Wabash Valley
POWER ALLIANCE

2024 Winter Reliability Forum

Indiana Utility Regulatory Commission

November 22, 2024

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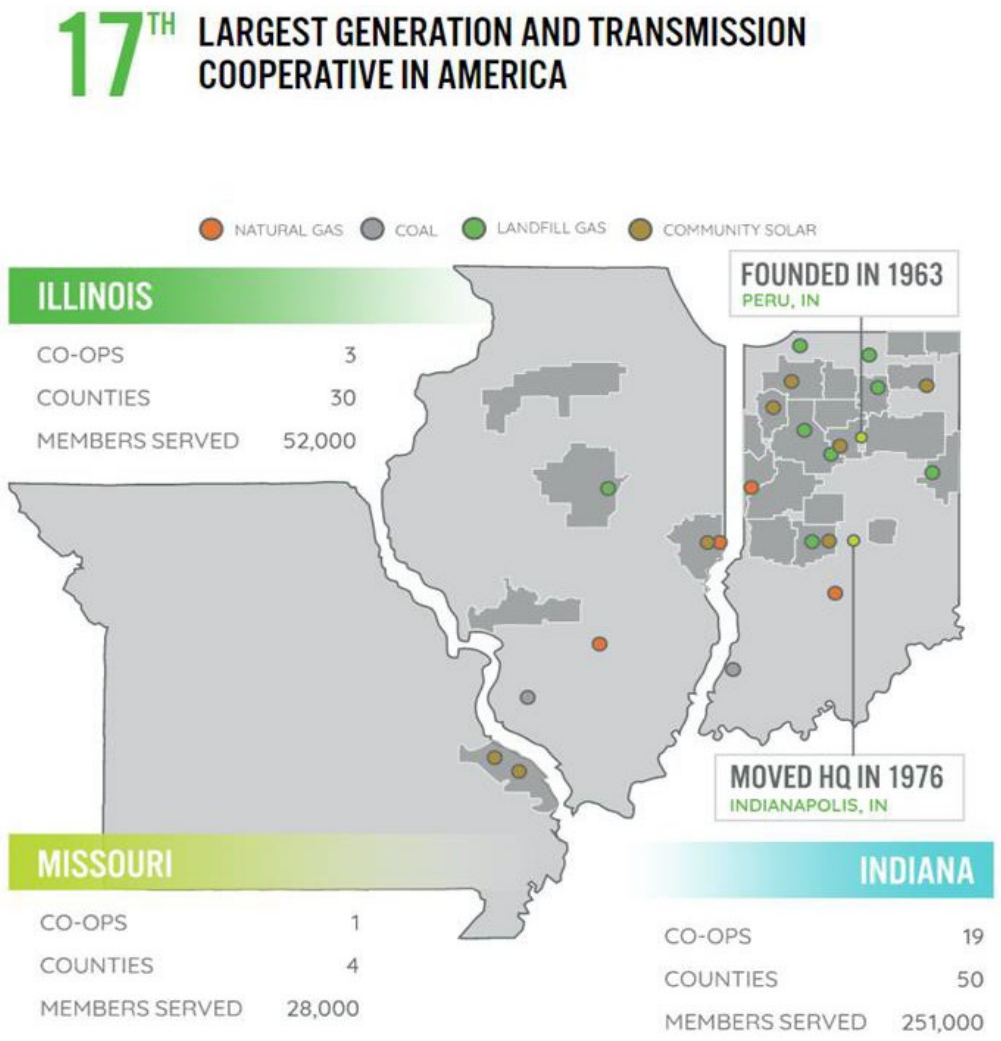
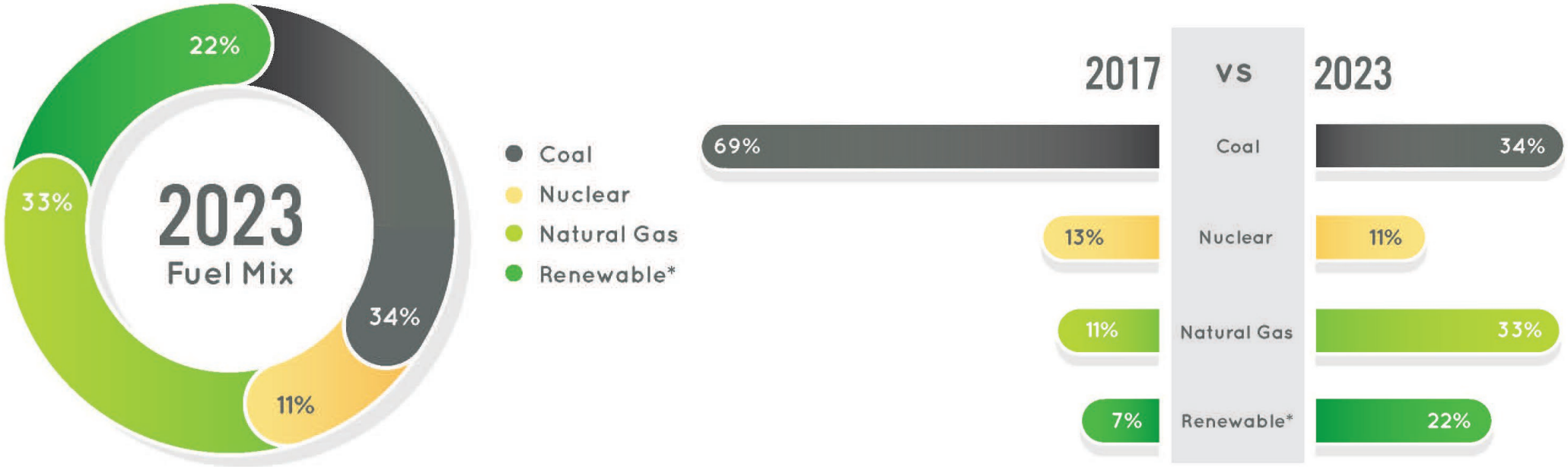
ABOUT WVPA

- Serves **23** locally-owned distribution cooperatives in **3** states with **331,000** members
- Peak load ~**1,700** MW
- **6** transmission zones
- Diverse portfolio of jointly owned and solely owned resources and contracts



WVPA FUEL MIX

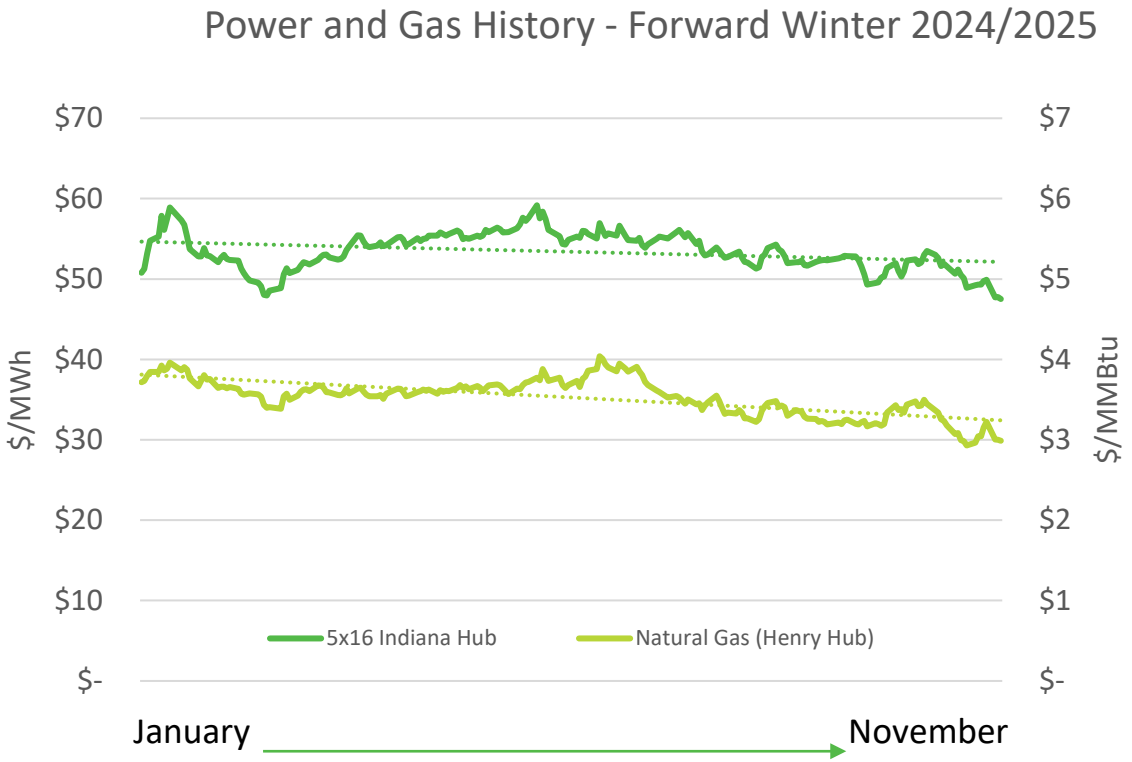


* Wabash Valley Power supports renewable energy by owning landfill gas and solar generation as well as purchasing the output from wind and solar facilities. Rather than incorporating these renewables into our own portfolio, we sell the environmental attributes, facilitating others' ability to achieve their environmental goals. While this doesn't allow us to claim this generation as renewable in our own portfolio, it is one more way we are supporting the growth of renewables in the marketplace.

Wholesale Power Cost Trend

2024/2025 WINTER TREND

- WVPA provides cost of service rates through a Formula Rate Tariff under FERC Regulation.
- Over/under collections trued-up annually.
- Through a disciplined energy hedging plan, Members exposure to volatility in spot power markets is minimal.
- Natural gas and power forward markets trending lower since the beginning of 2024.
  - Power ~$60/MWh - ~$47/MWh
  - NG ~$4/MMBtu - ~$3/MMBtu



EXTREME WEATHER EVENT MONITORING

- Established process to monitor national data to predict extreme weather risk through these factors:
  - Multiple RTO market prices
  - Temps in major cities
  - Planned generation resource outages
  - Wind output forecasts
  - Forecasted peak loads

- Consider options
  - Should we must run natural gas units? (Reliability)
  - Should we purchase power well in advance? (Affordability)

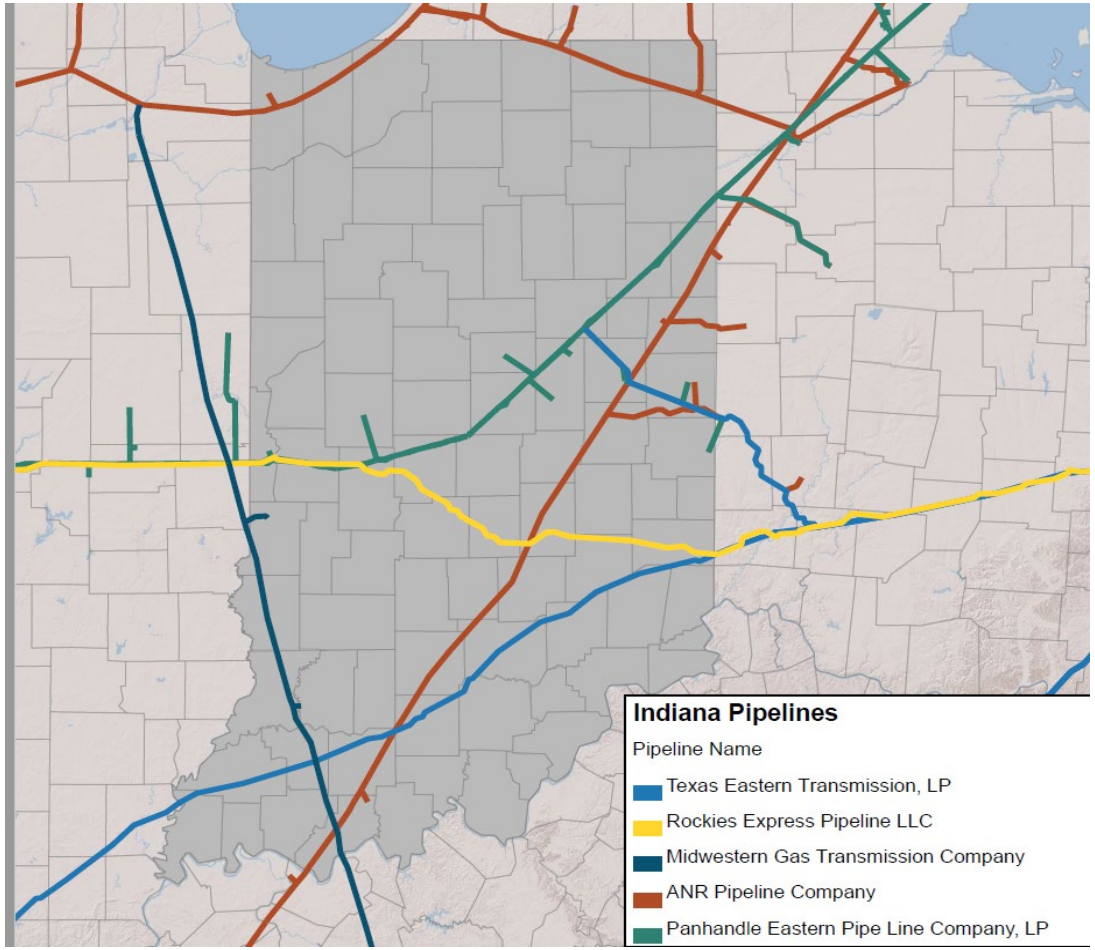
Fuel Management

FUEL INVENTORIES

01	Jointly Owned Coal Indiana	• Continuous collaboration with partners • Forecasting rail deliveries by month and coal burn • 65 days of full load burn of inventory • Manage coal pile objective through market offer strategy • Coal inventory currently at winter target level
02	Jointly Owned Coal Illinois	• Coal mine adjacent to coal plant • Maintain 30 days of inventory • Inventory to manage potential coal mine issues
03	Natural Gas	• Natural gas can't be stored in inventory on site • Contract with larger suppliers that own natural gas transportation and storage • Historically, WVPA has not had issues with physical delivery of natural gas

NATURAL GAS – PIPELINE NOMINATIONS

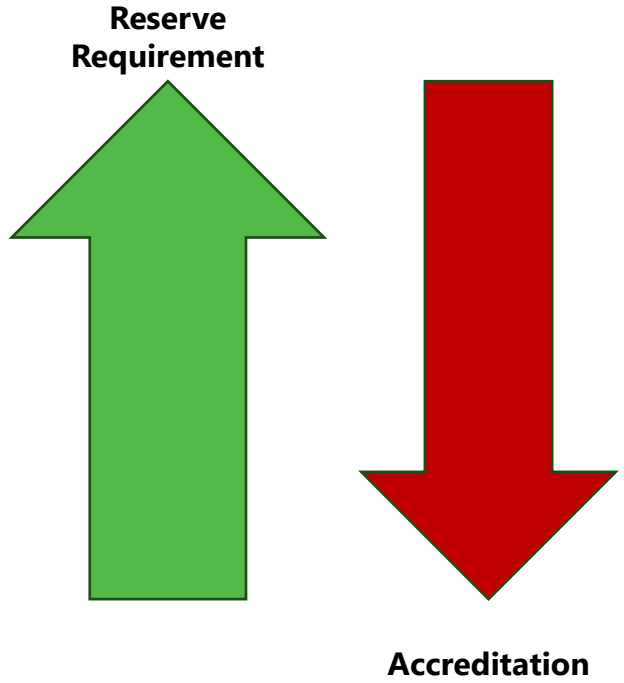
- WVPA has ownership in combined cycle and combustion turbine resources.
- Interconnected pipelines include ANR, NGPL, and Midwestern Gas.
- Natural gas nomination cycles under normal conditions typically do not create issues offering natural gas resources into the MISO Day-Ahead and Real-Time markets.
- Extreme cold weather events challenges:
  - Resources committed on day-ahead basis vs. days in advance.
  - Natural gas pricing can be extremely volatile, for real-time spot purchases.
  - Natural gas and power markets are not aligned.
  - Power markets clear daily (HE 1 to HE 24) and pipelines schedule flows to begin @ 10 am.
  - Power plants scheduled in real-time stress pipeline conditions and create challenges to manage line pack.



MISO Observations

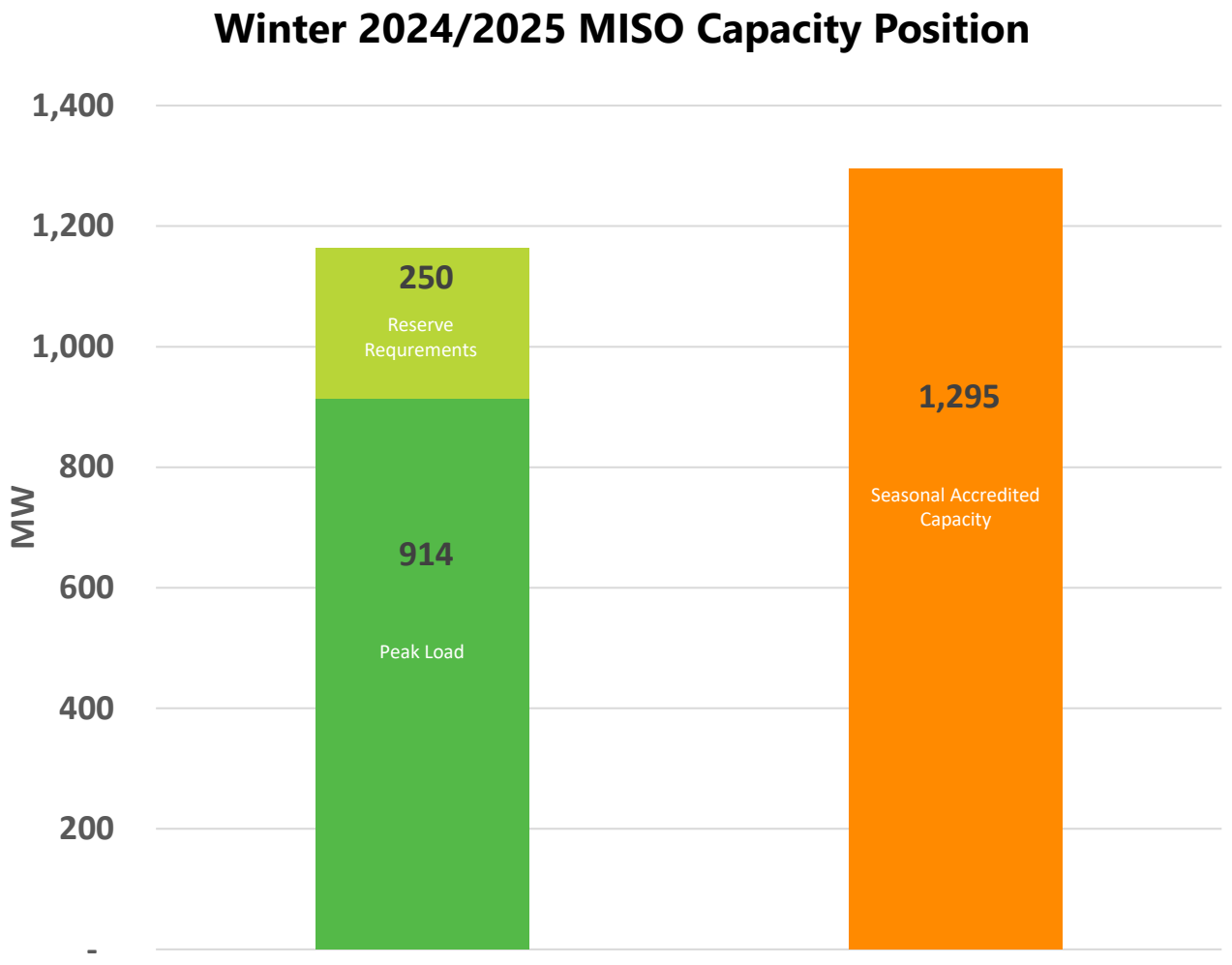
SEASONAL ACCREDITATION CONSTRUCT

- Planning reserve margins (PRM) for this season.
  - Winter: 27.4% for PY 24/25
- Solar accreditation is virtually zero in the winter.
- Management of unit outages that are scheduled for more than 31 days.
- Load Modifying Resources (LMRs) in winter include C&I and water heating load.
- Ability to respond to significant market rule changes.
  - Lack of liquidity in bilateral capacity market.
  - Long build cycles.
- Future changes to accreditation methodology prompt uncertainty.



WVPA WINTER CAPACITY

- WVPA owns and contracts for enough capacity to meet our total obligations (peak demand + reserves).
- WVPA serves member load across three states (IN, IL, MO).
- WVPA's resources are primarily in IN and IL.
- The majority of WVPA's load responsibilities in MISO footprint.
- Forward planning increasingly more complex.
- **WVPA will have sufficient capacity for several years**, under current accreditation methodology and reserve margin requirements.
- ~10% of WVPA member load in PJM footprint and served via full requirements agreement.



Winterization Plans

WINTERIZATION PLANS

- All operating companies for WVPA owned generation have formal winterization plans and procedures, adhering to NERC's Extreme Cold Weather Preparedness and Operations standard.

- Prior to winter season start each year (late summer/early fall), meetings held with operating staff review the winterization plans, associated Preventative Maintenance ("PM") activities, and the need for any necessary changes or lessons learned from the prior season.

- Plans and PM procedures reviewed immediately prior to the arrival of each potential winter weather event.

- All planned fall outages scheduled to be completed by December 15th.

WINTERIZATION ACTIONS

All Plants

1. Turn on and test heat trace circuits, strip heaters and space heaters
2. Inspect exterior piping, valves and sensing lines including associated heat tracing, wiring and insulation (especially on steam, water, instrument air systems)
3. Inspect and test building/enclosure heating systems, including louvers and vent fan operations
4. Check instrument air dryers and blow down lines
5. Drain water lines as necessary
6. Check salt, sand, and ice/snow melt supply inventories
7. Check inventory on tarps, heat lamps, supplement heater fuels
8. Check PPE inventories (gloves, ice spikes, etc.)
9. Build scaffold-supported weather enclosures around outside equipment prone to freezing
10. Contract for snow and ice removal

WINTERIZATION ACTIONS

Coal Plants

- Inspect coal conveyor antifreeze systems
- Inspect environmental reagents freeze protection systems
- Rent asphalt grinder to break up frozen coal
- Inspect train car deicer/thaw shed enclosure heaters

Natural Gas Plants

- Inspect and test bus duct heaters
- Inspect vaporizer on ammonia system
- For combined cycles, keep auxiliary boilers in good condition, sparge HRSG's, and keep water moving in cooling towers and piping
- Drain HRSG's as a last resort and/or install duct balloons in stack in case of a hard trip

BEFORE / DURING EVENT

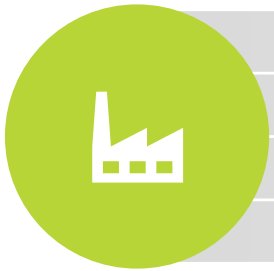
BEFORE

01 Communicate with local authorities on prioritizing road treatment for common routes to facilities.

02 Communicate with natural gas suppliers on pipeline operations/conditions.

03 Walk down facilities and revisit winterization plans and checklists.

04 Assure adequate staffing and readiness Check food supplies/cots - Coordinate site snow removal contractors



During

01 Closely monitor critical instrumentation and equipment for freezing

02 Snow removal and deicing of pathways and equipment

03 Increased communication with fuel suppliers, ACES, plant personnel and RTOs

04 Implement Emergency Power Supply Plan as necessary to respond to grid conditions

Questions?