



INDIANA

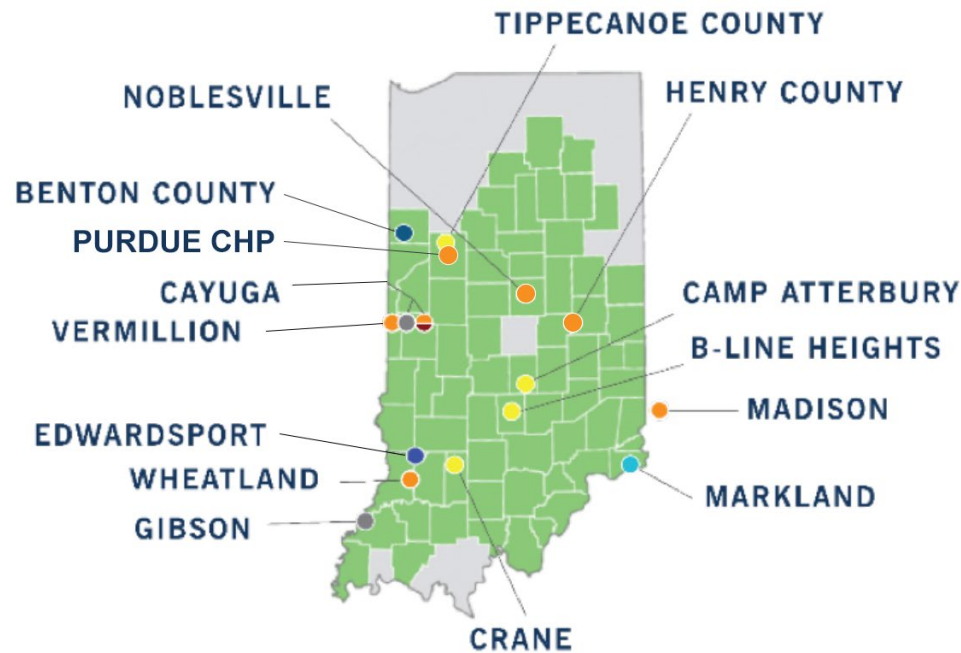
2023-2024 Winter Preparedness



Stan Pinegar
President Duke Energy Indiana
November 27, 2023



Duke Energy Indiana at a Glance



Plant Locations Generation Type

- Coal
- Syngas/Gas
- Gas CC/CT
- OIL CT
- Hydro
- Wind PPA
- Solar

Largest electric utility in Indiana

23,000 square-mile service area,
covering 69 of 92 counties

890,000 customers

36,800 miles of transmission and
distribution lines

6,300 megawatts at 12 large power
generation sites

2,500 Duke Energy Employees in
Indiana

Customer Bills: Projected Rates Into Winter 2023-2024

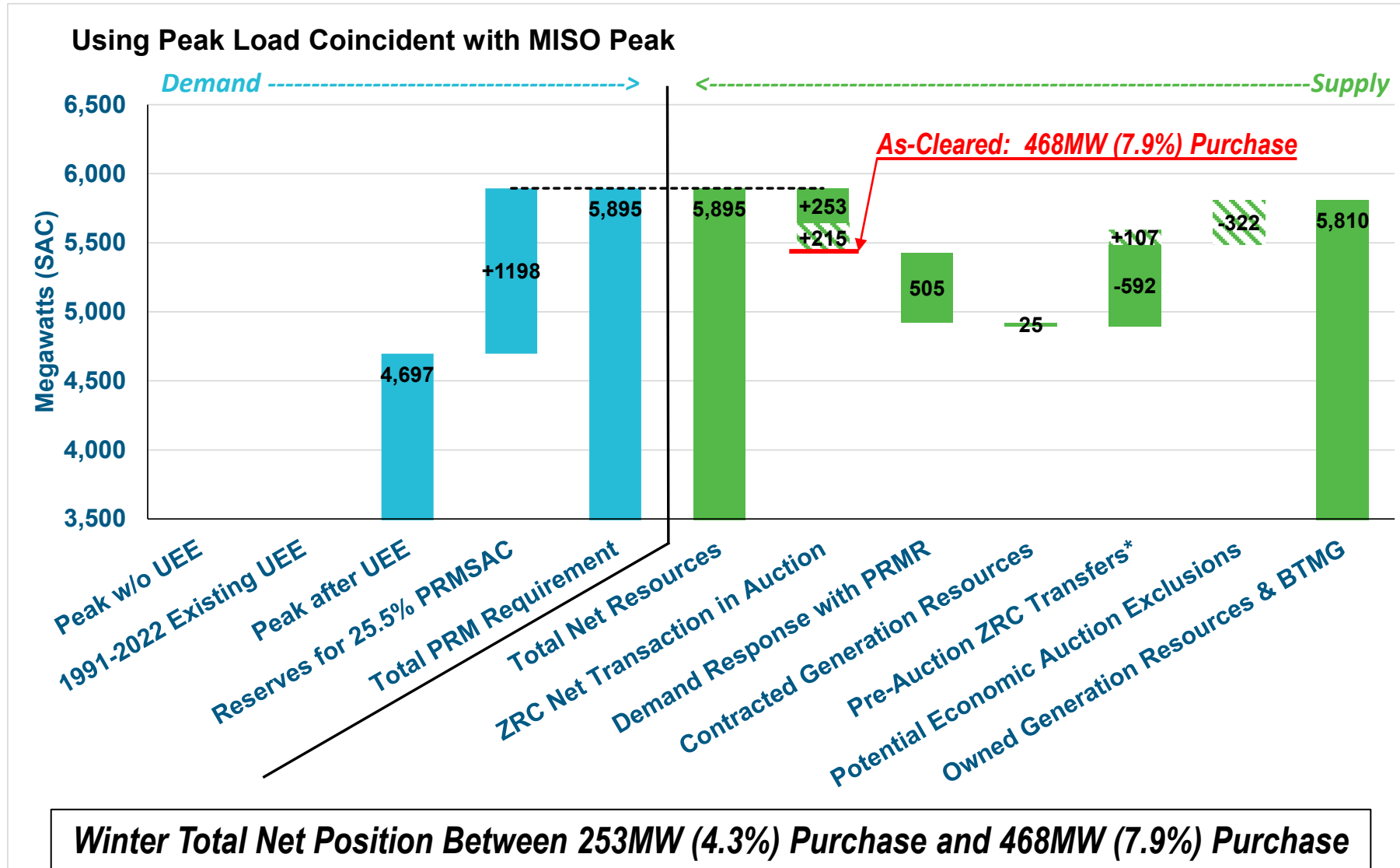
- 2023-2024 winter bills projected to be 18% to 30% lower than 2022-2023 winter bills
- 2023-2024 Winter rates are projected to remain flat this season
- Duke Energy Indiana programs aid customers struggling with higher bills:
 - Share the Light Fund
 - Partnering with State agencies on weatherization and LIHEAP outreach
 - Budget Bill
 - Pick Your Due Date
 - 6-Month interest-free installment plan options
 - Mid-cycle usage and budget alerts
- Recent Customer Rate Drivers
 - 2023-2024 projection of stable fuel and purchased power costs



MISO Seasonal Accredited Capacity (SAC): Results and Observations

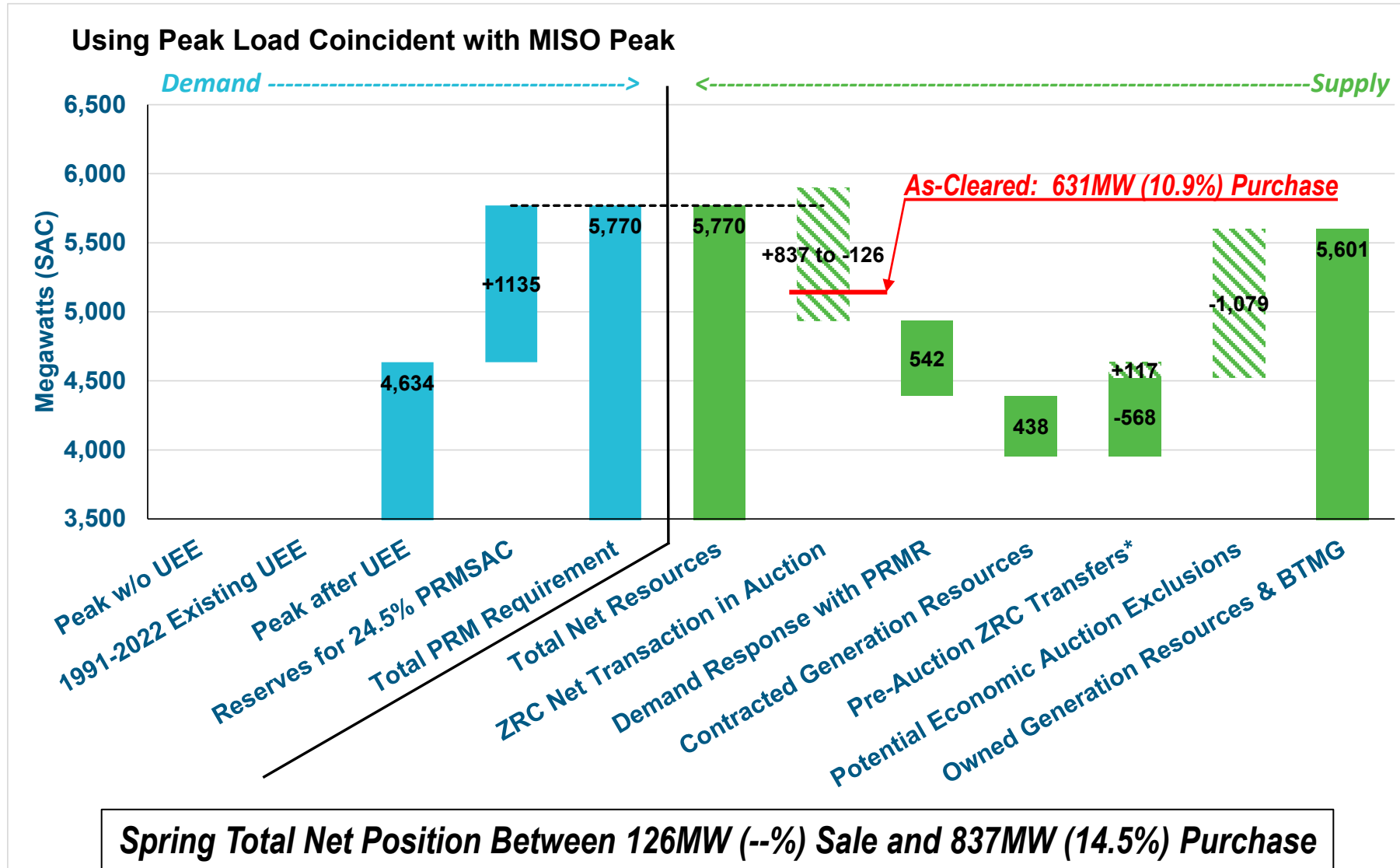
- Duke Energy Indiana Planning Year (PY) 2023/24 MISO capacity auction cleared positions
 - **Winter**
 - Net short 468 MW pre-auction; no bilateral purchases
 - All resources cleared the auction except for DEI share of Gibson 5 (31-Day Rule)
 - **Spring**
 - Net short 631 MW pre-auction; after 402MW bilateral purchase
 - 771 MW of resources on >31-day planned outage did not clear the auction
- Observations
 - Joint Owners' shares of some jointly owned units cleared the auction differently by season
 - Low auction clearing prices drove the DEI resources that did not clear the auction
 - Planned outages are routine and needed to maintain reliability
 - Offer prices determined consistent with Independent Market Monitor methodology resulted in the prudent economic outcome for customers, in lieu of capacity replacement or capacity replacement non-compliance charge exposure
- Monitoring ongoing changes in capacity construct:
 - PY 24/25: Reliability Based Demand Curve – load obligation no longer known before the auction, will challenge planning both short-term and long-term
 - PY 28/29: Proposal to move from UCAP to Direct Loss of Load for class accreditation – marginal accreditation approach will reduce accreditation of renewable resources more than thermal
 - These changes are at odds with drivers, including ongoing aggressive environmental rules proposed by the EPA that may drive yet earlier retirement of coal units, and challenge the addition of natural gas generation
- ▶ MISO capacity construct changes magnify future planning uncertainty

Preparation for Winter 2023: Capacity Supply–Demand Balance – As Offered



*IMPA ownership share of Gibson 5; WVPA ownership share of Vermillion CT; WVPA contract share of Henry County CT; 310MW STBNS
 Note: ZRC Net Transactions: (+) Purchase, (-) Sale

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Given the issues of an aging workforce, is Duke Energy Indiana facing any problems with maintaining appropriate levels of staffing and experience of skilled line crews?

Duke Energy Indiana has experienced a manageable rate of linemen attrition due to retirements and transitions to other companies. As a result, the company has partnered with regional line schools to increase its pool of qualified candidates and continues the in-house training of new line apprentices by technical trainers and journeyman line personnel.

In 2023, we provided a \$15,000 grant to Jefferson Community College in Louisville, KY. While outside of our service territory, they do have students from Indiana. The grant provided funding to expand their lineman training program.



Has Duke Energy Indiana increased reliance on outside contractors for line work?

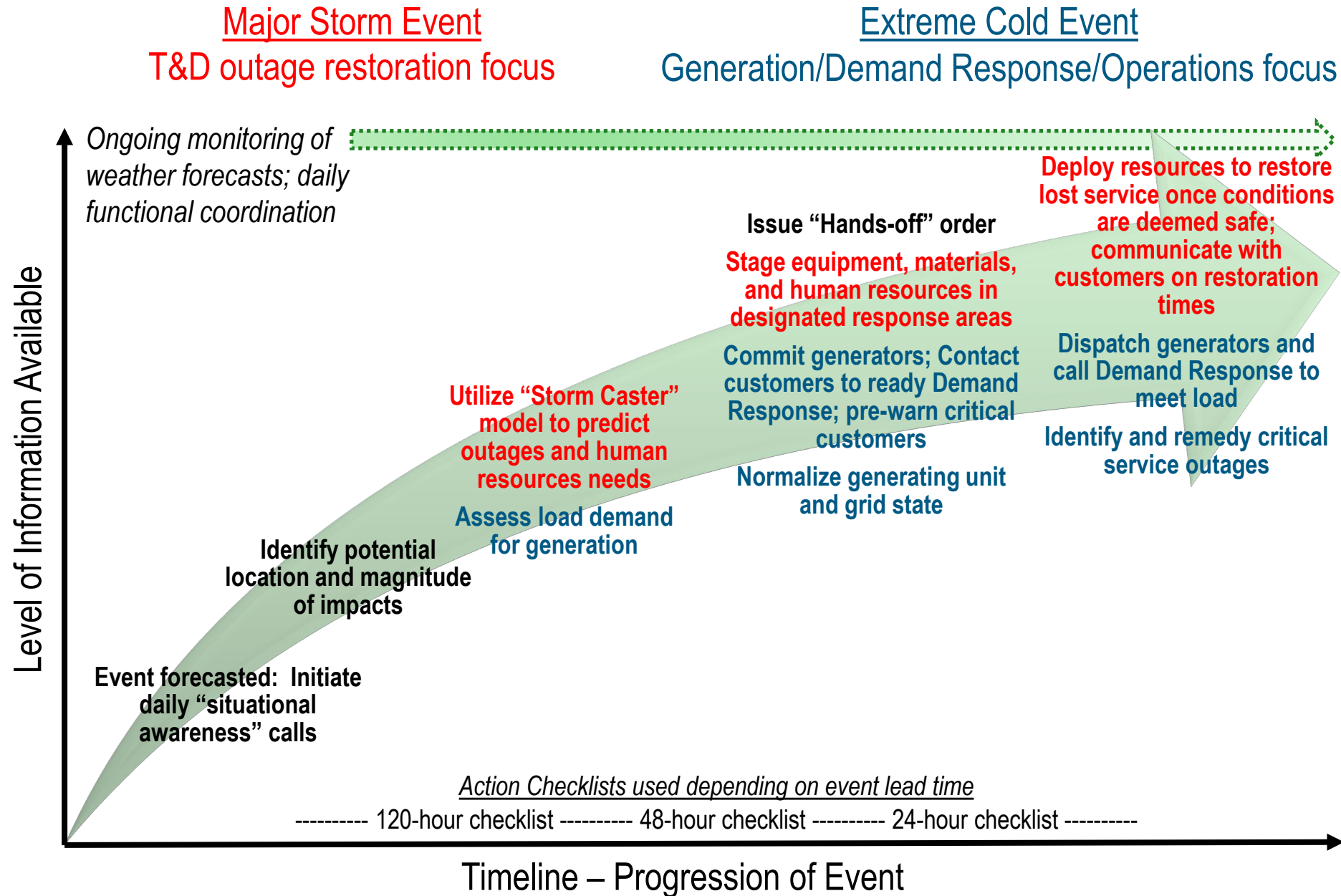
Duke Energy Indiana uses outside contractors to supplement the line workforce that executes projects related to capital investments. As those investments have increased, the use of contractors has also increased. Duke Energy has sustained adequate internal technical staffing to meet day to day operational needs.



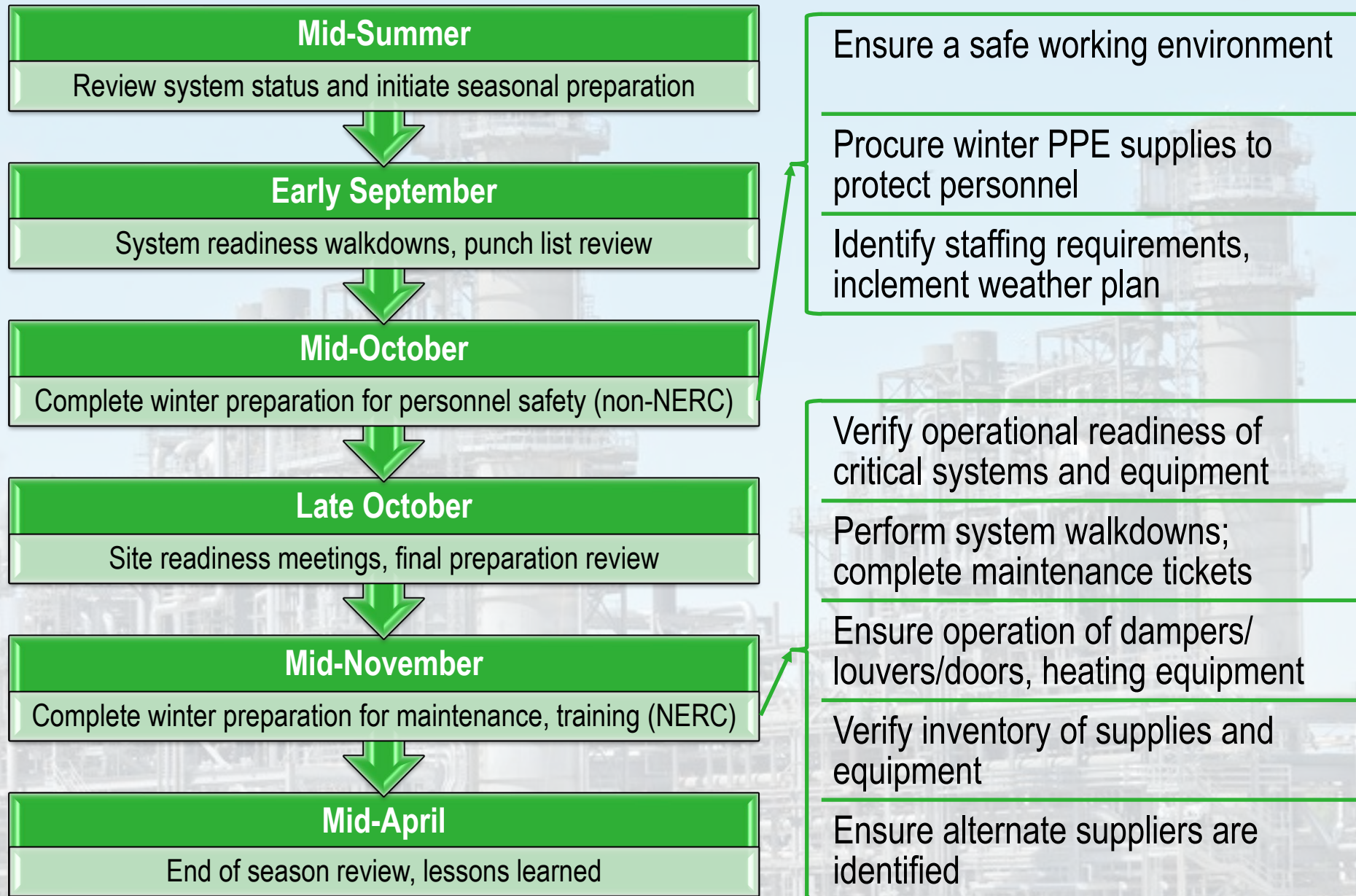
How is technology changing the need for skilled lineman and the skills they need to work most effectively?

As **Duke Energy Indiana** modernizes its grid with smart devices that automate operational response and data acquisition, we are enhancing our line personnel's technical skills to be able to interrogate and maintain these devices. The distribution organization has added the use of instrumentation and controls technicians to complement the existing line personnel.

System Readiness: Event Identification and Response



Generation – Actions to Prepare for Winter



Generation – Maintenance for Winter 2023-2024

- Learnings from Winter Storm Elliot implemented in seasonal preparation requirements
- About 79 weeks of base load unit outages and over 118 weeks of combustion turbine outages performed Spring 23 to Fall 23.
- Execution of capital maintenance plan
- All unit outages, except three, are scheduled to be complete by Nov 17; one coal major outage terminates mid-Dec along with 2 CT outages
- All MISO capacity resource units available this winter
- Managing environmental risks
 - Cayuga river temperature IDEM protocols year round
 - Cayuga CT4 fuel oil capability
- Weather related coal pile management for consistent fuel handling



Gibson Unit 3
Generator Rotor



Edwardsport Gasification Tower

Illinois Basin Coal Mines and Suppliers



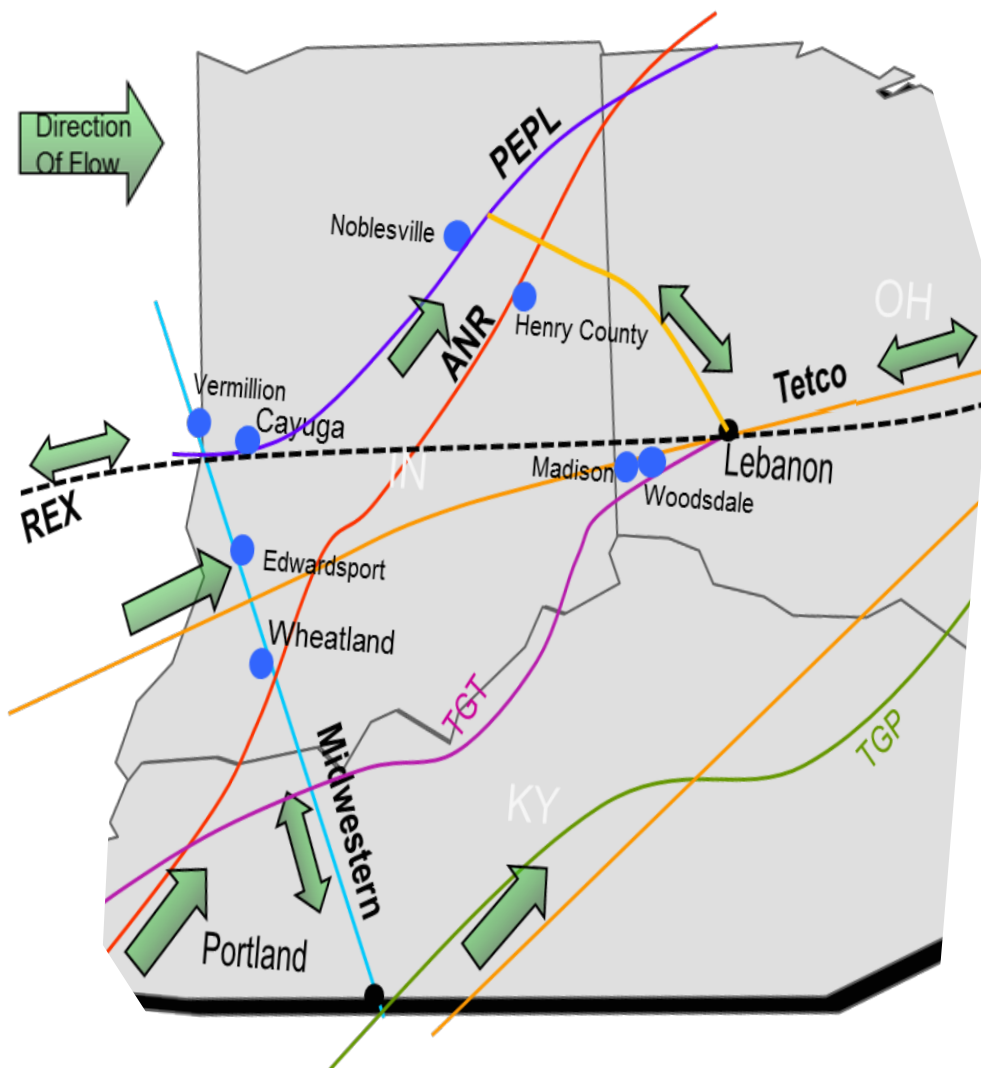
Coal Supply/Transportation

- Supply procured to 100% of projected need for Q4 2023 and Q1 2024 with supplier diversity
- Coal inventories above winter inventory targets
- Improved transportation performance year over year
- Suppliers remain impacted by rising costs and tight downstream supply chains
- Continuing to adjust MISO offer price at Gibson and Cayuga Stations to manage coal supply volatility and maintain reliable supply of coal and transportation

Winter Planning and Operations

- Maintaining trucking agreements should deliveries to Cayuga and Gibson need to increase due to rising demand
- Winterization activities for coal handling/rail infrastructure complete
- Continued engagement with railroads and suppliers

Natural Gas Pipeline Systems – DEI Generators and Gas Transportation



Natural Gas Supply

- Diverse supply from four pipelines
- DEI contracts with an asset manager and the market for firm delivered gas supply
- Asset manager provides fuel security, operational flexibility, 24-hour availability, helps mitigate risk
- Contracted Fixed and Indexed daily pricing to align with gas hedging supply locations

Firm Capacity Held

- Following strategic review, DEI able to increase firm NG transportation ensuring greater gas deliverability during times of high demand
 - Midwestern – 80,800 dth/day
 - Panhandle – 45,000 dth/day
 - ANR - 15,000 dth/day

Winter Planning and Operations

- Monitor gas supply, increase communication
- Reflect the price and availability of natural gas through the Company's MISO cost offers
- Day-Ahead economic: Offer unit(s) as must run and buy corresponding gas
- Real Time: Modify unit offers to account for price and amount of natural gas available

Coal

- Supply procured to 100% of projected need for Q4 2023 and Q1 2024
- Healthy inventories projected in December to meet winter demand
- Price adjustment remains in place to maintain coal supply reliability

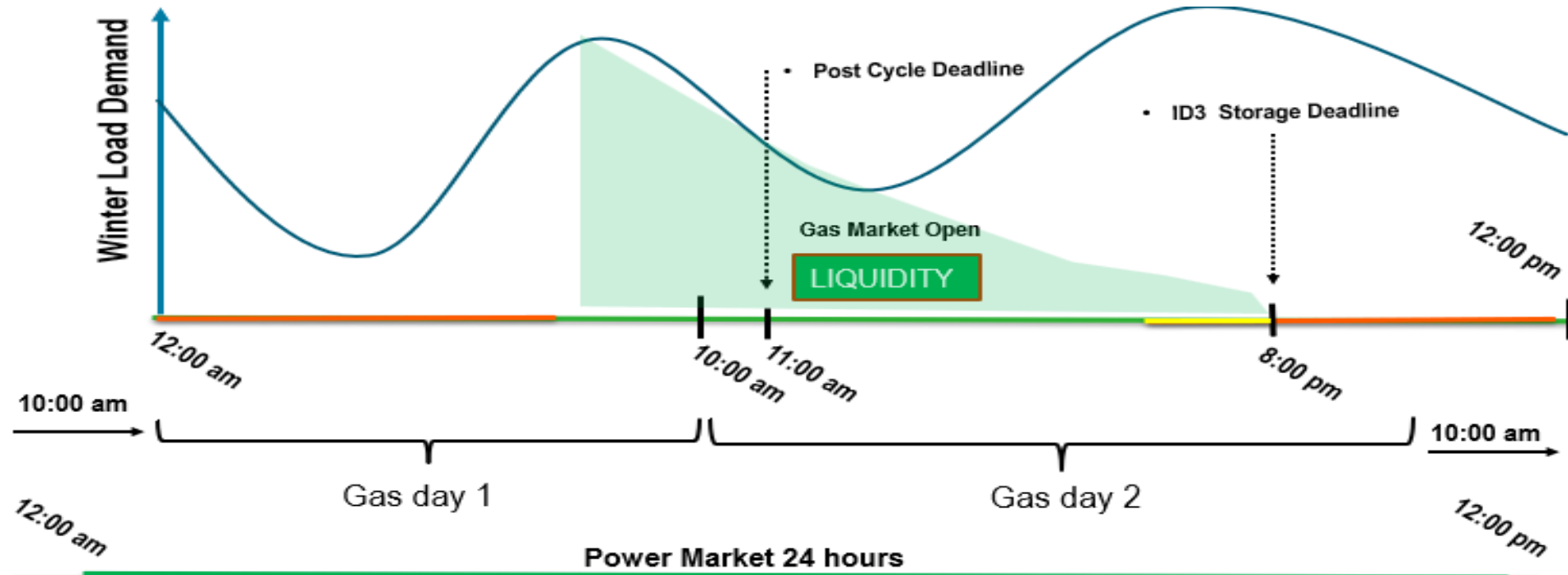
Natural Gas

- Follow approved hedging program using NYMEX hedging targets
- NYMEX Financially Hedged – 45% of monthly forecasted gas burns through March 2024
- Financial products used to mitigate daily price volatility

Power

- Execute monthly, weekly, and daily Indiana Hub power hedges based on relationship between gas and power exposures

Power and Gas Day Illustration



Potential pipeline requirements impacting generation flexibility:

- Ratable Flow: Non uniform hourly consumption is not a right
- Operational Flow Orders ("OFOs"): Restricts generator flexibility and enforces compliance with scheduled dispatch
- Low Pressure: Pipelines operating with low pressures may require staggered unit starts and gas supply to be purchased and nominated prior to units starting
- Gas nomination cycles and deadlines: Power Day overlaps 2 gas days, Power market is 7x 24, Gas market closed nights and weekends

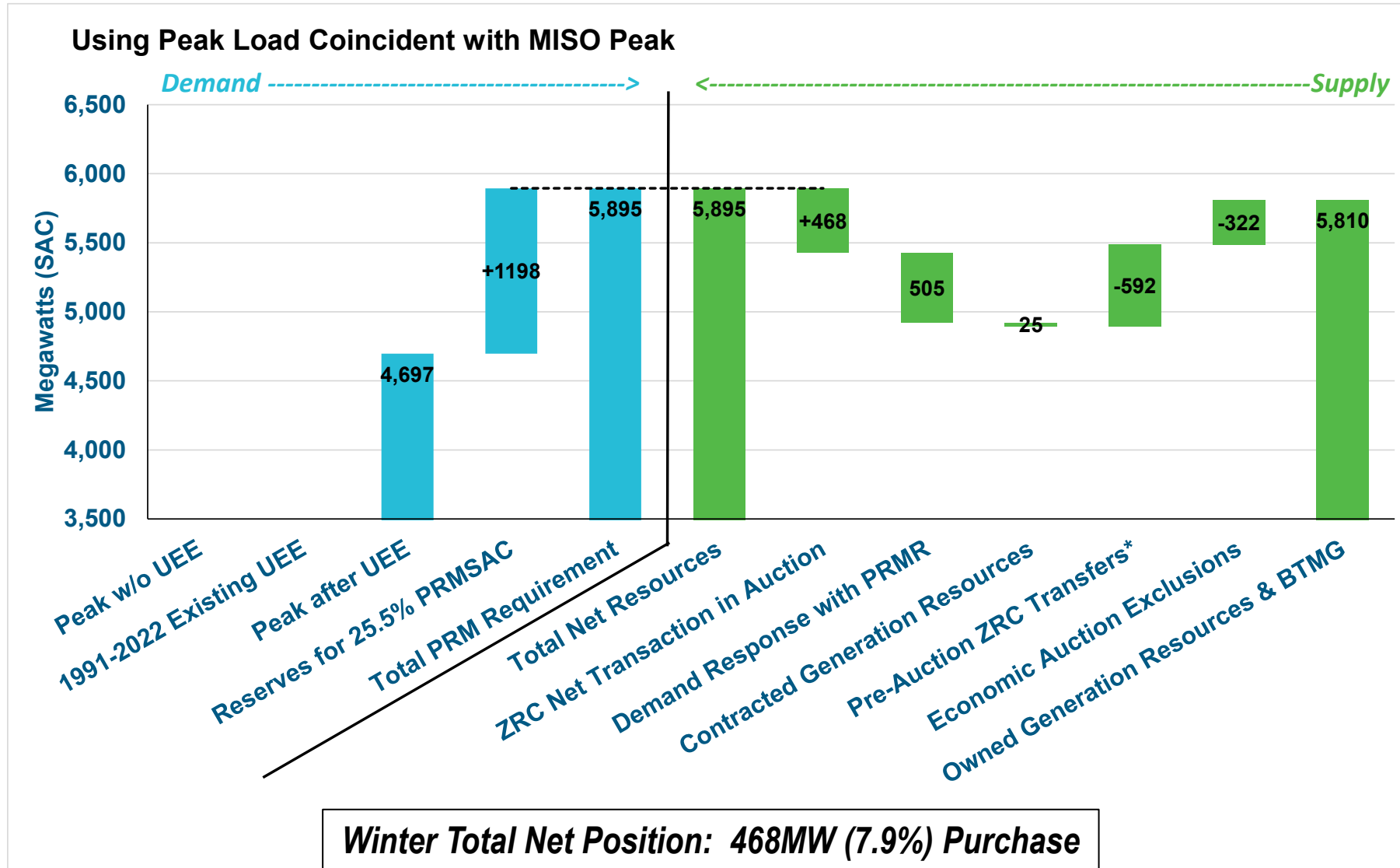
Mitigations:

- Contracting for firm transportation or for firm delivered gas supply: Ensures gas supply is highest pipeline priority increasing reliability and reduces some ratable pipeline obligations
- Contracting with Asset Manager: Provides greater access to firm supply and storage in a low liquidity market and increases ability to manage within OFO tolerances
- Maintaining inter-day communication with pipeline gas control: Promotes operational alignment and maximum flexibility during ratable restrictions and low-pressure scenarios
- Maintaining good communication with suppliers, pipelines and generation dispatch: Enables submittal of generation offers to MISO that mitigate risks and promote unit flexibility



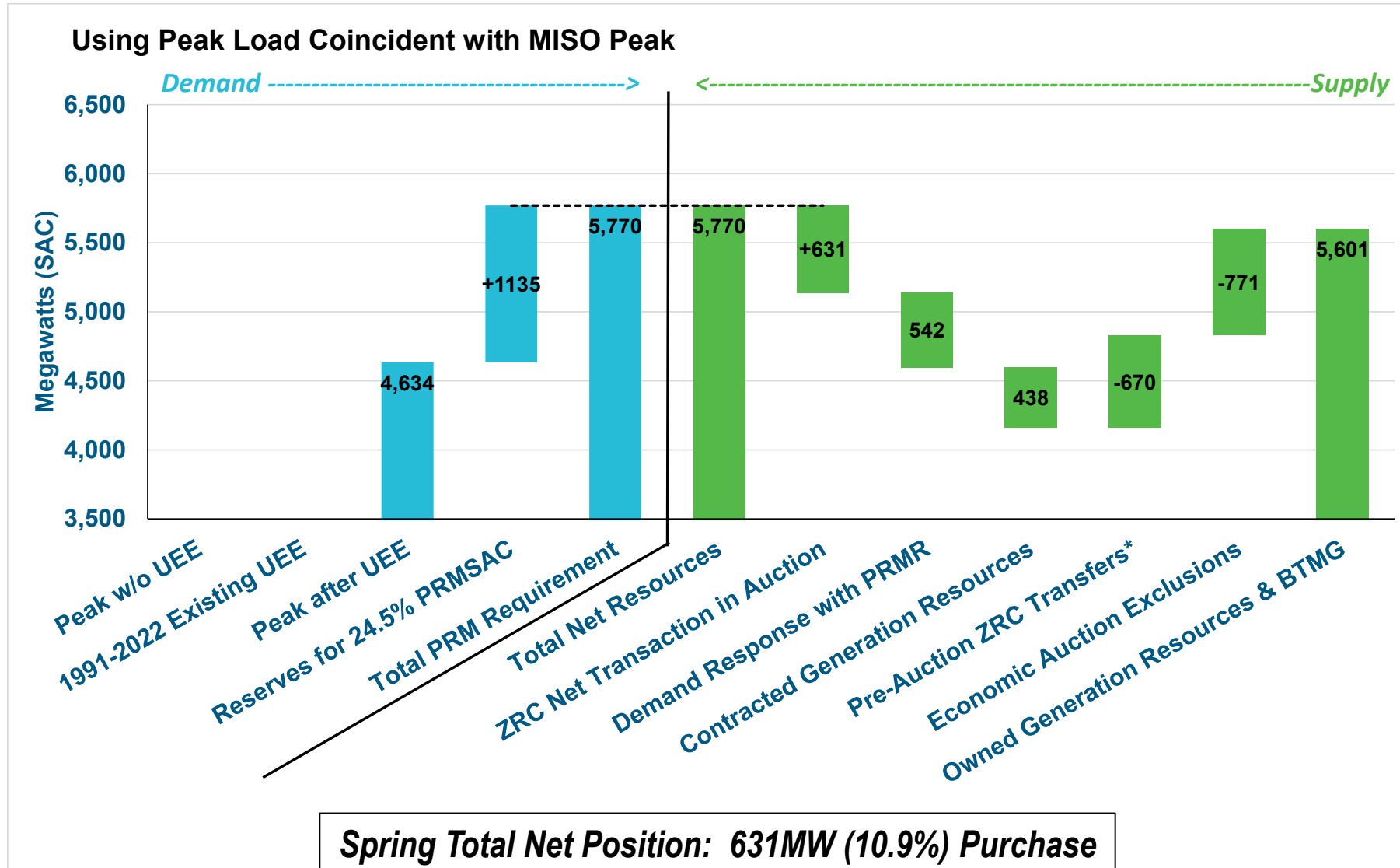
APPENDIX

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