



# Indiana Integrated Resource Plan

## Indiana Michigan Power 2024 Public Summary

March 28, 2025

## Executive Summary

### Overview

This Report presents Indiana Michigan Power Company's (I&M or Company) 2024 Integrated Resource Plan for its Indiana jurisdiction (2024 IN IRP or Report). This Report includes descriptions of assumptions, study parameters, and methodologies used to evaluate the integration of supply- and demand-side resources to meet future customer demand in a way that balances the Five Pillars of Indiana energy policy<sup>1</sup>.

I&M is in the midst of a transformation in terms of forecasted load growth, customer composition and changes to the generation resources that are needed to serve customers. I&M is forecasting electric load growth by the end of 2030 that will more than double I&M's peak load from its 2023 levels. The load growth is primarily associated with hyperscale (HSL) business development, which includes large data center development with electric capacity requirements exceeding 500 megawatts (MW). By the end of 2030, HSL customers are forecasted to represent approximately 60% of I&M's Indiana Jurisdiction peak load. I&M is also experiencing a shift in the generation resource composition as Rockport Unit 1 is obligated to retire by the end of 2028. This coal-fired resource represents nearly one-fifth of the Company's existing generation fleet. In addition, a key consideration in this Integrated Resource Plan (IRP) was the evaluation of a Subsequent License Renewal (SLR) of the Cook Nuclear Plant Units 1 and 2 that would extend the operating license of each unit 20 years, from 2034 and 2037 to 2054 and 2057, respectively. The magnitude of future demand for electricity is unprecedented and will require substantial expansion of supply- and demand-side resources, especially when considering generation resource retirements coinciding with significant load growth.

At the core of this transformation is the Five Pillars of Indiana energy policy, which guides how I&M generates and supplies electricity to balance the consideration of Reliability, Affordability, Resiliency, Grid Stability, and Environmental Sustainability. As a result, the 2024 IN IRP established and utilized Portfolio Performance Indicators associated with each of the Five Pillars. These indicators allowed I&M to assess and compare the scenarios and sensitivities modeled and ultimately inform I&M's Preferred Portfolio.

The goal of the 2024 IN IRP process is to develop a Preferred Portfolio that contains a near-term plan, representing years 2025-2030, and a long-term-indicative plan, representing years 2031-2044. The Preferred Portfolio identifies the amount, timing, and type of resources required to supply capacity and energy as part of the Company's obligation to ensure a safe, reliable and economical power supply to its Indiana customers. The near-term plan has the least uncertainty and is inclusive of the Company's Short-Term Action Plan described herein which includes the activities the

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<sup>1</sup> Ind. Code § 8-1-2-0.6. (2023). *GENERAL ADMINISTRATIVE ORDER OF THE INDIANA UTILITY REGULATORY COMMISSION*. Retrieved from [https://www.in.gov/iurc/files/GAO-2023-04\\_ORDER\\_06-28-2023.pdf](https://www.in.gov/iurc/files/GAO-2023-04_ORDER_06-28-2023.pdf)

Company plans to undertake during the 2025-2027 period to acquire the resource additions that will be necessary to meet the Company's capacity obligations.

This 2024 IN IRP is submitted based on the best information available at the time the load forecast and other modeling assumptions were developed. However, changes that affect this 2024 IN IRP can occur without notice and may not be reflected in this report due to the timing of the changes. Therefore, this 2024 IN IRP is not a firm commitment to specific resource additions or other courses of action over the period of the plan, as the future is uncertain. Accordingly, this 2024 IN IRP and the action items described herein are subject to change as new information becomes available or as circumstances warrant.

## **Background**

An IRP explains how an electric utility company plans to meet the forecasted capacity and energy requirements of its customers. I&M is required to provide an IRP that encompasses a 20-year forecast planning horizon (in this 2024 IN IRP, 2025-2044). The 2024 IN IRP uses the Company's current long-term assumptions for:

- customer load requirements – peak demand and hourly energy;
- commodity prices – fuel, capacity, energy, and emission prices;
- existing planned supply-side resource retirement options;
- supply-side alternative costs and performance characteristics – including natural gas, nuclear, and renewable generation along with storage resources;
- transmission and distribution planning; and
- energy efficiency and demand-side management program costs and impacts.

The 2024 IN IRP load forecast included significant load growth from HSL customers. In addition, I&M's existing long-term wholesale contracts were assumed to continue through their current contractual terms. These load assumptions were included in the customer load requirements above.

In addition to the assumptions noted above, I&M considered the impact of the existing and proposed Greenhouse Gas regulations under the Environmental Protection Agency's (EPA) Section 111(b)(d). The Company's IRP modeling assessed these regulations, and ultimately considered the regulations in its Preferred Portfolio, in an effort to better position I&M for future compliance with Greenhouse Gas regulations.

I&M operates within the PJM Interconnection, L.L.C. (PJM) Regional Transmission Organization (RTO), while most Indiana utilities operate in the Midcontinent Independent System Operator, Inc. (MISO) RTO. As expected, each RTO has its own capacity planning process that results in different resource planning criteria and assumptions. Specifically in the 2024 IN IRP, the Company adhered to PJM's resource adequacy planning processes.

To meet its customers' future capacity and energy requirements, I&M made assumptions regarding the continued operation of its existing fleet of generation resources in the 2024 IN IRP. Specifically,

the two units at the Cook Nuclear Plant (Cook) are assumed to operate through the remainder of their current license periods (Unit 1 – 2034 and Unit 2 – 2037). As noted above, the SLR for both units were included as a resource option available for economic selection compared to other supply and demand-side resources. Rockport Unit 1 is assumed to operate through its committed retirement date of December 31, 2028. Supply-side resources under long-term contracts are assumed to continue through the end date of the respective contracts.

I&M analyzed 15 total scenarios and sensitivities that provided adequate supply and demand-side resources to meet its capacity and energy need while reducing or minimizing costs to its customers over the planning horizon (2025 to 2044).

### **Key Changes from 2021 IRP**

The 2024 IN IRP includes changes from the Company's last IRP that impact the Report in its entirety, the capacity and energy assumptions, supply-side resource options, and demand-side resource options.

The following changes impacted all aspects of the 2024 IN IRP:

- I&M is transitioning to a state-specific IRP. This change will allow I&M to tailor its future resource plans and decisions to the needs specific to each individual state, which will best position I&M to meet the ongoing needs of its customers and comply with state energy policies.
- The 2024 IN IRP incorporated recommendations from the Indiana Utility Regulatory Commission (IURC or Commission) in the "Final Director's Report for Indiana Michigan Power Company's 2021 Integrated Resource Plan," issued on February 12, 2024.
- The Company engaged 1898 & Co., a part of Burns & McDonnell, to provide their own unique expertise and perspective along with facilitating the Public Advisory Process.

The following changes impacted the capacity and energy assumptions:

- I&M included the significant load forecast driven by new HSL business development.
- I&M included updated PJM resource adequacy changes, which impacted the capacity accreditation of all existing and modeled resources.
- The company included a capacity contingency in addition to the forecasted PJM load obligation.



The following changes impacted the supply-side resource options and assumptions:

- As noted above, the 2024 IN IRP resource options included a 20-year Cook SLR, or relicensing, for Cook Units 1 and 2.
- The 2024 IN IRP resource options included relicensing for the Elkhart Hydroelectric Plant in 2030, and the Mottville Hydroelectric Plant in 2033.
- The Company included a wider range of resource options, including existing natural gas resources available for procurement.
- Parallel to the 2024 IN IRP process, I&M issued four RFPs for generation resources to meet projected capacity and energy needs. The results from these RFPs were used to confirm and adjust the installed costs and build limits for supply-side resources and ultimately inform the Preferred Portfolio.

The following change impacted the demand-side resource options and assumptions:

The 2024 IN IRP process considered an array of new demand-side resource options through an updated Market Potential Study (MPS) that was completed in 2024. This study was conducted by GDS Associates and evaluated the potential for future energy efficiency (EE), demand response (DR) and distributed energy resources (DER) resources to support the IRP and demand-side management (DSM) planning processes.

## **IRP Process**

The 2024 IN IRP process and associated modeling comply with the Indiana Guidelines for Resource Planning and reliability requirements while also quantifying risks introduced by the market and regulatory environments, and the risk of over-reliance on energy market imports and/or exports. The 2024 IN IRP process is structured around the following five (5) steps:

**Step 1: Define IRP Objectives:** The initial step in the 2024 IN IRP Process is to define the IRP Objectives that will be used to evaluate the modeling results.

**Step 2: Modeling Inputs and Key Assumptions:** The second step in the 2024 IN IRP process is to collect modeling inputs. These inputs include the following:

- Load Forecast;
- Fundamental Forecast of PJM Energy, Capacity, and Commodity Prices;
- Current resource evaluation;
- Capacity and Energy needs assessment; and
- Supply- and Demand-side resource options.

**Step 3: Define and Optimize I&M Resource Portfolios:** The third step in the 2024 IN IRP process is to create a set of optimized portfolios. This step can be iterative based on stakeholder feedback throughout the 2024 IN IRP process.

**Step 4: Perform Scenario-Based Risk Analysis:** The fourth step in the 2024 IN IRP process is to conduct analysis to determine cost and performance metrics for each portfolio.

**Step 5: Identify Preferred Portfolio:** In the final step of the 2024 IN IRP Process, portfolio results are presented through the Portfolio Performance Indicators matrix, incorporating each of the IRP Objectives. The result of Step 5 is the selection of a Preferred Portfolio.

The IRP Objectives of the 2024 IN IRP process aligned with the Five Pillars of Indiana energy policy, Reliability, Affordability, Resiliency, Stability, and Environmental Sustainability. Portfolio Performance Indicators related to IRP Objectives were defined and used to evaluate different portfolios in the 2024 IN IRP process, and ultimately identify a Preferred Portfolio. The Portfolio Performance Indicators are noted in Table 1.

Table 1. Portfolio Performance Indicators

| IURC Pillar                  | IRP Objective  | Performance Indicator                         |
|------------------------------|--|---|
| Reliability                  | Maintain capacity reserve margin and the consideration of reliance on the market for the benefit of customers. | Energy Market Exposure – Purchases            |
|                              |  | Energy Market Exposure – Sales                |
|                              |  | Planning Reserves                             |
| Affordability                | Maintain focus on power supply cost and risks to customers   | Net Present Value Revenue Requirement (NPVRR) |
|                              |  | Near-Term Power Supply Cost Impacts (CAGR)    |
|                              |  | Portfolio Resilience                          |
| Resiliency                   | Maintain diversity of resources and fleet dispatchability  | Resource Diversity                            |
| (Grid) Stability             | Maintain fleet of flexible and dispatchable resources  | Fleet Resiliency                              |
| Environmental Sustainability | Maintain focus on portfolio environmental sustainability benefits and compliance costs                         | Emissions Change                              |
|                              |  | Net Present Value Revenue Requirement (NPVRR) |

The electric utility industry is changing rapidly and is subject to a significant number of external factors that are largely outside its control. The business development opportunities for data centers supporting advanced technologies is driving significant load growth across the United States at a time when some baseload generation resources are scheduled to retire. The result is increased economic pressures for new and existing resources to support the capacity and energy needs for utilities and RTO's experiencing the load growth. While some of these factors have been modeled in the 2024 IN IRP, the Company expects continuous improvement in incorporating these dynamic and uncertain factors in future IRPs.

## Public Advisory Process

For the 2024 IN IRP, I&M conducted an extensive and thorough Public Advisory Process. I&M considered multiple sources of input and feedback, including comments in the “Final Director’s Report for Indiana Michigan Power Company’s 2021 Integrated Resource Plan,” issued on February 12, 2024, stakeholder feedback, and internal suggestions. Care was taken to promote stakeholder engagement with a focus on transparency in the 2024 IN IRP process, encouraging questions and feedback along the way, and converting feedback to actionable suggestions to incorporate into the 2024 IN IRP process.

At the core of the process was a series of five (5) public Stakeholder Meeting Workshops. Figure 1 below lists the topics covered in each workshop.



Figure 1. Stakeholder Meeting Workshops

The 2024 IN IRP had an average attendance of nearly 50 stakeholder participants at each of the five Stakeholder Meeting Workshops. Stakeholder participants represented a diverse mix of I&M residential, commercial and industrial customers, regulators, customer advocacy groups, environmental advocacy groups, fuel suppliers, advocacy groups, and elected officials. Meeting materials of each workshop can be found in Appendix Volume 4 and at [2024 IRP - Indiana Stakeholder Engagement Process](#). All workshops were held via webinar utilizing the Microsoft Teams meeting tool.

Concurrent with the Stakeholder Meeting Workshops described above, the Company managed an IRP website where stakeholders had an opportunity to submit questions and directly provide feedback to I&M for further consideration throughout the process. This provided stakeholders an ongoing and continuous opportunity to engage with I&M during the 2024 IN IRP process.

In addition to the core Stakeholder Meeting Workshops, a separate engagement process was developed for “Technical Stakeholders” who desired to examine the underlying analysis performed during the IRP process. I&M held two (2) technical conferences for Technical Stakeholders who,

after signing non-disclosure agreements, were presented with details around portfolio modeling. In addition, I&M held five (5) meetings designated as “office hours” to address Technical Stakeholder modeling questions.

## I&M’s Existing Resources and Going-In Positions

To establish a base from which to develop resource portfolios, I&M developed its current outlook for capacity and energy positions over the planning horizon. This outlook reflects the forecasted Indiana jurisdictional share of capacity and energy from I&M’s existing and planned resources (resources approved by the Commission that will provide capacity and energy in future years) compared to Indiana’s forecasted PJM load obligation and a capacity contingency, to calculate capacity and energy needs throughout the planning horizon.

I&M’s existing supply-side resource portfolio includes a mix of nuclear, wind, solar, hydro, and fossil-fired resources. I&M has also recently obtained approval by the Commission for a diverse set of resources including solar, wind, and natural gas (capacity-only) resources that have resulted from multiple competitive procurement processes. Table 2 represents Indiana’s share of the capacity associated with both the existing and recently approved resources.

Table 2. I&M Supply-Side Resources as of September 2024

| Unit Name  | Location              | Fuel Type | C.O.D. <sup>1</sup> or<br>Contract Start Date | Retirement or<br>Contract Expiration Date <sup>2</sup> | PJM Nameplate<br>Capacity (MW) <sup>3</sup> |     |
|--|-----------------------|-----------|---|--|---|-----|
| Clifty Creek 1-6   | Madison, IN           | Coal      | 1956  | 2039/40  | 62  | (5) |
| Kyger Creek 1-5  | Cheshire, OH          | Coal      | 1955  | 2039/40  | 61  | (5) |
| Rockport 1   | Rockport, IN          | Coal      | 1984  | 2027/28  | 1,079                                       |     |
| Lawrenceburg   | Lawrenceburg, IN      | Gas       | 2028  | 2033/34  | 697   | (4) |
| Montpelier   | West Poneto, IN       | Gas       | 2027  | 2033/34  | 172   | (4) |
| Berrien Springs 1-12   | Berrien Springs, MI   | Hydro     | 1908  | 2035/36  | 5   |     |
| Buchanan 1-10  | Buchanan, MI          | Hydro     | 1919  | 2035/36  | 2   |     |
| Constantine 1-4  | Constantine, MI       | Hydro     | 1921  | 2052/53  | 1   |     |
| Elkhart 1-3  | Elkhart, IN           | Hydro     | 1913  | 2029/30  | 2   |     |
| Mottville 1-4  | White Pigeon, MI      | Hydro     | 1923  | 2032/33  | 1   |     |
| Twin Branch 1-8  | Mishawaka, IN         | Hydro     | 1904  | 2035/36  | 5   |     |
| Cook 1   | Bridgman, MI          | Nuclear   | 1975  | 2033/34  | 830   |     |
| Cook 2   | Bridgman, MI          | Nuclear   | 1978  | 2036/37  | 956   |     |
| Deer Creek   | Grant County, IN      | Solar     | 2015  | 2034/35  | 2   |     |
| Elkhart  | Elkhart, IN           | Solar     | 2026  | 2055/56  | 83  | (4) |
| Hoosier Line   | White County, IN      | Solar     | 2027  | 2056/57  | 150   | (4) |
| Lake Trout   | Blackford County, IN  | Solar     | 2028  | 2062/63  | 201   |     |
| Mayapple   | Elkhart, IN           | Solar     | 2028  | 2062/63  | 183   |     |
| Olive  | St. Joseph County, IN | Solar     | 2016  | 2035/36  | 4   |     |
| St. Joseph Solar   | St. Joseph County, IN | Solar     | 2021  | 2050/51  | 16  |     |
| Twin Branch Solar  | St. Joseph County, IN | Solar     | 2016  | 2035/36  | 2   |     |
| Watervliet   | Berrien County, MI    | Solar     | 2016  | 2035/36  | 4   |     |
| Fowler Ridge 1   | Benton County, IN     | Wind      | 2008  | 2027/28  | 83  | (4) |
| Fowler Ridge 2   | Benton County, IN     | Wind      | 2009  | 2028/29  | 42  | (4) |
| Headwaters   | Randolph County, IN   | Wind      | 2014  | 2033/34  | 166   | (4) |
| Meadow Lake  | Chalmers, IN          | Wind      | 2026  | 2045/46  | 83  | (4) |
| Wildcat  | Madison County, IN    | Wind      | 2014  | 2031/32  | 82  | (4) |
|  |                       |           |   |  | 4,974                                       |     |
| (1) Commercial operation date.   |                       |           |   |  |   |     |
| (2) Retirement or Contract Expiration dates represent the PJM Delivery Year and are assumptions for IRP planning purposes. Cook units 1 and 2, Elkhart Hydro, and Mottville Hydro Retirement dates represent license expiration dates. |                       |           |   |  |   |     |
| (3) Represents Indiana’s share of these resources  |                       |           |   |  |   |     |
| (4) Represents capacity from Power Purchase Agreements (PPAs) or Capacity Purchase Agreements (CPAs)   |                       |           |   |  |   |     |
| (5) Represents Indiana’s share of the OVEC capacity under the ICPA   |                       |           |   |  |   |     |



Figure 2 below shows Indiana's Going-In Capacity Position through 2044.

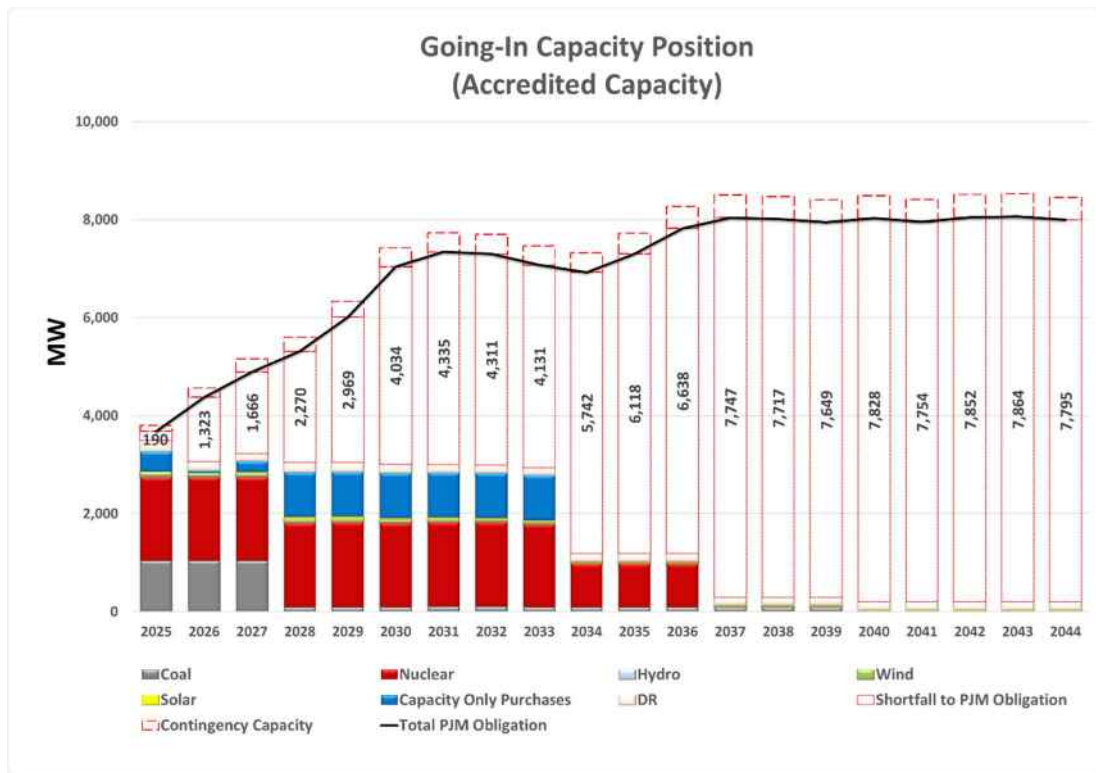


Figure 2. I&M Indiana Going-In Capacity Position

The capacity shortfall begins immediately in 2025 and rapidly increases over the planning horizon due primarily to the significant HSL growth, the expiration of capacity only purchases, and the going-in assumption that Cook Nuclear operates through its current license period. In the near-term, the Company will require a considerable amount of resources to meet the forecasted PJM load obligation. Over the long-term, the forecasted PJM load obligation more than doubles compared to the 2025 level.

I&M also developed a Going-In Energy Position, which is shown in Figure 3 below.

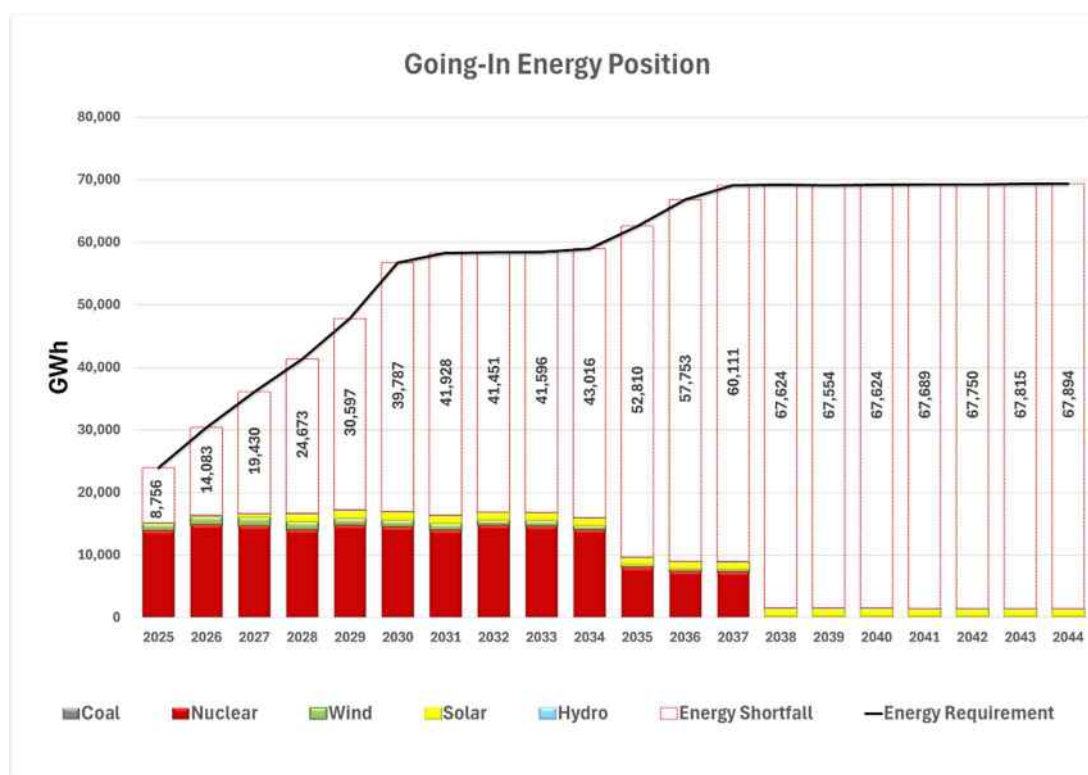


Figure 3. I&M Indiana Going-In Energy Position

Similar to the Going-In Capacity Position, the energy shortfall begins immediately in 2025, growing rapidly by 2030 and to nearly tripling by the end of the planning horizon. The energy shortfall is primarily due to HSL growth and the going-in assumption that Cook Nuclear operates through its current license period.

### Summary of I&M's Preferred Portfolio Development

To assess how modeled portfolios would perform under various market and regulatory conditions I&M developed four (4) distinct scenarios, including the (1) Base Reference Case, (2) an Enhanced Environmental Regulations (EER) Case, reflecting existing and proposed regulations under EPA Section 111(b)(d), (3) a High Economic Growth Case and (4) a Low Economic Growth Case. Additionally, I&M developed 11 sensitivities that test how portfolios are impacted by specific changes to base assumptions. Each scenario and sensitivity was assessed using the Portfolio Performance Indicators.

A common theme that resulted from modeling all the scenarios and sensitivities was that similar amounts of natural gas resources were selected to meet Indiana's future capacity needs. This remained true even in the sensitivities where I&M evaluated an expedited transition to a low carbon resource portfolio. Another common theme was that all scenarios and sensitivities economically

selected the Cook Nuclear Plant Unit 1 and Unit 2 SLR opportunities, maintaining Cook as a foundation of I&M's future generation portfolio.

Based on the Portfolio Performance Indicators, three Candidate Portfolios were selected for further evaluation: (1) Base Reference Case; (2) Low Carbon: Transition to Objective; and (3) Expanded Wind Availability (EER). A comprehensive risk analysis was conducted on these Candidate Portfolios using a stochastic modeling approach. The modeling analyzed the variability of key output metrics, including Net Present Value (NPV) and percent of energy market purchases and sales compared to total load.

After reviewing both the Portfolio Performance Indicators and the results of the risk analysis for the Candidate Portfolios, a Preferred Portfolio was developed. I&M developed the Preferred Portfolio primarily based on modifications to the Expanded Wind Availability (EER) Case. This case was selected as the basis for the Preferred Portfolio for the following reasons:

- The case better positions I&M for compliance with existing and future Greenhouse Gas regulations based on the current and proposed EPA Section 111(b)(d) rules and the potential for regulations to occur in some form during the planning horizon.
- The case leverages a mix of resource types that support reliability and stability, while increasing resource diversity and expanding the renewable and clean energy portfolio.
- The case leverages existing natural gas resources which allows I&M to better manage the remaining life of its generation portfolio and associated risks, mitigates the impact of development risks associated with new generation, and lowers the additionality impacts of natural gas on I&M's customers and the PJM system.
- The case resulted in less variability in future cost risk as compared to the Base Reference Case in the risk analysis results.
- The case reflects up to date market conditions on resource availability based on results from the four (4) separate RFPs issued in 2024.

The Preferred Portfolio takes advantage of cost savings opportunities and other benefits associated with redevelopment of the Rockport site with future NGCTs and SMR technology. New NGCTs were included in the Preferred Portfolio in 2030, reflecting 690 MW of nameplate capacity. These new NGCTs reflect estimated cost reductions of approximately 15% compared to the generic new NGCT resource price. These cost reductions were included to reflect the cost savings associated with the reuse of the Rockport interconnection and existing facilities and the opportunity to leverage favorable equipment pricing associated with AEP multi-unit supply chain opportunities. In addition, SMRs were included in the Preferred Portfolio in 2036 and 2037, reflecting a total 600 MW of nameplate capacity. These SMRs reflect estimated cost reductions of approximately 30% compared to the generic SMR resource price. These cost reductions were included to reflect the cost savings associated with the reuse of the Rockport interconnection and existing facilities, energy community bonus ITCs, federal grant opportunities, customer participation, and leveraging fast follower savings opportunities. The Rockport facility qualifies as an energy community under the Inflation Reduction Act of 2022.

The Preferred Portfolio capacity additions are shown in Table 3.

Table 3. Preferred Portfolio Cumulative Nameplate Capacity Additions

| Year | Nameplate MW |       |         |          |               |          |               |                        | Accredited MW    |                     |
|------|--------------|-------|---------|----------|---------------|----------|---------------|------------------------|------------------|---------------------|
|      | Wind         | Solar | Storage | New Acro | Existing NGCC | New NGCT | Existing NGCT | Nuclear Cook SLR & SMR | DR, EE, DER, CVR | Short Term Capacity |
| 2025 | 0            | 0     | 0       | 0        | 0             | 0        | 0             | 0                      | 0                | 325                 |
| 2026 | 0            | 0     | 0       | 0        | 0             | 0        | 0             | 0                      | 33               | 1,500               |
| 2027 | 0            | 0     | 0       | 0        | 0             | 0        | 0             | 0                      | 61               | 1,875               |
| 2028 | 1,000        | 599   | 50      | 0        | 1,800         | 0        | 1,000         | 0                      | 92               | 0                   |
| 2029 | 1,000        | 596   | 50      | 0        | 2,700         | 0        | 1,000         | 0                      | 116              | 0                   |
| 2030 | 1,000        | 593   | 50      | 0        | 3,600         | 690      | 1,000         | 0                      | 132              | 0                   |
| 2031 | 1,400        | 590   | 50      | 0        | 4,500         | 690      | 1,500         | 0                      | 148              | 0                   |
| 2032 | 1,800        | 886   | 50      | 0        | 4,500         | 690      | 1,500         | 0                      | 144              | 0                   |
| 2033 | 2,200        | 1,480 | 50      | 0        | 4,500         | 690      | 1,500         | 0                      | 138              | 0                   |
| 2034 | 2,600        | 2,071 | 50      | 0        | 4,500         | 690      | 1,500         | 0                      | 134              | 0                   |
| 2035 | 3,000        | 2,210 | 50      | 0        | 4,500         | 690      | 1,500         | 888                    | 134              | 0                   |
| 2036 | 3,200        | 2,199 | 50      | 0        | 4,500         | 690      | 1,500         | 1,188                  | 131              | 0                   |
| 2037 | 3,600        | 2,636 | 50      | 0        | 4,500         | 690      | 1,500         | 1,488                  | 128              | 0                   |
| 2038 | 4,000        | 2,623 | 50      | 0        | 4,500         | 690      | 1,500         | 2,480                  | 125              | 0                   |
| 2039 | 4,000        | 2,609 | 50      | 0        | 4,500         | 690      | 1,500         | 2,480                  | 122              | 0                   |
| 2040 | 4,000        | 2,596 | 50      | 0        | 4,500         | 690      | 1,500         | 2,480                  | 119              | 0                   |
| 2041 | 4,000        | 2,582 | 50      | 0        | 4,500         | 690      | 1,500         | 2,480                  | 111              | 0                   |
| 2042 | 4,000        | 2,569 | 50      | 0        | 4,500         | 690      | 1,500         | 2,480                  | 105              | 0                   |
| 2043 | 3,000        | 2,555 | 50      | 0        | 4,500         | 690      | 1,500         | 2,480                  | 99               | 0                   |
| 2044 | 3,000        | 2,542 | 50      | 0        | 4,500         | 690      | 1,500         | 2,480                  | 94               | 0                   |

The Preferred Portfolio represents a balanced plan that supports I&M's IRP Objectives and provides a sound planning basis for the Company's near-term plan, 2025 through 2030, and long-term-indicative plan, 2031 through 2044. The Preferred Portfolio reflects a diverse mix of wind, solar, storage, natural gas, nuclear and demand-side resources that is maintained throughout the planning horizon, including taking advantage of near-term expanded wind availability based on market intelligence gained from I&M's 2024 RFPs. This diverse mix of resources represents an all-of-the-above approach to considering Indiana's Five Pillars of energy policy. Existing natural gas combined cycle (NGCC) and combustion turbine (NGCT) resources are leveraged to better position for future environmental compliance while also providing the benefit of lowering costs, mitigating development risk and reducing additionality. The Preferred Portfolio maintains nuclear power as a key foundation

to Indiana's future capacity and energy resource diversity by selecting the SLR for both Cook Unit 1 and 2 and also including 600 MW of new SMR technology that takes advantage of redevelopment opportunities at I&M's Rockport site. The Preferred Portfolio also reflects the relicensing of the Elkhart and Mottville Hydro resources in 2030 and 2033, respectively, which will be further evaluated as part of I&M's Short-Term Action Plan.

Figure 4 and Figure 5 below show the Preferred Portfolio's accredited capacity and energy results by resource type.

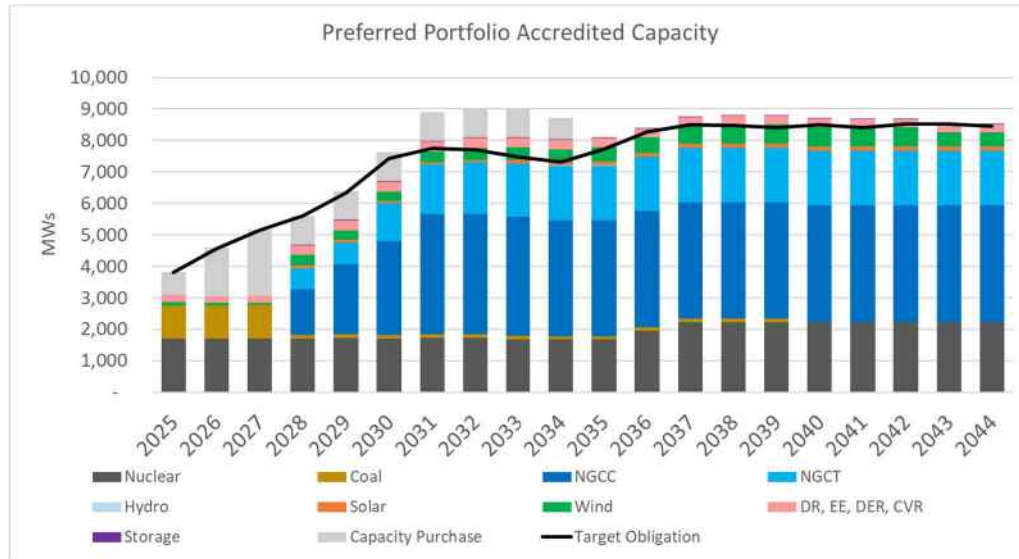


Figure 4. Preferred Portfolio Accredited Capacity by Resource Type



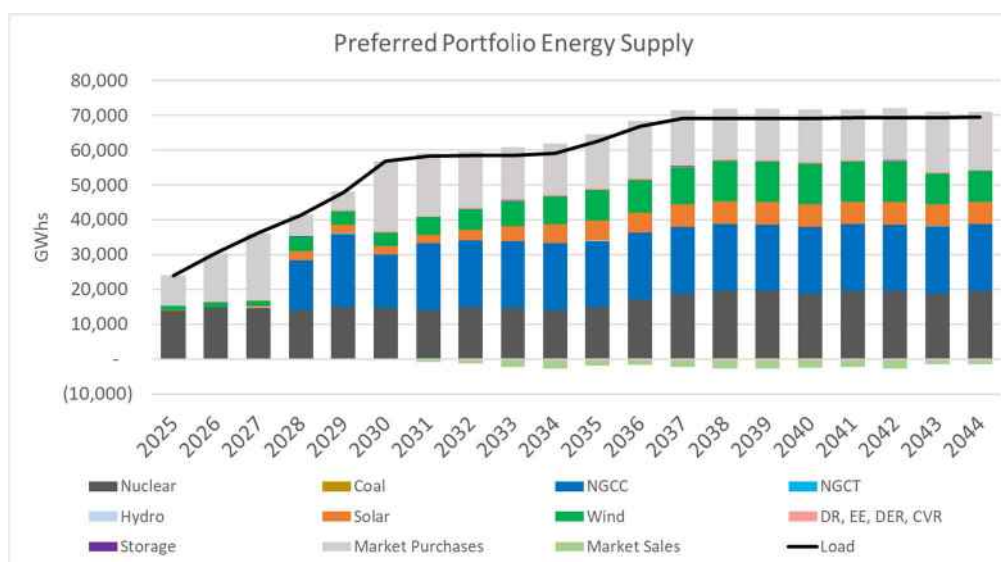


Figure 5. Preferred Portfolio Energy by Resource Type

As seen in the figures above, the Preferred Portfolio relies on significant capacity contributions from nuclear, NGCC, and NGCT resources due to their higher accredited capacity values, while wind and solar resources contribute less capacity due to the lower accredited values. As noted above, this was a common theme amongst all scenario and sensitivity results. From an energy perspective, wind and solar resources provide approximately 25% of the energy generated from 2034 to 2044 and nuclear resources provide approximately 28% of the energy generated from 2036 to 2044, leading to greater energy diversity within the Preferred Portfolio.

## Conclusions and Short-Term Action Plan

The Company's 2024 IN IRP is the result of a Public Advisory Process and extensive modeling that evaluated numerous scenarios and sensitivities using the best available industry and market intelligence available at the time to inform resource assumptions. I&M's IRP Objectives and Portfolio Performance Indicators were designed to align with Indiana's Five Pillars of energy policy. The Preferred Portfolio represents a balanced consideration of the Five Pillars and an all-of-the-above resource plan to meet the future energy and capacity needs of I&M's Indiana retail customers and will be used as a guide for the resource decisions I&M undertakes as its business transforms in the future to serve the unprecedented load growth forecasted. The Preferred Portfolio leverages key opportunities to significantly expand I&M's resource diversity, taking advantage of existing and new generation resources, to support ongoing safety, reliability, and resiliency of the grid. The Preferred Portfolio also positions I&M to significantly expand clean energy resources and prepare for potential future environmental regulation, thereby supporting an environmentally sustainable future. Collectively, the benefits of the Preferred Portfolio support I&M's IRP Objectives while mitigating potential cost risks to customers in the event future market conditions change.

Steps that I&M has taken, or will take, as part of its Short-term Action Plan include:

**DSM Programs:** Continue the planning and regulatory actions necessary to implement an ongoing cost-effective portfolio of DSM programs in Indiana consistent with this IRP.

**Rockport Retirement:** Continue to take the steps necessary to support a transition of the Rockport Coal facility, including proceeding with necessary actions to support the ongoing development and commissioning of new resources from I&M's 2022 and 2023 All-Source RFPs that have been approved by the Commission to replace Rockport.

**Near Term Capacity Needs:** Use bilateral capacity purchases to obtain the capacity needed for future PJM Delivery Years that cannot be met through long-term resources.

**2024 Competitive Procurement Activities:** Complete selection of resources from the 2024 RFP and other competitive procurement activities undertaken by I&M that reflect the market conditions at the time the procurement activities are conducted. Seek approval of resources that are reasonably consistent with the Preferred Portfolio resource selections.

**Rockport CT:** Complete competitive procurement process, secure reuse of transmission interconnection and request approval of resource with the Commission.

**Rockport SMR:** Initiate early site permit process and continue to evaluate and pursue project development options.

**Future Competitive Procurement Activities:** Continue to issue future generation RFPs or utilize other competitive procurement methods, as necessary, to meet I&M's capacity and energy needs.

**Cook SLR:** Take the appropriate steps to implement the Cook Subsequent License Renewal, as supported by the IRP modeling results and Preferred Portfolio.

**Hydro Relicensing:** Take the appropriate steps to finalize the evaluation of the Elkhart and Mottville Hydro operating license renewal opportunities reflected in the Preferred Portfolio.

**Adjust for the Future:** Adjust this action plan and future IRPs to reflect changing circumstances, as necessary.

Since the Company's last IRP, I&M accomplishments towards the 2021 Short-Term Action Plan include:

- Complied with the modeling and other IRP-related commitments as set forth in the Settlement Agreements in Cause Nos. 45546 and 45933.
- Conducted All-Source RFPs in 2022 and 2023 to acquire the generation resources necessary to replace the energy and capacity needs associated with the Rockport retirement obligation in December 2028. The Commission approved the related resources in Cause Nos. 45868, 45869, 46083, 46085, and 46088.
- The Company completed an updated Market Potential Study in 2024 assessing the potential for future energy efficiency (EE), demand response (DR) and distributed energy resources (DER) resources.
- The Company issued four RFPs in September 2024 targeting approximately 4,000 MW of solar, wind, storage, thermal and supplemental capacity resources.
- The Company has notified PJM of its intention to continue as a Fixed Resource Requirement (FRR) entity through the 2025/2026 PJM Delivery Year ending May 31, 2026.
- The Company continues to monitor and support PJM's Capacity Interconnection Rights (CIR) Transfer Efficiency proposal that would support an expedited process for reusing I&M's existing interconnection rights at the Rockport site for future generation resource development.