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# **Summer Preparedness 2022**

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AMERICAN ELECTRIC POWER



**Executive Summary** 

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- Prepared with adequate resources and infrastructure to meet customer needs during Summer 2022
- Proactively reaching out to communicate with and engage customers







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### Indiana Michigan Power Resource Diversity

#### **Diverse set of Generation Resources and PPAs:**

- 2,278 MW Cook Nuclear Plant
- 2,223 MW Rockport Coal Plant
- 22 MW of Hydroelectric Power
- 35 MW of Universal Solar
- 187 MW OVEC ICPA
- 450 MW of Wind Power under PPA;



- 50 MW from the Fowler Ridge II Wind Farm in Benton County, IN
- 100 MW from the Wildcat Wind Farm in Madison County, IN
- 200 MW from Headwaters Wind Farm in Randolph County, IN

### **I&M Demand-Side Resources:**

- Energy Efficiency Programs
- $\sim$  300 MW of Interruptible and Demand Response Load

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Carbon-free System-wide

**Generation In 2021** 



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# Summery Energy Outlook PJM Unforced Capacity (UCAP)

I&M has sufficient capacity to meet its load obligations for Summer 2022 with adequate reserve margin

MWs	2022 Capacity
Description	(MW)
Fossil and Nuclear	4,289
Demand Response	285
Intermittent (wind, solar, hydro)	85
Total Capacity	4,659



Estimated I&M Summer 2022 Capacity Position



### PJM-2022 Watch List

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- I&M does not anticipate RTO changes to impact the ability to meet 2022 summer load obligations.
- I&M is monitoring ongoing activities in PJM related to:
  - Comprehensive review of capacity market
  - Timeline for interconnection of new generation resources
  - Integration of DER's into capacity, energy, and ancillary service markets

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# Summer 2022 Preparation: Cyber Security

### US Industry & Government are still on heightened alert for Russia

- AEP I&M, like many utilities maintain 24x7 heightened level to monitor/block cyber attacks
- AEP is leader in Threat sharing with government, Energy sector, Banks and Communications
- Active threat sharing and collaboration are key to a unified front against threat actors

### **Russia Primary Cyber tactics:**

- DDOS Attacks flood of traffic to disable capabilities
- Wiper Malware malicious code that destroys systems
- Phishing email social engineering to gain access or distribute malware



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## Summer 2022 Preparation: Fossil Generation

### **Fossil Generation**

- Fuel Suppliers: I&M anticipates having adequate supply on hand for Summer 2022
- Monitoring transportation constraints & evaluating alternative options
- Planned Outages: Spring outages to be complete by Mid-May 2022



#### INDIANA MICHIGAN POWER

An AEP Company

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# Generation: Proactive Management of Extreme Weather (Summer Peaking)

#### Weeks Ahead

- Address notable known liabilities during Spring touch up outages.
- Verify coal, chemical and reagent inventories and delivery schedules align with anticipated operating plan.
- Heat Stress Awareness Policy review with employees.
- Review Severe Weather Procedure in Emergency Action Plan and execute tornado drill.
- Complete corrective and preventive maintenance of critical equipment including (blowers/compressors, circulating water intake screens and air filters, coal conveying equipment, etc.
- Prepare facility for summer operation by reversing winterization activities such as blanking of building vents/fans, adjusting thermostats, etc.
- Preventive Maintenance on HVAC systems in critical areas.

#### **Days Ahead**

- Increase operations rounds on critical equipment, monitoring of key trends in the Plant Information System
- Ensure availability of needed staffing, setting up overtime as needed well in advance.
- Increase monitoring for biofouling in cooling towers
- Establish staffing augmentation as needed.

#### Day Ahead

- Work scope review with respect to unit trip potential (risk), and limit tasks as necessary
- Extend delivery times/days for reagent truck drivers as needed
- Plan work and staffing according to heat stress policy – evaluate heat index and implement work / rest cycles and adequate supply of hydration.

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# Summer 2022 Preparation: Nuclear Generation

### **Nuclear Generation**

- Fuel suppliers
  - Adequate fuel supply for 4 years (through 2025)
  - No direct dependence on Russia
- Planned/maintenance outages
  - Unit 1 Spring refueling outage
- Severe Weather
  - Summerization procedure
  - Severe weather procedure
  - High heat, high winds, rough lake





### Transmission & Distribution Operations: Extreme Weather Preparations and Response

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#### Annual Preparedness

- AEP is embarking on a Storm Governance project, focusing on opportunities to enhance restoration strategies, I&M included.
- Weekly meeting with Regional Mutual Assistance Group (RMAG) to review issues
- Weekly meeting with AEP Storm Coord. team to review general storm preparation business.
- I&M Incident Command System (ICS) is regularly updated with role assignments and back-ups, and planned absences are reported to ensure coverage.
- ICS General Training will be reviewed in 2022. Training for individual roles will be implemented to at least the "Unit Leader" level.
- At least two "mock events" are planned to test I&M storm response.

#### **Days Ahead**

- Weather alert is received from AEP Meteorology with prediction model data for a forecasted weather event.
- AEP Mutual Assistance schedules a meeting to review.

- I&M Leadership reviews forecast.
- Based on severity of forecast, ICS is activated, internal and base load resources are put on alert, and AEP Mutual Assistance is contacted to fill outside resource requests.
- ICS Logistics and Planning sections engage to prepare. Planning section sets up structure for strategic interface with other sections and situational analysis to prepare for resource mobilization.

#### **Event Response**

- Incident Command System begins managing restoration efforts.
- Begin hazard assessment and damage assessment as a first response.
- Operations Section, which has been engaged, initiates active restoration based on Planning Section data.
- Customers are updated via social media and mobile alert application. Customers experiencing outages. receive restoration time estimates via updates to ETR (estimated time of restoration) through mobile app.
- IURC receives regular updates during event restoration.



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## Summer 2022 Preparation: Indiana Tree Related Outages



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# Summer 2022 Preparation: 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