

# Regional Transmission Planning: Current Issues

Commissioner Lauren Azar

Public Service Commission of Wisconsin

High Plains Regional Transmission Summit

November 3, 2009

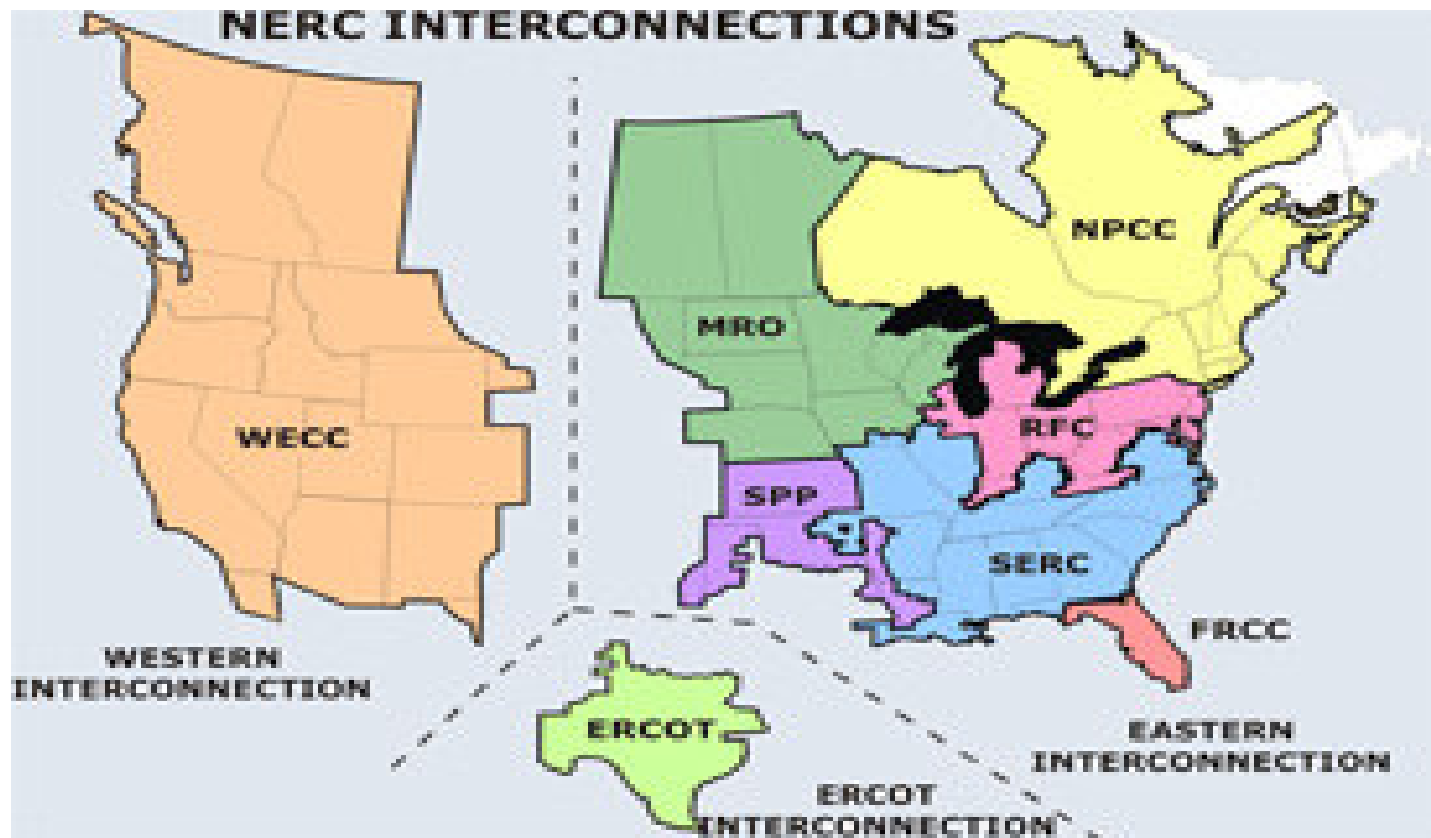
Lawrence, Kansas



**Why is multi-state transmission planning  
a good idea?**



# The Electric Interconnections



## Renewable Portfolio Standards/ Renewable Energy Standards

- ~ 30 states already have RPS
- Congress is considering federal RPS
- Renewable Fuel Sources:
  - Resource often located far from electricity customers



## CO<sub>2</sub> Limitations

- US EPA:
  - Endangerment Finding for Carbon Emissions
- Congress:
  - Possible cap-and-trade program (House ACES bill passed – current debate in Senate)
- Regional Initiatives:
  - Northeastern RGGI
  - Midwest Governors GHG Accord



# Multi-State Transmission Planning is Now a Necessity

**Policies will require rapid transformation of electric industry**

- CO<sub>2</sub> limitations
- Increased renewable generation

**Regional transmission planning (and perhaps construction) will occur...with or without state involvement.**

- ARRA funding makes transmission planning a priority
- \$ 80 million for transmission planning in the three interconnections.



## Transmission Planning – The Basics

**Approach 1: reliability focus**

**Approach 2: reliability + resource focus**



# Transmission Planning – Approach #1: Reliability

## Step 1: Demand Forecasts:

Utilities predict how much power is needed in the future for their customers

## Step 2: If Demand > Supply

Either build generator near customers

- or -

Build transmission to customers



## Transmission Planning – A period of transition

- **Political mandates require building tremendous amounts of new generation, some of which may not be located near the demand**
- **Transformation of the generation portfolios must happen over a short period of time.**



## Transmission Planning – Approach #2: Reliability + Resource Focus

### Build Generation:

- To comply with political mandates for renewables and carbon reduction
- Not primarily for customer need

### Build Transmission:

- To connect politically mandated generation to customers
- Renewable and low-carbon generation may be located far away from customers



# States' Role in the Transformation of the Electric Industry



## Transmission Planning – Approach #2: Reliability + Resource Focus

### How Will We Meet Political Mandates?

- New Generation and Storage
- Retirements of Existing Generators
- Demand Reduction Initiatives
- A Combination Of All Of These

**Should state-level policymakers help define those actions?**



# Transmission Planning – Approach #2: Reliability + Resource Focus

## New Generation and Storage

- How Much?
- What Type?
- Where?

-----  
Renewables: some far from customers

Nuclear: requires water (current technology)

-----

Is it best to build near your state's customers, or far away and build transmission?



## Transmission Planning – Approach #2: Reliability + Resource Focus

### Retirements of Existing Generators

- How Much?
- What Type?
- Where?

---

Is carbon capture and sequestration an option for your state?



# Transmission Planning – Approach #2: Reliability + Resource Focus

## Demand Reduction Initiatives

### Energy Efficiency

How much EE can your state achieve?

### Distributed Generation

Is distributed generation viable in your state?

### Smart Grid

Is your state transitioning to a smart grid?

### Plug-In Electric Vehicles

Are plug-in electric vehicles viable for your state?



# Feds Fund Interconnection-Wide Planning



# ARRA Funding – The Basics

- **ARRA** devoted significant funding to interconnection-wide planning:
  - “for the purpose of facilitating the development of regional transmission plans” and
  - “to conduct a resource assessment and an analysis of future demand and transmission requirements.”
- **DOE Funding Opportunity Announcement** – divided funding
  - Topic A (Planning/Analysis – the “Engineering”)
  - Topic B (Cooperation Among States on Priorities – the “Policies”)
- **Interconnection-wide planning** = a new scope and scale for planning. Will be important and insightful.



# **States Propose to Take Leadership Role in Eastern Interconnection Planning**



## EISPC Funding Proposal – Snapshot

- **EISPC** = Eastern Interconnection States' Planning Council
- **\$14,800,000** requested in 9/14/09 grant proposal
- **Voting Representatives Per State = 2**
  - one identified by Commission and
  - one by Governor



# EISPC - Development

## **May 15 – Washington, DC**

- 20 Commissioners -OPSI, OMS, NECPUC, NYISO, SEARUC, SPP-RSC
- DOE Presentation – encouraged state participation

## **June 29/30 – Washington, DC**

- Representatives from 33 of the 41 “states”
- Decision to apply for Topic B funds
- Established 3 working groups
  - Proposal Group – Lauren Azar, President OMS
  - Negotiations Group – Doug Nazarian, President OPSI
  - Governance Group – Jon McKinney, Chair MACRUC

## **Various Teleconferences**

- Proposal submitted September 14<sup>th</sup> – seeking \$14.8 million
- 38 of the 41 “states” submitted commitment letters indicating support of the funding request



# EISPC – Substantive Tasks

1. Identify Eastern Energy Zones
2. Develop Modeling Inputs for the Topic A Planning (construction costs, future scenarios)
3. Participate in Other Topic A Activities including identifying participants in Topic A Steering Committee
4. Develop Studies and Whitepapers to Guide Decision-Making
  - Integration of renewables into the grid
  - Availability of baseload renewables and low-carbon resources
  - Other studies needed for states for interconnection-wide planning
5. Articulate Economic and Environmental Implications of the resource and transmission alternatives used in Topic A Planning
6. Others?



# Questions

- Questions?

Contact info

Commissioner Lauren Azar

(608) 267-7899

email questions or comments to

[lauren.azar@wisconsin.gov](mailto:lauren.azar@wisconsin.gov)

