

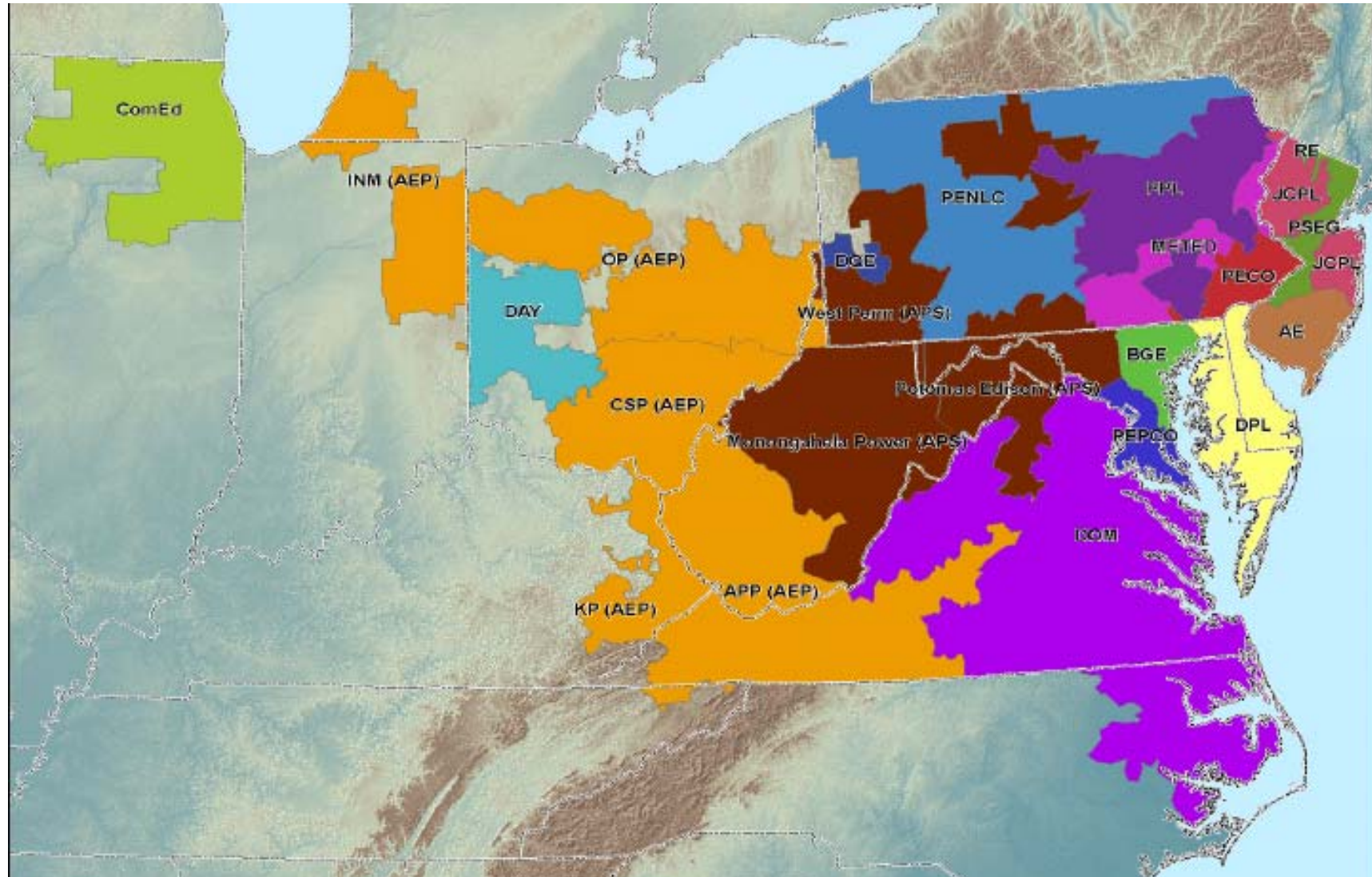
# Illinois and Regional Electric Industry Issues



# Regional “Transmission” Organization

- We normally discuss several markets in the RTO construct.
  - Energy Market – this is most widely studied because it is most transparent, i.e. LMPs.
  - Capacity Market – more heterogeneous, some RTO’s have centralized markets with transparent prices, others have bilateral constructs where price is not publically know.
  - Ancillary Services Markets – Regulation, Spinning and non-Spinning Reserves procured in a market construct similar to energy.
- However, what is included herein discusses the most traditionally regulated portion of the RTO market – **Transmission Service**
- Transmission Service costs to the end customers served by the utility or ARES will include the embedded cost rates of Attachment H, those assigned for financing new transmission construction through Schedule 12 and ancillary service costs.

# State Jurisdictional Public Utilities within a FERC Jurisdictional Utility



# Calculation of PJM Transmission Rates (Embedded Costs)

- FERC Form 1
  - Public Utilities and Licensees Subject To the Provisions of The Federal Power Act
  - Filed April 1, year t for calendar year t -1.
- Attachment H
  - The annual transmission revenue requirement and the gross rate for Network Integration Transmission Service are equal to the results of the formula shown in Attachment H-13A, posted on the PJM website, which reflects the transmission facilities of Commonwealth Edison Company (“ComEd”) under the operational control of PJM. The rate determined pursuant to Attachment H-13A shall be implemented pursuant to the Formula Rate Implementation Protocols set forth in Attachment H-13B. Service utilizing other facilities will be provided at rates determined on a case-by-case basis.
  - <http://www.pjm.com/markets-and-operations/transmission-service/formula-rates.aspx#june2009may2010>

# Formula Rate Under Attachment H

$$\text{Rate} = \frac{\text{Revenue Requirement}}{\text{Transmission Zone Peak Load}}$$

$$\text{Revenue Requirement} = (\text{Transmission Plant} - \text{Depreciation})\text{ROR} + \text{Expenses}$$

- In order to ensure full cost recovery the RTO must charge the Formula Rate to Load Serving Entities sinking energy in a Transmission Zone for a quantity equal to Peak Load in the Transmission Zone to return the Transmission Owner her Revenue Requirement.

# Transmission Service Charges in RTO's at Embedded Cost Rates

- Network Integration Transmission Service
  - Network Customer, Network Load, Network Resource, Network Operating Agreement, Network Upgrades
    - PJM Rate established pursuant to Attachment H and MISO pursuant to Attachment O.
- Point to Point Transmission Service
  - Firm Point to Point
    - PJM Rate established pursuant to Schedule 7
  - Non Firm Point to Point
    - PJM Rate established pursuant to Schedule 8

Revenues from Point to Point Service are credited to (serve to reduce) the network customers rate under Attachment H. Again the point is to charge the network service rate equal to a quantity of network load equal to the peak in the used to calculate the rate.

### **34. Rates and Charges (PJM) (this seems to only address charges for embedded cost recovery)**

The Network Customer shall pay the Transmission Provider for any Direct Assignment Facilities, Ancillary Services, PJM Administrative Service, any applicable **Transmission Enhancement Charge(s)** and applicable study costs, consistent with Commission policy, along with the following:

#### **34.1 Monthly Demand Charge:**

**(a) The Network Customer shall pay a monthly Demand Charge for Zone Network Load and Non-Zone Network Load, which shall be determined as follows:**

- $MDC = \text{Sum of MDCZ for all Zones plus the MDCNZ for Non-Zone Network Load}$
- $MDCZ = \text{Sum of DDCZ for each day of the calendar month for the Zone}$
- $DDCZ = DCPZ \times RTZ/365$

Where:

- MDC is the monthly demand charge
- MDCZ is the monthly demand charge for a Zone
- DDCZ is the daily demand charge for a Zone
- DCPZ is the daily load of the Network Customer located within a Zone coincident with the annual peak of the Zone (as adjusted pursuant to sections 34.2 and 34.3 below).
- RTZ is the rate for Network Integration Transmission Service from Attachment H for the Zone in which the Zone Network Load is located, stated in dollars per megawatt per year

- (It is important to note the underlined. The rate is calculated from the annual coincident peak of the transmission owner and the charged is assessed based also on a load serving entities contribution to annual coincident peak. For vertically integrated states, the transmission owner and LSE are likely the same, but ComEd the transmission owners is larger than ComEd the LSE because of the existence of ARES and policy concerning large customers.)

# In addition to Attachment H charges Schedule 12 determines allocation of costs for PJM Transmission Enhancement

- (b) Designation or Customers Subject to Transmission Enhancements Charges
  - (i) Regional Facilities and Necessary Lower Voltage Facilities
  - (ii) Cost Responsibility Assignment Procedures for Other Facilities Pursuant To Settlement In Docket No. ER06-456-000
  - (iii) Lower Voltage Facilities
  - (v) Economic-Based Required Transmission Enhancements that as Planned will Operate Below 500 kV

(b)(i) is the source of the controversy in the ICC case against the FERC. It is only about the allocation of new cost, i.e. PJM Transmission Enhancements.

These costs will also be subtracted from Transmission Plant fed to Attachment H from the Transmission Owners FERC Form 1 to avoid double recovery of the costs.



# Cost Allocation Issues

- FERC Opinion 494
- Recent 7<sup>th</sup> Circuit Court Case
  - Embedded Costs vs. New Costs
    - American Electric Power and Ohio PUC v. FERC
  - Regional vs. Local Costs (New Costs)
    - Illinois Commerce Commission v. FERC
- MISO RECB and CARP
  - Wind Integration Issue: Otter Tail
  - 7<sup>th</sup> Circuit Court Consequences: Regional Facilities

In the  
**United States Court of Appeals**  
**For the Seventh Circuit**

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Nos. 08-1306, 08-1780, 08-2071, 08-2124, 08-2239

ILLINOIS COMMERCE COMMISSION, *et al.*,

*Petitioners,*

*v.*

FEDERAL ENERGY REGULATORY COMMISSION, *et al.*,

*Respondents.*

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Petitions to Review Orders of the  
Federal Energy Regulatory Commission.

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ARGUED APRIL 13, 2009—DECIDED AUGUST 6, 2009

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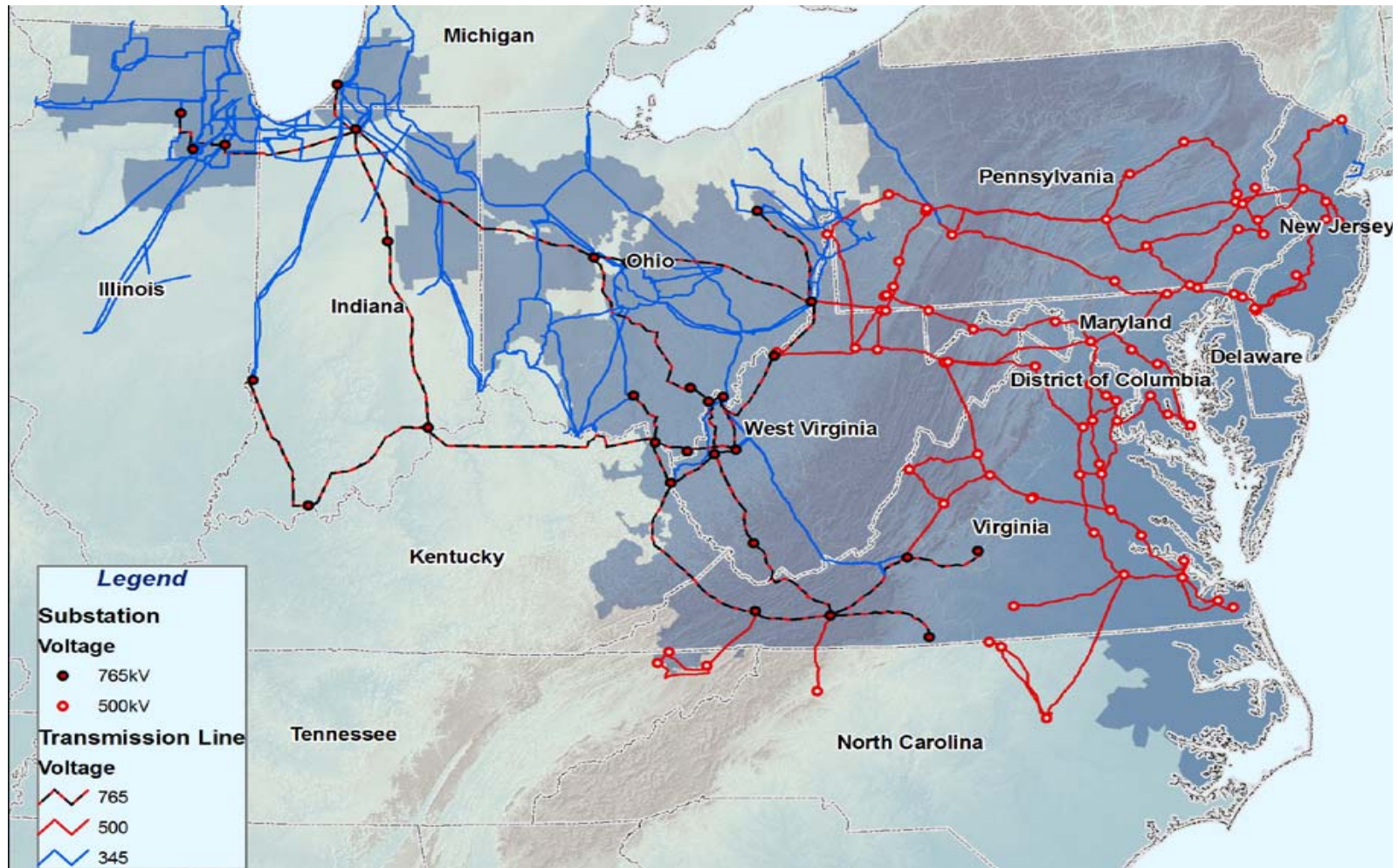
Before CUDAHY, POSNER, and TINDER, *Circuit Judges.*

# Judge Richard Posner



<http://www.ca7.uscourts.gov/fdocs/docs.fwx?caseno=08-1306&submit=showdkt&yr=08&num=1306>

# PJM Transmission

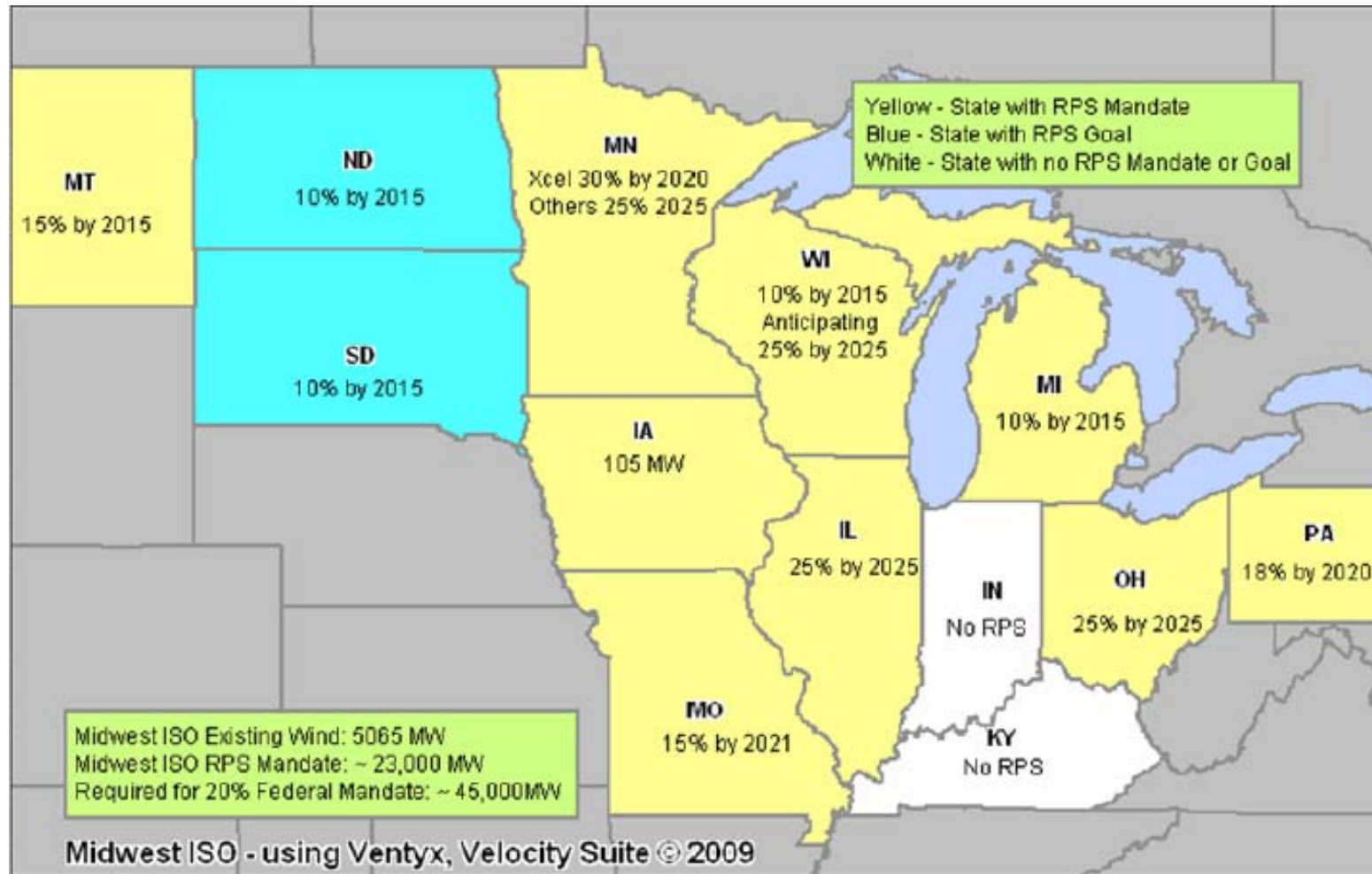


The socialization of the costs for any transmission facilities without attempt to identify beneficiaries is the central objection the ICC makes in the case. In addition the regional discrimination associated with the socialization of costs for new facilities greater than or equal to 500kV is readily apparent in this illustration of the PJM Transmission System.

# MISO RECB and CARP

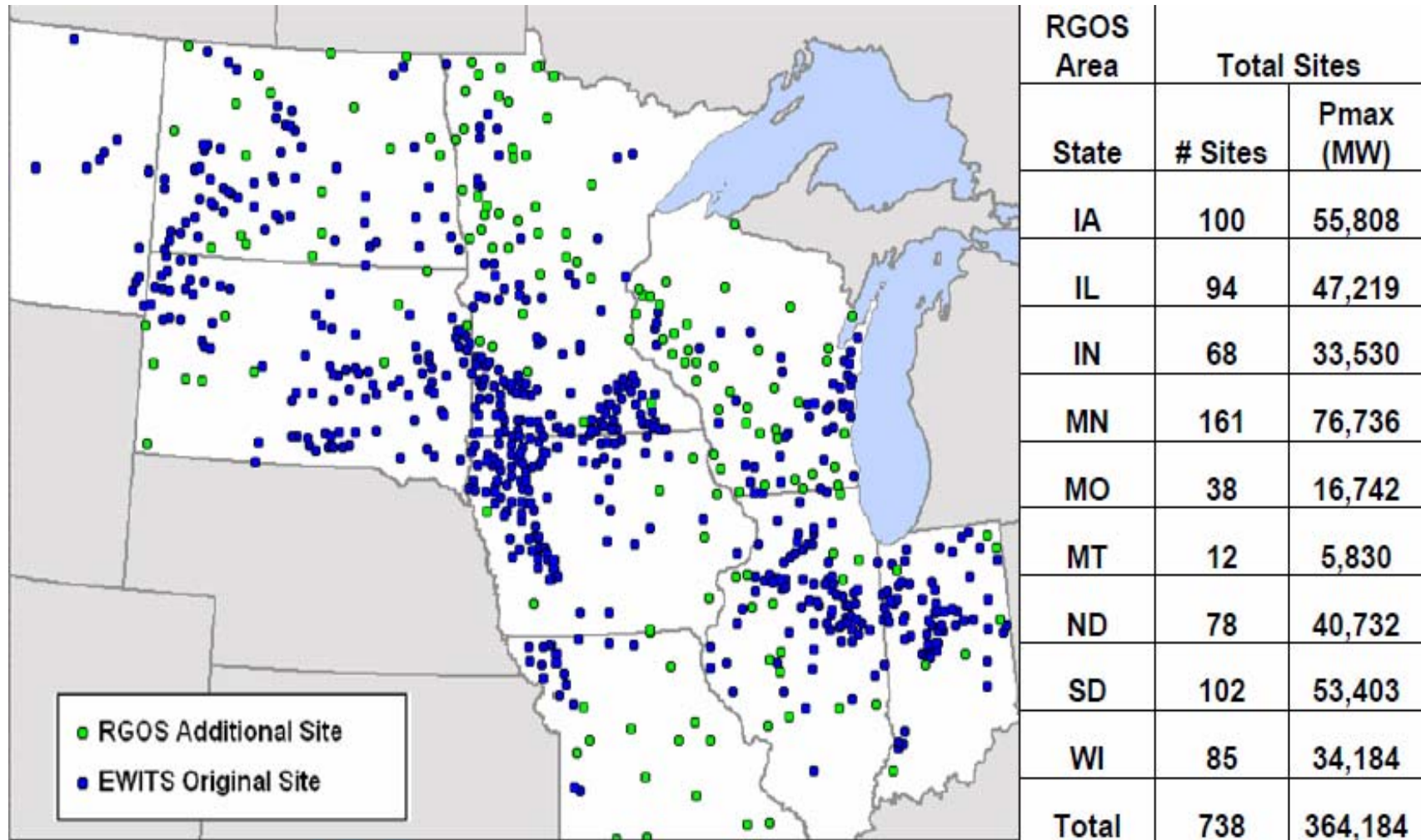
- Goals of Transmission Plans
- Regional Expansion Criteria and Benefits (RECB)
  - RECB 1 – Reliability Projects
  - RECB 2 – Reliability vs. Economic Projects
  - RECB 3 - Otter Tail “Solution”
- Cost Allocation and Resource Planning (CARP)
  - Coalition of State Commission
  - Injection/Withdrawal Cost Allocation and the 7<sup>th</sup> Circuit Court Decision

# Renewable Portfolios in the Midwest ISO





# NREL Data used in RGOS



# Transmission Planning Issues

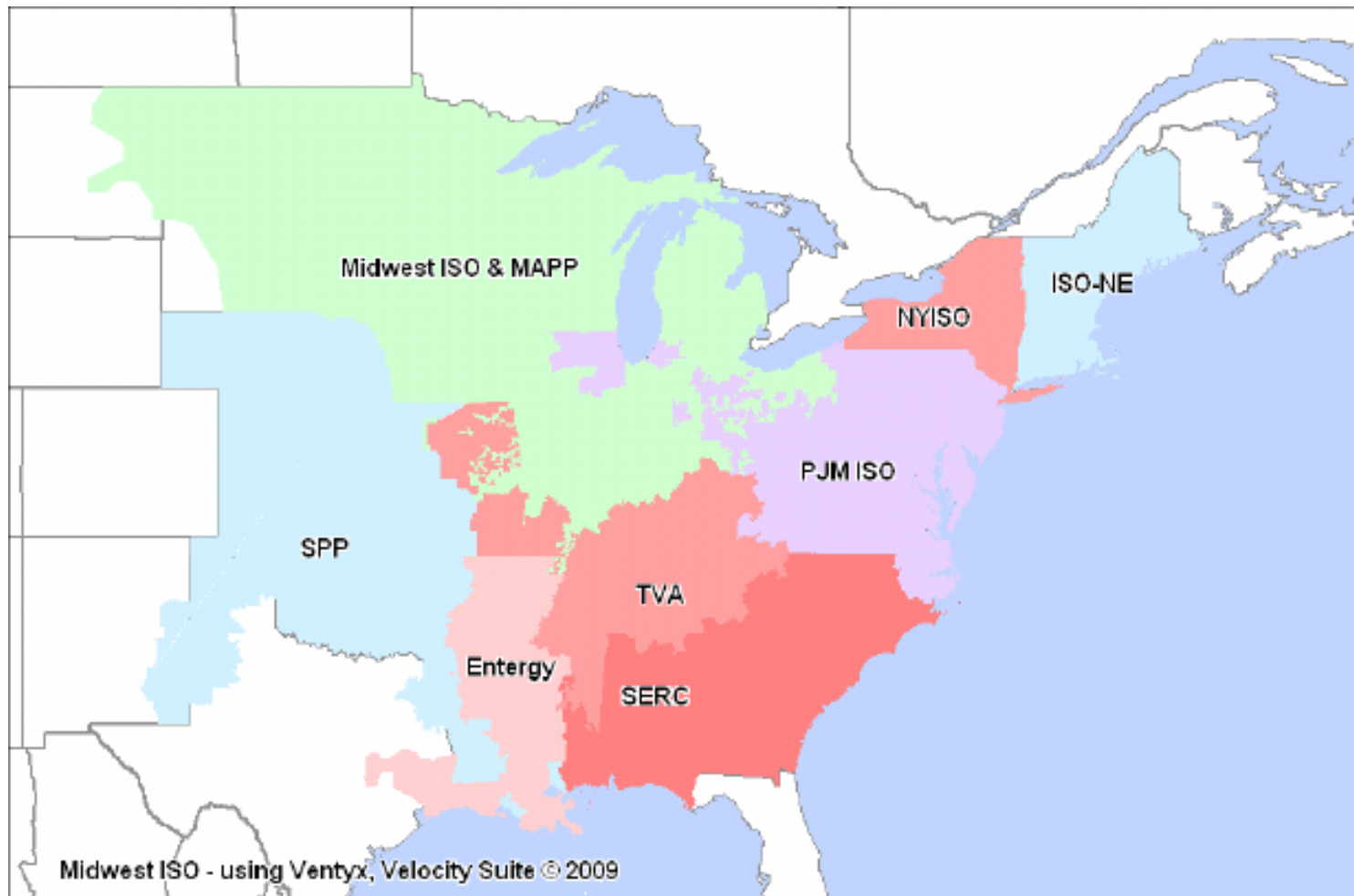
- Scope and Jurisdiction
- Political Uncertainty
- Technological Uncertainty
- Load Uncertainty
- Wind Integration – Distance from Load vs. Capacity Factors
- FERC Request for Comments Docket AD09-8



# Regional Planning Processes

- Midwest Transmission Expansion Planning (MTEP)
- Regional Generation Outlet Study (RGOS)
- Upper Midwest Transmission Development Initiative (UMTIDI)
- Cost Allocation and Resource Planning (CARP)
- PJM Regional Transmission Expansion Plan (RTEP)
- Joint Coordinated System Plan (JCSP)
- Southeastern Regional Transmission Planning (SERTP)
- Eastern Interconnect Planning Collaborative (EIPC)

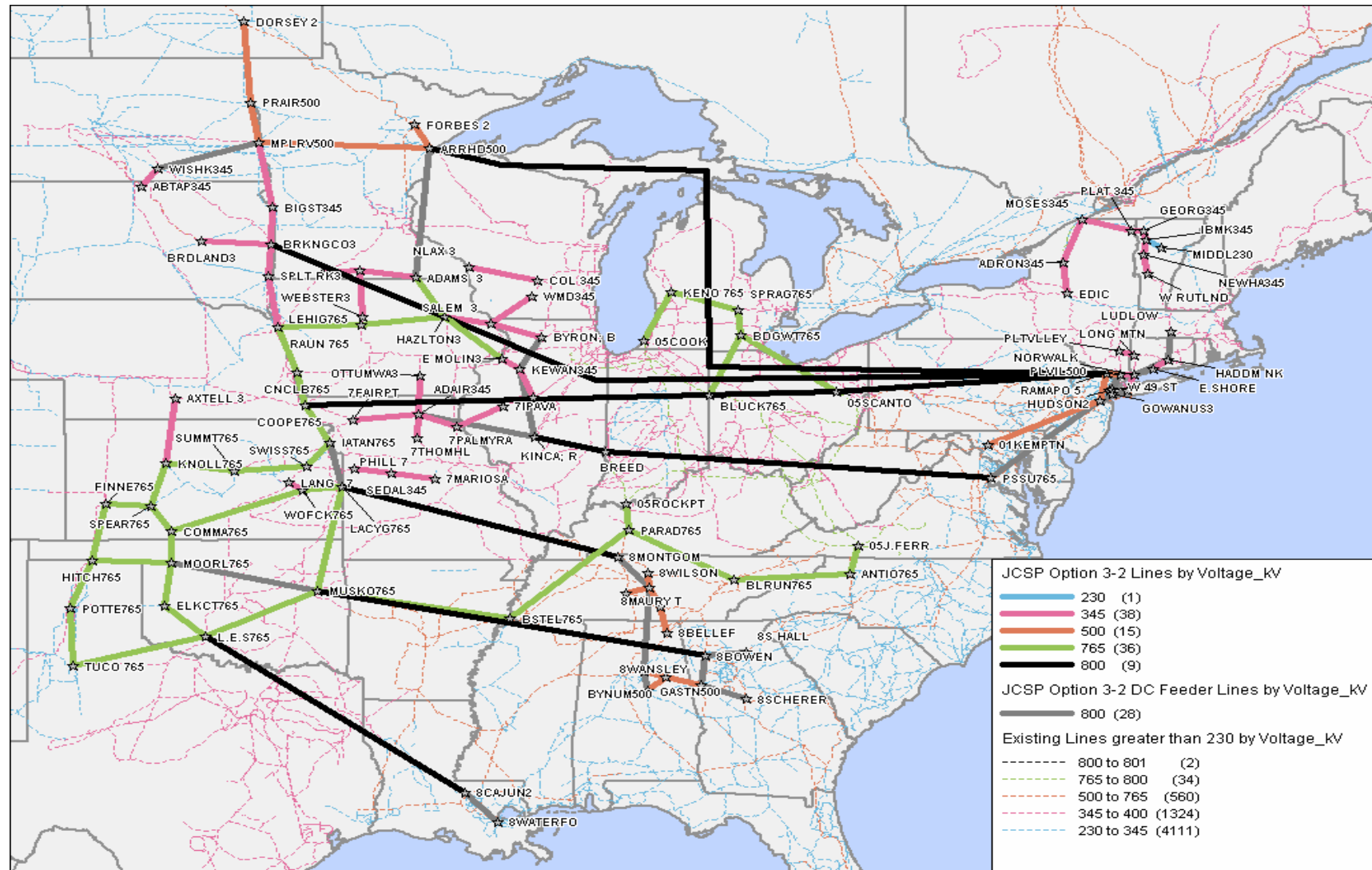
# Eastern Interconnect Operators



# Regional Planning Process

- Define Parameters
  - Demand and Energy
  - Capital and Running Costs
  - Physical and Political Constraints
- Generation Expansion – EGEAS
- Generation Siting
- Transmission Expansion
- Production Cost Modeling – PROMOD and GEMaps

# JCSP Indicative Transmission Plan



# Other Regional Issues

- FERC Order 719 – Wholesale Competition in Regions with Organized Electric Markets
- Minimum Generation Alerts –Reflecting a new Paradigm
- Interconnection Queue – Free Riders
- Market Power Mitigation – Rhetoric and Realities
- Capacity Markets – PJM Reliability Pricing Model
- Carbon Capture and Sequestration – Tenaska
- 2<sup>nd</sup> Circuit Court Decision – Connecticut v AEP
- Waxman – Markey Climate and Energy Bill aka The American Clean Energy and Security Act

# Major FERC Orders

- Order 636 – Restructuring the Natural Gas Industry
- Order 888 – Open Access Transmission Tariffs
- Order 889 – Open Access Same Time Information System
- Order 2000 – Regional Transmission Organizations
- Order 890 – Preventing Discrimination in Transmission Service and Planning
- Order 697 – Market Based Rates