2023 Indiana State Infrastructure Report (January 1, 2023 – December 31, 2023)

June 2024

This report reflects information for the portion of Indiana within the PJM service territory.

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Executive Summary

2023 Indiana State Infrastructure Report

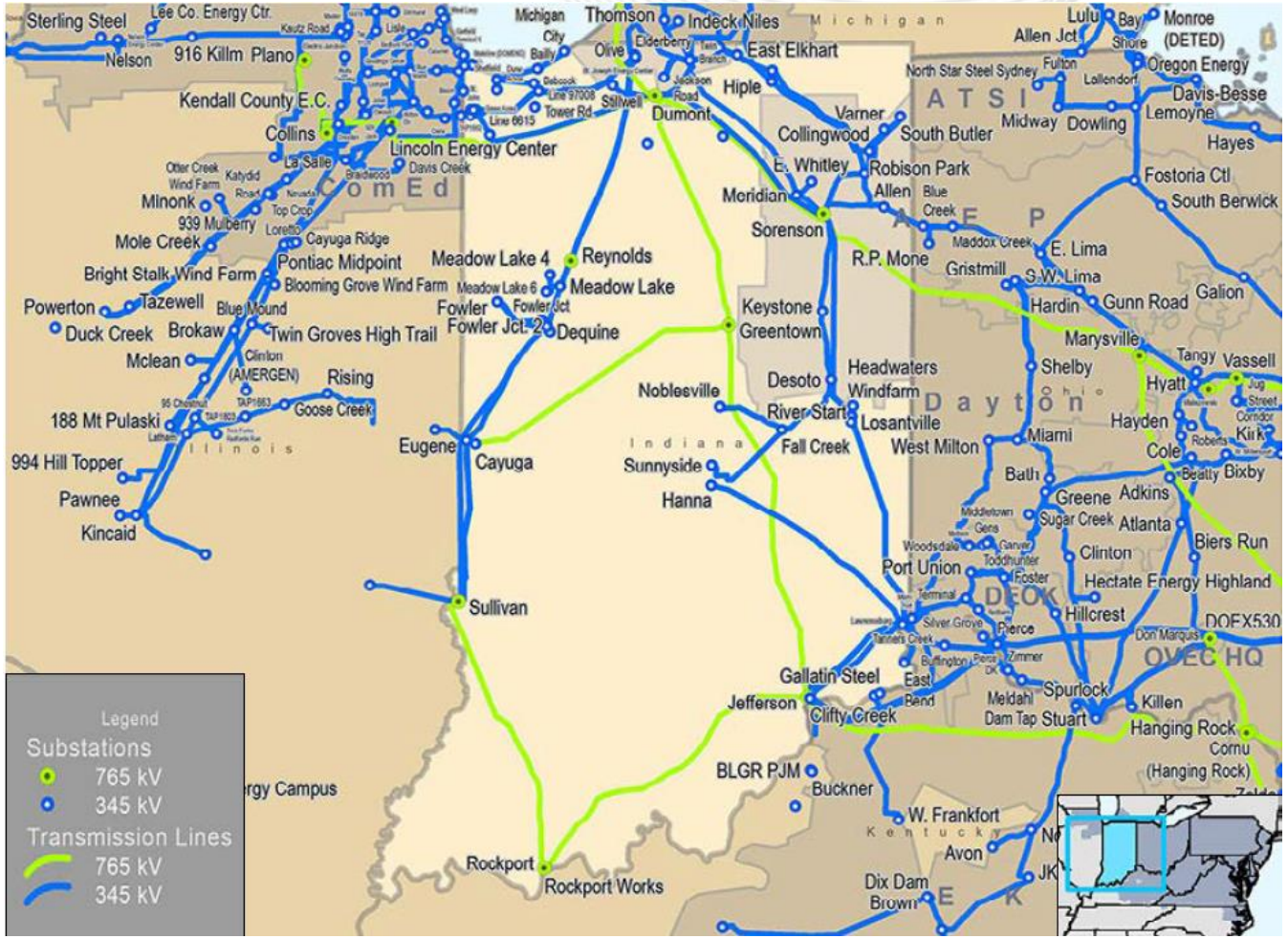
In the Indiana service territory:

Existing Capacity:	• In the Indiana portion of PJM, coal represents 52% of installed capacity while natural gas represents 33%. • In PJM, natural gas and coal are 48% and 22% of total installed capacity, while nuclear represents 18%.
Interconnection Requests:	• Solar represents 73% of new interconnection requests while storage represents 19% of new requests.
Deactivations:	Indiana had no generators deactivate or give a notice of deactivation in 2023.
RTEP 2023:	Indiana's 2023 RTEP project total represents approximately $275.24 million in investment.

In the Indiana service territory:

Load Forecast:	Indiana's summer peak load is projected to increase by 0.3% percent annually over the next ten years, while the winter peak is projected to increase by 0.2% percent.
Capacity Market:	No Base Residual Auction was conducted in 2023. For the most recent auction results please see the 2022 Indiana State Infrastructure Report.
Market Performance:	Indiana's average hourly LMPs were generally lower than the PJM average hourly LMP.
Emissions:	Indiana's average CO_2 emissions decreased in 2023 compared to 2022 levels.

PJM Service Area in Indiana



The PJM service area in Indiana is the AEP zone and is represented by the shaded portion of the Indiana state map.

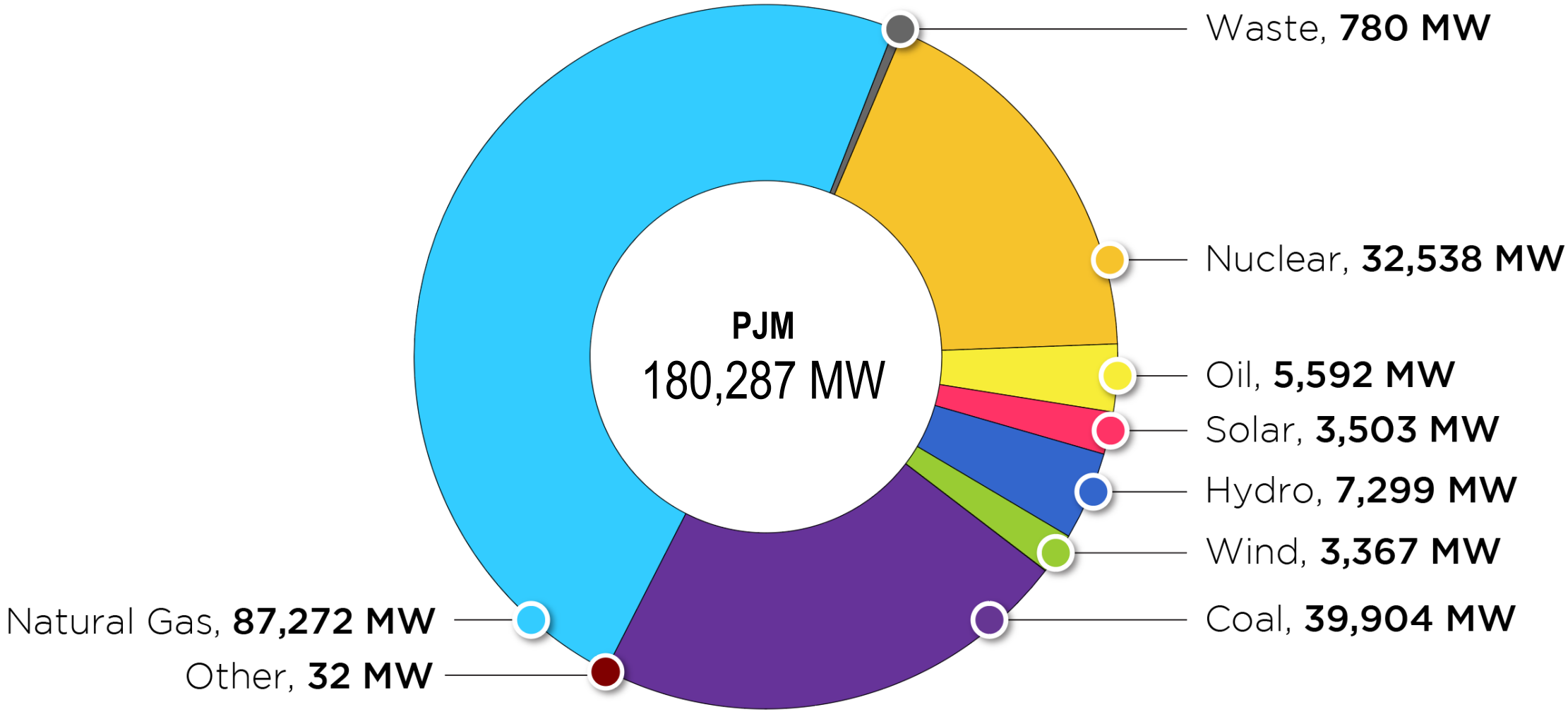
PJM operates transmission lines that extend beyond the service territory.

Planning

Generation Portfolio Analysis

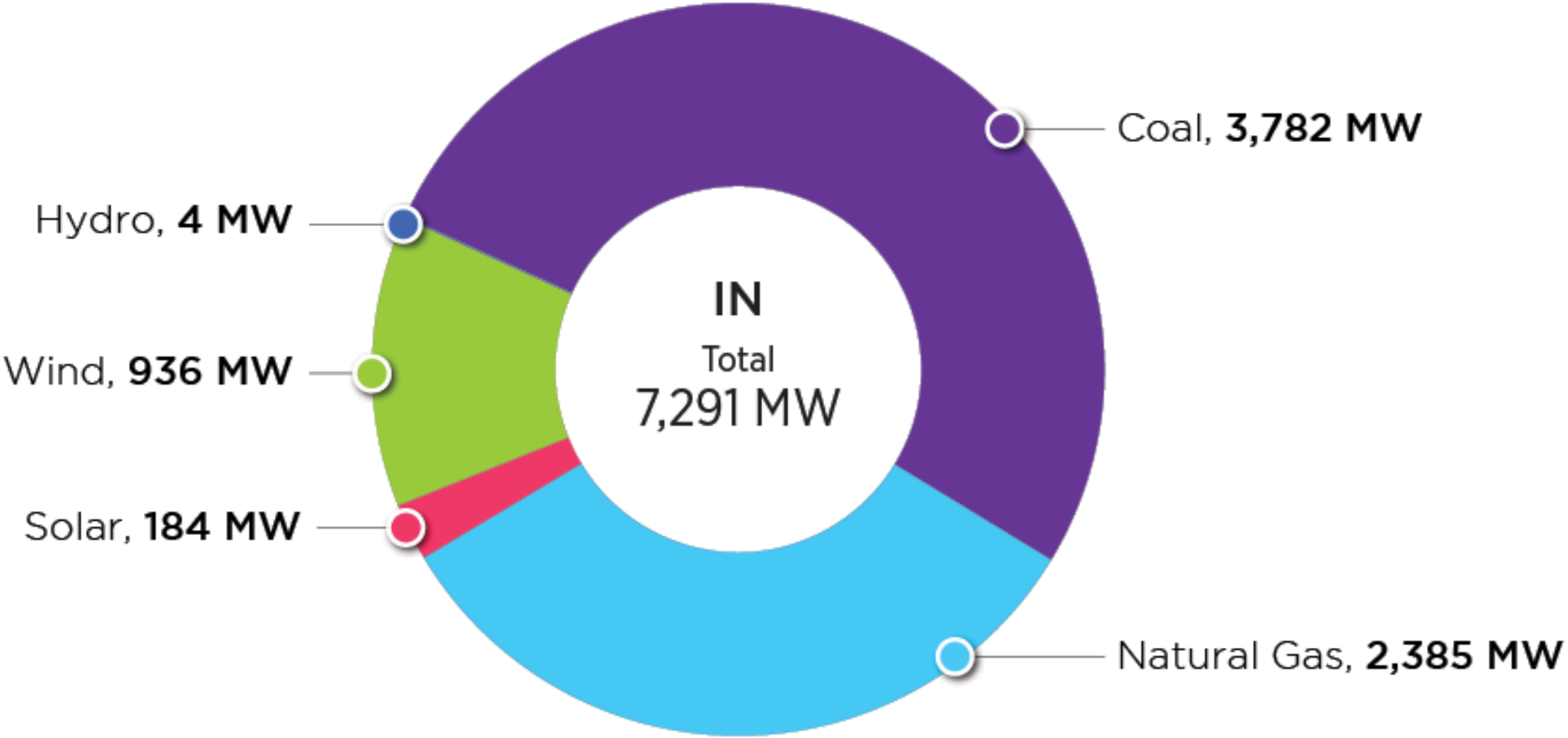
PJM Existing Installed Capacity Mix

(CIRs – as of Dec. 31, 2023)



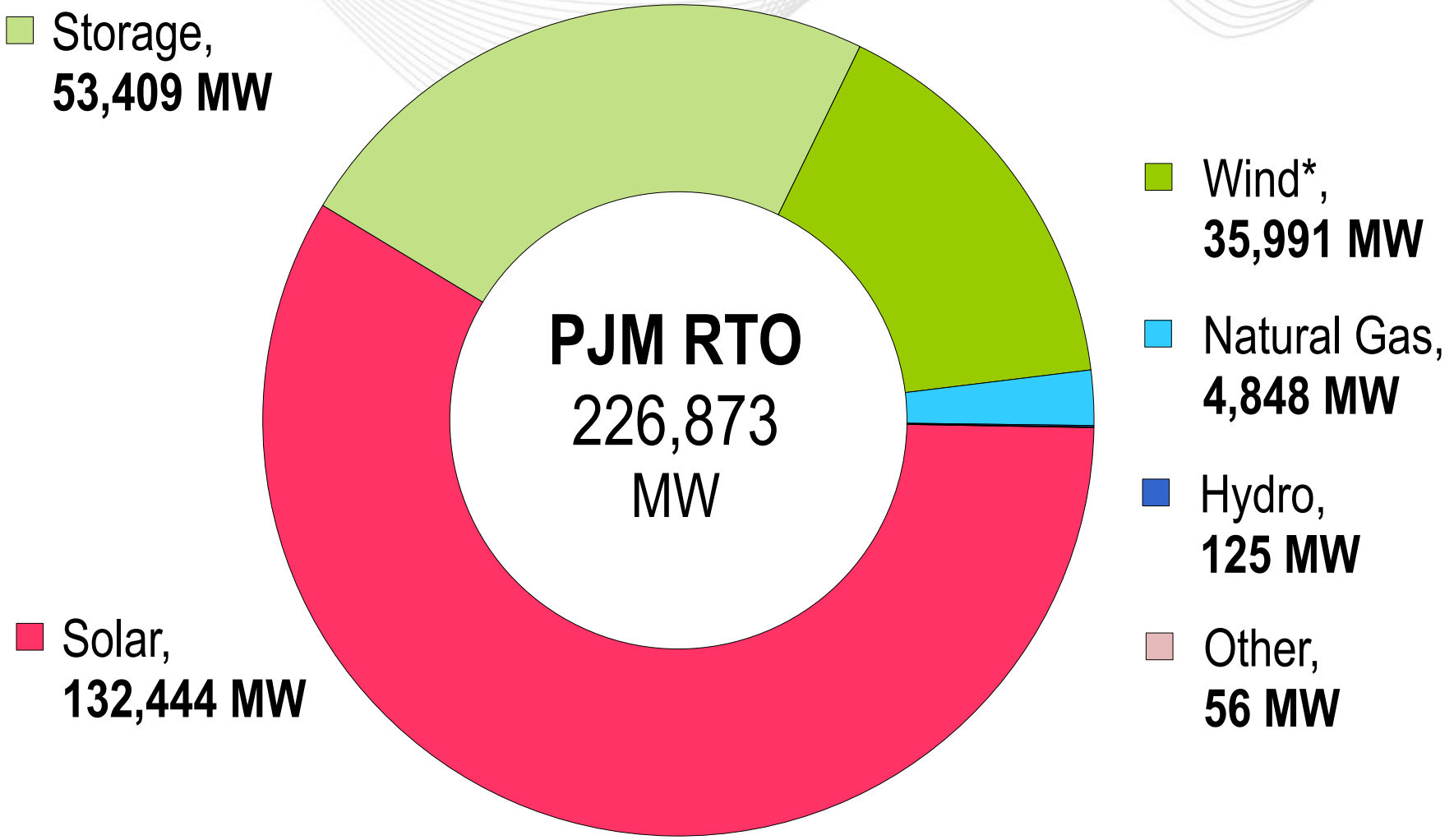
Indiana – Existing Installed Capacity (MW) by Fuel Type

(as of Dec. 31, 2023)



PJM Queued Capacity (Nameplate) by Fuel Type

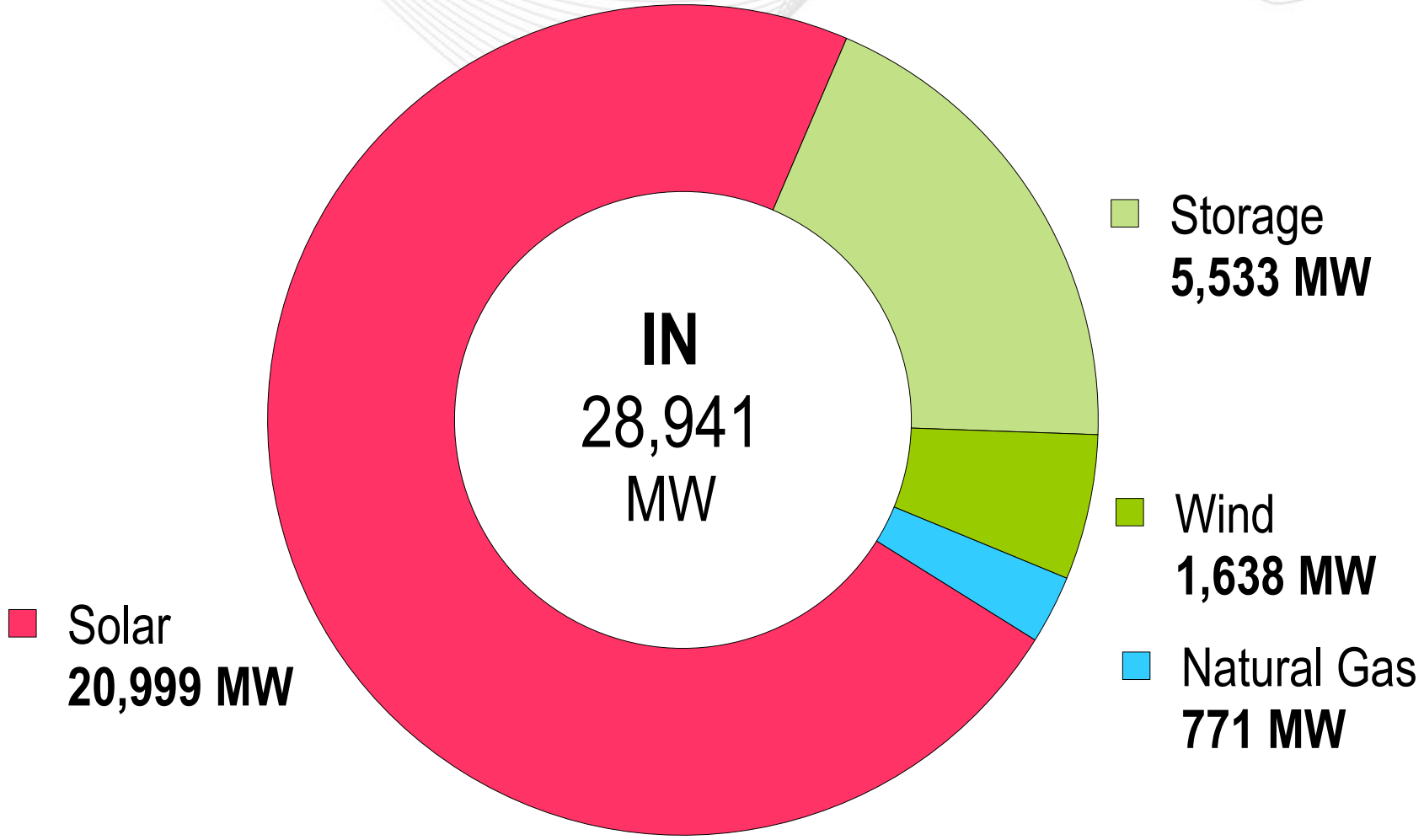
("Active" in the PJM Queue as of April 1, 2024)



*Wind includes both onshore and offshore wind

Indiana Queued Capacity (Nameplate) by Fuel Type

("Active" in the PJM Queue as of April 1, 2024)



Indiana – 2023 Generator Deactivations

Indiana had no generators deactivate or give a notice of deactivation in 2023.

Planning

Transmission Infrastructure Analysis

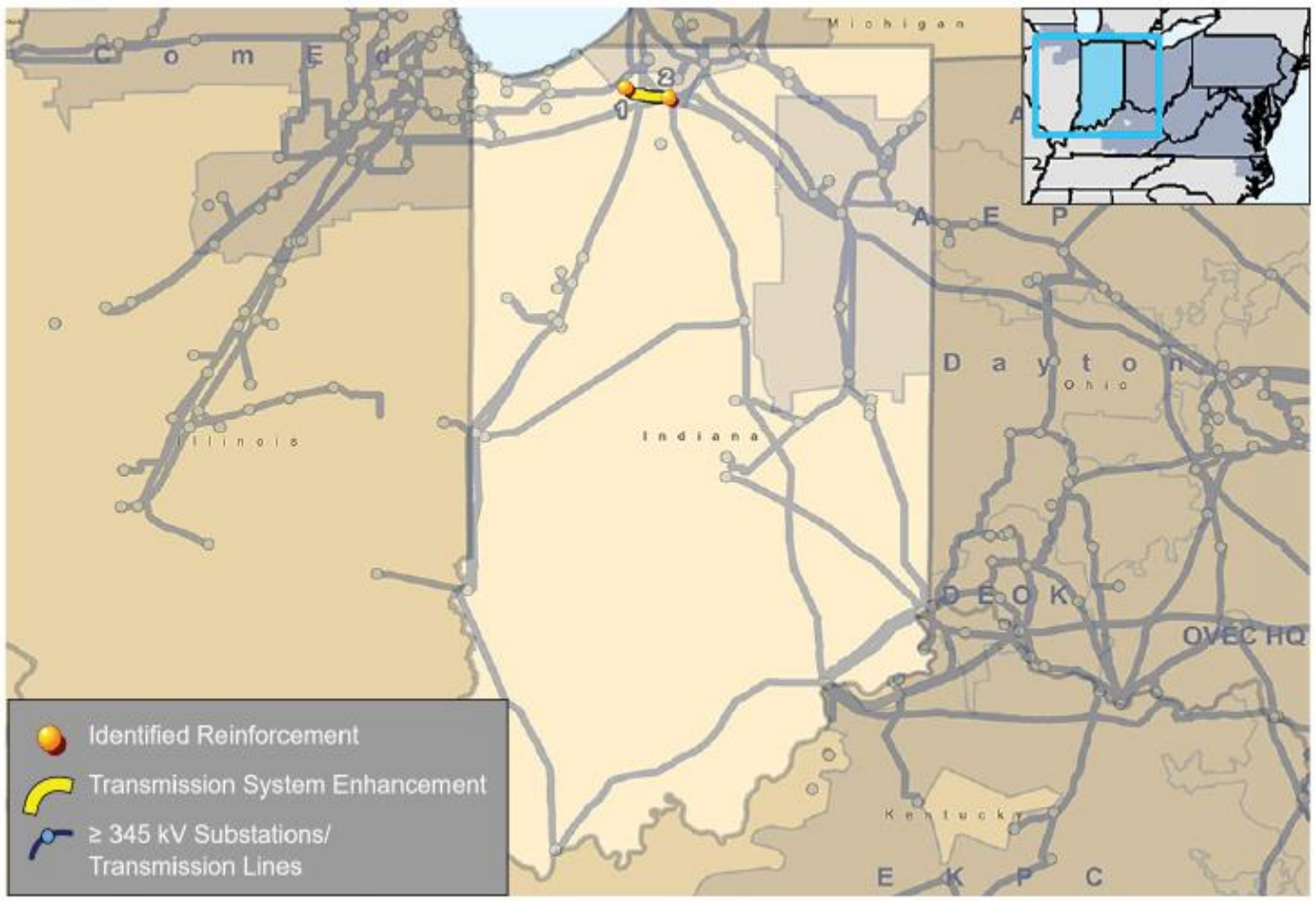
For reporting purposes, the 2023 state infrastructure reports provide maps displaying all baseline, network, and supplemental projects for the respective state. The reports also include aggregated project costs for each type of project within each state. The costs listed in the state infrastructure reports and 2023 Annual RTEP Report are not indicative of each project's cost allocation.

For a detailed list of each project shown on a state's project map, please see that state's section in the **2023 Annual RTEP Report** on PJM.com: https://pjm.com/-/media/library/reports-notices/2023-rtep/2023-rtep-report.ashx.

The complete list of all RTEP projects in PJM, including those from prior years, can be found at the **RTEP Upgrades & Status – Transmission Construction Status** page on PJM.com: https://www.pjm.com/planning/m/project-construction.

Indiana Baseline Projects

(as of Dec. 31. 2023)

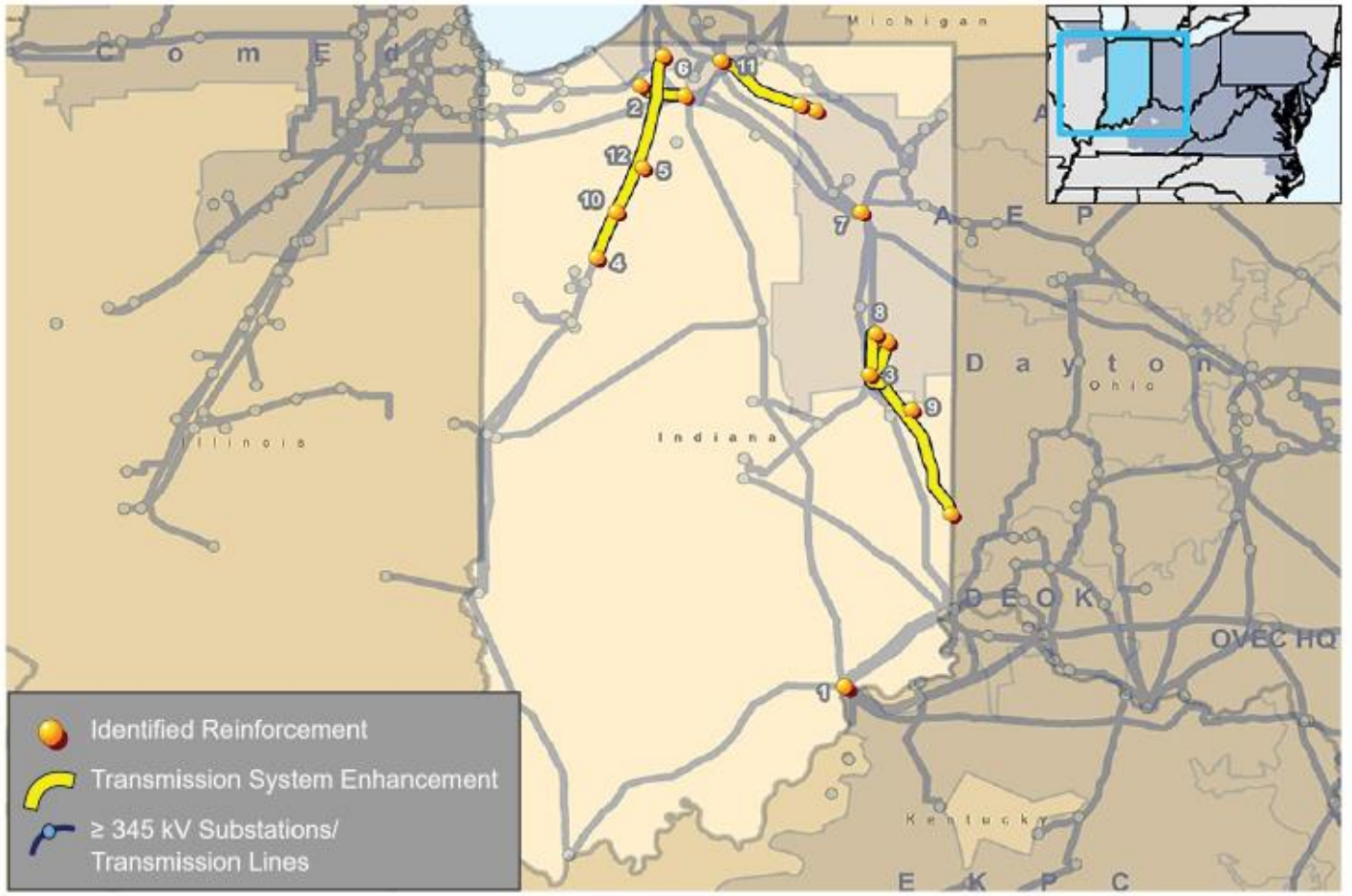


The 2023 RTEP has $6 million in baseline projects located in Indiana.

Note: Baseline upgrades are those that resolve a system reliability criteria violation. Baseline projects listed in the annual RTEP report reflect project costs within a specific location and are not indicative of the project's cost allocation.

Indiana Network Projects

(as of Dec. 31. 2023)

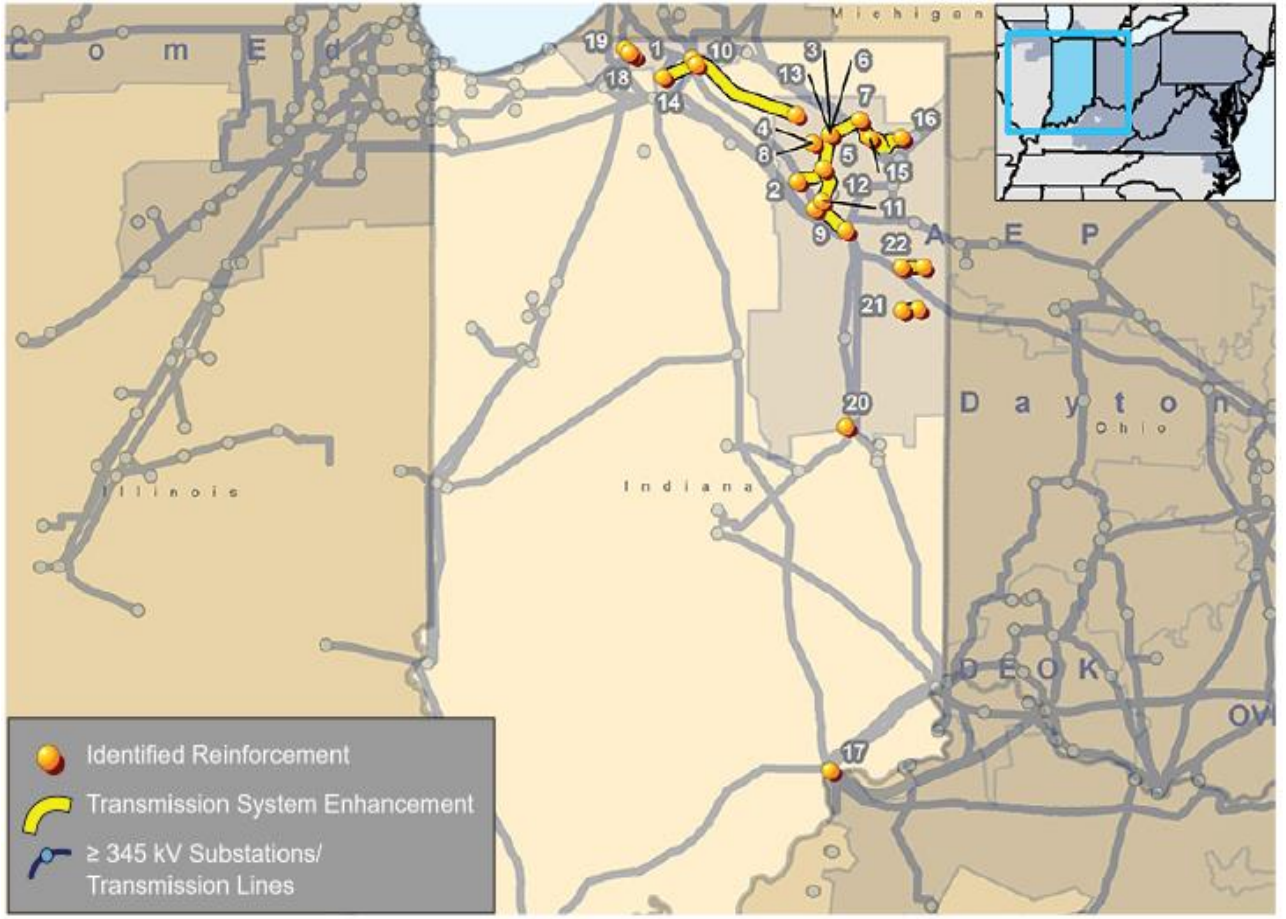


The 2023 RTEP has $45.98 million in network upgrades located in Indiana.

Note: Network projects are new or upgraded facilities required primarily to eliminate reliability criteria violations caused by proposed generation, merchant transmission or long-term firm transmission service requests, as well as certain direct connection facilities required to interconnect proposed generation projects. The costs of network projects are borne by the interconnection customer.

Indiana Supplemental Projects

(as of Dec. 31. 2023)

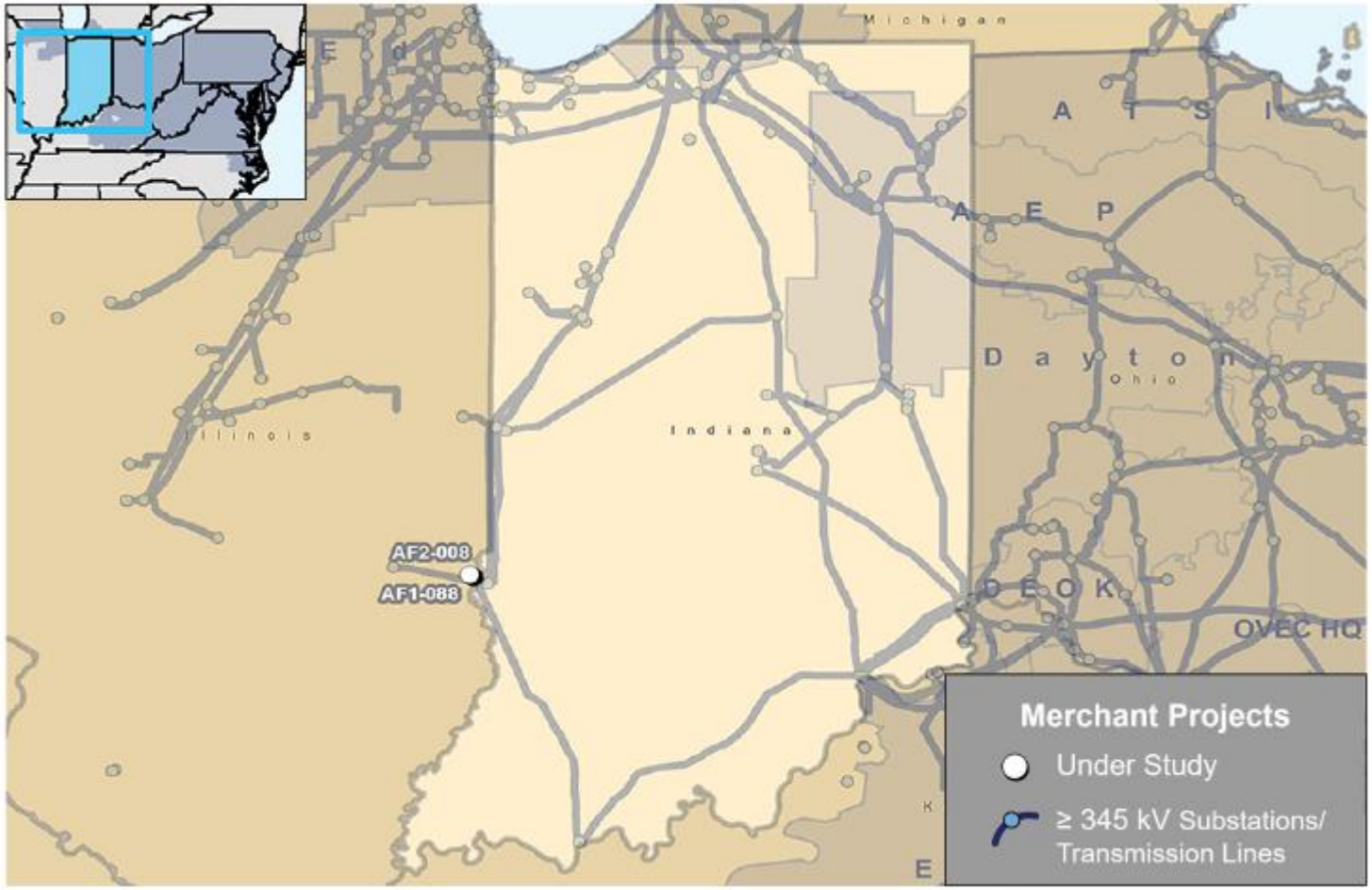


The 2023 RTEP has $223.26 million in supplemental projects located in Indiana.

Note: Supplemental projects are transmission expansions or enhancements that are not required for compliance with PJM criteria and are not state public policy projects according to the PJM Operating Agreement. These projects are used as inputs to RTEP models, but are not required for reliability, economic efficiency or operational performance criteria, as determined by PJM.

Indiana Merchant Transmission Project Requests

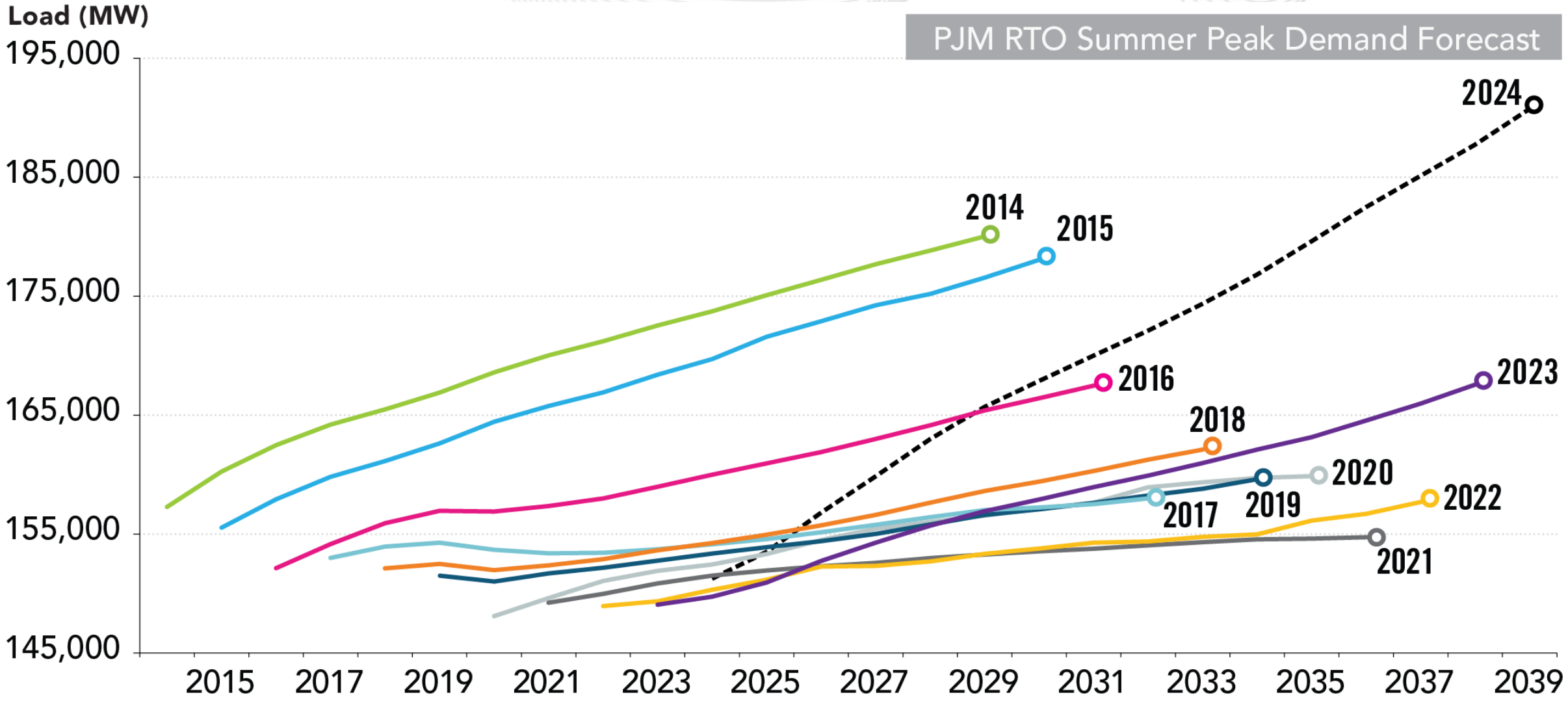
(as of Dec. 31. 2023)



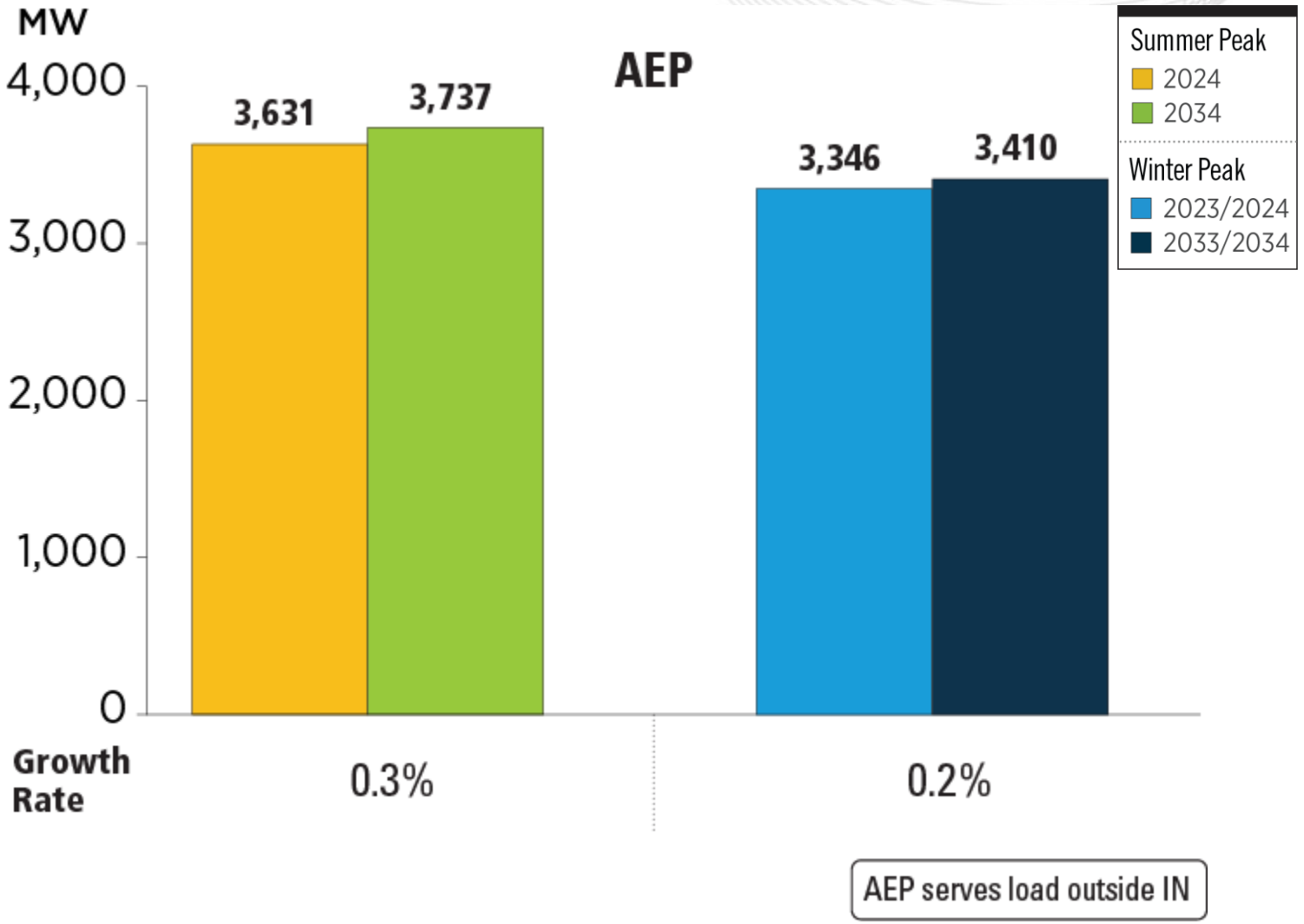
IN Merchant Transmission Projects	
Queue Number	AF1-088
	AF2-008
Queue Name	Sullivan 345 kV
To Zone	AEP
Status	Active
Actual or Requested In-Service Data	12/31/2025
Maximum Output (MW)	1,000
	2,000

Planning
Load Forecast

PJM Electricity Demand Growth



Indiana – 2024 Load Forecast Report



PJM RTO Summer Peak

2024	2034
151,247 MW	176,822 MW

Growth Rate 1.6%

PJM RTO Winter Peak

2023/2024	2033/2034
134,659 MW	163,069 MW

Growth Rate 1.9%

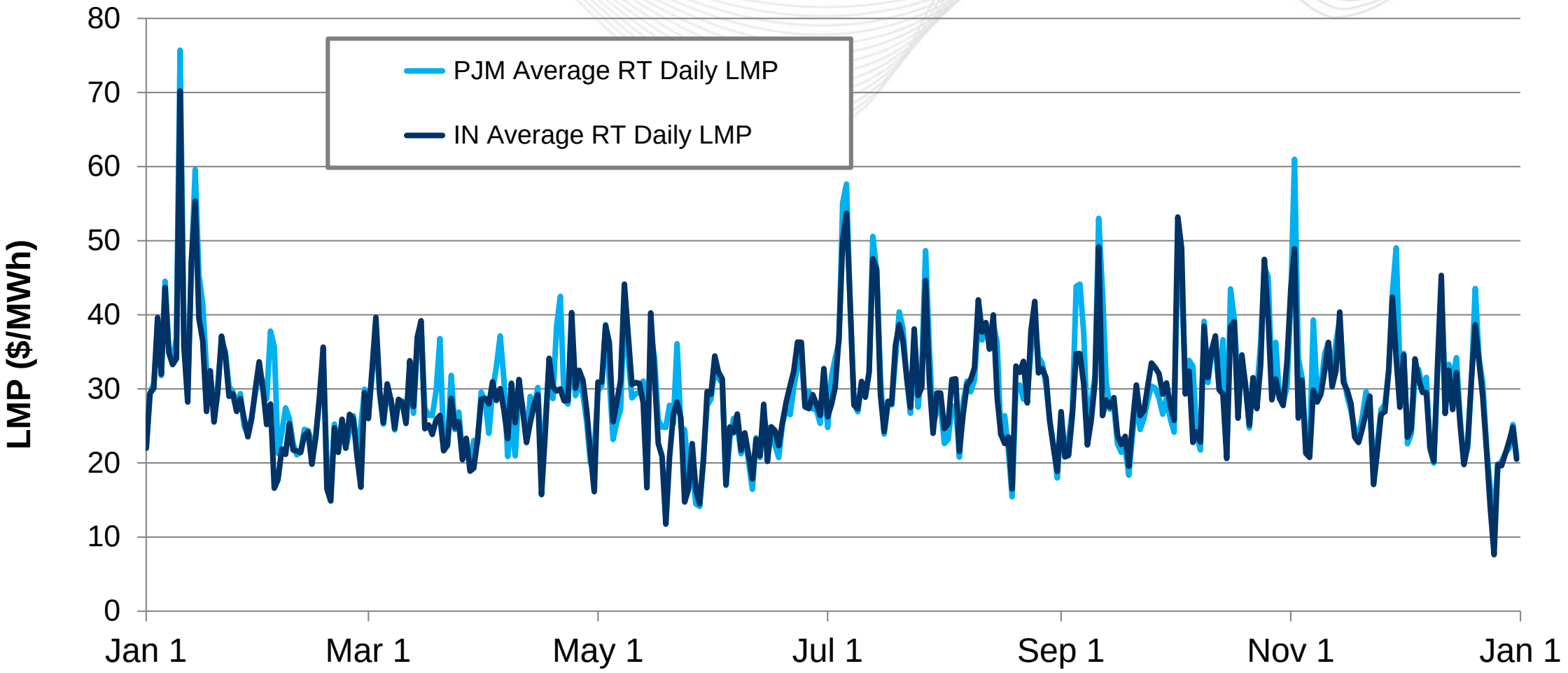
The summer and winter peak megawatt values reflect the estimated amount of forecast load to be served by each transmission owner in the noted state/district. Estimated amounts were calculated based on the average share of each transmission owner's real-time summer and winter peak load in those areas over the past five years.

Markets

Market Analysis

Indiana – Average Daily LMP

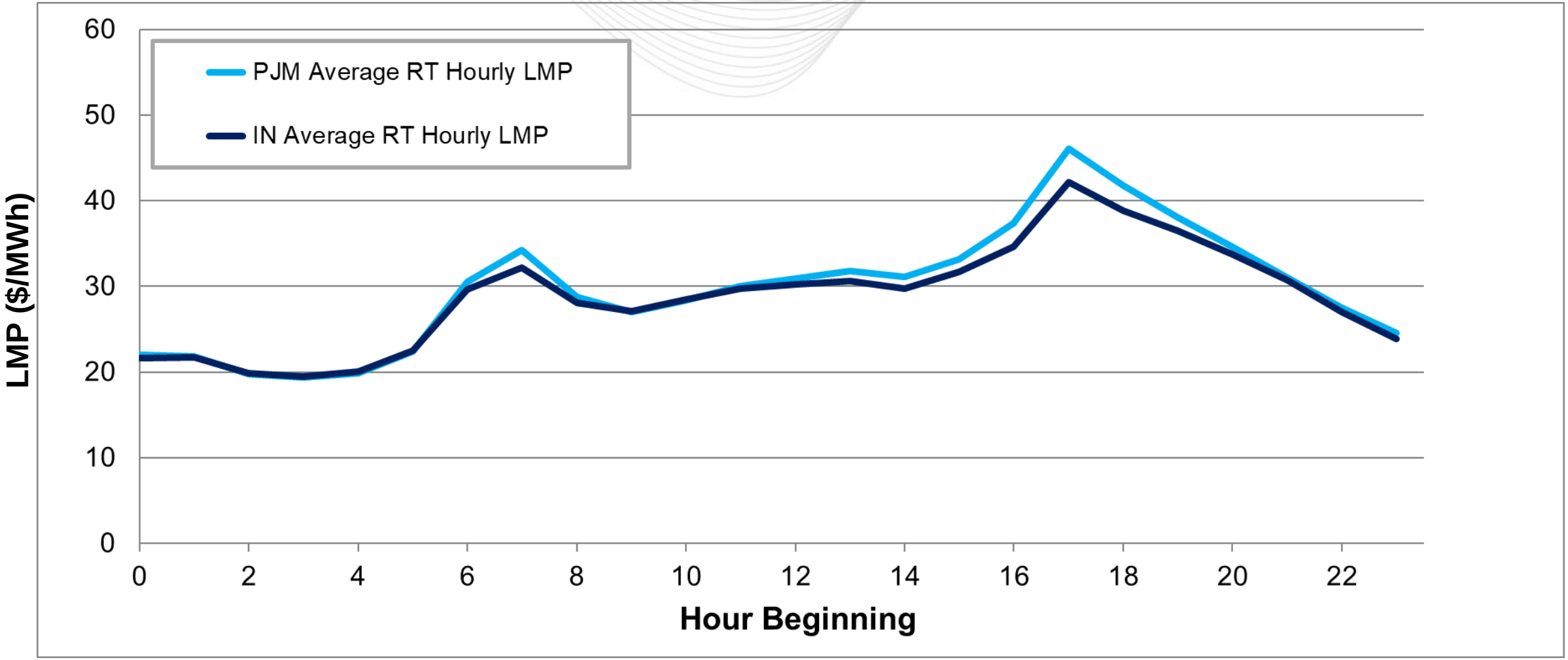
(Jan. 1, 2023 – Dec. 31, 2023)



Indiana – Average Hourly LMP

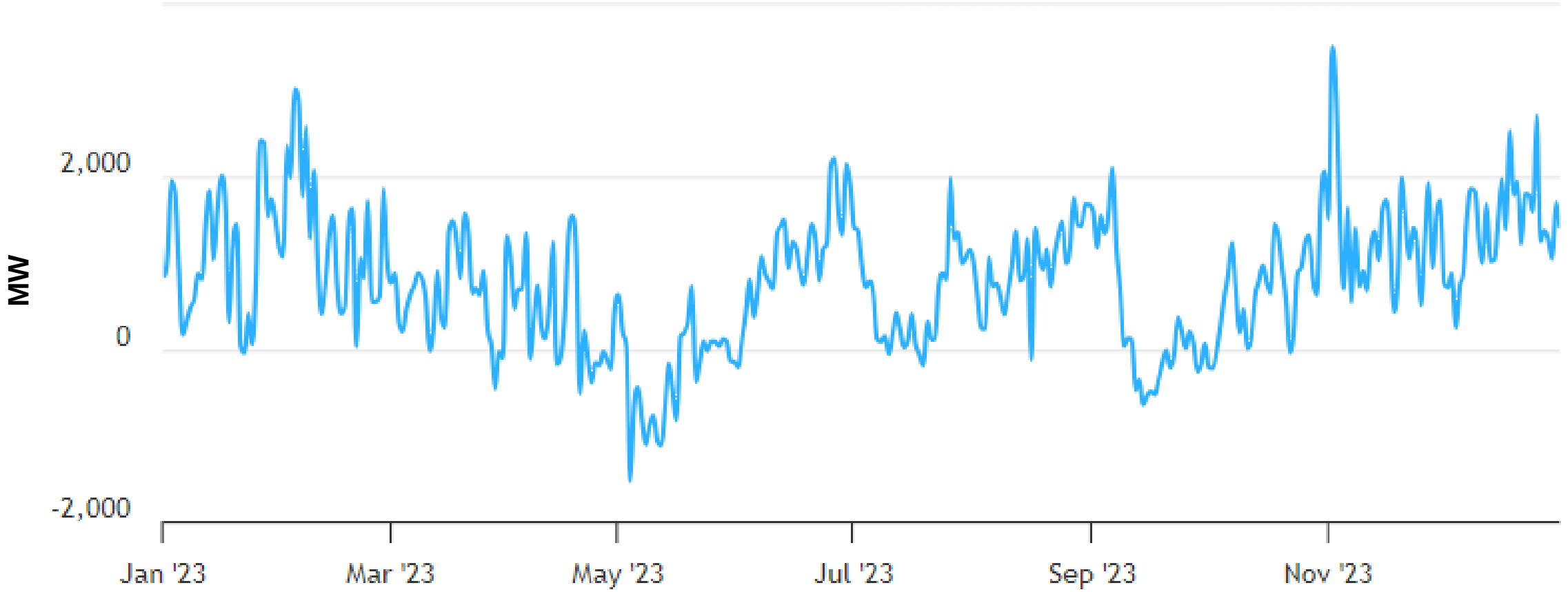
(Jan. 1, 2023 – Dec. 31, 2023)

Indiana's average hourly LMPs were generally consistent with the PJM average hourly LMP and slightly lower at peak hours.



Indiana – Net Energy Import/Export Trend

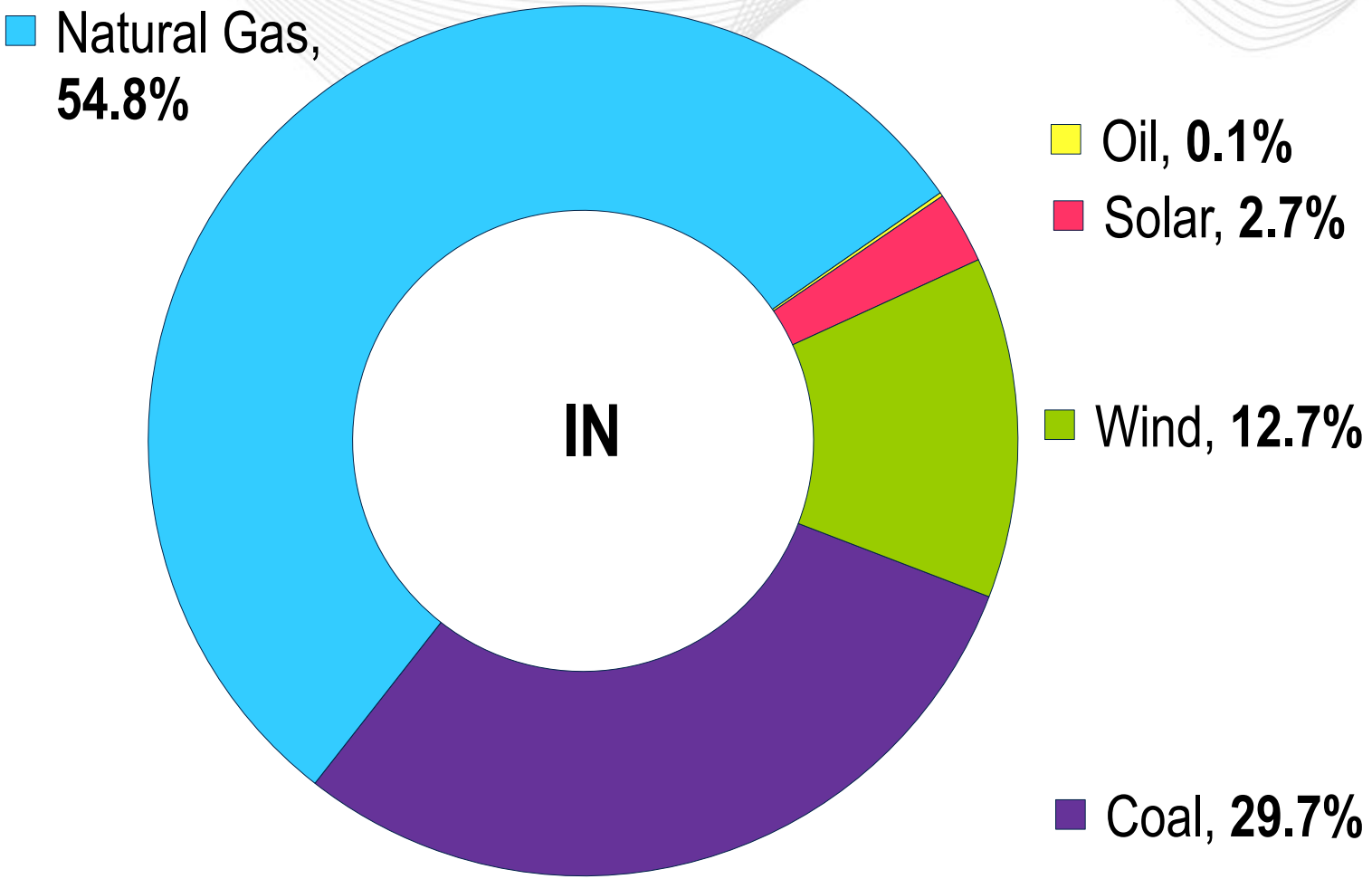
(Jan. 2023 – Dec. 2023)



This chart reflects the portion of Indiana that PJM operates. Positive values represent exports and negative values represent imports.

Operations

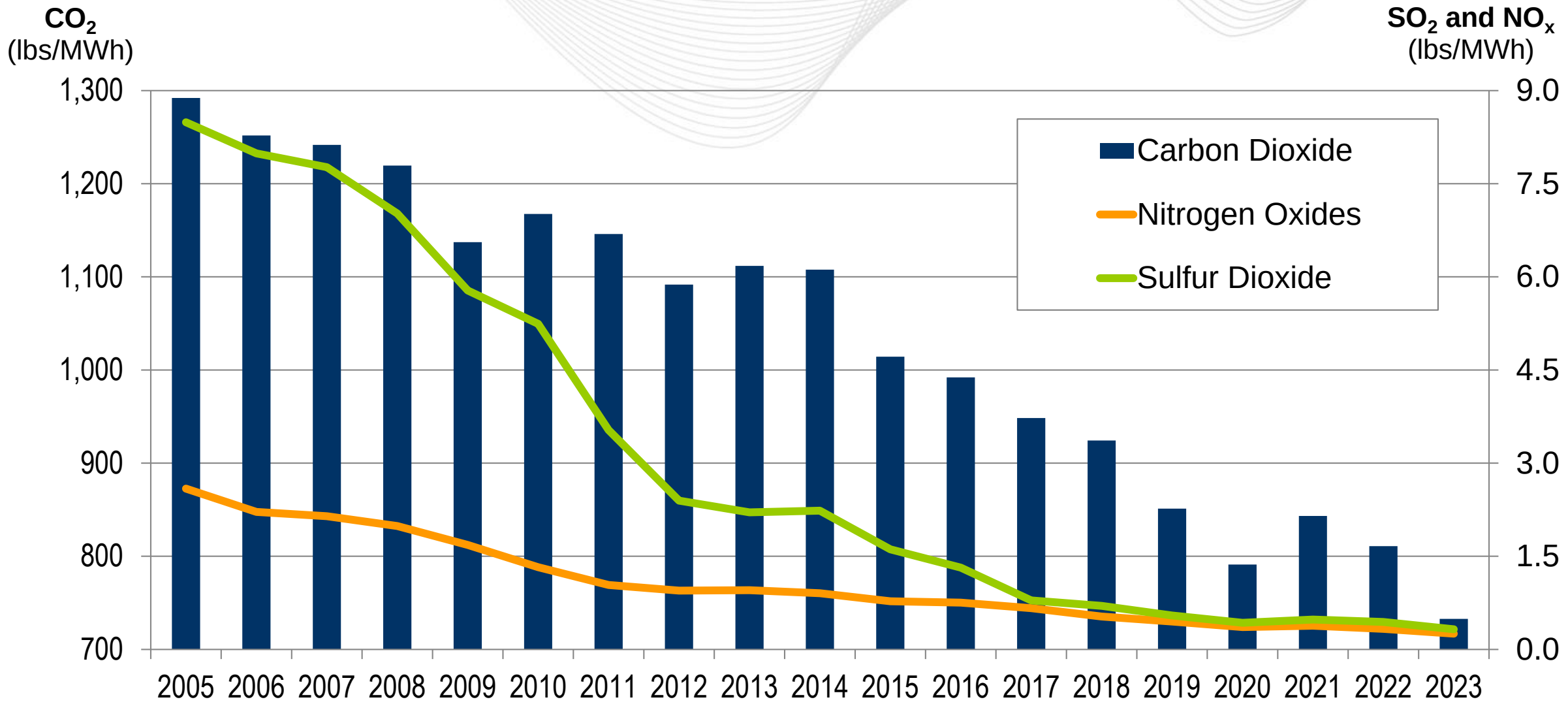
Indiana – 2023 Generator Production



The data in this chart comes from EIA Form 923 (2023) and represents only generators within the PJM portion of Indiana.

2005–2023 PJM Average Emissions

(March 2024)



Indiana – Average Emissions (lbs/MWh)

(March 2024)