

**I&M**-Winter **Reliability Forum** October 28, 2021

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## **Introductions**

**Steve Baker** | President and COO

Shane Lies | Site Vice President, Cook Nuclear Plant

Tim Kerns | Vice President, Generating Assets



## **Executive Summary**

- Generation Preparedness
  - Nuclear
  - Fossil/Hydro/Wind
  - Solar
  - Fuel Supply
- T&D Preparedness
- Customer Focus and Engagement



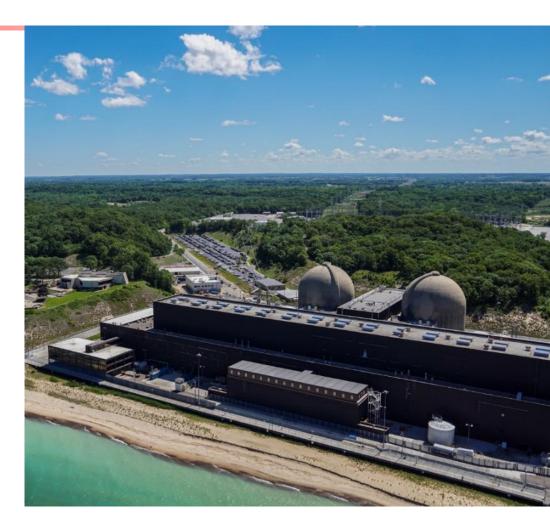




## **Nuclear Generation**

#### **Nuclear Generation**

- Winterization Procedure
  - Readiness action timeline is March 1 Nov 1
    - Open work order identification / resolution
    - All exterior openings closed/covered
    - Heat trace functionality checks
    - Contingency heaters staged
    - Temperature monitoring performed
    - Shiftly operator walk downs
  - "Approaching Extreme Weather" Procedure
- Fuel availability
  - 18 month fuel cycle





An AEP Company

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## Fossil Generation Cold Weather **Preparation Activities**

Sept 1<sup>st</sup> to Nov 15th

- Cold Weather Preparedness & Operation Plan Review & Execution started.
- Site Cold Weather Liability Review and lessons learned initiated.
- Cold Weather **Preparedness** Training (annual refresher)
- Site Winter Preseason Preparedness **Activities Completed**

5 days prior to predicted CWA

- Facility initiates discussions to determine expected Weather Alert Level (Temperature and Duration) and actions required associated with facility standard work and current operating conditions.
- Appropriate communications to employees, dispatch, and plant critical suppliers. All departments to review and perform actions associated with facility standard work.

Level 1 (<30 F) Cold **Weather Alert** 

- •Communicate to all Supervisors in 6:30 Daily Planning Meeting in accordance to Facility Winter Preparedness Policy/Procedure of predicted conditions.
- Update and communicate "Stop Light Notification" system on daily basis to correspond with weather conditions.
- Complete readiness activities according to Policy/Procedure.
- Stage additional portable heating equipment and place in service; monitor & refuel as required.
- Monitor ambient temps on O/S unit(s).

Level 2 (<20 F) **Extended Cold Weather Alert** 

- •Level 1 items continue.
- Verify all roll-up doors throughout facility remain in closed position.
- Verify all doors in boiler house proper remain in the closed position.

Level 3 (<10 F) Severe **Cold Weather** 

•Level 1. 2 & 3

- •Level 1 & 2 activities continue.
- Ensure Turbine Room Temp remains above 32 F on O/S unit(s).
- Monitor ambient conditions on units and out buildings. Add additional portable heating as needed.
- Communicate with **Production Optimization** to schedule appropriate load points to manage reliability of units ( cooling tower basin temps).
- •Implement Standard Work RKSOP 8-5 -Winter Preparation & Extreme Ambient Temps.

activities continue.

Level 4 (< 0 F) Cold

**Weather Emergency** 

Alert

- •Fire Auxiliary Boiler as needed for additional heat loading.
- •Start up out of service unit(s) as needed for additional heat loading.

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## Generation: Fuel Availability and Hedging

- Fuel Supply commitments and inventory available for Rockport
- As additional fuel is needed the market is solicited to determine supply availability
- Regular discussions are held with suppliers/carriers on supply commitments and inventory levels during extreme weather conditions including diverting supply to/from other AEP plants as needed
- Additional transportation assets are secured to provide for reliability during extreme weather events



## **Transmission and Distribution Facilities**

#### T &D (Wires) in Indiana

- Snowfall, ice, extreme temperatures
- Event/Load Shed preparation
- Vegetation management
- Forecasts / Prediction Model
- Labor Resources / Mutual Assistance

#### **Cold Weather Preparedness**

- Ice loading and conductor galloping mitigation
- Substation equipment malfunction
- Asset Health/SCADA deployment
  - Capital Sparing
  - Heater checks
  - SF6 pressure checks
  - Control building HVAC verification
- Review and address system conditions ahead of seasonal risks







# T&D: Proactive Management of Extreme Weather

#### **Weeks Ahead**

- Transmission reviews load forecasts and determines which outages are at risk
- Begin re-verification of station equipment operability

#### **Days Ahead**

- Verify contractor availability
- Begin to assemble/assign emergency response crews
- Verify emergency response vehicles, especially those with diesel engines, have engine heater availability
- As appropriate, begin to cancel outages based on grid predication
- Assemble ICS response structure
- Re-Certify spare material / equipment availability

#### **Day Ahead**

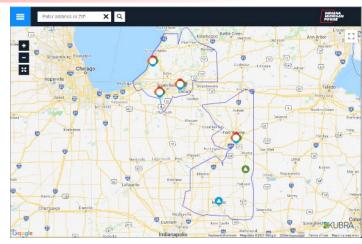
- Activate ICS response and crew assignments
- Verify grid load "as is" conditions and further cancel outages as required

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## **Customer Focus / Engagement**

- Event Prediction Preparation
  - AEP Meteorology
    - constantly monitors weather patterns
  - Incident Command Structure (ICS)
    - Provides predictable, scalable approach
    - Accommodates adjustment as changes occur
  - Damage Assessment & Hazzard Mitigation occur immediately
- Customer Interface
  - Mobile Alerts-provides ETR updates
  - Social Media/One Voice-provides current "picture" of recovery
  - I&M Website provides geographical outage information
- Technology Improvements
  - AMI deployment
  - Drones developing use for line patrols: assess & assign







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# Questions