Indiana's Energy Landscape

INDIANA UTILITY REGULATORY COMMISSION
Luke Wilson, Executive Director of External Affairs

9/10/25

OUTLINE

- IURC & Other Regulatory Entities
- Generation Planning & Transition
- Resource Adequacy
- Other Trending Topics

ELECTRIC UTILITY REGULATORY PARTNERS

- Federal Energy Regulatory Commission (FERC)
- North American Electric Reliability Corporation (NERC)
- Regional Transmission Organizations (RTOs)
  - MISO & PJM
- ReliabilityFirst
- State Utility Commissions

FEDERAL ENERGY REGULATORY COMMISSION (FERC)

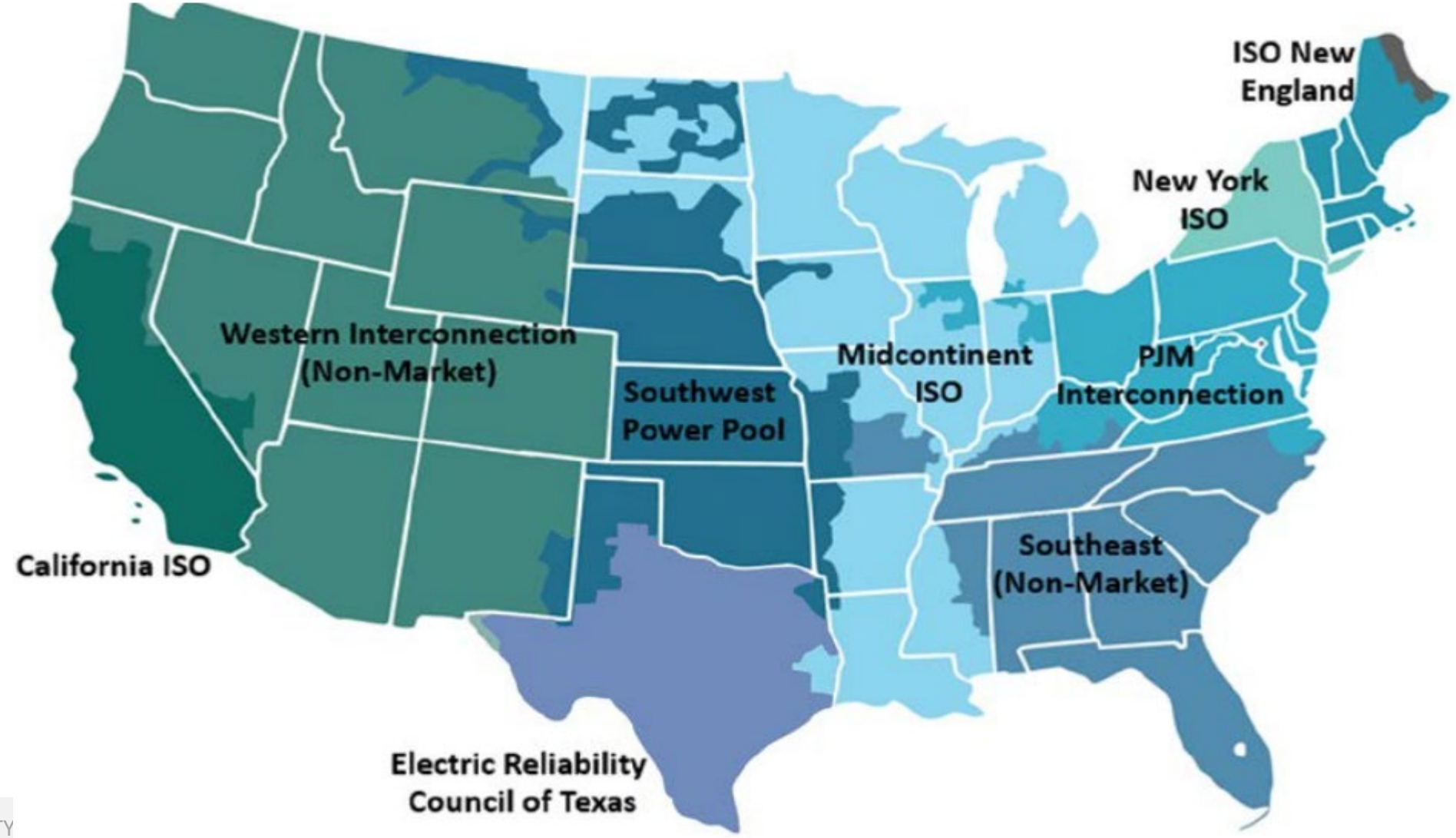
- The federal agency that oversees the nation's bulk power system.
- FERC regulates both the high-voltage transmission system and wholesale sales of electricity, among other things.
  - FERC oversees regional transmission organizations.
- Sets mandatory reliability standards
  - FERC oversees the North American Electric Reliability Corporation

REGIONAL TRANSMISSION ORGANIZATIONS (RTOS)

- RTOs are independent organizations that plan and control the transmission grid to improve the economics and reliability of the wholesale electric markets.

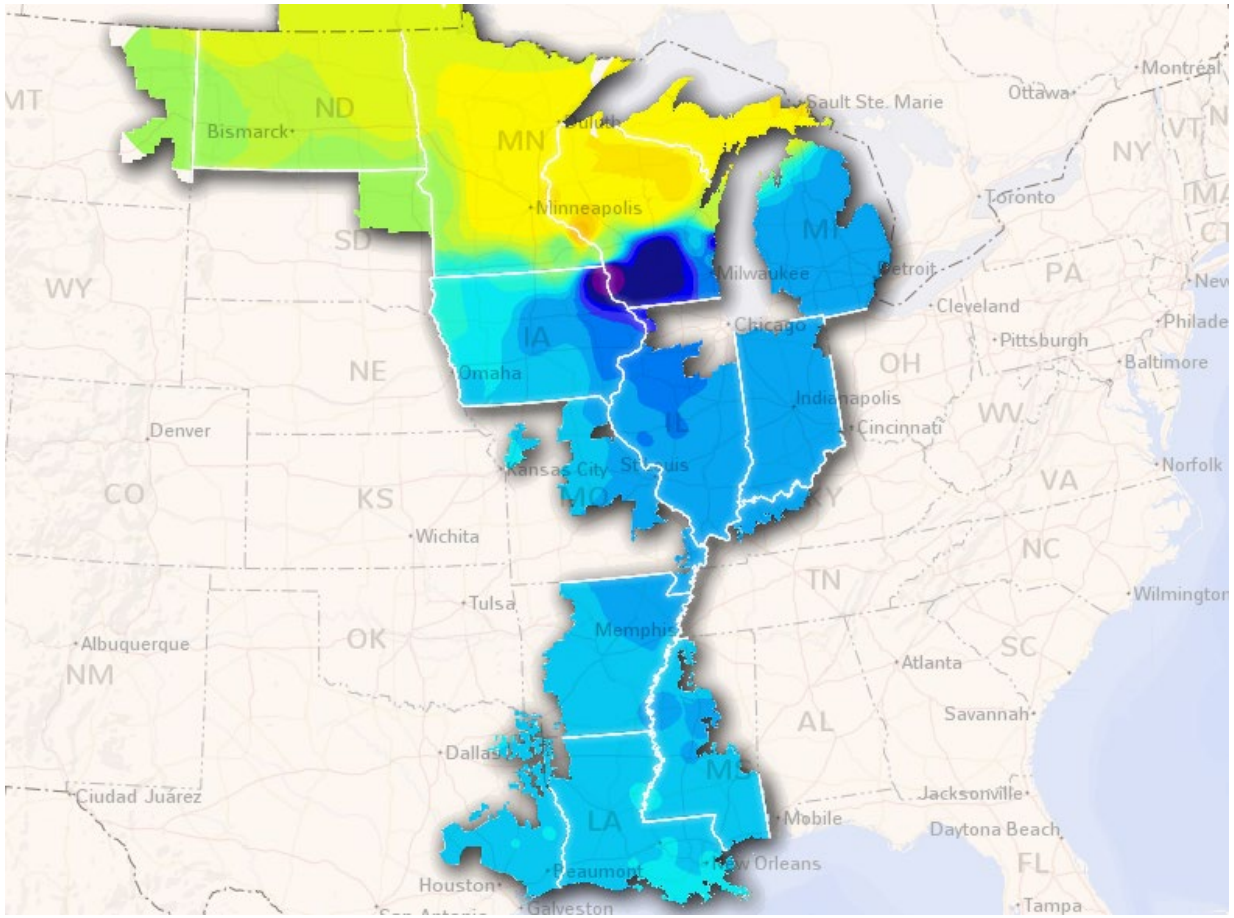
- They provide three main functions:
  - **Planning** - transmission system and regional resource needs.
  - **Operations** – matches supply with demand by coordinating generation output and transmission.
    - Think air traffic controller for electrons.
  - **Markets** – provides economic dispatch of resources to ensure the lowest cost combination of resources are used.
    - Think stock market for electrons.

REGIONAL TRANSMISSION ORGANIZATIONS (RTOS)

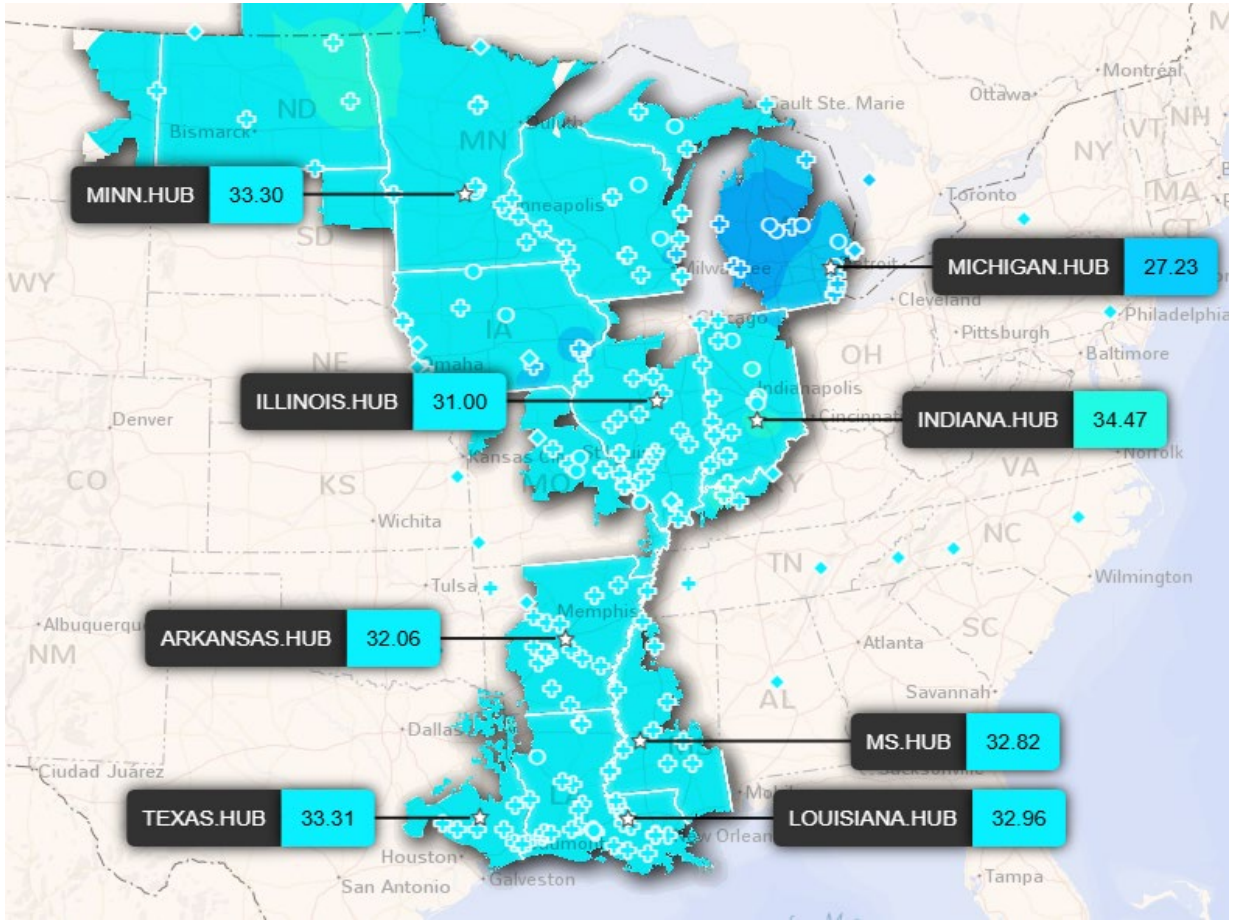


REGIONAL TRANSMISSION ORGANIZATIONS (RTOS)

September 9, 2025 around 12:30pm



September 9, 2025 around 9:30pm



REGIONAL TRANSMISSION ORGANIZATIONS (RTOS)

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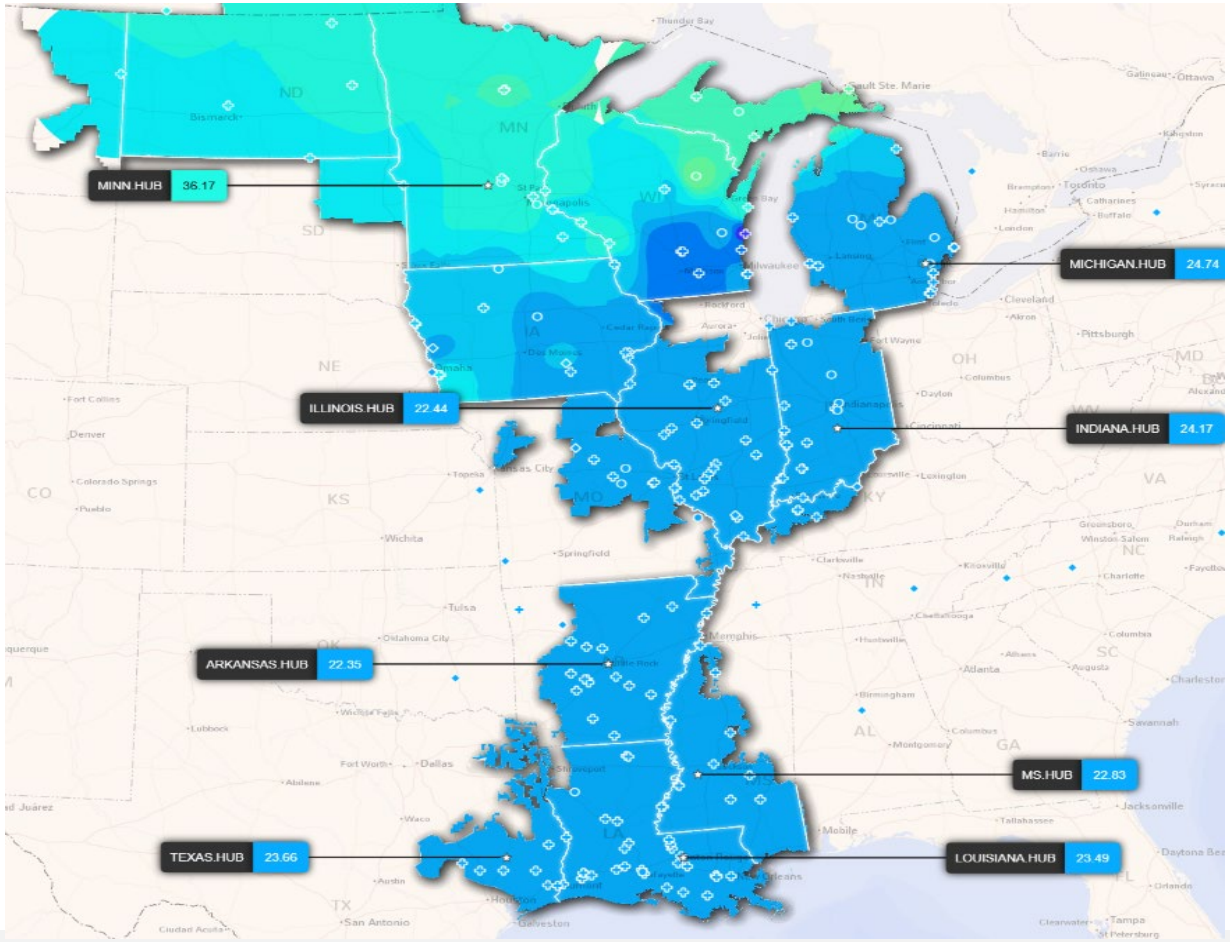

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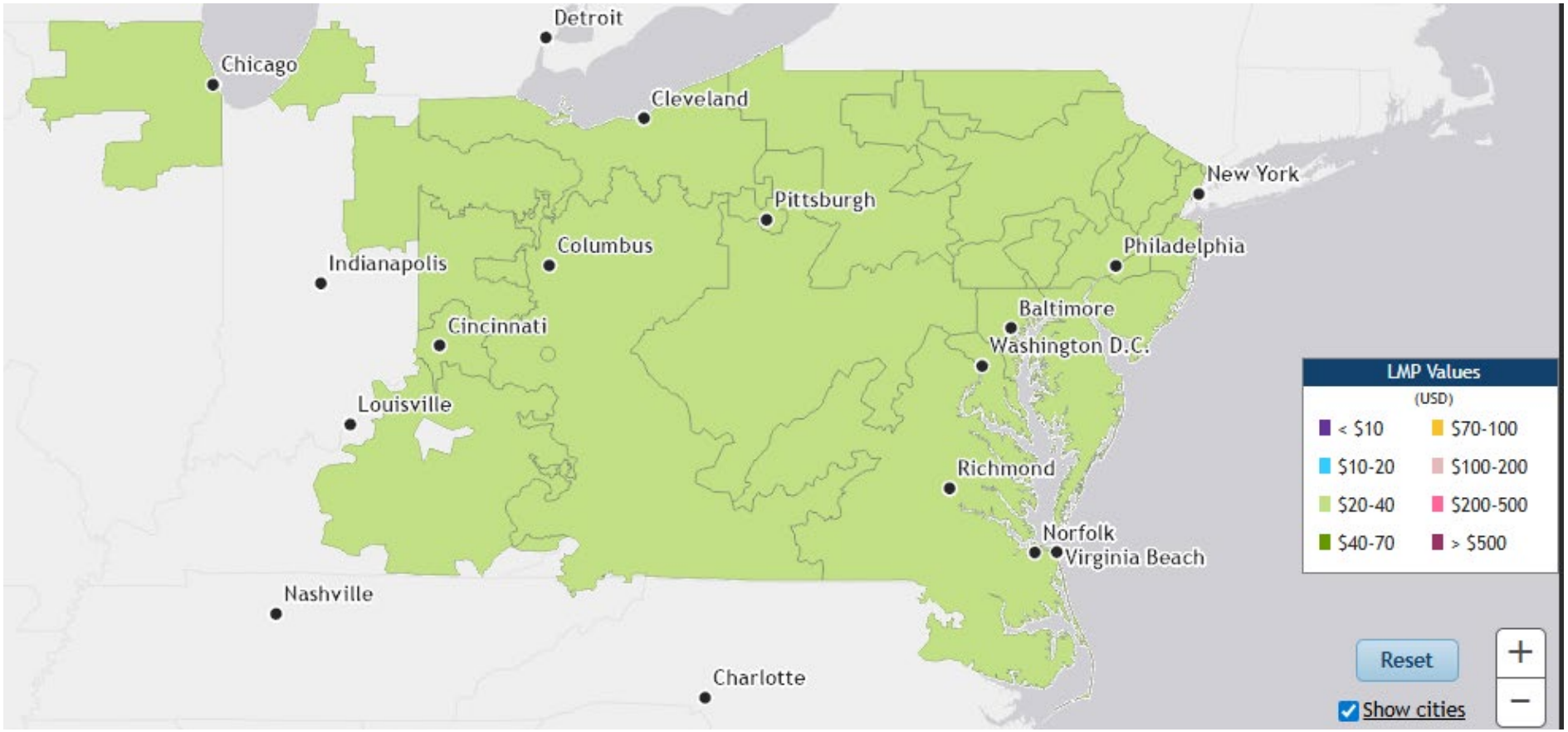
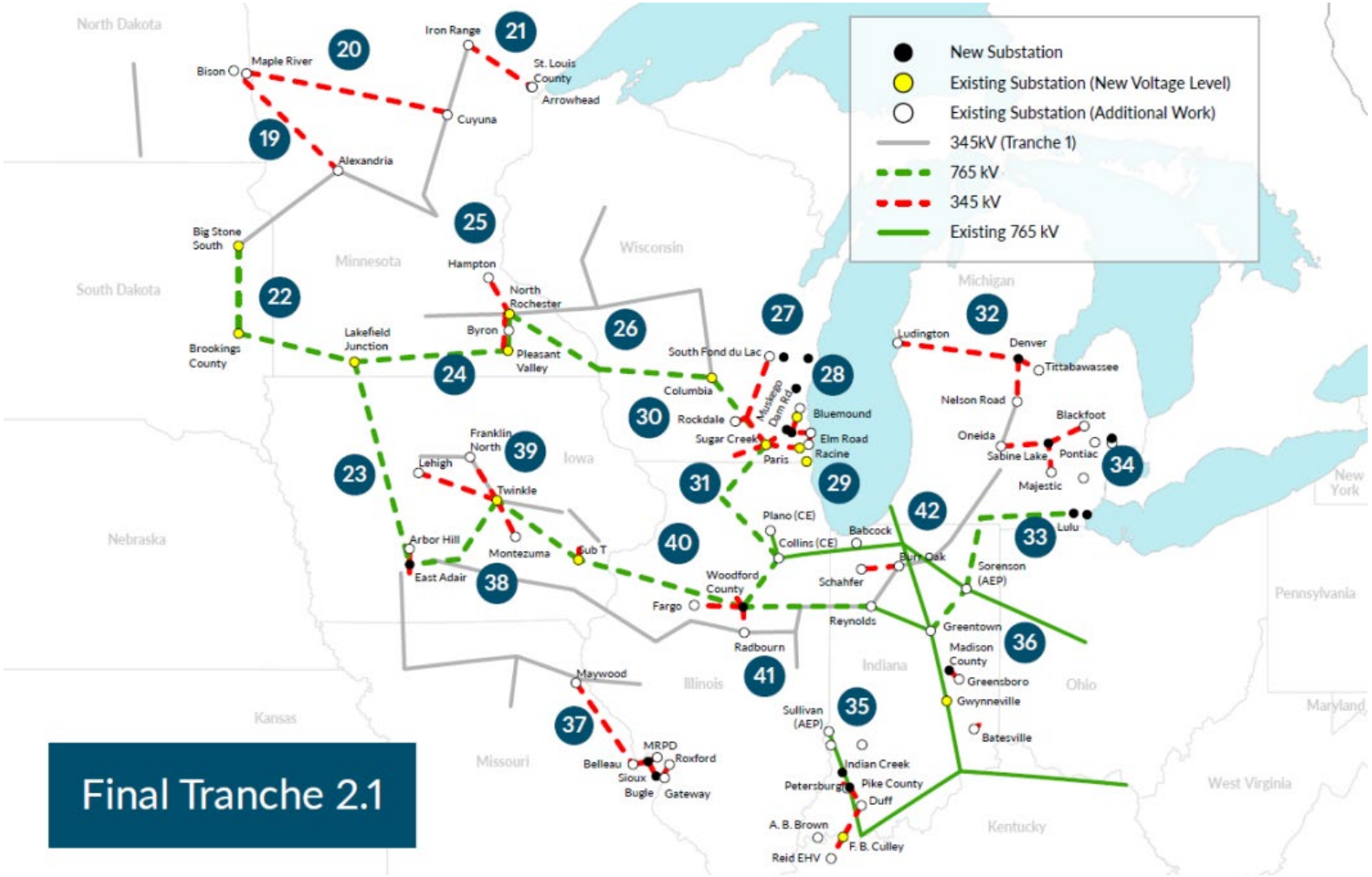


REGIONAL TRANSMISSION ORGANIZATIONS (RTOS)

MISO
Control Room

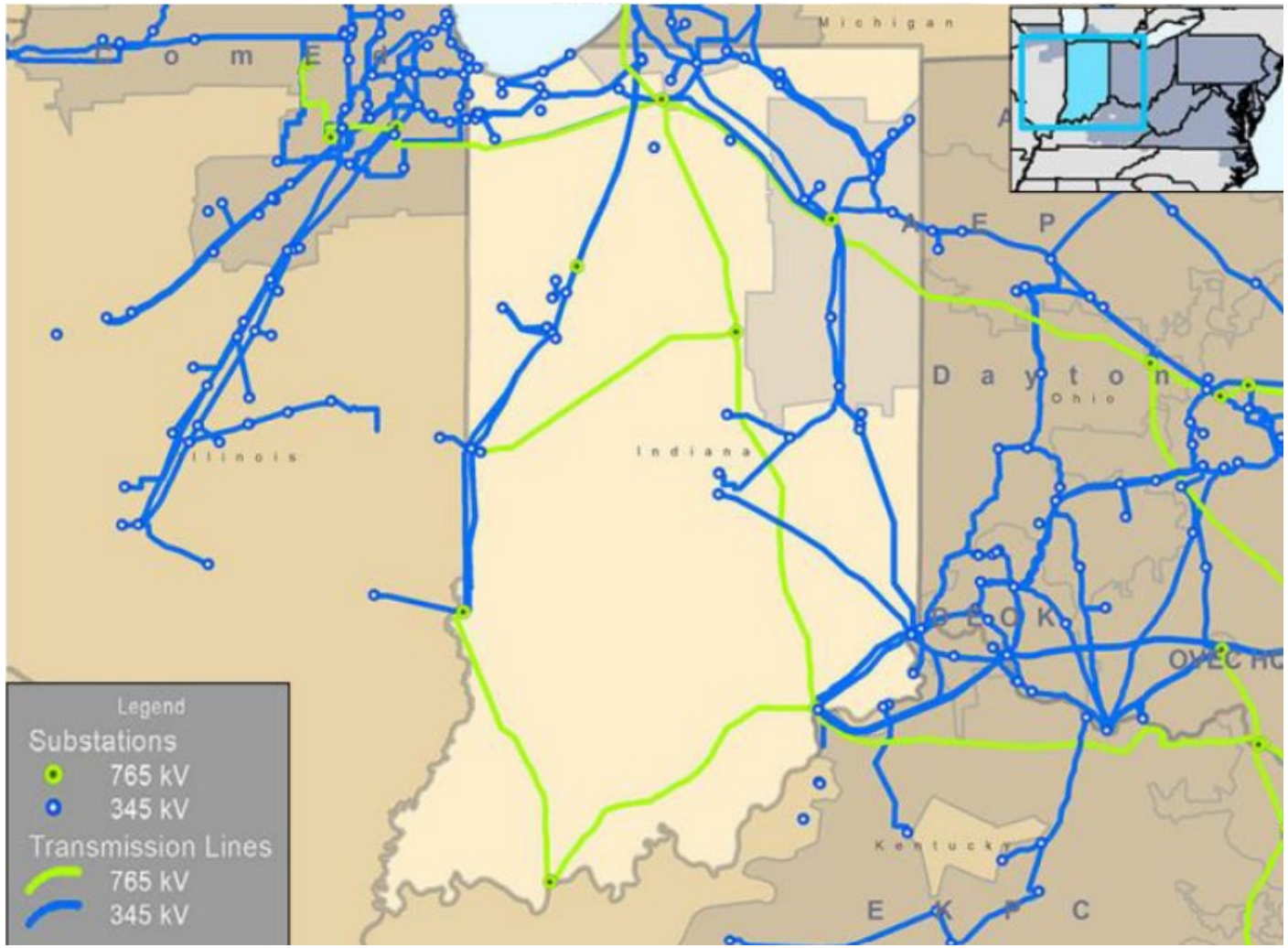
REGIONAL TRANSMISSION ORGANIZATIONS (RTOS)

MISO Transmission Planning



REGIONAL TRANSMISSION ORGANIZATIONS (RTOS)

PJM
Transmission
in Indiana



REGIONAL TRANSMISSION ORGANIZATIONS (RTOS)

- MISO includes Duke Energy, CenterPoint Energy, NIPSCO, AES Indiana, and Hoosier Energy.
- PJM encompasses Indiana Michigan Power.
- Indiana Municipal Power Agency & Wabash Valley Power Alliance participate in both RTOs.

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION (NERC)

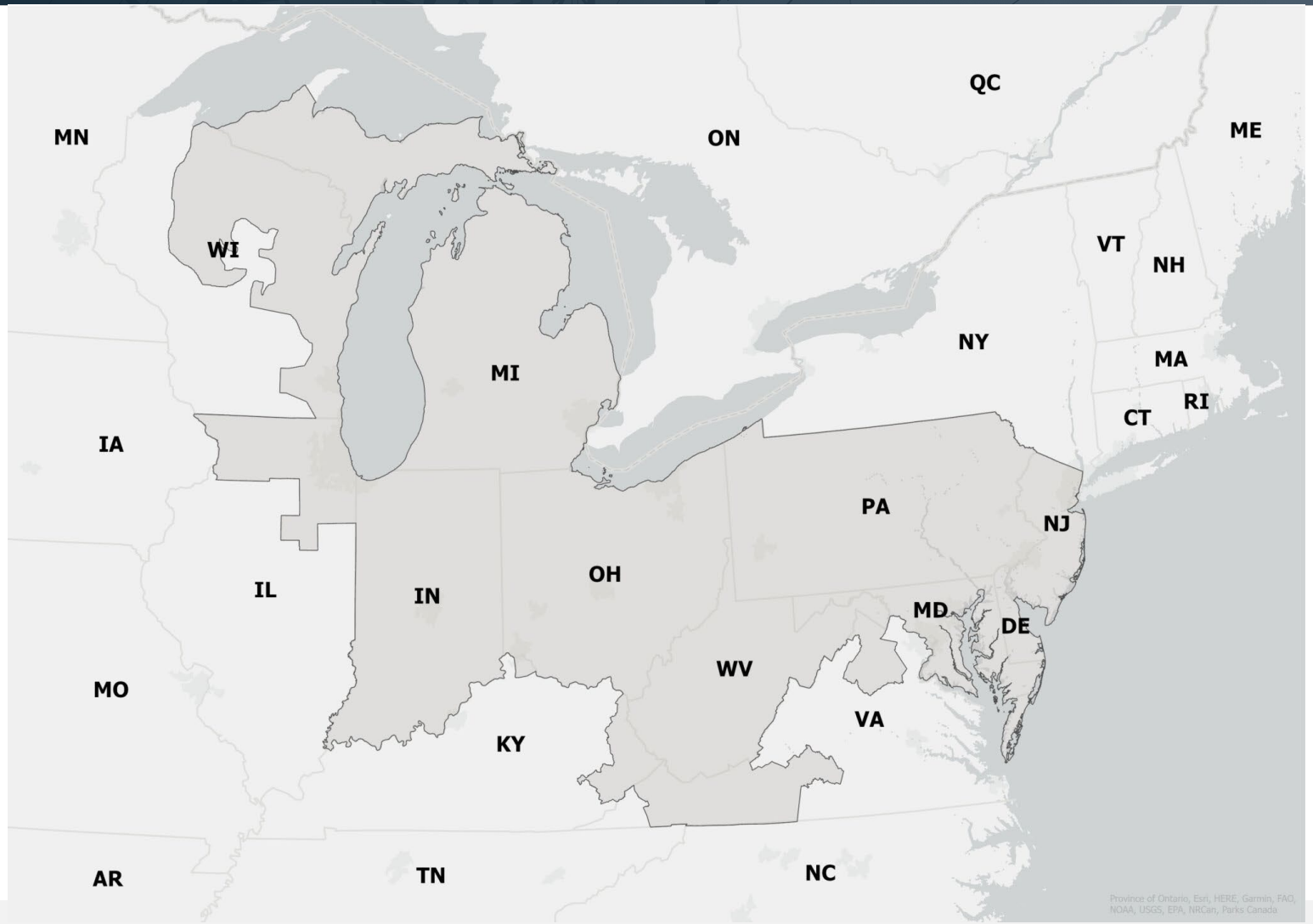
- Established as the non-profit regulatory authority responsible for the reliability of the bulk power system in North America (USA & Canada).

- NERC accomplishes this by:
  - Developing and enforcing reliability standards
  - Providing seasonal and long-term reliability assessments annually
  - Offering education and training to industry personnel

ReliabilityFirst

- Operates as the Electric Reliability Organization for the region Indiana is in.
  - Provides training and analysis to utilities on the reliability and security of their systems.
  - Audits compliance with mandated standards
  - Serves as an independent source for state bodies to utilize on energy policy decisions.
  - ReliabilityFirst is subject to FERC jurisdiction.

ReliabilityFirst



ELECTRIC UTILITY REGULATORY PARTNERS

Yes – there are more!

- Indiana law allows Rural Electric Membership Cooperatives (REMCs) and Municipal-owned utilities to opt-out of IURC rate jurisdiction.
  - REMCs can be rate-regulated by their Board of Directors who are elected by their members (i.e. customers)
  - Municipal utilities can be rate-regulated by their elected officials.

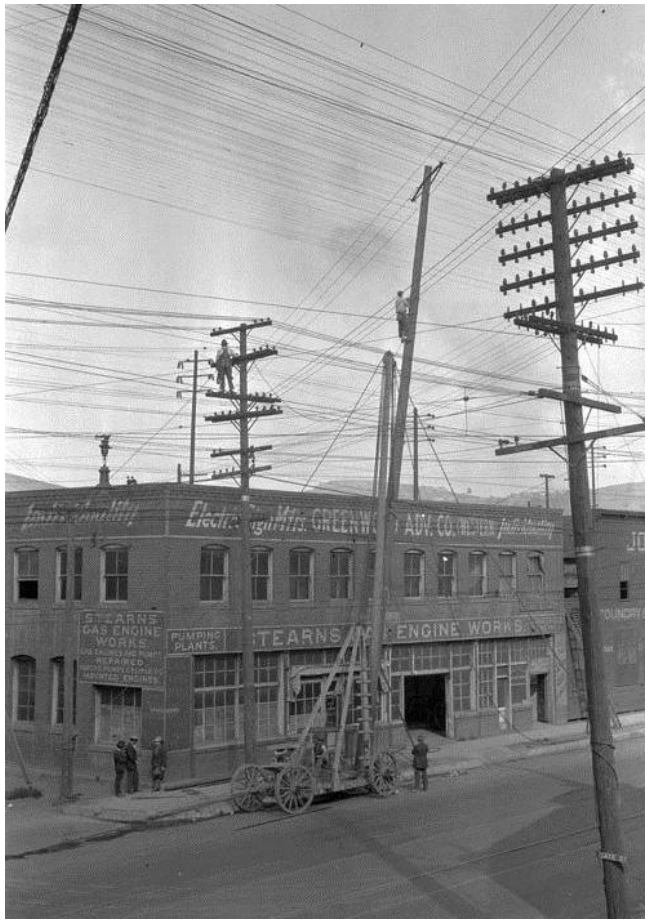
UTILITY REGULATION

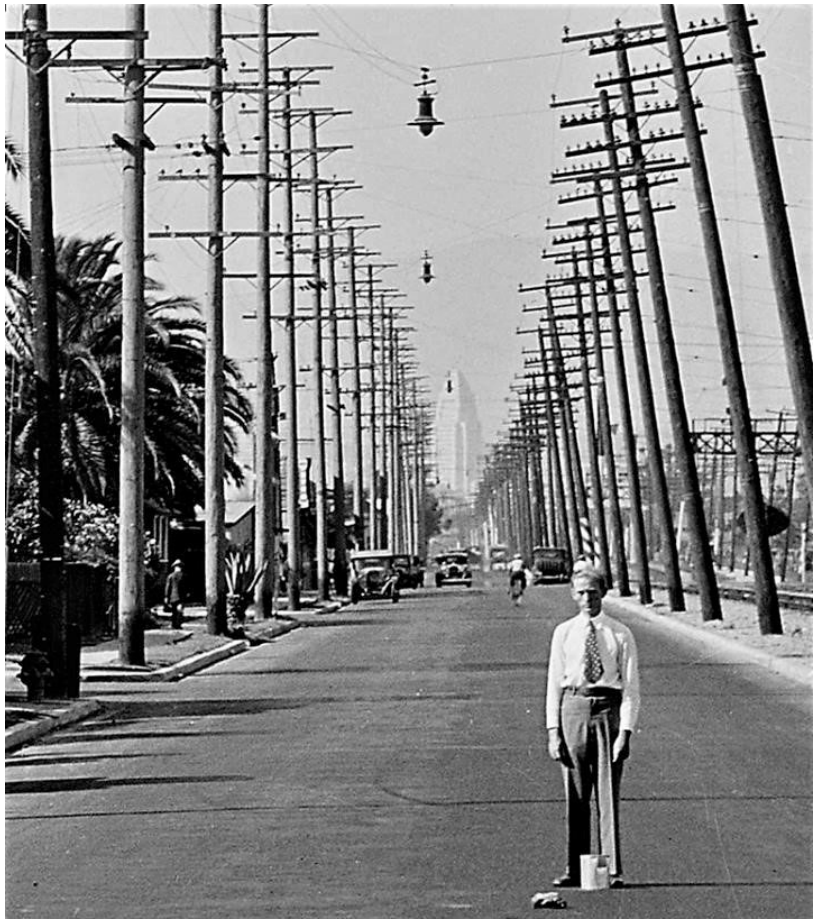
- Utilities have generally been considered a *natural monopoly* because of the significant capital investments necessary to build the infrastructure to serve customers.

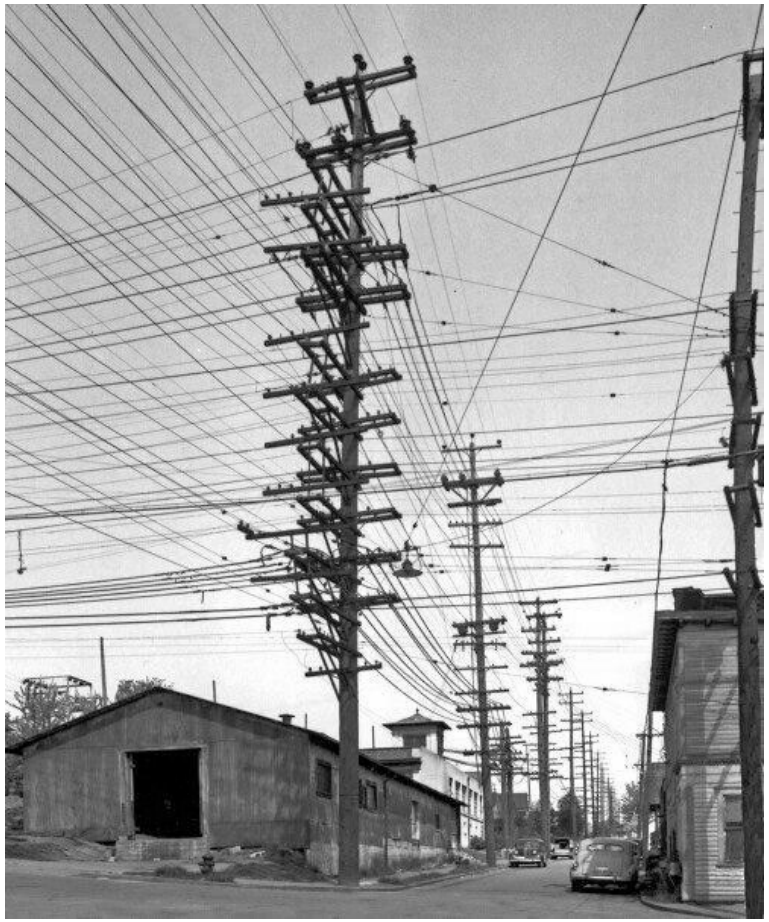
- To avoid the high costs of unnecessary duplication, utilities are generally granted a specific, or exclusive, retail service territory by the government.

- Utilities must serve the public safely and reliably without discrimination. The government then regulates and sets the rates and charges of the utilities.

UTILITY REGULATION







THE IURC's ROLE

- The IURC regulates the rates and charges of utilities under its jurisdiction.
  - This includes the 5 investor-owned electric utilities and a handful of municipal electric utilities.
  - Most municipal and all rural electric membership cooperatives have withdrawn from IURC jurisdiction for rates and charges.
    - However, utilities cannot withdraw from the IURC resource adequacy oversight

- The IURC uses 'cost of service' ratemaking to determine the amount of revenues necessary for a utility to provide safe and reliable service while having an opportunity to earn a reasonable return on their investments.

THE IURC's ROLE

- Cost of Service:

$$\left[\text{Operating Expenses} + (\text{Rate Base} \times \text{Rate of Return}) = \text{Total Revenue Requirement}\right]$$

- **Rate Base:** Capital investments in facilities to serve customers minus accumulated deprecation
- **Operating Expenses:** Wages, administrative costs, benefits, materials and supplies, fuel costs
- **Rate of Return:** Money required to pay interest on debt and to reimburse investor/shareholders for the use of their money

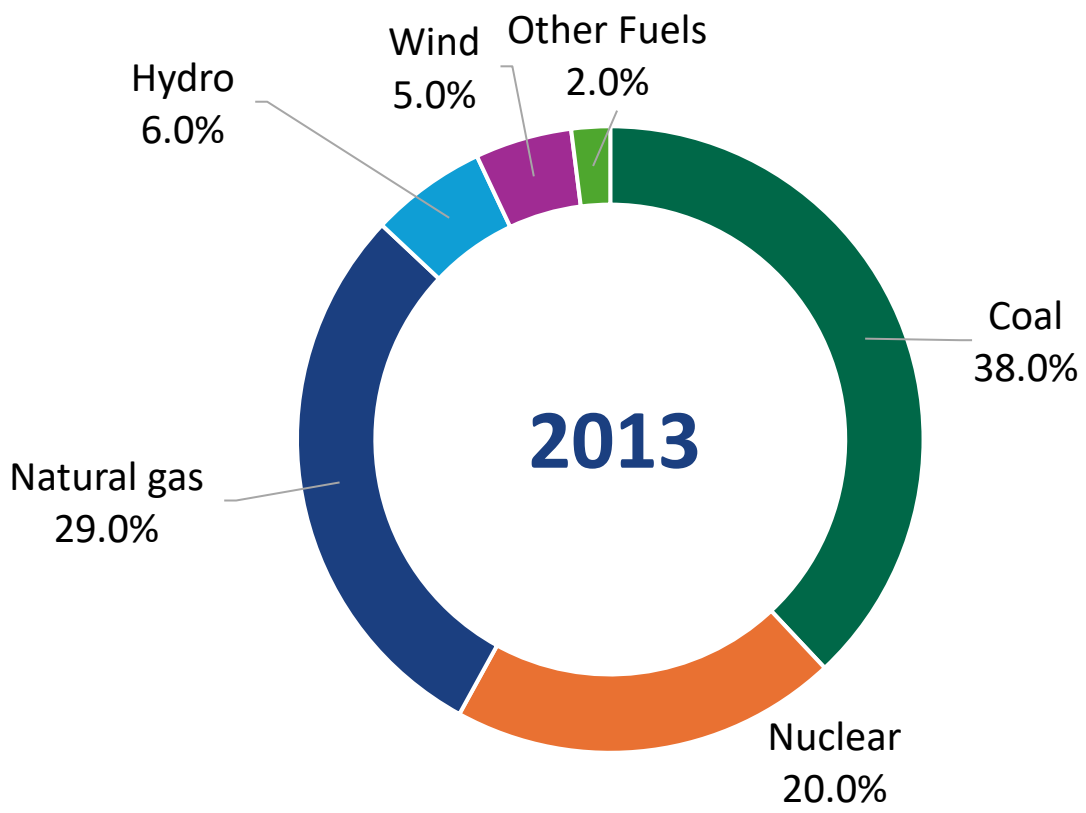
THE IURC's ROLE

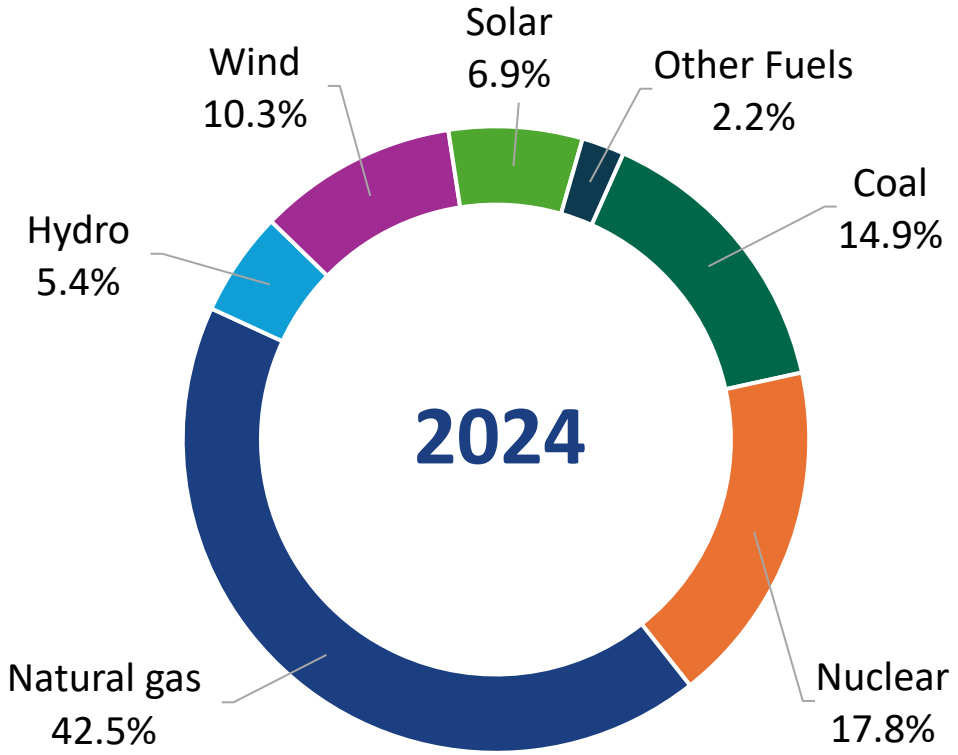
- The IURC ensures that utilities are meeting their resource adequacy requirements (i.e. providing safe and reliable service)
- Utilities submit integrated resource plans (IRPs), every 3 years demonstrating how they plan to meet their forecasted demand with a generation portfolio over the next 20 years.
- The IURC approves utilities building new generation facilities and ensures cost recovery for investments made in generation, transmission, and distribution infrastructure that are found prudent.

GENERATION PLANNING & TRANSITION

Generation Mix Transition

United State's Generation Fuel Mix

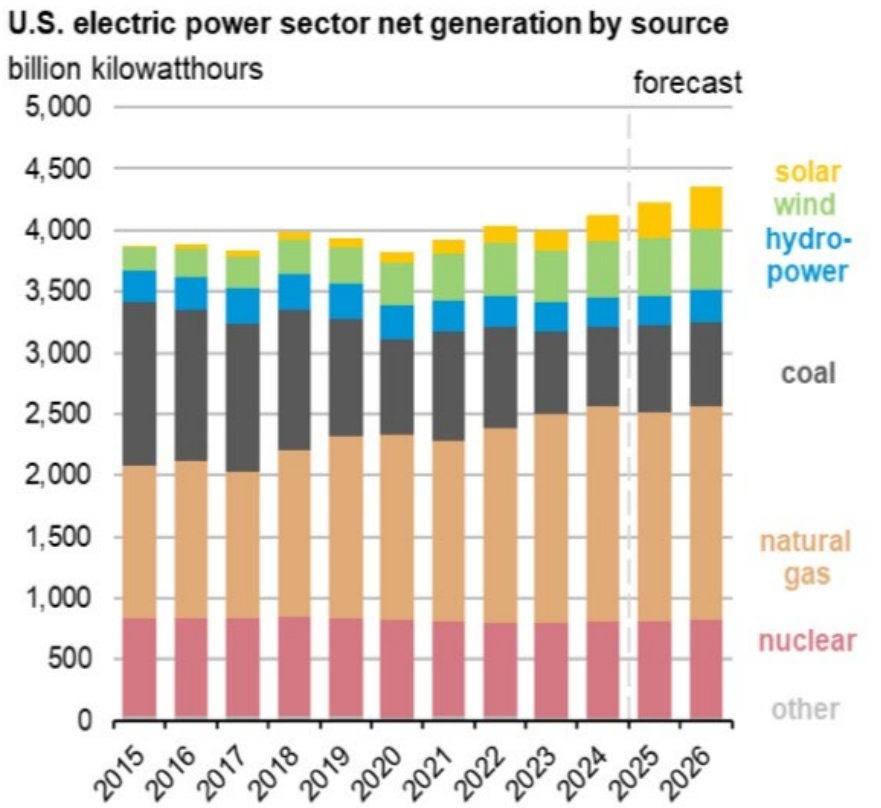




**Numbers are rounded from EIA data*

Generation Mix Transition

United State's Generation Fuel Mix



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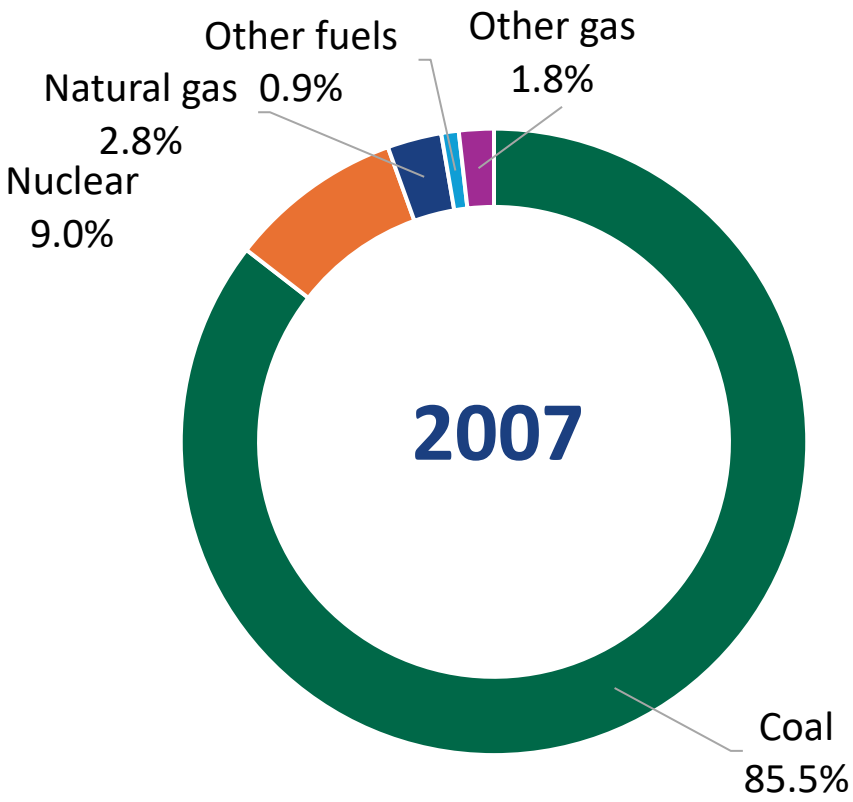
Generation Mix Transition

Indiana's Generation Fuel Mix



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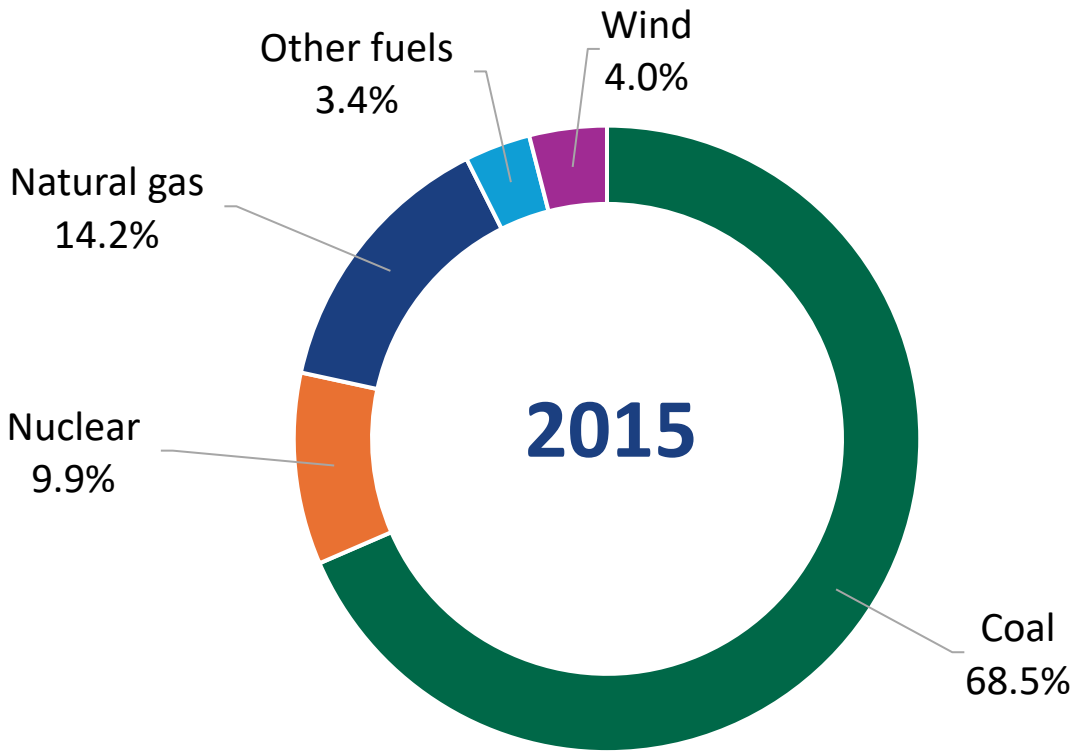
Generation Mix Transition

Indiana's Generation Fuel Mix



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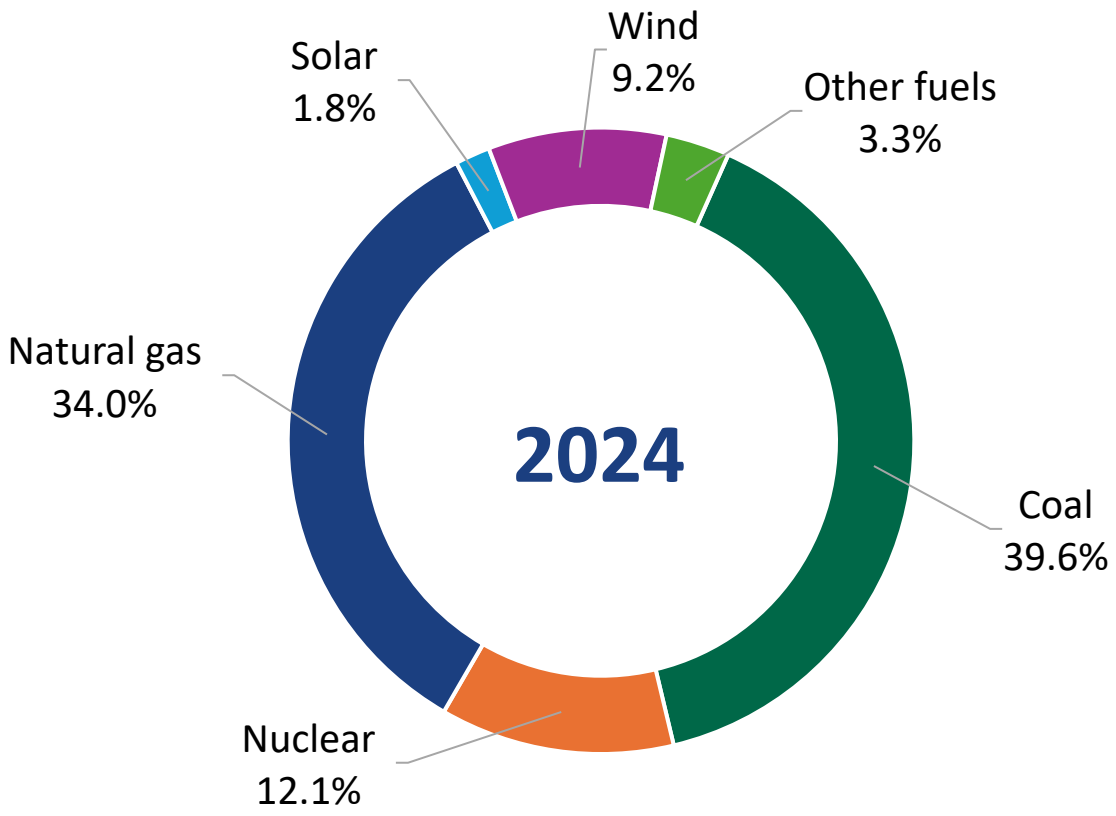
Generation Mix Transition

Indiana's Generation Fuel Mix



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Generation Mix Transition

Indiana's Generation Fuel Mix

Resource	2007	2015	2024	Change
Coal	85.5%	68.5%	39.6%	-45.9%
Natural Gas	2.8%	14.2%	34.0%	31.2%
Nuclear	9.0%	9.9%	12.0%	3%
Wind	0%	4.0%	9.2%	9.2%
Solar	0%	0.1%	1.8%	1.8%
Other (e.g. hydro)	2.7%	3.3%	3.3%	0.6%

**Numbers are rounded from EIA data*

What Do These Charts Show?

- Electric generation transition happening slowly but surely

- What has been the story over the last 20 years?
  - Retirements of thermal generation (coal, oil, and some natural gas)
  - The growth of renewable generation (wind and solar)
  - The growth of natural gas generation

ELECTRIC GENERATION TRANSITION

- What is behind the transition?
  - Energy market economics
  - Federal and state policies
  - Aging generation plants (natural build cycle)

What Has Driven Renewable Energy Growth?

- Relatively lower capital costs compared to traditional thermal generation.
  - Capital costs have decreased over time as renewable energy manufacturing and commercialization grew.
- No fuel costs to produce electricity & lower maintenance costs.
- Favorable tax treatment (production & investment tax credits)

Integrated Resource Planning

- Retail-serving electric utilities in the state are required to submit Integrated Resource Plans (IRPs) every 3 years.

- The five investor-owned electric utilities, the Indiana Municipal Power Agency (IMPA), Hoosier Energy, and Wabash Valley Power Alliance (WVPA) file IRPs.
  - IMPA has 61 municipal utility members
  - Hoosier Energy has 17 REMC members
  - WVPA has 21 REMC members

Integrated Resource Planning

- IRPs are 20-year power resource plans that help guide generation investments for the utility.
- The objective is to provide safe and reliable power at the lowest delivered cost reasonably possible.
- However, IRPs must be flexible to account for changing economics, public policy, and electric demand.

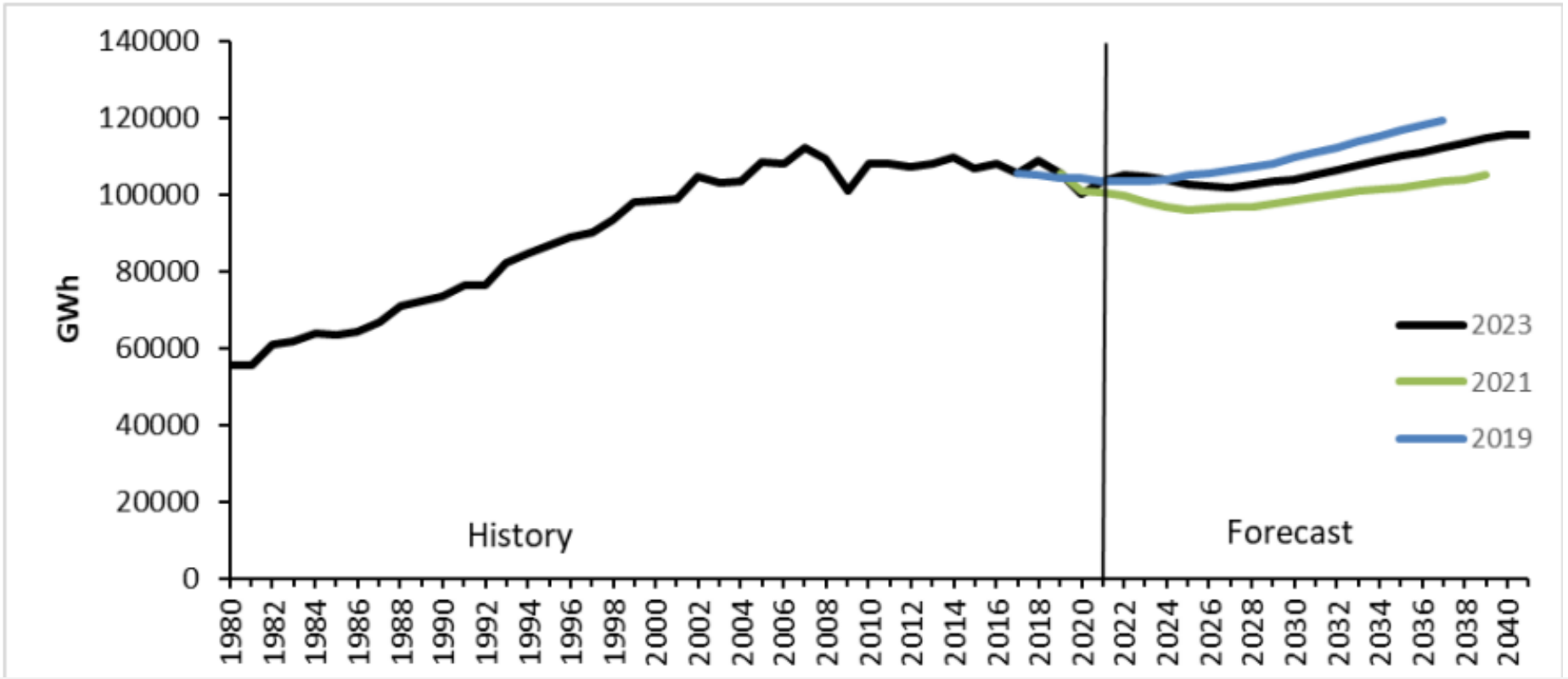
Integrated Resource Planning

- IRP in the recent past have generally shown that investments in natural gas and renewable energy resources will likely provide the best long-term value for ratepayers.
  - Fracking and improved technology reduced the cost of natural gas, especially compared to the cost of coal.
  - Environmental policies and aging coal plants hurt the economics of continuing to operate coal plants.
  - Renewable energy costs declined significantly.

Integrated Resource Planning

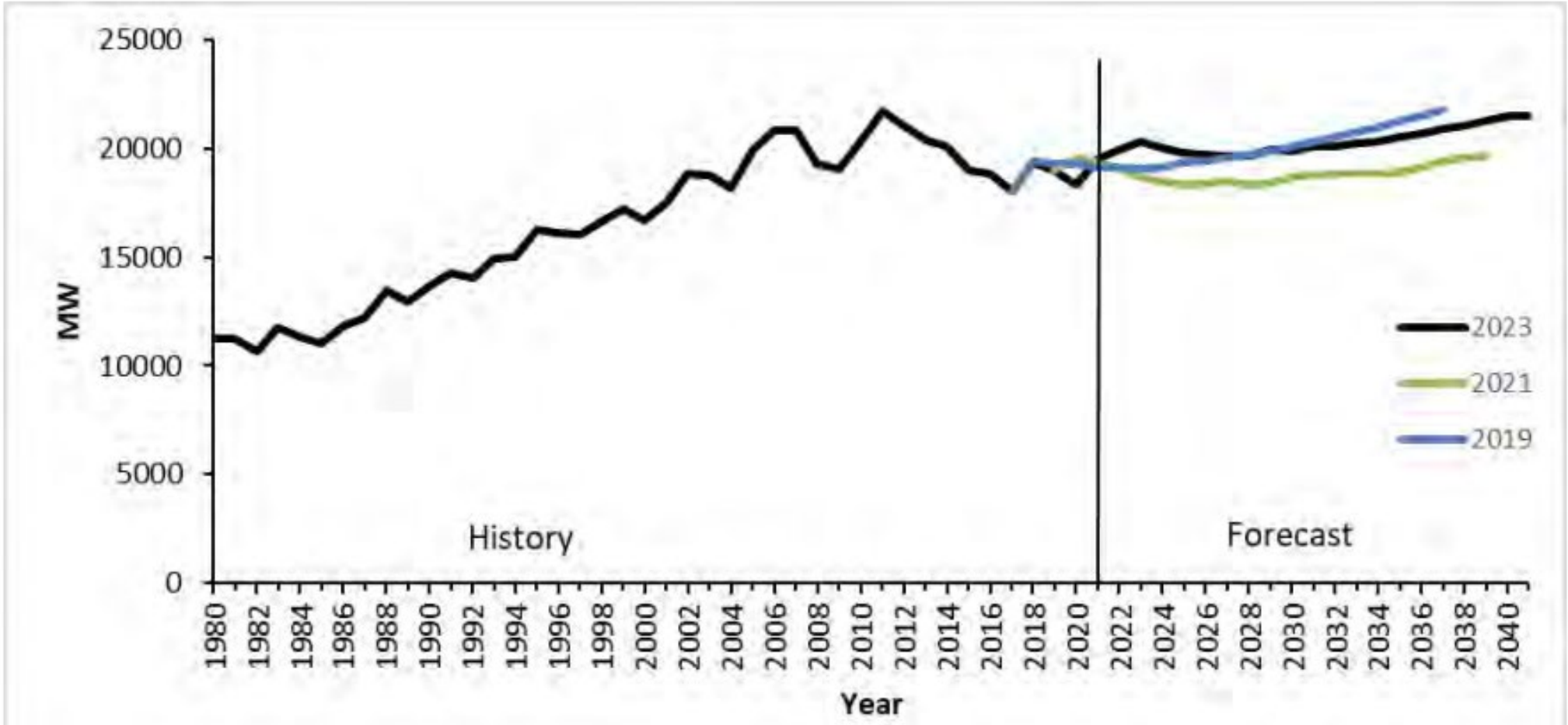
- New generation has been mainly to replace retiring units.

Figure 3-1. Indiana Electricity Requirements in GWh (Historical, Current, and Previous Forecasts)



Integrated Resource Planning

Figure 3-2. Indiana Peak Demand Requirements in MW (Historical, Current, and Previous Forecasts)



RESOURCE ADEQUACY

What is Resource Adequacy?

- Simply put, resource adequacy is the ability of an electric utility to serve all of its customers during highest moment of demand (peak demand) in the year.

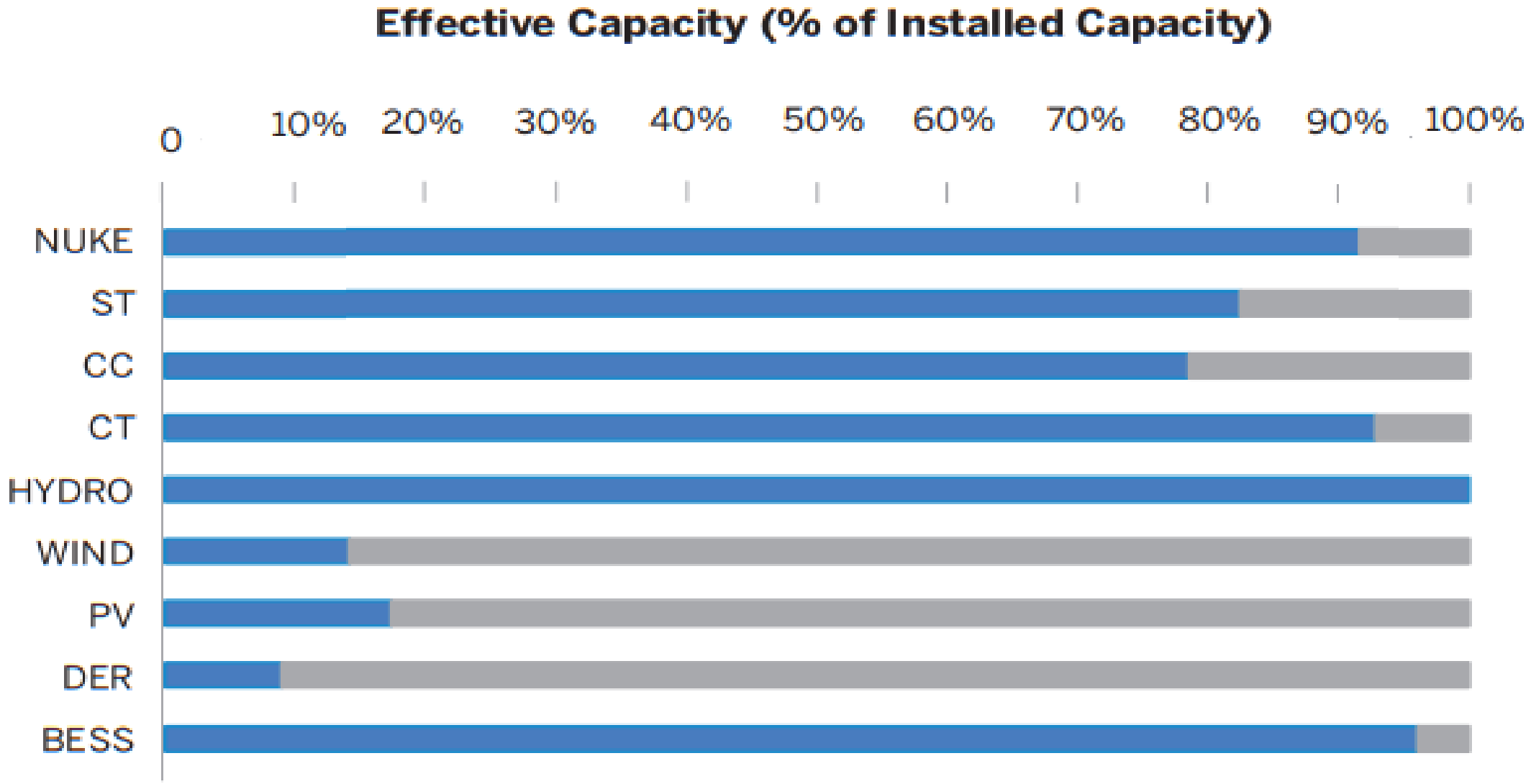
- Utilities plan to meet this peak demand plus a reserve margin to account for unplanned outages or other issues that may happen.
  - Remember, retail electric utilities have an obligation to provide safe and reliable service

- Participating in an RTO improves system reliability and economics.

Why Are We Hearing About This Now?

- Installed capacity ≠ production at time of system need.
- RTOs use accredited capacity to determine value of generation resources.
- Renewable generation accredited capacity is much lower than thermal generation.
- IRPs rely on current accreditation capacity policy from RTOs.

ACCREDITED OR EFFECTIVE CAPACITY



ACCREDITED OR EFFECTIVE CAPACITY

- Morgan Stanley Annual Energy Paper (2023):
  - "…we computed the amount of natural gas that can be disconnected when adding solar and wind to meet another 10% of demand. The result: due to wind and solar intermittency and the need to meet demand and maintain system reliability, **only 10-30 MW of natural gas could be disconnected for every 100 MW of new wind and solar capacity.** These capacity credits decline as more wind and solar are added to the system..."

WHAT ARE THE GRID OPERATORS SAYING?

1

PJM

- Retirements are at risk of outpacing new resources, due to a combination of industry forces including siting and supply chain issues; 95% of the PJM generation queue is renewables with completion rates of just 5%.

2

MISO

- Studies conducted by MISO indicate it is possible to reliably operate an electric system that has far fewer conventional power plants and far more zero-carbon resources than we have today. However, the transition that is underway to get to a decarbonized end state is posing material, adverse challenges to electric reliability.

3

NERC

- In 2023, for the first time, NERC considered “energy policy” among the five significant evolving and interdependent risks to grid reliability.

INDIANA'S RESPONSE

- 21st Century Energy Policy Development Task Force
  - Met from 2019-2022 and produced many recommendations for the General Assembly to adopt. It took testimony from over 100 witnesses.
- House Enrolled Act 1520 – 2021
  - Required utilities to generate or have contracts to purchase power for at least 70% of their demand for the next three years. The IURC reports on this annually.
- House Enrolled Act 1007 – 2023
  - Established a state energy policy (The 5 Pillars) and raised the HEA 1520 threshold from 70% to 85%.

Retail Electric Utility vs. Non-retail Electric Utility

- Why distinguish retail electric utilities?
  - Many renewable projects in the state are built by non-retail electric utilities.

- Non-retail electric utilities are commonly called independent power producers, wholesale electricity producers, or merchant generators.
  - In Indiana, these utilities cannot directly serve retail customers and instead sell directly into the wholesale electric market operated by the RTO.

Independent Power Producers

- Remember, in order to build new electric generation in Indiana, a utility must receive IURC approval.
  - This includes independent power producers/merchant generators.

- However, since these utilities will seek revenue through wholesale market transactions rather directly from retail ratepayers, they often seek a “declination of jurisdiction” from the IURC when seeking to build a new generation facility.

Declination of Jurisdiction

- When seeking a declination of jurisdiction, a company will seek to be considered a “public utility” for purposes of being able to use public right-of-way.

- If granted, the IURC will often decline to exercise its jurisdiction over the utility regarding the construction, operation, and financing of the new generation facility.

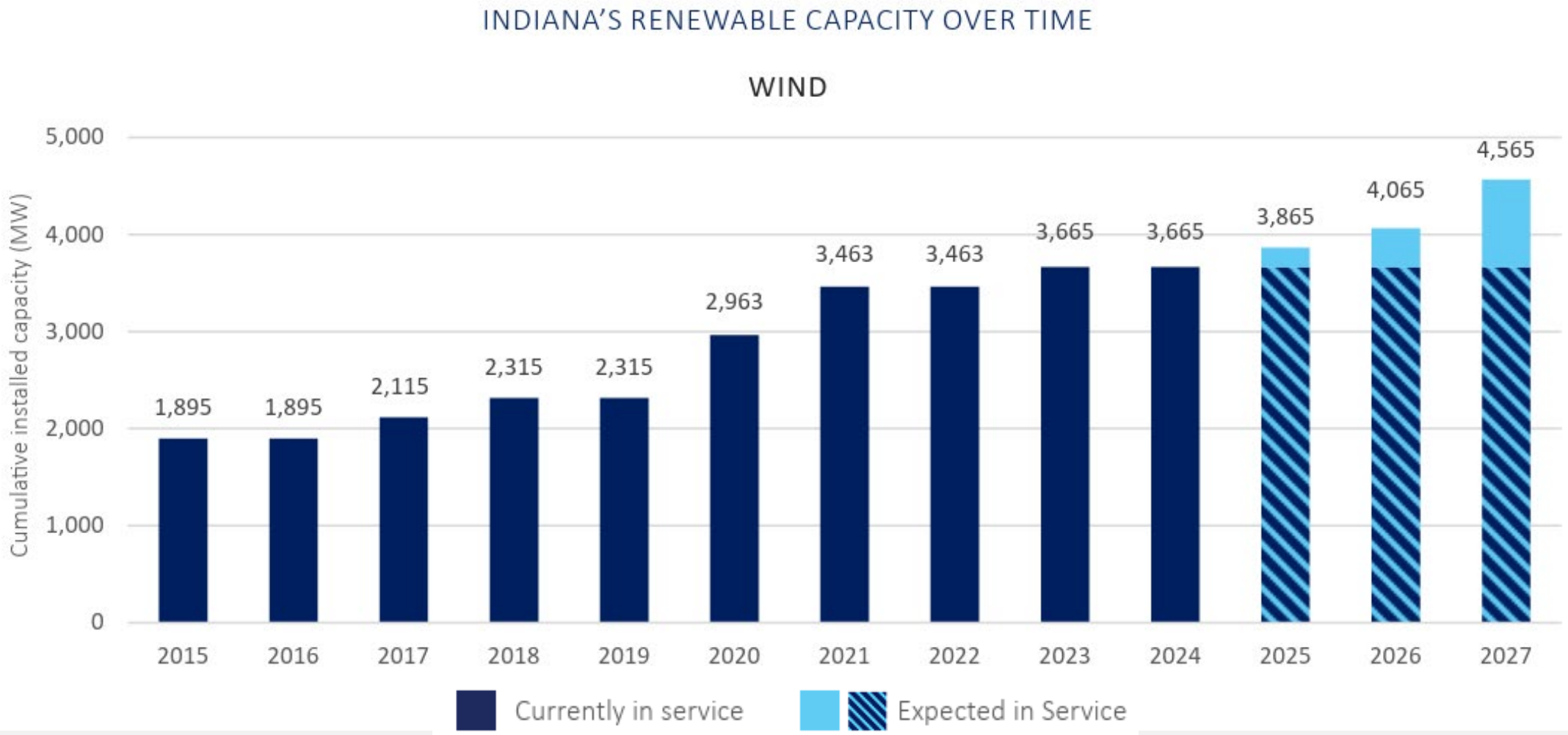
- The independent power producer is subject to FERC regulation.

Merchant Generation in Indiana

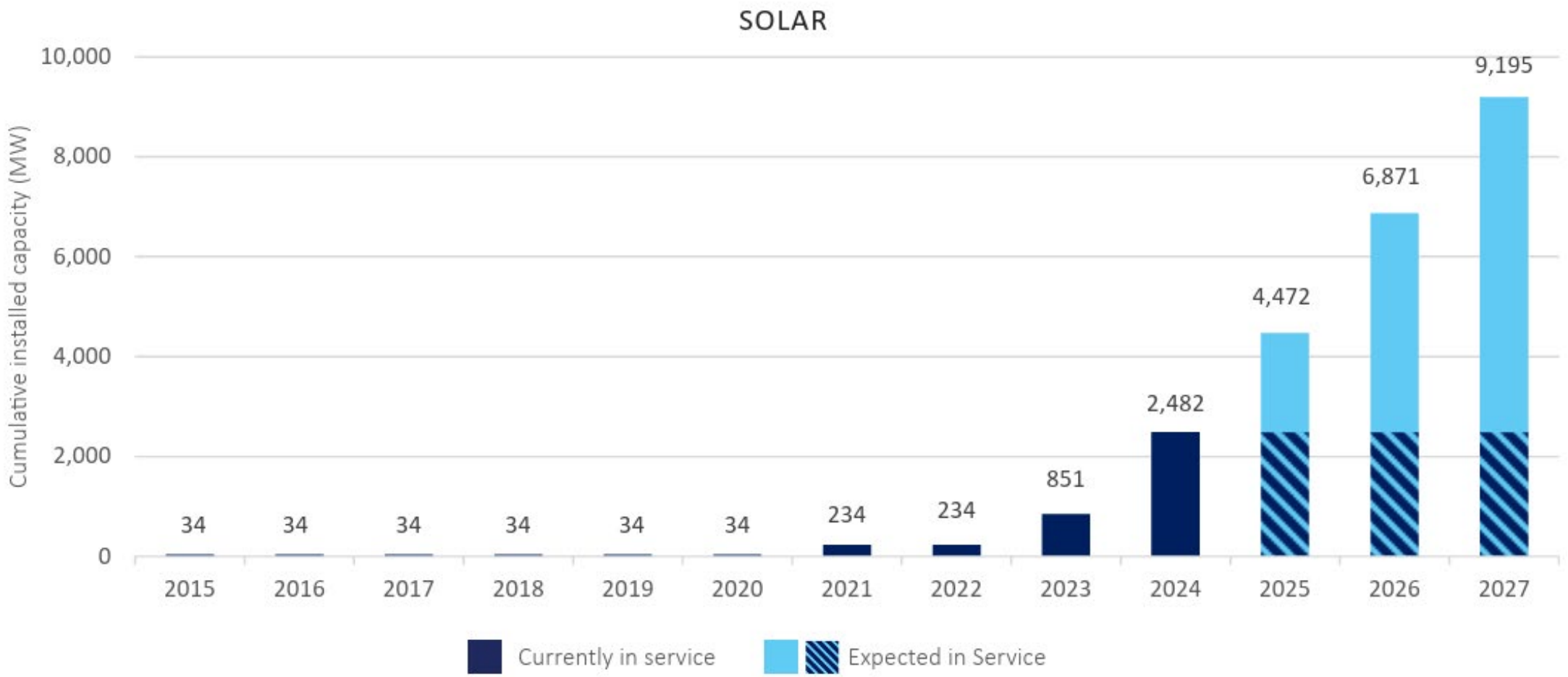
- A significant amount of merchant generation in Indiana is renewable energy; however, there are a few natural gas or coal merchant facilities.

	Wind		Solar	
Status	**Capacity (MW)**	**No. of Facilities**	**Capacity (MW)**	**No. of Facilities**
Operating	3,664	20	2,481	15
Under Construction	400	2	3,069	13
Construction Not Started	602	3	4,716	30
Total	**4,667**	**25**	**10,267**	**58**

Merchant Generation in Indiana



Merchant Generation in Indiana



Merchant Generation in Indiana

- Recall that merchant generation participates in the RTO wholesale markets.
- This participation expands generation resource availability (helping reliability) and can also help keep wholesale power prices lower (more supply available).
- RTOs “clear” the wholesale market in order from lowest cost to highest cost that provides the level of generation needed.

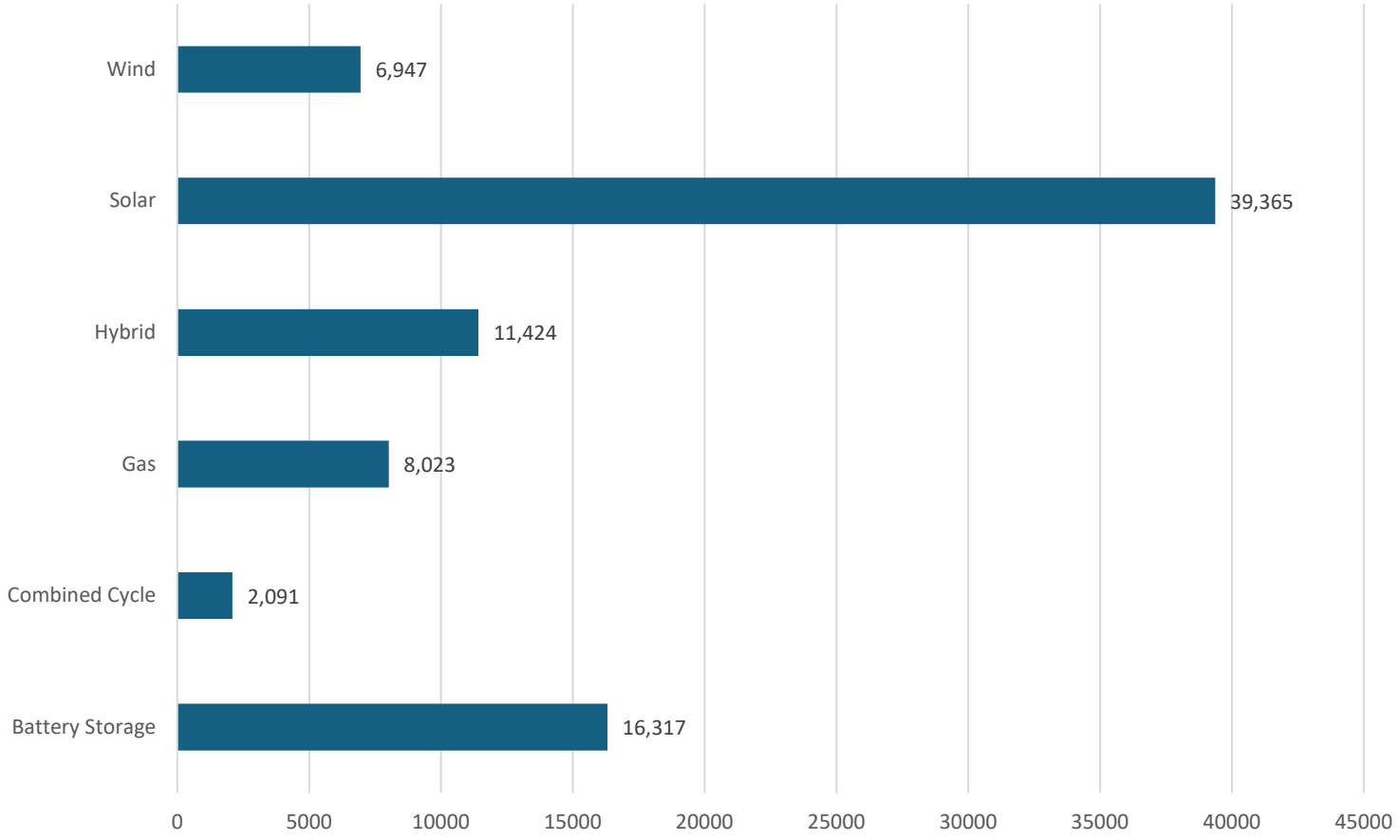
New Generation in Indiana

- New generation must receive technical approval from the RTO before being put onto the grid (called interconnection agreement).

- In MISO, there is 8,300 MW of generation that has received approval to interconnect to the grid but is still awaiting commercial operation.
  - Solar: 4,500MW
  - Hybrid: 1,700MW (usually solar with battery):
  - Gas: 1,000MW
  - Battery: 600MW
  - Wind: 200MW

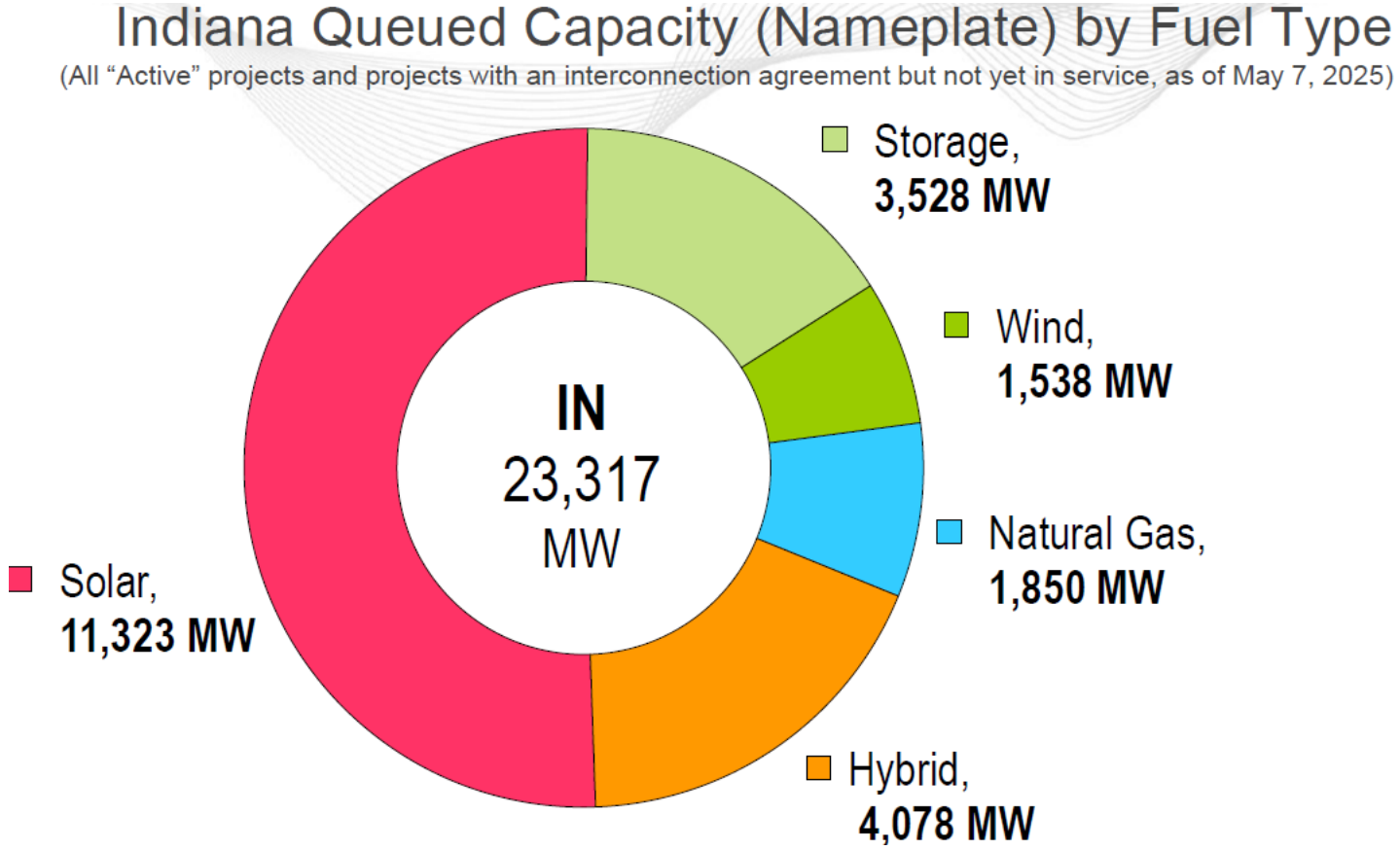
New Generation in Indiana

Total MISO Queue in Indiana



New Generation in Indiana

Total PJM Queue in Indiana



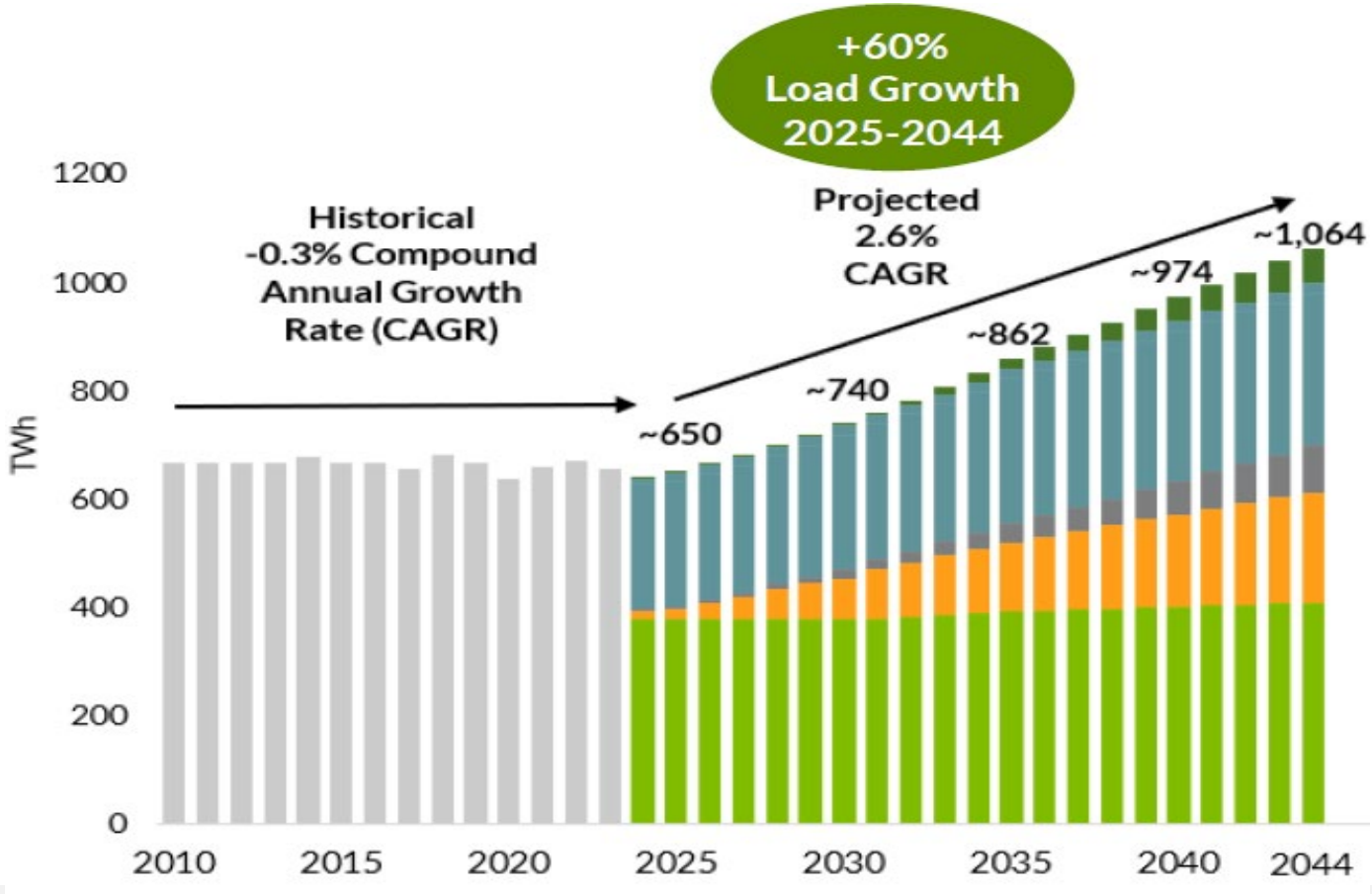
RTO Warnings

- RTOs are concerned that projects are not moving to construction and completion.
- PJM has identified three main concerns:
  - Financing issues (related to costs and inflation)
  - Sluggish supply chain
  - Permitting issues (at the local, state, or federal level)
- In effect, each partner in the RTO is in some measure dependent on the other partners to accomplish the desired interconnected system reliability across the region.

HOT TOPICS

Load Growth is Back!

- Both MISO & PJM are expecting large load growth rates



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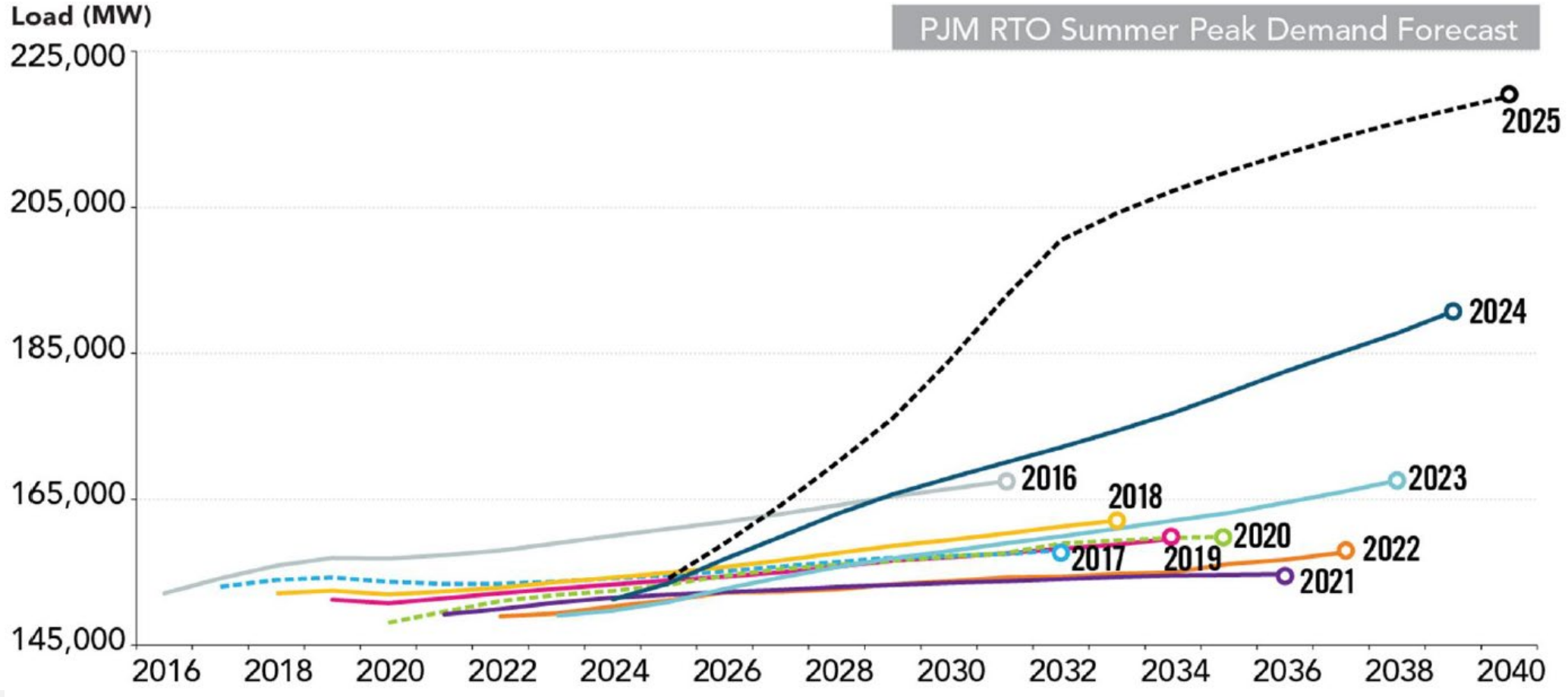

Load Growth is Back!

- Data centers (i.e. hyperscalers), manufacturing onshoring, and electrification of buildings & transportation are causing demand projections to rise rapidly.

- Generation retirements caused by economics or state policy objectives can have a significant impact on the grid's resource adequacy.

- Delays in siting, permitting, and building new generation and transmission infrastructure exacerbate the problem.

Load Growth is Back!

- Tighter generation supply with growing demand can mean wholesale electric costs increase – raising prices for ratepayers.

PJM capacity prices hit record highs, sending build signal to generators

Consumers across the PJM Interconnection footprint will pay $14.7 billion for capacity in the 2025-26 delivery year, up from $2.2 billion in the last auction.

MISO summer capacity prices jump to $666.50/MW-day as power supplies shrink

"The results reinforce the need to increase capacity, as demand is expected to grow with new large load additions," the Midcontinent Independent System Operator said.

Datacenter Impact & Existing Customers

- Ratemaking design questions on how to address costs associated with datacenters.

- Traditionally, ratemaking generally uses a “cost causer” structure.

Datacenter Impact & Existing Customers

- Indiana Michigan Power has a new rate for data center customers that requires at least a 12-year contract with an 80% minimum billing demand requirement. There is an exit fee and collateral obligations.
  - Calculations show that monthly minimum bill for a datacenter with a contract capacity of 1000MW would be $28M per month, $336M per year.

- NIPSCO has a pending case before the IURC (Cause No. 46183) to establish a “generation-only” subsidiary that would build generation to serve new data centers customers, which would isolate those costs to the subsidiary and not NIPSCO’s existing customers.

Datacenter Impact & Existing Customers

- The General Assembly's response was two-fold:
  - **HEA 1007-2025:**
    - For new electric generation built for a "large load customer", the customer must cover at least 80% of the costs and risk to existing ratepayers must be evaluated and minimized in order to expedite the generation review.
    - More stringent generation retirement reviews by the IURC.
  - **SEA 425-2025:**
    - Creates "energy production zones" on existing generation or mining sites to allow new thermal generation to be build without local land use/zoning approval.
    - Establishes regulatory certainty and shot clocks for local permitting decisions. Limits moratoriums on generation projects for no more than one year and prohibits their renewal, regardless of when they were first adopted.

AFFORDABILITY!!!

Yes, AI is power-hungry. But there's more to surging electricity prices.

ECONOMY

Electricity prices are climbing more than twice as fast as inflation

Indiana governor seeks lower utility rates: 'We can't take it anymore.'

Why electricity prices are surging for U.S. households

Electricity prices spike for American households: Here's what's driving costs higher

THANK YOU

INDIANA UTILITY REGULATORY COMMISSION
Luke Wilson, Executive Director of External Affairs

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