

Market Design in Light of Jurisdictional Uncertainty

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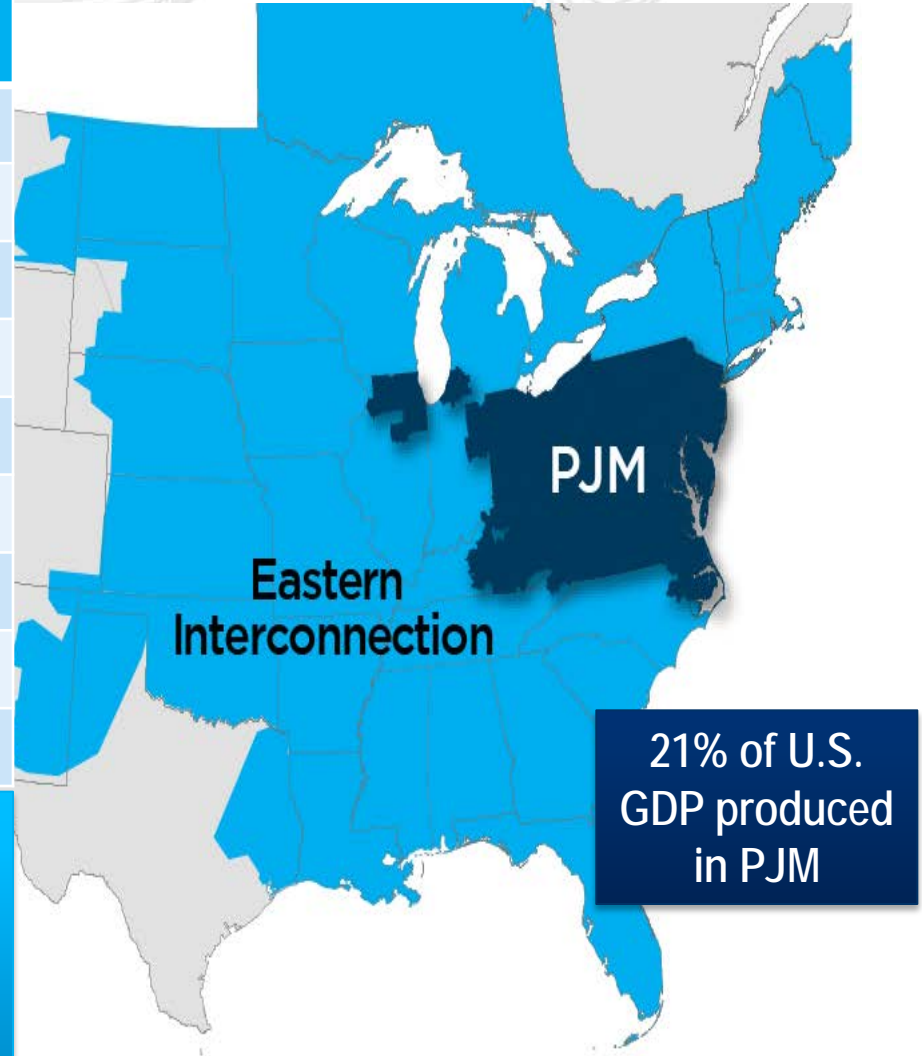


PJM as Part of the Eastern Interconnection

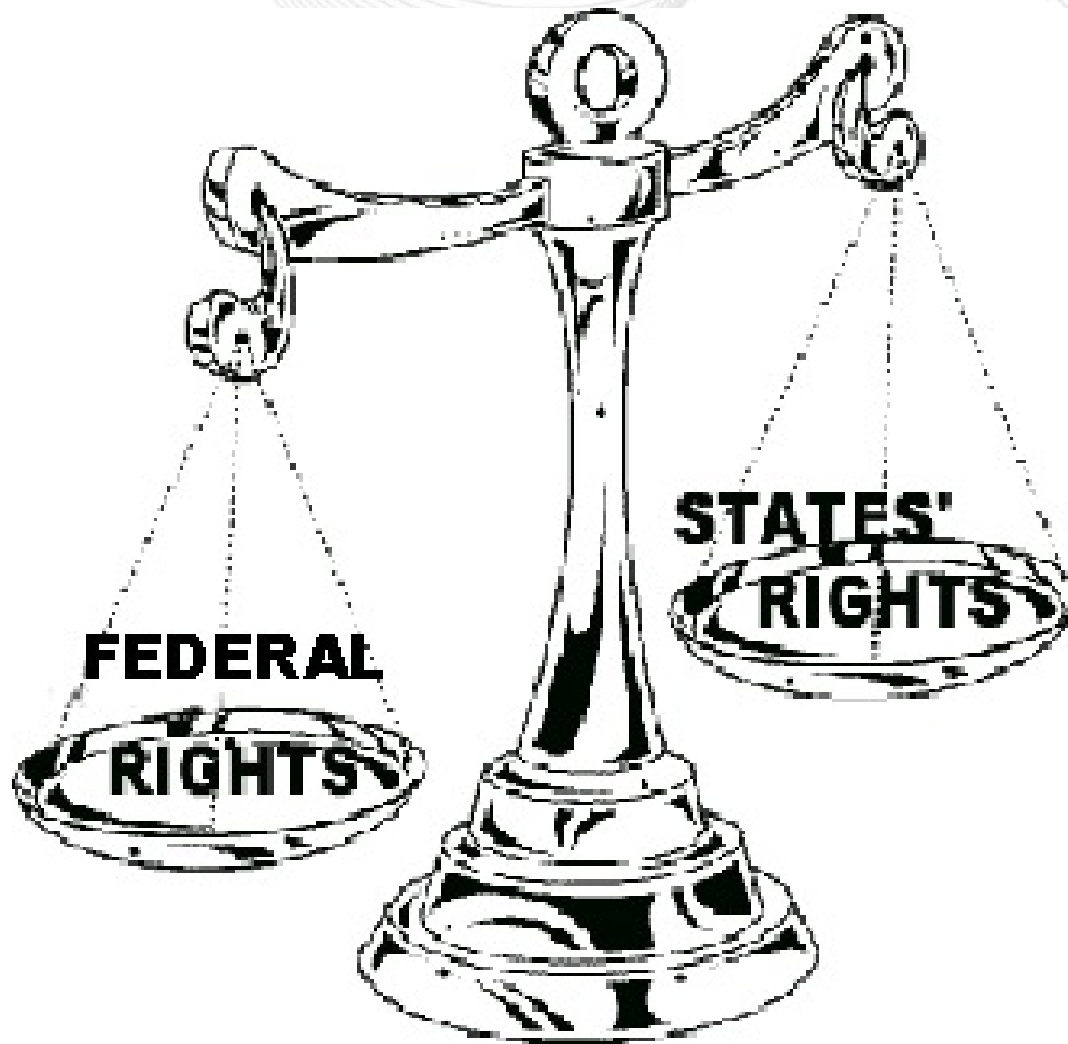
Key Statistics

Member companies	960+
Millions of people served	61
Peak load in megawatts	165,492
MW of generating capacity	171,648
Miles of transmission lines	81,736
2014 GWh of annual energy	792,580
Generation sources	1,304
Square miles of territory	243,417
States served	13 + DC

- 27% of generation in Eastern Interconnection
- 28% of load in Eastern Interconnection
- 20% of transmission assets in Eastern Interconnection



As of 5/2016



Can we rely on organized wholesale electricity markets to efficiently and reliably manage the entry and exit of supply resources as external forces create tremendous uncertainty and potential industry transformation?

- Complications getting federal legislation passed on climate policy
 - Clean Power Plan
- Four states requested a stay that was granted by the US Supreme Court
- Decision not likely until June 2018
- More state-based initiatives



Local generation

Demand-side participation

Local renewable targets

Economic - spot market; short sighted; gas prices will rise

Reliability - operational security concerns given "just in time" delivery

Reliability - long term adequacy; black swan events

Environmental Policy - loss of zero emission resources (nuclear)

Social/Political Policies - jobs, local economic vitality, etc.

Conclusion: the most economically efficient resource portfolio to meet reliability

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"best" portfolio in the eyes of policymakers

Capacity Market

How can we ensure capacity market prices are competitive in an environment where certain asset types are encouraged/discouraged?

Energy Market

What market rule changes or new markets are required to appropriately value energy and grid services?

Assumptions:

- Hopeful (but realistic) on the prospects for national or regional consensus
- Anticipate that individual states will act

PJM Thinking:

Open to market design changes

2 Principles:

- Do not frustrate states from taking policy actions
- Ensure prices that issue from markets remain competitive