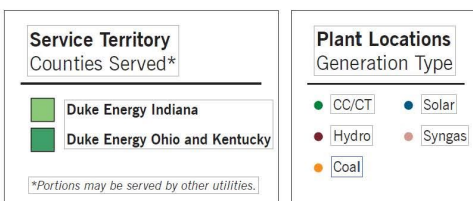
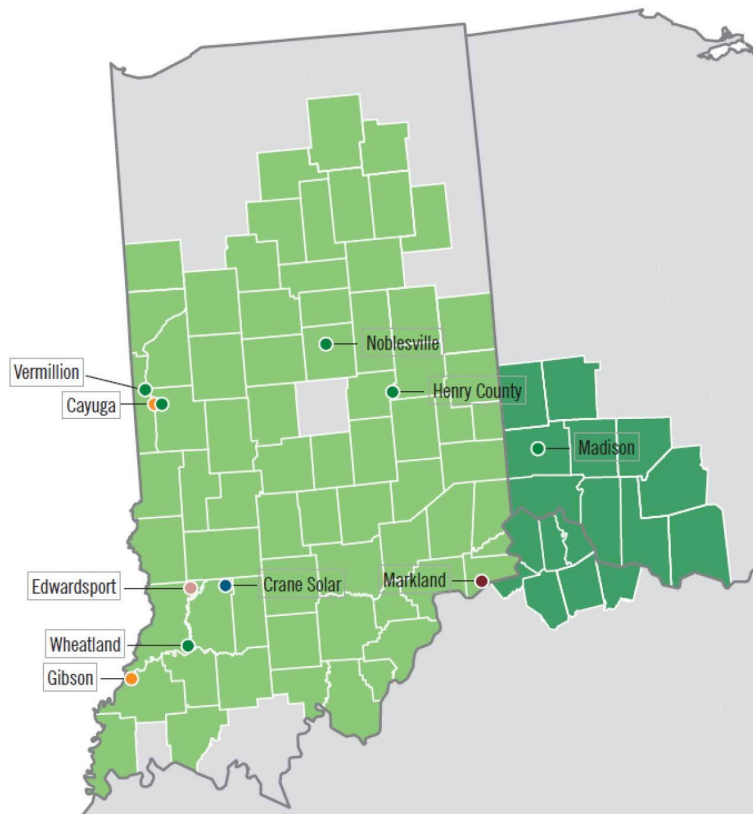


2021 Winter Preparedness



Stan Pinegar, President Duke Energy Indiana
October 28, 2021

Duke Energy Indiana at a Glance



Largest electric utility in Indiana

23,000-square-mile service area

850,000 customers

36,200 miles of transmission and distribution lines

6,600 megawatts at 11 power generation sites

Duke Energy Indiana winter preparation plans

- **Generating Plants**
- **Fuel Supply**
- **Transmission**
- **Customer Delivery**
- **Customer Service**



Supported by Meteorology

Generation

Edwardsport Generating Station



Crane Naval Base Solar Facility



Generation – Actions to Prepare for Winter

Mid-Summer

internal team meetings to review current system status and initiate seasonal preparation



Early September

system readiness walkdowns and final punch list review/closure



Mid-October

planning target for completion of winter preparation preventative maintenance and activities



Late October

site readiness meetings and final preparation review



Mid-April

end of season post review meeting and lessons learned to prepare for next winter

Generation – Winter Preparations

Reliability Preparations

Personnel & Site Health & Safety

Verify operational readiness of critical systems and equipment.

Ensure operation of dampers/louvers/doors and heating equipment.

Verify inventory of supplies and equipment.

Ensure alternate suppliers are identified.

Ensure a safe work environment.

Procure supplies to protect personnel.

Identify additional staffing requirements.



Transmitter Freeze Protection Enclosure

DEI generating plants are well prepared for Indiana winter weather

Generation – Winter Preparations

Preparations for an imminent winter weather event

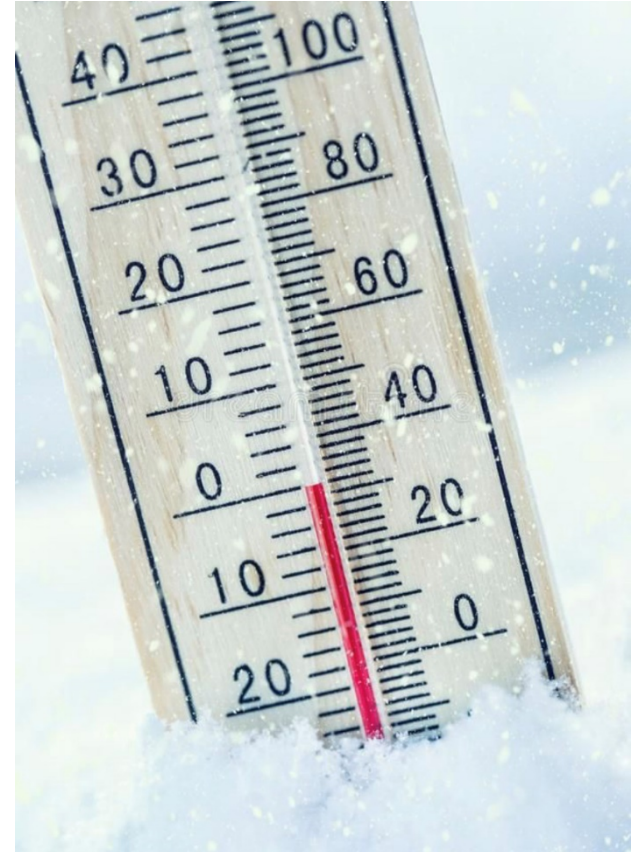
Meteorology Forecasting

Activate procedures

Review winter checklist 3 days in advance

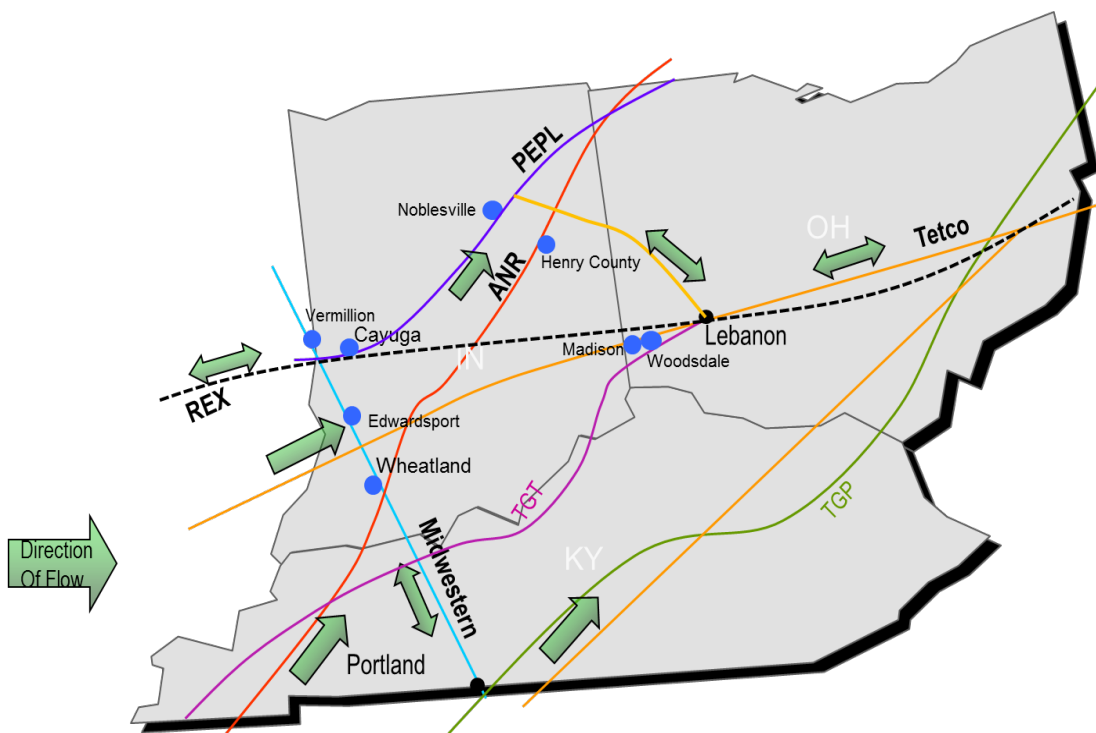
Snow / ice removal 24 hours prior

Identify staffing and sequester plans



Fuel Supply – Winter Preparations

Natural Gas Pipeline Systems – DEI Generators and Transport



- Firm Capacity held:
 - Panhandle – 25,000 dth/day
 - Midwestern – 52,800 dth/day
- CT's:
 - Madison
 - Wheatland
 - Vermillion
 - Henry County
 - Cayuga CT4
- Combined Cycle:
 - Noblesville
- IGCC:
 - Edwardsport (Primary fuel is coal. Natural gas used when gasifiers are unavailable.)

• Mid Western

- Edwardsport
- Wheatland
- Vermillion

• TETCO

- Madison CT
- Woodsdale

• Panhandle (PEPL)

- Noblesville CC
- Cayuga

• ANR

- Henry County

Fuel Supply – Winter Preparations

Gas, Power Hedging and Oil Security

Natural Gas

- Follow approved hedging program using NYMEX hedging targets
- NYMEX Hedged – 75% of monthly forecasted gas burns
- Financial products used to convert to mitigate daily price volatility

Power

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

Fuel Oil

- Primary delivered supplier for all coal plants
- Contracted additional backup supplier in event of emergency
- Cayuga CT4 – 24 full load burn hours on site
- Coal units at Cayuga and Gibson carry inventory on site for startups and replenish as fuel oil is burned

Fuel Supply – Winter Preparations

Natural Gas Management during Extreme Weather Event

Asset Management Agreement

(extended through March 2024)

- DEI contracts with an asset manager and the market for firm delivered gas supply
- Asset manager provides fuel security, operational flexibility, 24-hour availability, help mitigate financial penalties
- Contracted Fixed and Index daily pricing to align with gas hedging supply locations

Winter Event Operations

- Increased frequency in communications with Asset Manager, gas suppliers, dispatchers and pipeline representatives.
- Nighttime communications distributed include; latest pipelines updates, gas supply conditions and gas positions for generation desk monitor during the night.
- DEI has 23 NAESB contracts with suppliers for liquidity on all pipelines
- Compliance with pipeline integrity mandates (Operation Flow Orders / Hourly Ratable Takes)
- Natural gas pipelines / producers / end users better prepared as result of winter 2021

Coal Procurement - Winter Preparations

DEI Coal Hedging Guidelines – long term purchases

Physical/Hedge	Measure	Prompt to 12 Months	13 – 24 Months	25 – 36 Months	37 – 48 Months	49 – 60 Month s	Beyond 60 Months
Physical Procurement	Percent of Forecasted Burn	\geq P25 \leq P75	30% - 65%	30% - 65%	30% – 65%	30% - 65%	0%

DEI also makes short term spot coal purchases as necessary.

Recent Coal And Transportation Constraints

Coal supply disruptions due to labor availability as a result of COVID 19 and overall labor constraints

Lack of coal market liquidity: increased demand for coal due to high natural gas prices coupled with overall declining inventory levels, strong export market and record high prices for coal overseas

Rail and trucking transportation delays due to COVID 19 and overall labor constraints

DEI entered into short term spot coal supply contracts for the remainder of 2021 and 1st quarter 2022

DEI adjusting its MISO offer price at Gibson and Cayuga Stations to reflect the economics of the constrained coal situation. The impact of the adder is less Company generation and more power purchases from MISO. The plan is to include the adder through the end of the year to have adequate inventory levels going into the winter months.

These actions should ensure reliable coal supply for winter 2021

Coal Supply Chain – Winter Preparations

Coal Suppliers

- Check to ensure their freeze treating systems are completely operable
- Winterize the loadouts and other critical infrastructures
- Continuously check their onsite rail track lines are kept free and clear resulting from inclement weather to allow the railroads proper access
- Update or develop their storm contingency and snow removal plans

Railroads

- Communications to customers (example, CSX Rail): [Winter Safety – YouTube](#)
- Clean rail switches and other rail track lines on the mainline
- Winterize locomotives, railcars and other critical rail infrastructure

Transmission – Winter Preparations

Control centers staffed 24x7x365

Company-wide winter preparedness status meeting held in October

Review corrective maintenance work orders

Review planned outages

Participate in the MISO Winter Readiness Workshop

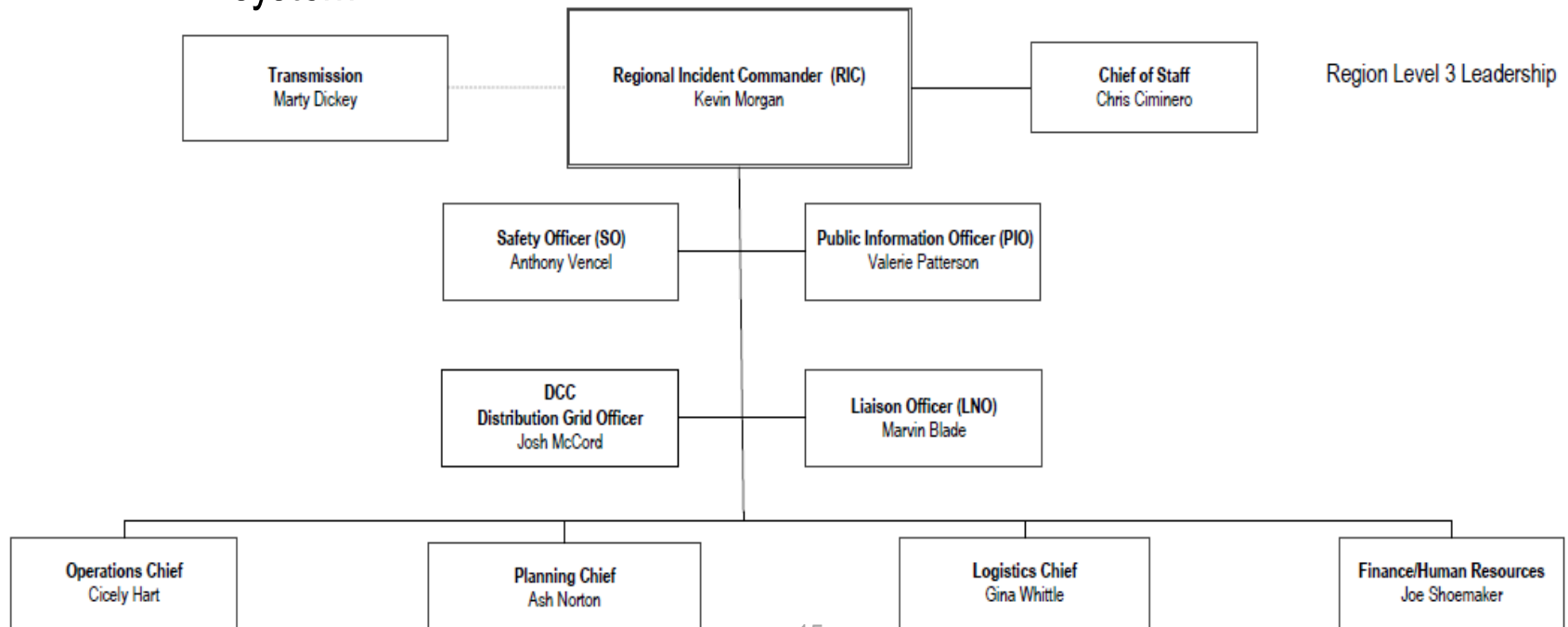
Customer Delivery – Winter Preparations

Distribution control center is staffed 24x7x365

Winter storm drill exercise held in September by Distribution

Review planned outages

In November, Distribution will participate with Transmission in a GridEx exercise simulating loss of load on the bulk power system



Customer Services – Winter Preparation



Required to be available during inclement weather

Required to complete the Midwest Winter Program Training annually

Evaluate staffing needs

Flexibility to work from home in extreme conditions

Emergency Assistance Team are on call for storm support

Disconnect moratorium for low income and extreme weather

Duke Energy Indiana Prepared to Serve Customers Reliably

