

HOOSIERENERGY

Winter Reliability Forum

Indiana Utility Regulatory Commission

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About Hoosier Energy

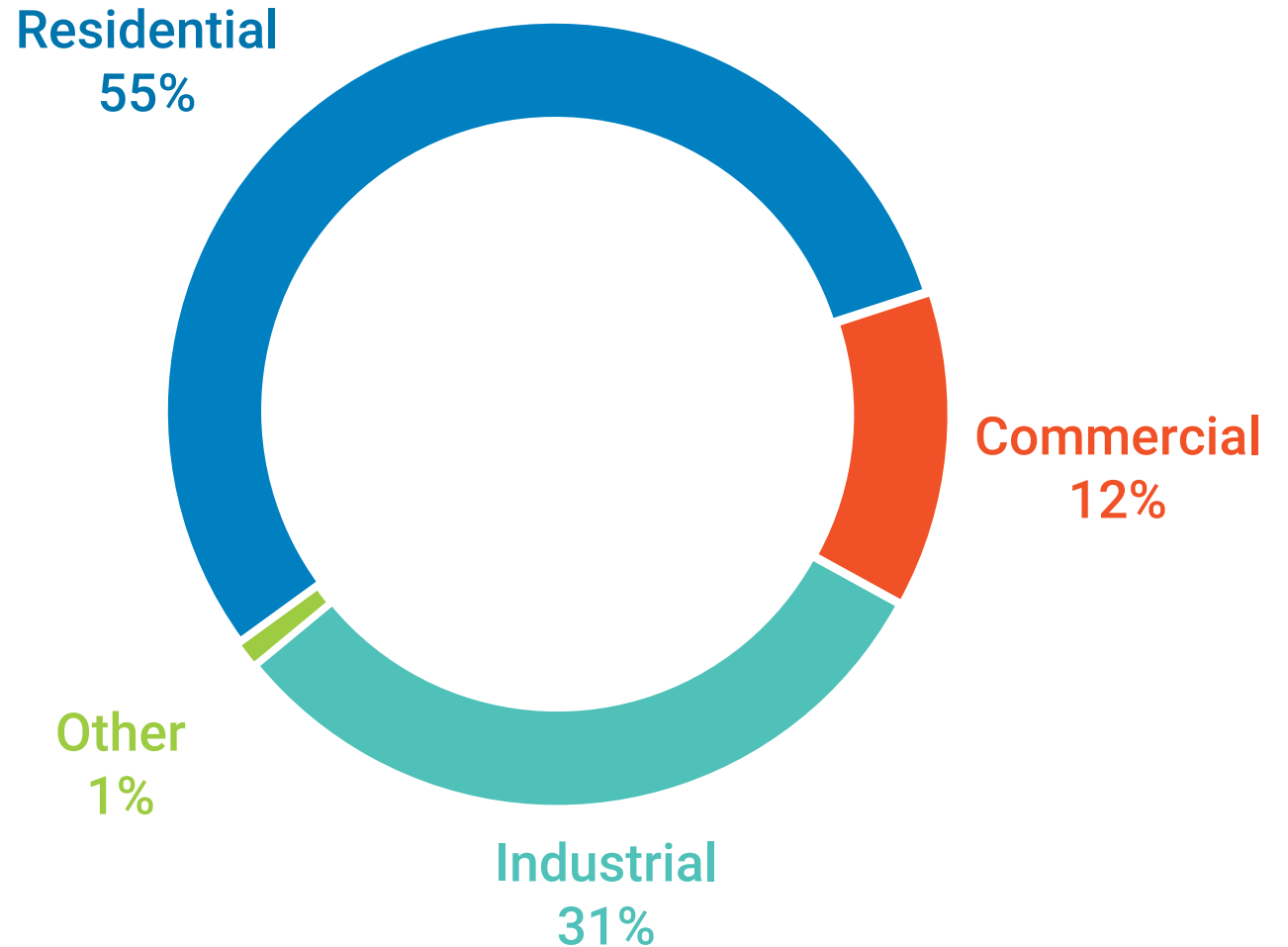
- Non-profit
- 18 member systems in southern Indiana and southeastern Illinois
- Member of MISO and PJM
- Approximately 1,730 miles transmission line
- 28 transmission stations and 321 delivery points
- Interconnections with 7 major utilities
- All-time system peak 1,828 MW
- 284 employees
- Patronage capital returned - \$205M



Member Systems

Energy Profile

- Diverse retail customer mix
- No single member system constituted more than 10% in 2023
- No single consumer constituted more than 3% of a member system's 2023 aggregate billings



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Reliability Forum Q&A

Wholesale Cost Trends

- Hoosier Energy customer base heavily influenced by weather conditions
- Wholesale costs have been stable following unprecedented volatility in 2022 and are expected to continue at current levels through this winter
- Higher overall costs driven by market trends
 - Higher cost of energy and capacity resources
 - Cost of transmission continues to increase, including approved reliability projects within MISO and costs associated with regional transmission owner investments to address aging infrastructure
- Inflationary impacts have put upward pressure on cost of all materials and services

Winterization Preparedness Actions

- Hoosier Energy maintains and updates an annual generation and transmission winter preparedness plan
 - Plan outlines and defines communication, winterization, and operations protocols among Hoosier's system control, generating facilities, and transmission operations
- Hoosier conducts coordination meetings with generation facilities, internal fuels team, and industry partner experts
 - Review of current natural gas market and previous lessons learned
 - Review of communication protocols
- Physical preparations for generating facilities occur annually in the fall through automatically generated Preventive Maintenance (PM) notifications
 - Examples include heat tracing verification, auxiliary boiler testing, commodity inventory analysis, de-icing system testing, etc.

Winterization Preparedness Actions

- If, and when Hoosier anticipates extreme winter weather conditions to impact our footprint, Hoosier coordinates directly with generating facilities to recalibrate assumptions and implement specific operations contingencies
- Real-time planning activities conducted based on unit output and related contingency plans
- Upon notification of a pending weather event, frequency of communication increases among fuels, plants and power markets teams
 - Communications include procedural refreshers, assessments of market and operational conditions (energy, gas, pipeline) and other plans
 - Event management plans include supplier engagement/communications, MISO offer strategies, including risk mitigation, and plant availability and coordination decision points
- Lastly, a real-time, on-call communication plan is confirmed to ensure appropriate contacts and approval authorities are engaged

Fuel Availability & Reliability Planning

- Hoosier Energy secures natural gas supplies in a manner that ensures fuel supply reliability at competitive prices
 - Enables generating capacity to be competitively offered into day-ahead and real-time MISO markets each day
- Fuel strategy executed via short-term supply agreements
 - Allows Hoosier to effectively evaluate potential suppliers that could further enhance reliability or reduce associated costs
 - Includes transportation, imbalance charges, etc.
- Due to dynamic of rapidly changing gas markets over past several years, these short-term supply agreements ensure procurement flexibility, allowing Hoosier to respond to changing market conditions
- Hoosier continues to develop and broaden relationships with potential natural gas suppliers

Maintenance Outages & Reliability Planning

- Lawrence County Unit 1 (natural gas) currently estimated to return to service by Dec. 31, 2024
- All other fall maintenance activities completed as of October 30, 2024
- Supply chain challenges continue to impact costs and schedules
- Outage planning and MISO Seasonal Accreditation risks
 - Added complexities for planned and unplanned/forced outages with respect to 31-day outage window
 - Seasonally specific and replacement capacity liquidity

MISO Market Reforms & Resource Adequacy Seasonal Construct

- Market compensation mechanisms would be helpful to address reliability risks and to compensate generators for their contribution to system reliability, both in real-time and across the long-term planning horizon
- The evolution of MISO's resource adequacy construct does reflect the increased operating risks across the footprint – operating risks at a premium as the bilateral market continues to diminish

MISO Market Reforms & Resource Adequacy Seasonal Construct

- Seasonal risks require different reserve margin requirements
- Current lack of seasonal-only resources causes load serving entitles to over-procure to meet specific seasonal requirements
- Fluctuating reserve margins continue to carry risk

Season	Planning Reserve Margin % - PY 24/25	Planning Reserve Margin % - PY 25/26
Summer	9.0%	7.9%
Fall	14.2%	14.9%
Winter	27.4%	18.4%
Spring	26.7%	25.3%

Firm Fuel Supply

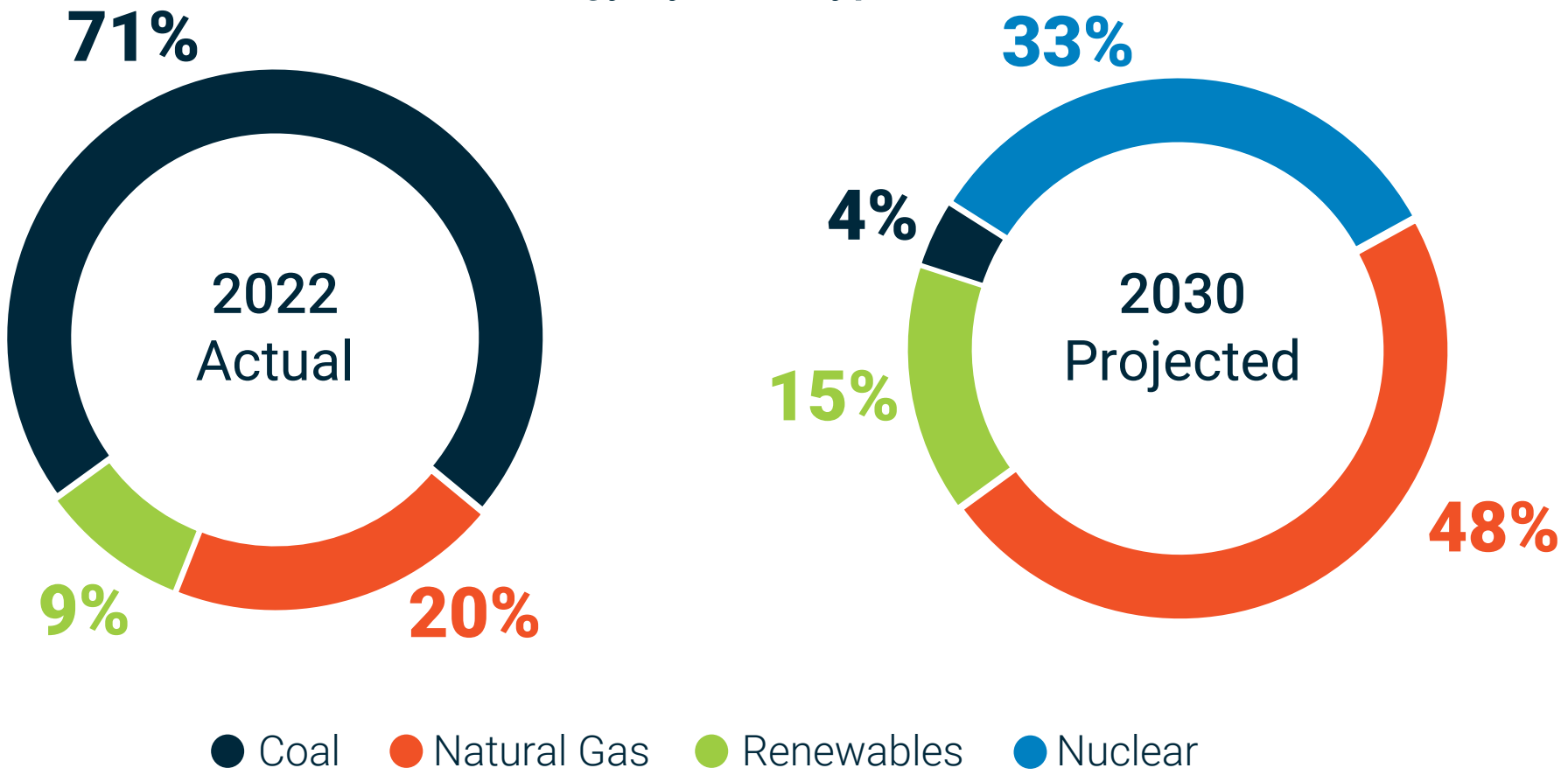
- Hoosier Energy does not subscribe to Firm Fuel contracts at current operating plants
- “Firm” isn’t always a guarantee
 - Firm fuel supply is often weather dependent and reliant on operational characteristics of the gas system
 - Natural gas can be diverted for home heating prioritization during extreme weather events
 - Operational or capacity restrictions on pipelines may prevent fulfillment of gas demand or produce incompatible flow requirements for electric generators
- While Hoosier doesn’t have onsite physical storage, given the strategic location of local gas pipelines to generating assets, we continue to leverage partnerships with entities that have firm capacity and/or storage options to mitigate risk

Natural Gas Market Interactions & Operating Flexibility

- Pipeline requirements, including restrictions, lead to inflexibility depending on operating parameters and system conditions
- Natural gas generators often must adjust real-time offers to limit dispatch ranges because of gas flow restrictions
 - Often includes reducing operating range between the economic minimum and maximum limits
 - Continued misalignment between electric and natural gas market rules creates uncertainty around whether and when generation units will be dispatched based on fuel availability during high-demand periods
- These examples can create over-procurement scenarios, which carry higher costs for members and consumers
 - When pipeline operating restrictions are in place, generators are often put in a position of procuring large volumes of gas at high prices without the market certainty to cover those costs

Energy Portfolio Transition

Energy by Fuel Type



*As of August 2024

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