INDIANA

2024 DUKE ENERGY | INTEGRATED RESOURCE PLAN

DUKE ENERGY®

*BUILDING A **SMARTER** ENERGY FUTURE®*

Table of Contents

Executive Summary

For over a century, Duke Energy Indiana (or the "Company") has proudly provided safe and reliable service to residential customers, communities, and commercial, industrial, and governmental enterprises across Indiana. The Company serves its customers with approximately 6,900 megawatts ("MW") of generation capacity, serving 900,000 electric customers across its 23,000 mile service territory. The Company's diverse portfolio, comprised of coal, integrated gasification combined cycle ("IGCC"), natural gas, oil, solar, wind, hydroelectric, and energy storage resources, together with strategic participation in the Midcontinent Independent System Operator ("MISO") market, provides a balanced mix of energy and capacity to support Indiana's economic growth and the long-term vitality of the state. Duke Energy Indiana's recent economic development wins add approximately 300 MW of additional demand by 2030. Economic development growth alone will create nearly 6,000 jobs and invest over $13 billion in communities served by Duke Energy Indiana. Blend 2, the Preferred Portfolio for this Integrated Resource Plan ("IRP"), ensures that the Company will continue to safely, reliably, and affordably serve customers in Indiana, providing incremental capacity to support customer and economic development growth while improving the environmental sustainability of the resource mix.

A Resource Plan for a Changing Energy Landscape

For decades, coal-fired generation formed the backbone of a reliable and affordable electric system for Duke Energy Indiana and for the nation at large. Over time, the Company has built on this strong foundation to benefit Indiana customers by adding new resources to provide fuel diversity, enhance flexibility, improve environmental sustainability, and support economic growth. Duke Energy Indiana remains committed to maintaining reliability and affordability while transitioning to an increasingly diverse and environmentally sustainable mix of natural gas, wind, solar, hydroelectric, and energy storage resources.

This necessary transition is taking place against a backdrop of profound transformation in the energy landscape, both in Indiana and nationally as outlined in Chapter 1 (Planning for the Future Energy Landscape). Consequential changes in the marketplace and regulatory environment since the Company submitted its previous IRP in 2021 have led the Company to make certain course adjustments, the opportunity for which is an important and valuable feature of the iterative IRP process. Inflation and supply chain challenges have increased costs and project lead times for new resources, including resources for which the Company had previously expected to see nominal dollar cost declines. In addition, delays in the MISO interconnection queue and to permitting have further slowed the pace at which new resources can be connected to the system. These higher costs and longer lead times come at a time of growing load, with an expanding manufacturing base requiring reliable, around-the-clock energy supply. In recognition of the needs of a growing economy and to ensure continued system reliability as the market share of weather-dependent renewable resources increases, MISO continues to refine and reform its capacity accreditation methods, moving to the seasonal accredited capacity ("SAC") construct in 2022 and proposing the direct loss of load ("DLOL") method in 2024. These MISO reforms put a premium on firm, dispatchable capacity resources that can serve customer needs on demand. Coinciding with the MISO reforms, the Company is seeing reliability risk shift from summer to winter hours. These changes combine to significantly increase the importance of firm winter capacity. As just one example, solar resources received 50% capacity accreditation in the 2021 IRP based on summer performance. Solar's 2% winter capacity accreditation under MISO's proposed DLOL construct significantly changes the role of that resource in the 2024 IRP analysis. Finally, as the Company was developing the 2024 IRP, the Environmental Protection Agency ("EPA") finalized its Clean Air Act Section ("CAA") 111 Rule ("EPA CAA Section 111 Rule") dictating specific actions for existing coal-fired generation and new natural gas generation. In this environment, the Company must advance solutions while prudently managing risks and uncertainties to ensure it continues to meet the needs of its customers.

Three key external factors in particular have added complexity and greater uncertainty in planning since the 2021 IRP: (1) regulatory requirements under the contested EPA CAA Section 111 Rule, (2) the potential for significant increases in load resulting from economic development in the region, and (3) cost volatility for new resources as the Company plans to replace aging coal units. Crucially, the Preferred Portfolio for the 2024 IRP includes opportunities to adjust course in response to changing conditions in these and other areas. The Company is mindful that it must keep a sharp eye on the Five Pillars of energy policy[1] guiding utilities in Indiana – reliability, resiliency, stability, affordability and environmental sustainability – as it transitions its generation fleet for the future.

Duke Energy Indiana's 2024 IRP is designed to reliably and affordably meet current and future customers' needs over the next 20 years, adding incremental generating capacity to support customer growth and economic development, retiring and replacing aging assets, and upgrading and repurposing others where reasonable and prudent, while maintaining optionality to respond to changing market and regulatory conditions. Chapter 2 (Methodology) explains in detail the analytical framework and tools used to develop the plan, and Chapter 3 (Key Assumptions) provides information on the forecasts and other inputs to the

1 Indiana Code 8-1-2-0.6.

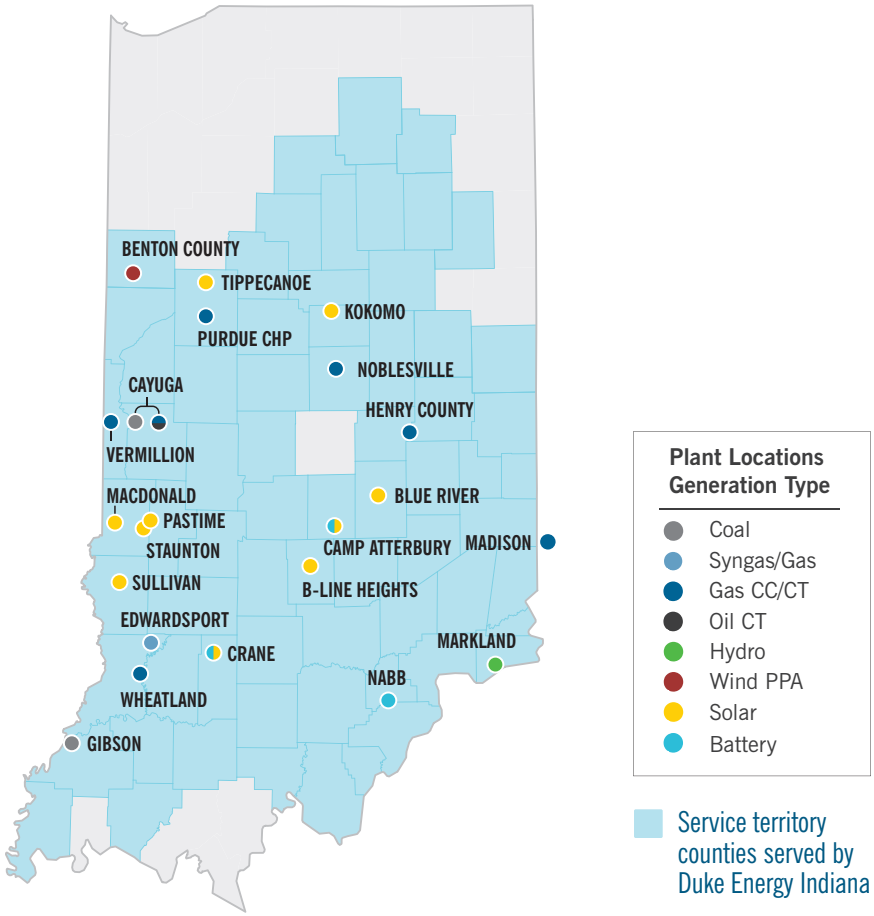
quantitative analytics. The results of those analytics are presented in Chapter 4 (Candidate Resource Portfolios), while Chapter 5 (Preferred Resource Portfolio) identifies the key factors influencing the selection of the Preferred Portfolio. Chapter 6 (Short-Term Action Plan) details the prudent, risk-balanced actions that the Company plans to take in the near term to advance the Preferred Portfolio. Finally, the Company has prepared 12 appendices that provide additional information on the inputs, assumptions, stakeholder process, and other aspects of the 2024 IRP.

Duke Energy Indiana Today

Duke Energy Indiana serves customers in 69 of the state's 92 counties with a resource portfolio that includes solar, wind, hydroelectric, coal, natural gas, and battery energy storage assets. Figure 1 provides a map of the Company's generating resources across Duke Energy Indiana's service territory.

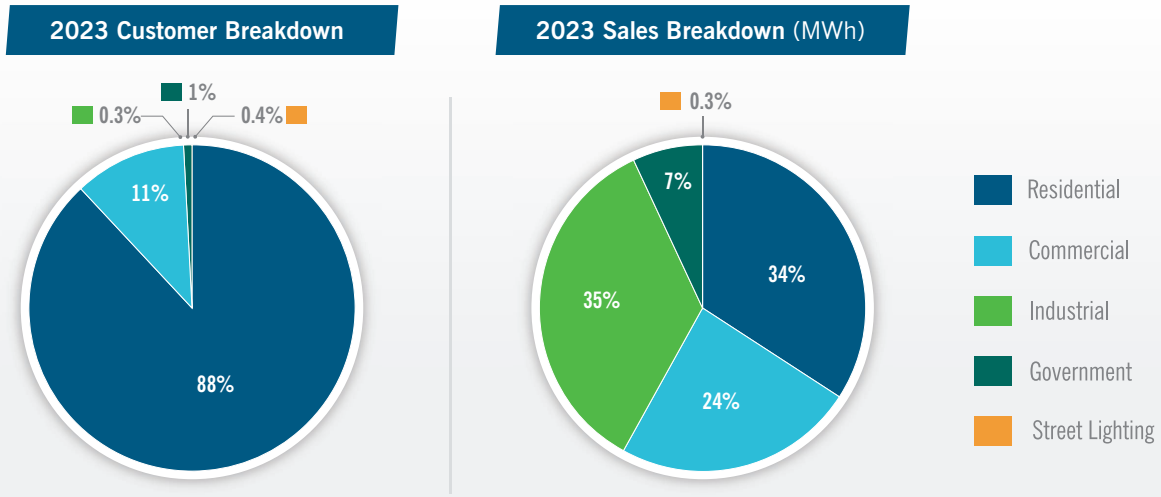
As the state's largest electric utility, the Company served peak demand approaching 6,000 MW in 2023 and generated approximately 29.5 terawatt-hours, or 29,500,000 megawatt-hours ("MWh"), of electricity. Figure 2 shows the composition of the Company's customer base by number of customers and by electricity sales.

Figure 1: Duke Energy Indiana Counties Served and Generating Resource Locations



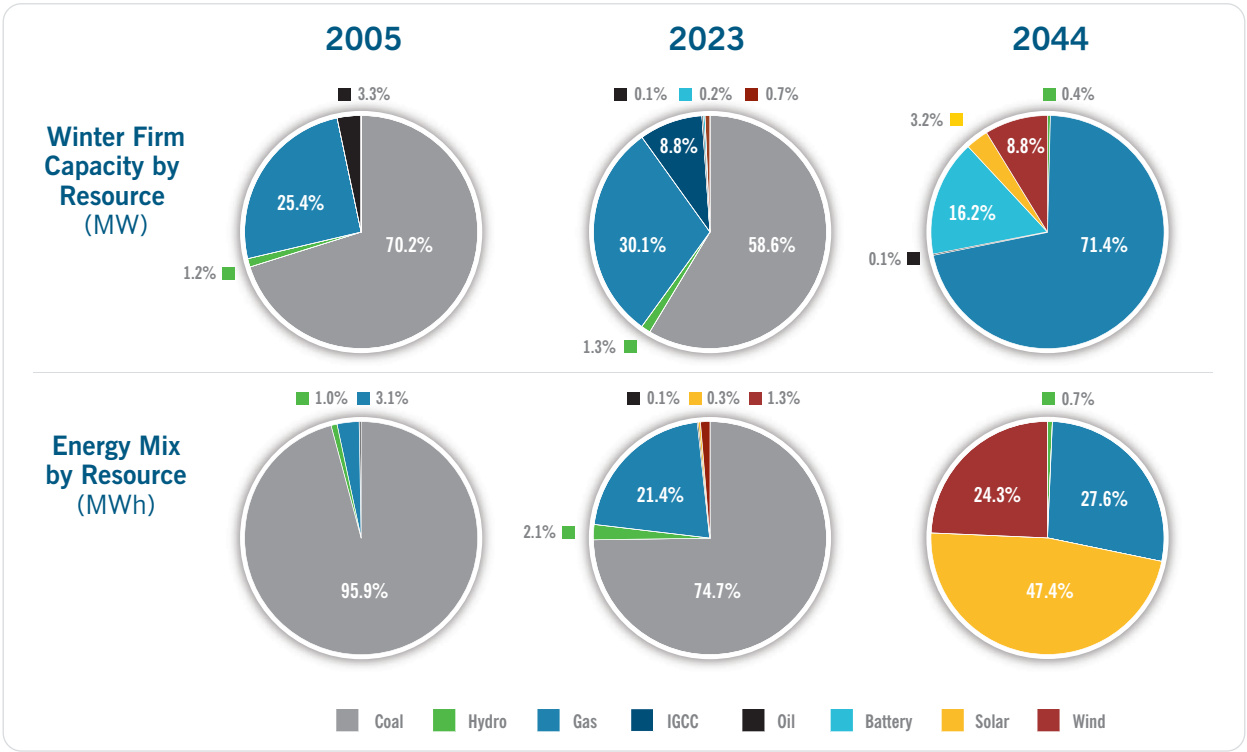
Note: Combined cycle ("CC"); combustion turbine ("CT"); power purchase agreement ("PPA")

Figure 2: Composition of Duke Energy Indiana Customer Base



Over time, the Company has steadily transitioned the portfolio of resources with which it serves these customers, replacing aging assets while improving resource diversity and environmental sustainability. The Preferred Portfolio positions the Company to continue these improvements into the future while supporting Indiana's growing economy. Figure 3 shows Duke Energy Indiana's changing energy and capacity mix over time.

Figure 3: Duke Energy Indiana Energy and Capacity Mix Over Time



Note: Energy and capacity for Duke Energy Indiana supply-side resources only. IGCC is included with coal in the energy mix. Edwardsport IGCC is converted to natural gas fuel by 2030 and included with gas for both energy and capacity in 2044.

Developing an Integrated Resource Plan

Planning Objectives

Driving and informing the Company's resource planning process are the Five Pillars, which were added to Indiana state law in 2023. As referenced above, the pillars governing utility decision-making include reliability, resiliency, stability, affordability and environmental sustainability. In addition to the Five Pillars, the Company's planning objectives include the consideration of risk and uncertainty, a vital aspect of long-term planning, particularly in the context of this changing energy landscape. Figure 4 illustrates the planning objectives, which are discussed in detail in Chapter 2.

Figure 4: Duke Energy Indiana Resource Planning Objectives

Stakeholder Process

The Company believes that stakeholder engagement is critical for resource planning, and it is essential to consider the needs and concerns of a broad audience of customers, regulators, environmental organizations, social advocates, community agencies, elected officials, and employees. Duke Energy Indiana recognizes that stakeholders have varying backgrounds in key resource planning concepts and, for meaningful stakeholder engagement for all participants, the Company invited interested individuals to participate in public meetings that discussed key resource concepts at a high level. Duke Energy Indiana also asked interested individuals to self-identify as "technical representatives" and participate in technical meetings to discuss detailed, sometimes confidential, modeling assumptions subject to a nondisclosure agreement.

Over the course of eight months, more than 146 individuals representing 75 organizations actively participated in a five-part engagement series consisting of a total of 10 public and technical meetings. In the public meetings, Duke Energy Indiana reviewed the overall purpose, components, and timeline of the 2024 IRP. Presenters and attendees then engaged in discussions around non-confidential modeling and input assumptions, scenario and scorecard

Figure 5: Public Stakeholder Meeting Participation

development, and several other resource planning concepts described further in the series summaries in Appendix A (Stakeholder Engagement). In the technical meetings, technical representatives dove deeper into the more complex and detailed IRP modeling assumptions and methodologies. Figure 5 shows the engagement throughout the stakeholder process.

Public meeting presentations and summaries were shared with stakeholders on the Duke Energy Indiana IRP website,[2] and individuals had the opportunity to provide comments and feedback to the Company during the meetings and throughout the stakeholder process via a dedicated email address. Technical representatives were given access to detailed modeling files and data as it became available. Feedback from all stakeholders was thoughtfully considered and a significant amount was incorporated into this 2024 IRP. The feedback considered and incorporated is discussed in Appendix A and throughout the IRP.

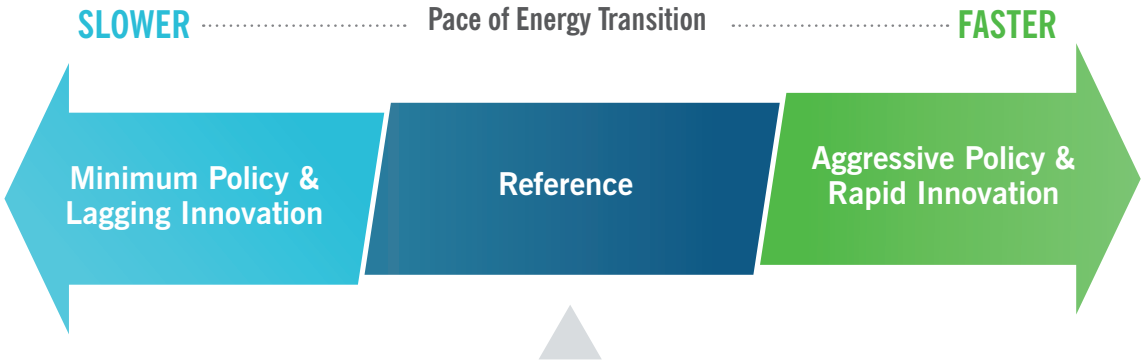
Analytical Framework

The Company developed a robust analytical framework for the 2024 IRP. This framework, described in detail in Chapter 2, was centered around six generation strategies, each of which was evaluated in three potential scenarios for the future, or "worldviews." The worldviews consisted of (1) the Reference Scenario, which includes existing regulations and the Company's base case forecasts and expectations for the most likely future, (2) Aggressive Policy & Rapid Innovation, which assumes regulatory and technological factors incentivize and enable a more rapid energy transition, and (3) Minimum Policy & Lagging Innovation ("Minimum"), which assumes a more lenient regulatory environment, including reversal of the EPA CAA Section 111 Rule, and a slower pace of energy transition. The worldviews represent three different versions of the future and were deliberately constructed to explore the range of plausible future outcomes. Each was modeled with a distinct set of assumptions corresponding to the market and regulatory factors that define the worldview, and they are not representative of or shaped by the Company's policy objectives.

The worldviews and their implications for the pace of energy transition are illustrated in Figure 6.

2 Duke Energy, Indiana Integrated Resource Plan, available at www.duke-energy.com/IndianaIRP.

Figure 6: 2024 IRP Scenarios ("Worldviews") Exploring Pace of Energy Transition



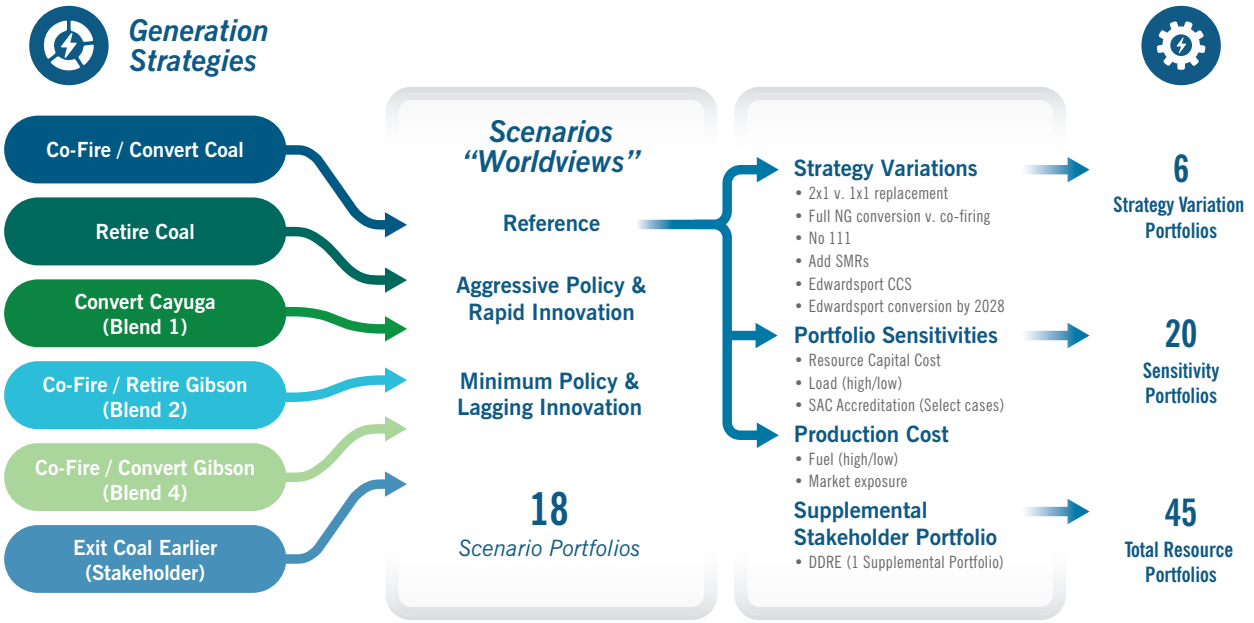
To further examine the detailed implications of specific resource decisions, and to test the sensitivity of model results to variability in individual inputs, the Company constructed additional strategy variations and conducted sensitivity analysis around both resource selection and portfolio operations. Importantly, one of these variations includes a portfolio optimized for a future in which the EPA CAA Section 111 Rule does not survive legal challenges, but the Company's base case assumptions otherwise hold (the "No 111" case). The results of the No 111 case inform the flexibility and potential pivot points included in the Short-Term Action Plan. The six generation strategies evaluated in these worldviews along with the No 111 strategy variation are summarized in Figure 7.

Figure 7: 2024 IRP Generation Strategies and No 111 Strategy Variation

UNIT	Convert/ Co-Fire Coal	Retire Coal	Blend 1	Blend 2	Blend 4	Exit Coal Earlier (Stakeholder)	No 111
Cayuga 1	NG Conversion by 1/1/2030	Retire by 1/1/2032	NG Conversion by 1/1/2030	Retire by 1/1/2030		NG Conversion by 1/1/2029	Retire by 1/1/2032
Cayuga 2				Retire by 1/1/2031			
Gibson 1	Co-fire by 1/1/2030		Retire by 1/1/2032	Co-fire by 1/1/2030		Retire by 1/1/2032	Retire by 1/1/2036
Gibson 2							
Gibson 3	NG Conversion by 1/1/2030			Retire by 1/1/2032	NG Conversion by 1/1/2030	Retire by 1/1/2030	Retire by 1/1/2032
Gibson 4							
Gibson 5	Retire by 1/1/2030						
Edwardsport	NG Conversion by 1/1/2030						NG Conversion by 1/1/2035

Note: Natural gas ("NG") conversion involves modifying existing infrastructure to use 100% natural gas fuel instead of coal for electricity generation. Co-firing involves infrastructure modification to use 50% natural gas fuel at the coal unit.

Figure 8: 2024 IRP Analytical Framework



Note: Carbon capture and sequestration ("CCS"); Deep decarbonization & rapid electrification ("DDRE")

The thorough 2024 IRP analysis centered around these six strategies ultimately yielded 45 potential resource portfolios along with additional supporting information derived from sensitivity analysis and stochastic risk assessment. The full analytical framework is illustrated in Figure 8.

Integrated Resource Planning Results

Reference Scenario results for the six generation strategies and the "No 111" strategy variation illuminate the trade-offs across potential paths forward. Strategies that keep more of the existing coal-fired steam units online (Convert/Co-fire Coal, Blend 4), achieving compliance with the EPA CAA Section 111 Rule by modifying these units to burn natural gas (either entirely or co-fired with coal), require lower levels of new resource additions. However, continued reliance on aging, relatively inefficient assets through the 2030s results in higher maintenance and compliance costs, increased cost risk due to MISO energy market exposure, and increased reliability risk. Strategies that retire most or all of the existing coal units by the deadline under the EPA CAA Section 111 Rule transition more rapidly to efficient, cost-effective resource mixes, but do so at the expense of greater near-term customer bill impacts and higher execution risk. The "blend" strategies explore various ways to balance these trade-offs, with Blend 2 separating itself from the other candidates as the most reasonable and prudent path forward.

Figures 9 and 10 show the cumulative resource additions and retirements and the energy mix for each generation strategy in the Reference Scenario and the "No 111" case at specific points in time.

Figure 9: Cumulative Supply-Side Resource Additions and Retirements for Generation Strategies in Reference Scenario and "No 111" Case (Installed GW, beginning of year)

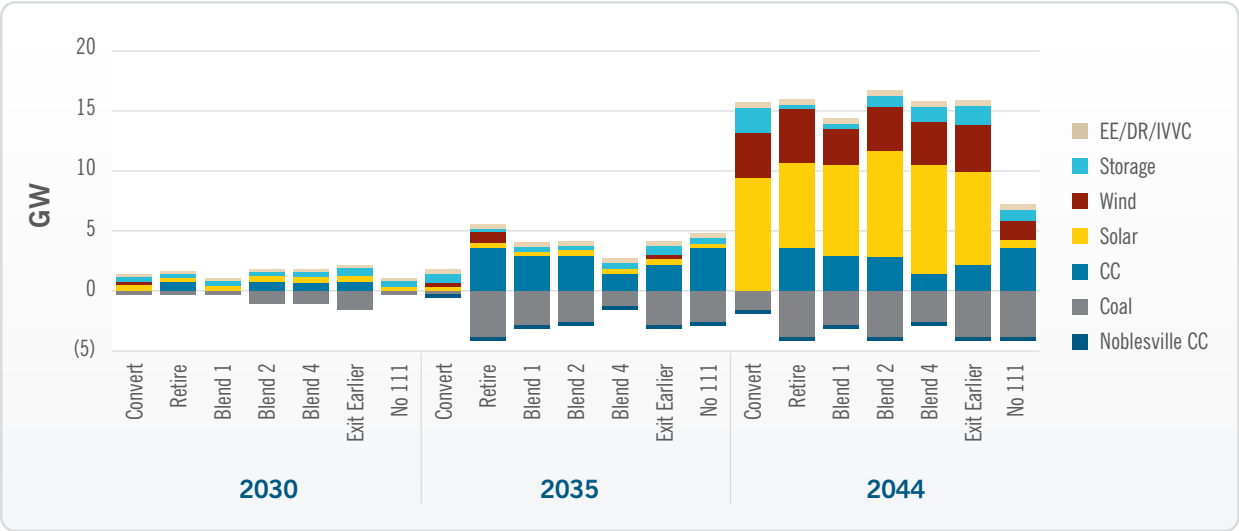
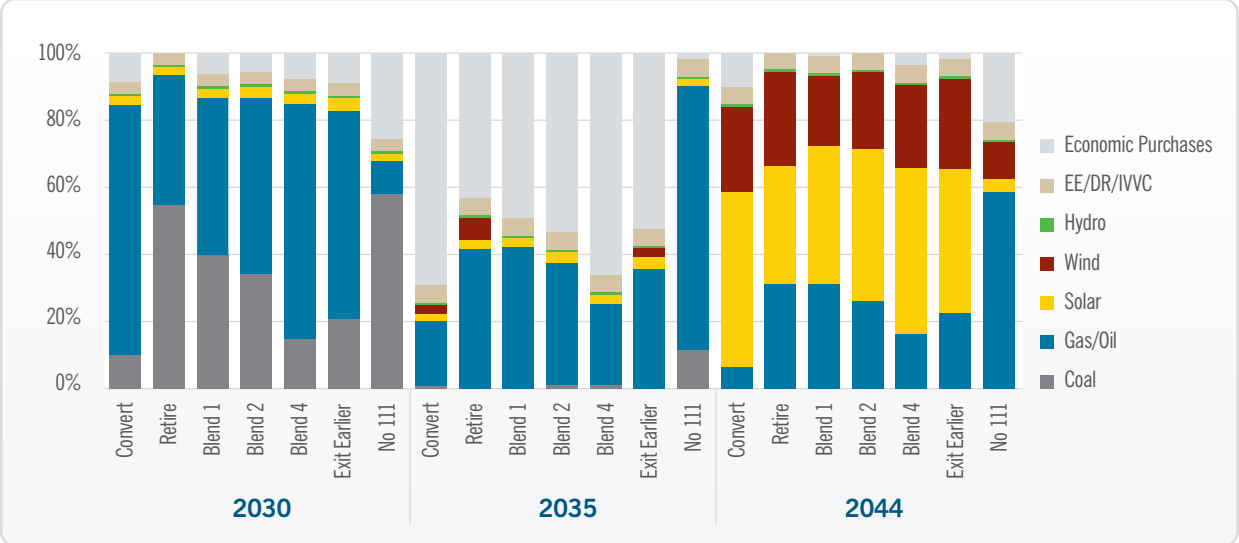


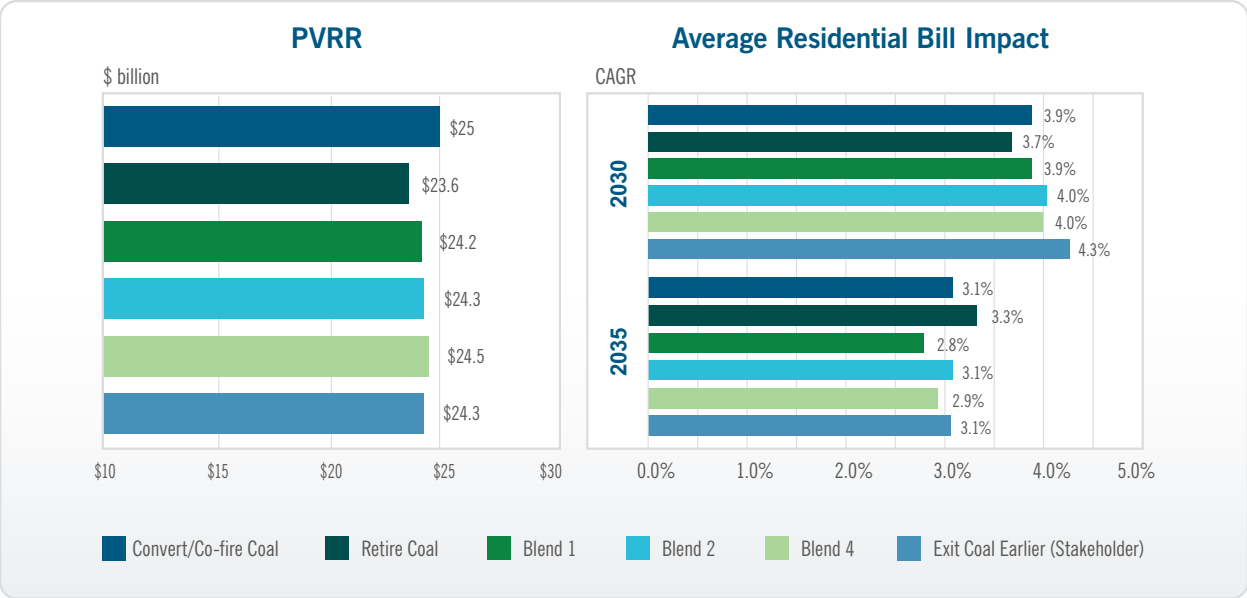
Figure 10: Energy Mix for Generation Strategies in Reference Scenario and "No 111" Case



Note: Energy Efficiency ("EE"); Demand Response ("DR"); Integrated Volt-Var Control ("IVVC")

Figure 11 shows the total portfolio cost, as measured by the present value of revenue requirements ("PVRR") over the planning period, and customer bill impacts by 2030 and 2035, as measured by the projected compound annual growth rate ("CAGR") for the average monthly bill of a typical residential household using 1,000 kilowatt-hours ("kWh") per month. These cost metrics include system fuel, operating and maintenance, and new resource capital expenditures for each candidate portfolio. Blend 2 achieves a reasonable balance between total cost (PVRR) and near-term customer bill impacts.

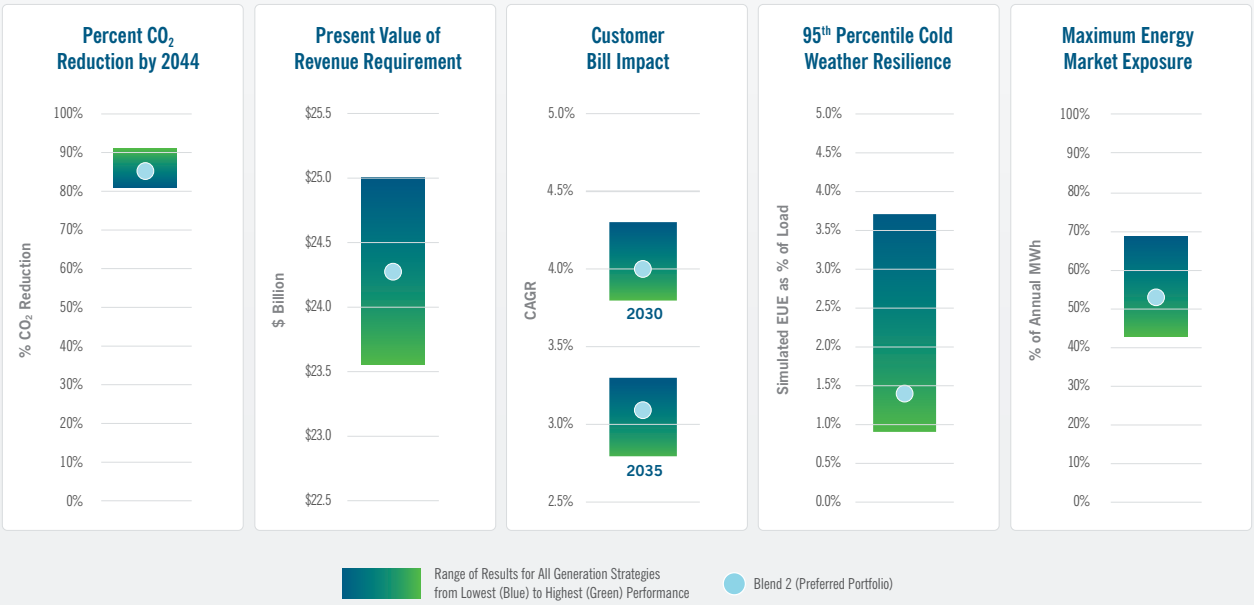
Figure 11: PVRR and Average Residential Customer Bill Impact Snapshots for Generation Strategies in Reference Scenario



Portfolio Evaluation

Balancing multiple objectives that are often in tension is a challenge, and avoiding negative outcomes can often be as or more important than achieving positive ones. Figure 12 shows where Blend 2, which the Company has identified as the Preferred Portfolio, falls in the range of results for CO_2 emissions reduction, cost, cold weather resilience, and energy market exposure across all generation strategies for the 2024 IRP. As discussed in Chapter 4 and Chapter 5, no generation strategy is consistently the best performer with respect to all of the planning objectives. Each strategy outperforms the group on certain metrics while underperforming on others. As Figure 12 illustrates, Blend 2 achieves better-than-average results for most metrics and never delivers the worst performance on any one metric.

Figure 12: Blend 2 Performance Within Range of Results for Selected Scorecard Metrics



Note: Expected Unserved Energy ("EUE") is stochastically simulated for Duke Energy Indiana as an islanded system with varying weather, unit outages, and economic conditions to indicate relative reliability, resiliency, and potential reliance upon the broader MISO market to meet customer demand.

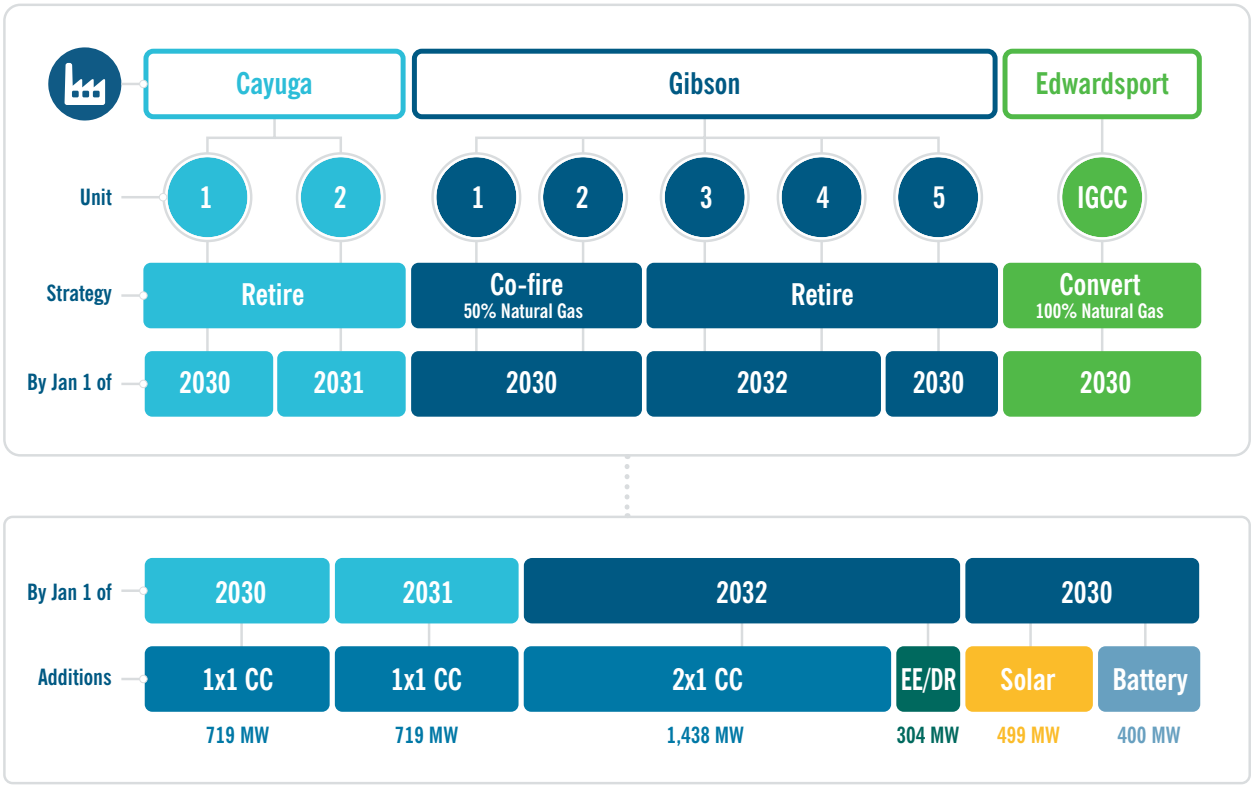
A Preferred Portfolio that Balances Planning Objectives

Duke Energy Indiana is committed to an orderly transition to cleaner energy that adds incremental generation to reliably support economic development and serve the needs of its growing customer base while replacing aging coal plants with a mix of diverse resources, including more flexible, equally reliable natural gas baseload generation, renewables, and energy storage, all with affordability top of mind. The Company has identified the Blend 2 Generation Strategy as the basis for the Preferred Portfolio in the 2024 IRP. This portfolio achieves compliance with the EPA's CAA Section 111(d) requirements but is flexible enough to allow for adjustments in the event the EPA rule is delayed or overturned. This strategy, described in more detail in Chapter 4 and Chapter 5, strikes the appropriate balance among the Five Pillars, mitigates risk with opportunities to adjust course as future conditions warrant, and adds new generating capacity to support robust economic development and customer growth in the state of Indiana.

By 2032, most projects initiated during the Short-Term Action Plan window for this IRP will be completed, coinciding with a critical compliance deadline for CAA Section 111(d). In this window, Blend 2 calls for over 2,800 MW of highly efficient combined cycle generation, nearly 500 MW of solar, and 400 MW of battery energy storage as shown in Figure 13 below. Additionally, the Company will implement more than 300 MW of energy efficiency and demand response programs. In total, Blend 2 would add over 1,100 MW of winter firm capacity, net of unit retirements, by 2032.

This mix will provide essential firm dispatchable capacity, enhance environmental sustainability, diversify the energy portfolio to mitigate risk, and provide for an affordable energy transition.

Figure 13: Summary of Blend 2 Strategy and Resource Additions by 2032

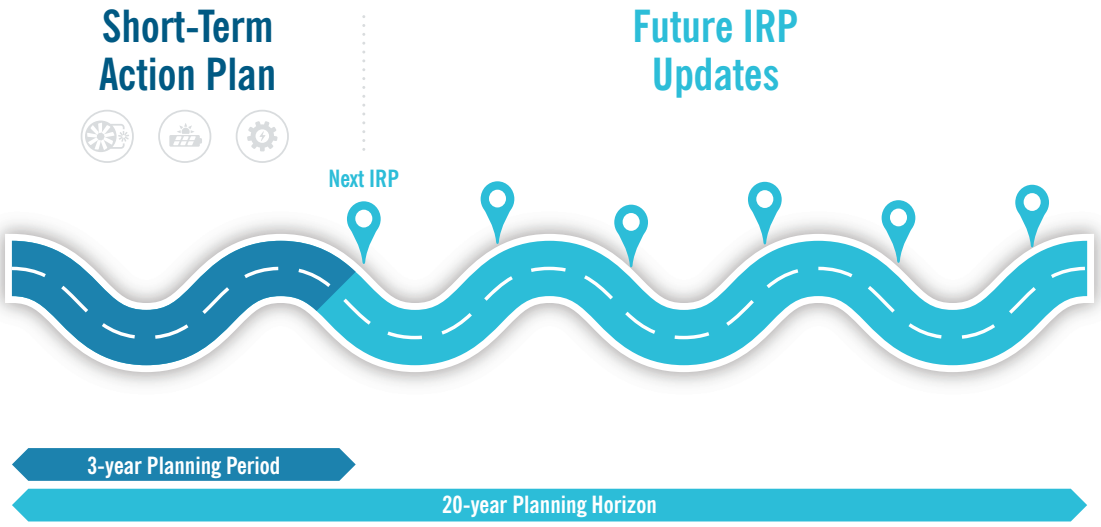


Short-Term Action Plan

The comprehensive resource planning analysis conducted by Duke Energy Indiana for the 2024 IRP identifies certain actions that are in the best interest of its customers across a wide range of potential future conditions, while also illuminating the signposts that will guide reasonable and prudent decision making over the next several years. This IRP is the latest iteration in the ongoing long-term resource planning process in which the Company updates its analysis and submits a new plan at least every three years. The Short-Term Action Plan covers activities that the Company will pursue over the three years between the development of this plan and the next.

Importantly, the Company is pursuing a path in its short-term action plan that has low or no regrets, with the ability to make adjustments if circumstances warrant. In addition to the activities outlined below and described in Chapter 6, the Company continually evaluates emerging opportunities to pursue prudent incremental supply-side and demand-side resources that can meet growing customer needs while balancing the planning objectives outlined in Chapter 2. The following short-term actions support the Preferred Portfolio and provide flexibility to adjust course as conditions change.

Figure 14: Short-Term Action Plan within a 20-Year Planning Horizon



Adding Capacity & Improving Reliability with Combined Cycle Generation at Cayuga

Since the early 1970s, the two coal units at Cayuga Generating Station (Cayuga 1 and 2) have provided reliable, affordable energy for Duke Energy Indiana customers. However, these units, now the oldest coal-fired generators in the Company's portfolio, are approaching retirement after six decades of service. In addition to requiring substantial maintenance work, continued operation of the Cayuga steam generators into the mid-2030s would be complicated by the need to comply with U.S. EPA's Effluent Limitation Guidelines and potentially add closed-cycle cooling to achieve compliance with sections 316(a) and 316(b) of the Clean Water Act, which govern discharge temperatures and intake structures, respectively. The age of the units, combined with the maintenance and compliance costs associated with continued operation, makes retirement and replacement of the existing Cayuga steam generators by 2030 and 2031 the reasonable and prudent course of action for the facility.

Replacing the coal units with two new 1x1 combined cycle generators will add over 400 MW of flexible, dispatchable generating capacity above the retiring capability at the site. Retiring these aging coal units and replacing them with more flexible and cleaner burning natural gas combined cycle units will provide environmental benefits by lowering CO_2 and nitrogen oxide ("NOx") emissions, eliminating sulfur dioxide and mercury emissions, and removing the current thermal discharge to the Wabash River. It will also increase reliability and resource adequacy of the Duke Energy Indiana generating fleet, providing flexible dispatchable generation needed in the MISO market and eliminating an ongoing risk of derates due to river temperatures. Additionally, the Cayuga site is well situated for natural gas generation, due to its proximity to interstate pipelines and a robust source of natural gas supply and firm transportation. Finally, the path promotes affordability through lowering ongoing operating costs, eliminating large environmental compliance costs associated with the aging coal units, and repurposing existing infrastructure at the Company's coal sites.

The Company has begun preliminary development of these projects, including filing an application for an air permit and entering the MISO interconnection queue for the incremental generation. Duke Energy Indiana plans to file a Certificate of Public Convenience and Necessity ("CPCN") with the Indiana Utility Regulatory Commission ("IURC" or the "Commission") application for these projects in the upcoming months.

Enhancing Plan Flexibility with Gas Supply to Gibson

The five coal-fired steam generators at Gibson have a combined generating capacity of nearly 3,200 MW, of which over 2,800 MW are owned by Duke Energy Indiana. The 2024 Preferred Portfolio includes the following short-term actions at Gibson to support compliance with CAA Section 111(d) requirements.

- **Units 1 and 2:** Upgrade to allow co-firing of natural gas and coal fuels, enabling the units to run at up to 50% of full capacity on natural gas alone. Of the Gibson generators, units 1 and 2, which have the newest emissions controls and largest precipitators, are best positioned to maintain coal-burning capability. Adding natural gas as a fuel option will reduce emissions from these units while allowing continued operation through 2038 in compliance with CAA Section 111(d). In addition to the natural gas upgrade, certain maintenance projects must be completed to allow these units to operate into the late 2030s

- **Units 3 and 4:** Retire and replace with a 2x1 combined cycle generator by 2032. Replacing these existing steam units with a highly efficient, flexible gas-fired generator will improve environmental sustainability, reduce reliability and resource accreditation risks, and add nearly 200 MW of incremental firm capacity above the retiring generating capability.

- **Unit 5:** Retire by 2030, consistent with the unit's expected depreciable life.[3]

Importantly for action at Gibson Station, Duke Energy Indiana will closely monitor legal and regulatory developments related to the contested EPA rule governing greenhouse gas emissions under CAA Section 111(d). Indications of the likely success or failure of legal challenges to the rule constitute critical signposts that could indicate the need to adjust the Short-Term Action Plan. In the event of any changes to compliance requirements or deadlines under the rule, the Company could delay taking action to co-fire Gibson units 1 and 2 until regulatory requirements were finalized. If the rule is overturned, the Company could continue to operate Gibson units 1 and 2 on coal through 2035, consistent with the 2021 IRP's moderately paced clean energy transition and the "No 111" Portfolio evaluated as part of the 2024 IRP.

Similarly, the Company could delay action on Gibson units 3 and 4 if deadlines for compliance with CAA Section 111(d) requirements are delayed. Regardless of the final outcome for the rule, the cost of new combined cycle generation to replace Gibson units 3 and 4 will be an important consideration. Over the next year, Duke Energy Indiana will engage with equipment suppliers and engineering, procurement, and construction ("EPC") contractors to monitor the costs and lead times for new generation projects, preserving the option to pivot to conversion of Gibson 3 and 4 to 100% natural gas fuel if market conditions or

3 Conversations regarding the joint owner implications of this anticipated retirement are ongoing.

customer load needs dictate that option to be in the best interest of customers.

The Company plans to repurpose the Gibson site for this new generation, which allows for the continued use of existing infrastructure, including transmission interconnections, and allows the Company to continue its investment in the local community, providing jobs and tax base. Securing firm natural gas fuel supply to the Gibson site is a requirement for any of the potential resource options described herein. Duke Energy Indiana will take the appropriate steps to ensure that gas fuel is available at Gibson when it is needed.

Edwardsport Integrated Gasification Combined Cycle Provides Valuable Optionality

With an in-service date of 2013, Edwardsport IGCC Plant is Duke Energy Indiana's newest and cleanest coal plant, and it continues improving operations and lowering costs. This facility provides essential dispatchable capacity, the value of which will continue to increase as renewables make up a greater portion of the MISO resource mix. It supports system resiliency with on-site fuel storage and the optionality of operating on coal, natural gas or a combination of the two. Edwardsport IGCC is well situated today to comply with ever increasing environmental regulations, such as stricter coal ash residual handling, NOx, mercury and particulate emission limitations, and clean water act regulations, and it holds the promise of cost-effective compliance with greenhouse gas emissions, like the EPA's CAA Section 111(d) rule through either conversion to natural gas operations or the addition of carbon capture, and sequestration ("CCS") by the early 2030s.

Given the substantial uncertainty around the future timing and extent of greenhouse gas regulations, including EPA's new CAA Section 111(d) rule, as well as future fuel prices, the cost of new resources and the pace at which they can be added to the system, and accelerating load growth driven by economic development, Duke Energy Indiana remains confident in the value of the flexibility and optionality provided by the Edwardsport IGCC. If, however, EPA's CAA Section 111(d) rule persists as it is currently written, the Company will maintain optionality by (1) continuing to advance studies of the feasibility, risks, and costs of deploying CCS at Edwardsport by 2032, and (2) remaining prepared to retire the gasifiers by 2030 should that ultimately prove to be a reasonable and prudent decision.

Notably, retirement of the coal gasification portion of Edwardsport IGCC in 2030 or 2035 would be well in advance of its projected end of useful life in 2045. As such, Duke Energy Indiana would require a Commission order that assures recovery of and on the retired assets in accordance with its CPCN for the plant in order to move forward with a natural gas conversion project at the plant.

In the event the EPA CAA Section 111 Rule is delayed or repealed, the Company could continue to operate the gasifiers as it monitors regulatory and market conditions. As described in the 2021 Duke Energy Indiana IRP, a decision to move to full-time natural gas operations at Edwardsport IGCC is virtually a permanent decision and would be very difficult to reverse. Required air permitting changes, the loss of specialized workforce for the gasification process, coal contract issues, and operational challenges with restarting the plant on coal would all make a reversal highly complex and costly. Until such time that a change occurs, the Company will continue to look for opportunities to maximize the value of Edwardsport IGCC's flexibility to operate on coal, natural gas, or a combination of the two.

Renewables & Storage Contribute Needed Capacity & Energy this Decade

To meet more immediate needs for incremental energy and capacity, Duke Energy Indiana plans to add approximately 500 MW of solar and 400 MW of battery energy storage to the portfolio by 2030. This includes the 199 MW Speedway Solar project that is scheduled to be completed in 2025. The remaining capacity will be procured through the ongoing evaluation of bids received in response to the request for proposals in the late 2024 through mid-2025 time frame. In addition to meeting customers' near-term needs for additional energy and capacity, these renewable and energy storage resources will help improve the environmental sustainability of the portfolio and enhance resource diversity.

The 2024 IRP analysis indicates that renewable energy and energy storage resources will make up a large part of the Company's energy mix starting in the mid-to-late 2030s as the relative economics of those resources improve. Duke Energy Indiana will continue to monitor the market and regulatory changes that influence the economic value of renewable and storage resources in between IRPs and in future IRPs. If circumstances warrant, the Company could accelerate some of the larger solar, wind and storage additions that are included in the Preferred Portfolio in the late 2030s to earlier in the plan.

Continued Investigation of Advanced Nuclear for Future Around-the-Clock, Carbon-Free Generation

Although nuclear resources were not economically selected in the 2024 IRP, advanced nuclear technologies such as small modular reactors ("SMR") offer the potential to add considerable value for customers. The potential for significant cost declines as SMR technology and supply chains mature, combined with the possibility of delivering reliable, around-the-clock, carbon-free generation in the future, makes it prudent for Duke Energy Indiana to continue to advance early studies and maintain advanced nuclear as a viable option in future resource plans. The Company plans to continue its work with Purdue University related to the feasibility of SMR and advanced nuclear generation, closely monitoring the evolving technology, the regulatory framework, stakeholder education, and costs as the initial SMR demonstration projects are brought online. It is prudent for the Company to continue these investigations given the long lead time associated with nuclear deployment.

Managing Demand with Customer Programs

Duke Energy Indiana recognizes the importance of customer programs in managing reliability on the grid. From load flexibility (or demand response) programs to help manage peaks and intermittency of the grid, to energy efficiency programs designed to lower energy consumption to electric vehicle programs to facilitate and manage the impacts of transportation electrification, Duke Energy Indiana is committed to continuing to offer a suite of programs to customers while progressing a reliable and resilient energy future.The Company contributes as appropriate in IURC, MISO, and Federal Energy Regulatory Commission policy areas that impact customer programs, benchmarks with other utilities, and stays abreast of vendor technologies to protect and grow opportunities for customers to participate.

Figure 15: Snapshot of Major Short-Term Actions

Combined Cycle	▪ **2024-2025:** File CPCN for two Cayuga 1x1 CCs, 719 MW each, to be in-service by beginning of 2030 and 2031. ▪ **Completed in 2024:** Submitted air permits, MISO Generator Replacement Requests ("GRR") for Cayuga units 1 and 2, and incremental capacity study requests. ▪ **2025–2026:** File CPCN for Gibson 2x1 CC at 1,438 MW to be in-service by 2032, submit air permits, submit MISO GRR for Gibson units 3 and 4.
Solar	▪ **2024-2025:** Procurements targeting approximately 300 MW of solar to be in-service by 2030. ▪ **2025:** Speedway Solar (199 MW) to be placed in-service by end of year.
Storage	▪ **2024-2025:** Procurements targeting 400 MW of battery storage to be in-service by 2030.
Energy Efficiency	▪ **2025:** File for new three-year energy efficiency programming. ▪ **2025-2027:** Continue to grow existing programs and introduce new cost-effective programs.
Demand Response & Voltage Optimization	▪ **Continue** to grow existing demand response programs and introduce new cost-effective programs, apply lessons learned to Savings on Demand program. ▪ **Continue** deployment of IVVC to additional circuits. ▪ **Monitor** changes to MISO and Federal Energy Regulatory Commission ("FERC") policies, participate in forums and utility groups.
Natural Gas Conversion/ Co-firing	▪ **2025-2026:** Complete Gibson 1-4 boiler studies for natural gas co-firing, conversion. ▪ **Complete** Edwardsport CCS Feed Study by mid-2026. ▪ **2026-2027:** Determination of Edwardsport natural gas conversion or CCS path and timing.
SMR	▪ **Continue** work with Purdue University, other preliminary discussions and activities related to advanced nuclear feasibility. ▪ **Monitor** technology developments.
Rate Design	▪ **2024-2027:** Ramp up implementation of Green Source Advantage, other voluntary customer clean energy programs. ▪ **If approved**, implement new time-of-use rates and electric vehicle programs.

Duke Energy Indiana will pursue these short-term actions and continue to monitor the energy landscape, checking and adjusting as warranted to ensure it is prepared to serve its customers with reliable, affordable, and increasingly clean energy now and into the future.