



# PJM Summer Reliability Assessment Indiana Utility Regulatory Commission

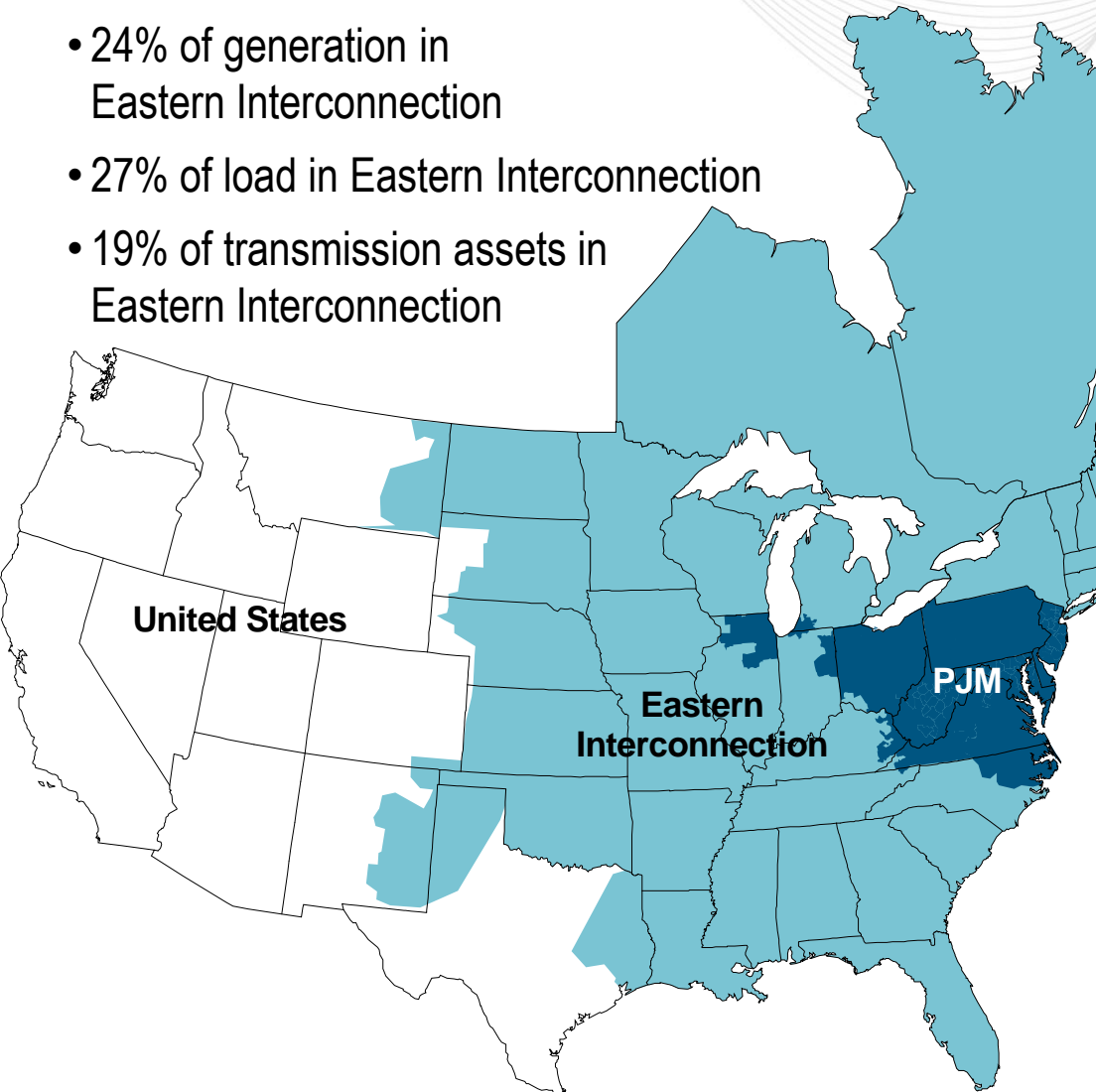
May 23, 2011

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# PJM as Part of the Eastern Interconnection with American Transmission Systems, Inc (ATSI) Integration

- 24% of generation in Eastern Interconnection
- 27% of load in Eastern Interconnection
- 19% of transmission assets in Eastern Interconnection

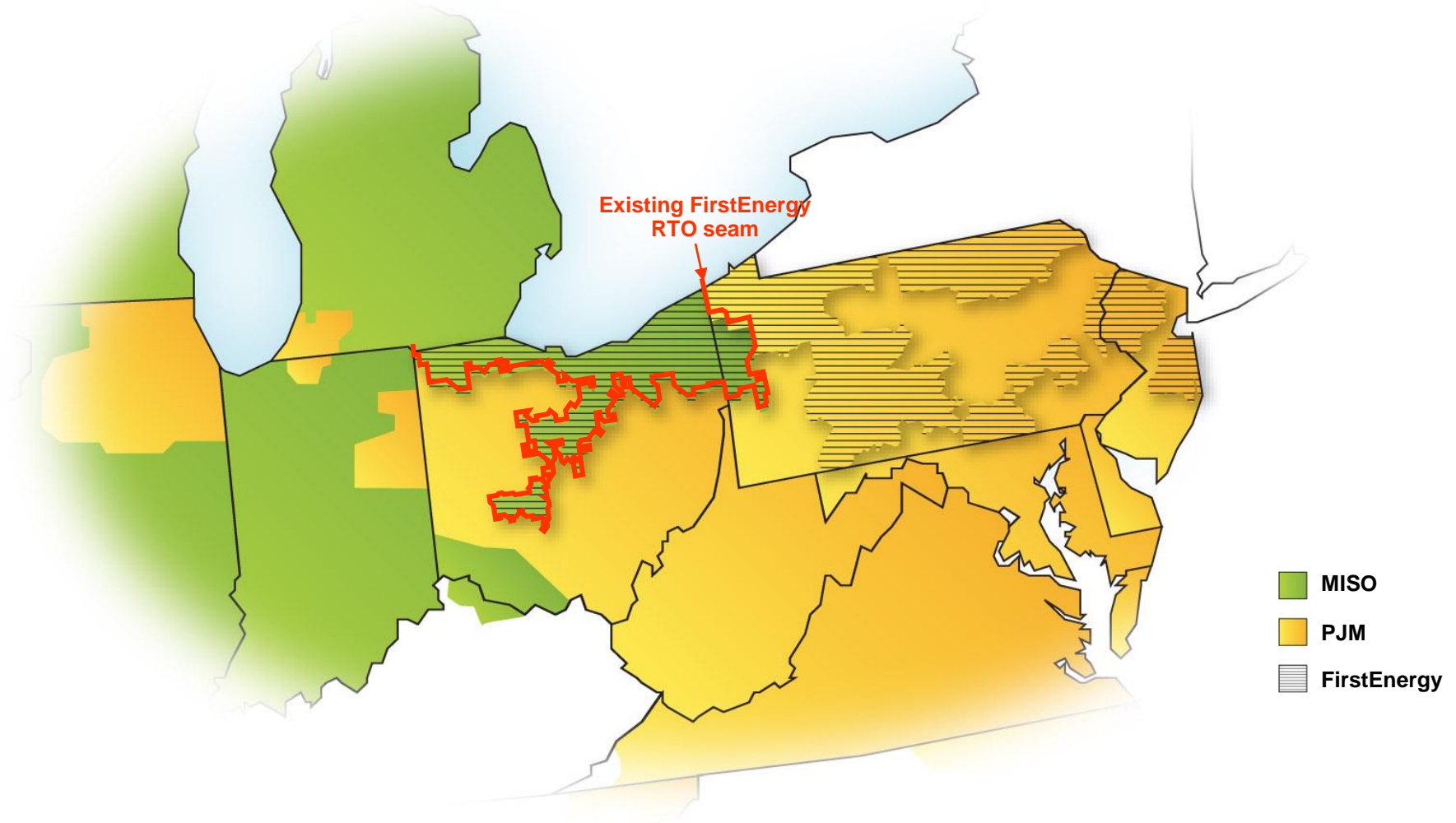


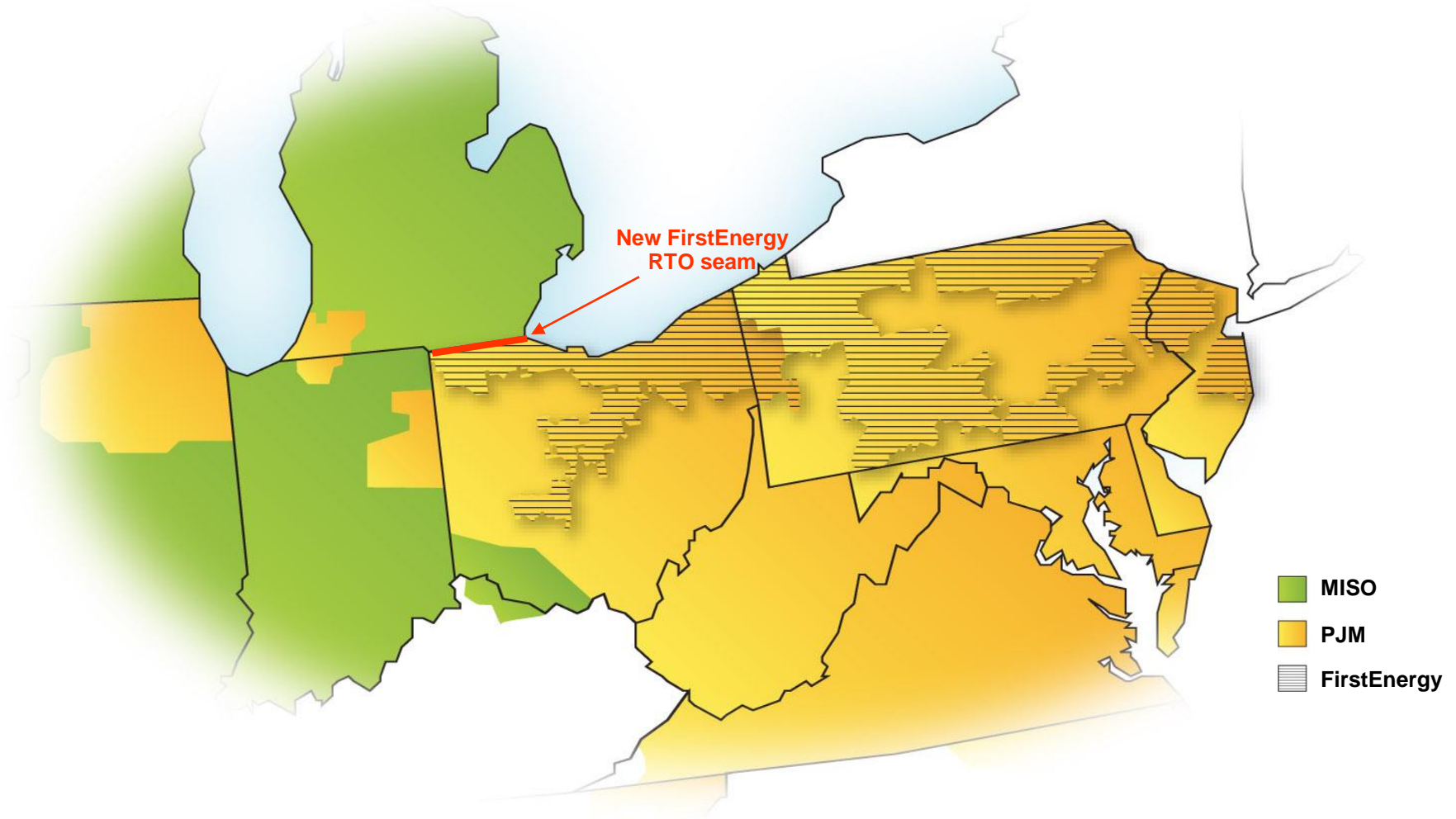
## KEY STATISTICS

PJM member companies	700+
millions of people served	58
peak load in megawatts	156,149
MW of generating capacity	176,400
miles of transmission lines	60,823
GWh of annual energy generation	794,335
generation sources	1,366
square miles of territory area served	210,900
Internal/external tie lines	13 states + DC
	142

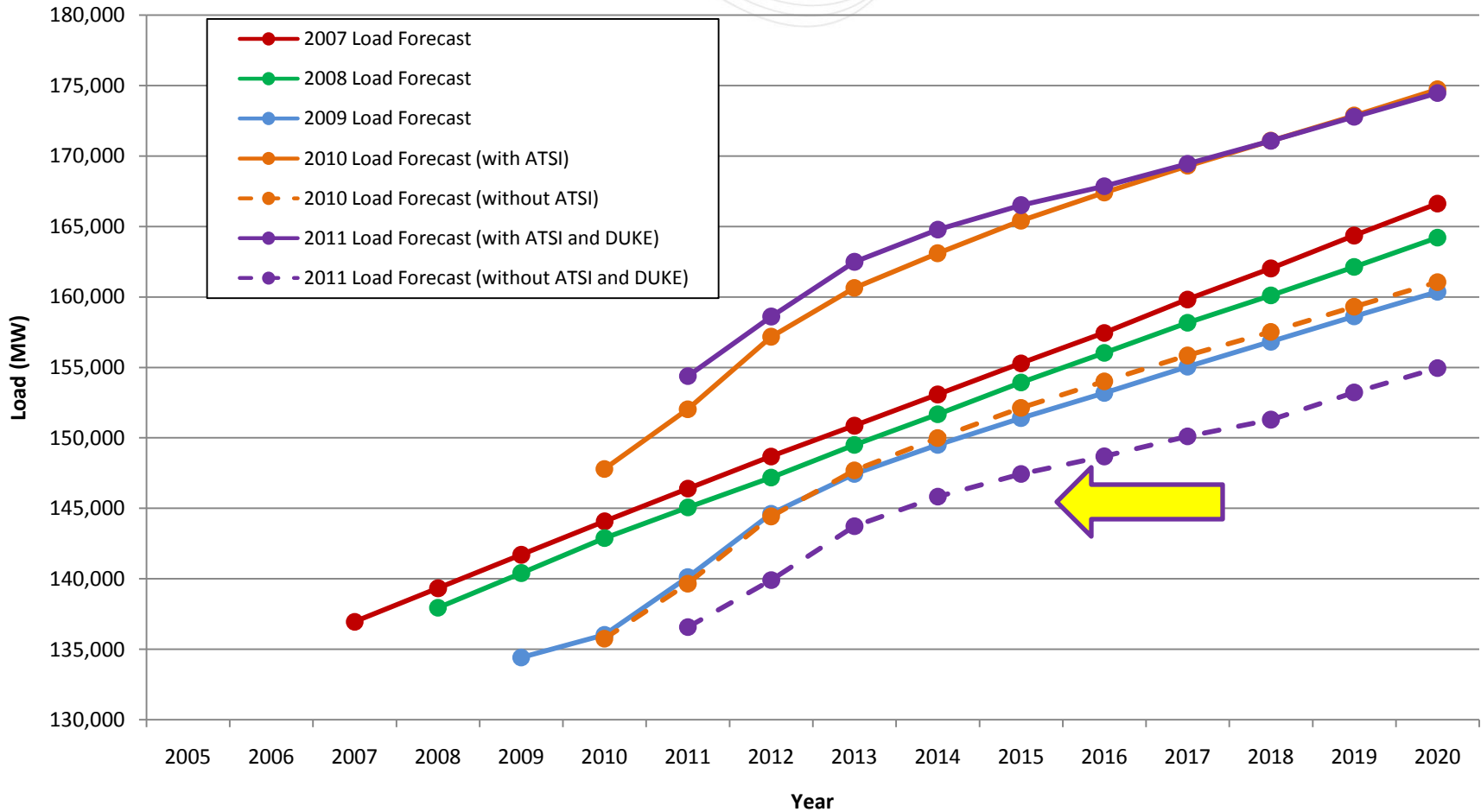
**20% of U.S. GDP  
produced in PJM**

As of June 1, 2011





## Comparison of 2007, 2008, 2009, 2010, 2011 Load Reports



- PJM expects to be able to reliably serve expected peak loads—peak loads are expected to be slightly higher this summer vs. last summer
- Demand response has increased significantly—helping to offset the impact of generator retirements
- The energizing of the TrAIL line and the replacement of the last Doubs transformer will increase transfer capability into the Washington/Baltimore/Northern Virginia area
- At peak load conditions, significant transmission congestion can be expected on the paths into Washington/Baltimore/Northern Virginia and on the ComEd/Wisconsin interface

## 2011 (w/o ATSI and CPP)

Forecast Peak Load (MW)	Demand Response (MW)	Forecast Peak Load (MW) Less Demand Response	Installed Generation Capacity (MW)	Reserve (MW)	Reserve Margin	Required Reserve Margin
136,574	10,433 (est.)	125,836	164,533	38,697	30.5%	15.5%

## 2010 (Actual Peak Load: 135,039 MW on July 7, 2010 at Hour Ending 1700)

Forecast Peak Load (MW)	Demand Response (MW)	Forecast Peak Load (MW) Less Demand Response	Installed Generation Capacity (MW)	Reserve (MW)	Reserve Margin	Required Reserve Margin
135,750	8,525 (est.)	127,225	162,903	35,678	28.0%	15.5%



# PJM Load and Capacity Comparison: 2011 vs. 2010

2011 (w/ American Transmission Systems, Inc (ATSI) and Cleveland Public Power (CPP))

Forecast Peak Load (MW)	Demand Response (MW)	Forecast Peak Load (MW) Less Demand Response	Installed Generation Capacity (MW)	Reserve Margin (MW)	Reserve Margin	Required Reserve Margin
148,940	11,675 <sup>1</sup> (est.)	137,265	180,400	43,135	31.4%	15.5%

<sup>1</sup>Includes 75MW of Energy Efficiency

2011 (w/o ATSI and CPP)

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**Forecast Load** – Expected peak demand, based on normal weather (Total Internal Demand-TID)

**Demand Response** – Customer load willing to be interrupted at the direction of PJM. Compliance check is performed at end of summer.

**Forecast Load Less Load Management** – Expected peak demand after demand response has been implemented (Net Internal Demand-NID)

**Installed Generation Capacity** – Total MW output of all of the generators that cleared in RPM and are committed to serve PJM load (Installed Capacity)

**Reserve (MW)** – Installed Generation Capacity minus Net Internal Demand

**Reserve Margin (%)** – Reserve expressed as a percent of Net Internal Demand

**Required Reserve Margin (%)** – PJM required planning reserve, as determined by the RPM process (Installed Reserve Margin-IRM)

## Normal Sequence of Emergency Procedures

- Alerts – Usually, issued the day before the operating day
- Warnings – Usually, issued the morning of the operating day or when the event is imminent
- Actions – At the onset of the event

**In Indiana, PJM notifies only the IURC**

- PJM Operations Assessment Task Force (OATF) Summer Operating Study
- Reliability *First* Summer Assessment
- Joint MISO/PJM Operations Coordination Meeting
- PJM Spring Operator Seminar (10 sessions – over 700 operators attended)
- PJM Emergency Procedures Drill

