energy, Funding Opportunity Announcement DE-FOA0000068
North American Electric Reliability Corporation Interconnections

WESTERN INTERCONNECTION

EASTERN INTERCONNECTION

ELECTRICITY RELIABILITY COUNCIL OF TEXAS INTERCONNECTION
TWO TEAMS IN PLANNING EFFORT

**Engineering Team (EIPC)**

- Planning Authorities =
  - Regional Transmission Organizations (RTO)
  - Transmission Owners
- Run models and prepare the transmission plans
- Stakeholder Committee – provides strategic advice

**Policymakers Team (EISPC)**

- State representatives—Commissioners, Governors’ Reps., SEOs, Environmental Agencies
- Provide inputs to modelers through Stakeholder Committee
- Conduct Studies
- Prepare Whitepapers
1. Coordinate with SSC and EIPC Engineering Team:
   - Identify 8 hypothetical futures/72 Sensitivities
   - Select 3 hypothetical futures for grid design
   - Provide input on grid design
   - Participate in the Stakeholder Steering Committee.

2. Conduct Studies to Inform Future Transmission Actions and State Decision-Making (including a study of Energy Zones in the States in the EI)

3. Prepare Whitepapers to Inform Decision-Making
Eight Futures

1. Business as Usual
2. Carbon Capture – Top-Down Implementation
3. Carbon Capture – State/Local Implementation
4. Aggressive EE/DR/DG/Smart Grid
5. Federal RPS – National Implementation
6. Federal RPS – State/Regional Implementation
7. Nuclear Resurgence
8. Combined Federal Climate and Energy Policy

All Futures contain environmental components, including the EPA Rulemaking
Studies

1. Energy Zones—State-by-State Potential
2. State-by-State Potential for DSM
4. State-by-State Potential for DG
5. Identify Locations for New/Uprated Nuclear
6. State-by-State Assessment of Sm. Generation
7. Assessment for Coal Development with CCS
9. Assessment of Other Carbon Reduction Steps
10. Assessment of Gas/Other Fuel Prices
Whitepapers
1. Energy Values Impacted Resource Selection
2. Market Structures Impacting Resource Choice
3. Financial Implications of PPAs
5. Incentives/Disincentives for Energy Develop.
6. PHEV: Identify Potentials and Implications
7. Evaluate Local vs. Remote Generation
8. Economic Uncertainties for emerging tech.
9. Smart Grid: Identify Potential and Impacts
10. Aspects of existing RPSs—”off ramps”
11. RPS Fuels/ Technologies Inclusions
TIMELINE FOR EISPC TASKS:
-- COMPLETE MODELING INPUTS – MARCH 2011
-- BEGIN ENERGY ZONES AND OTHER STUDIES AND WHITEPAPERS – MARCH 2011
-- BEGIN TRANSMISSION “BUILD OUT” STUDIES – LATER IN 2011 INTO 2012
-- EXAMINE MODELING, STUDY AND WHITEPAPER RESULTS—END OF 2012 INTO 2013
Questions?