

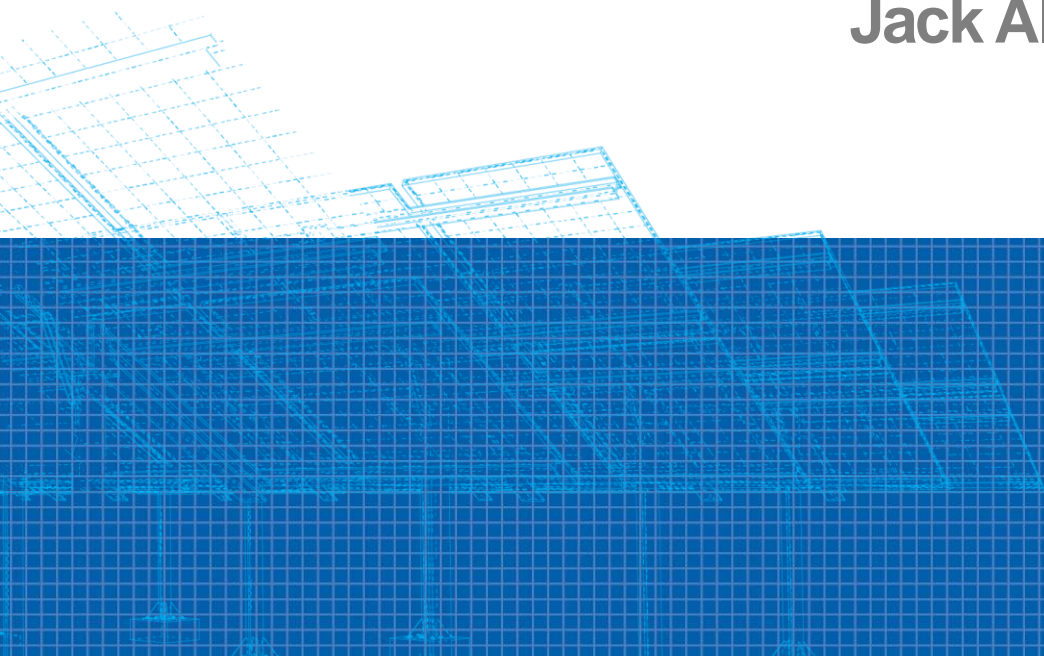
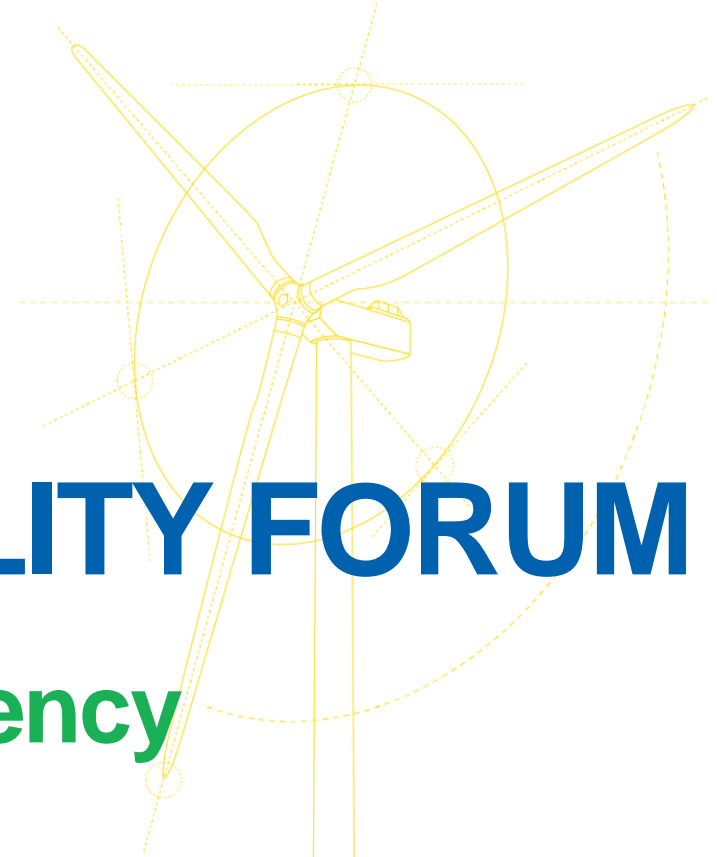


IURC 2024 SUMMER RELIABILITY FORUM

Indiana Municipal Power Agency

Jack Alvey, President and CEO

May 9, 2024



AGENDA



IMPA Overview



2024 Summer Preparedness

including severe weather events & outage restoration processes, utility workforce, supply chain concerns



Resources



RTO Observations

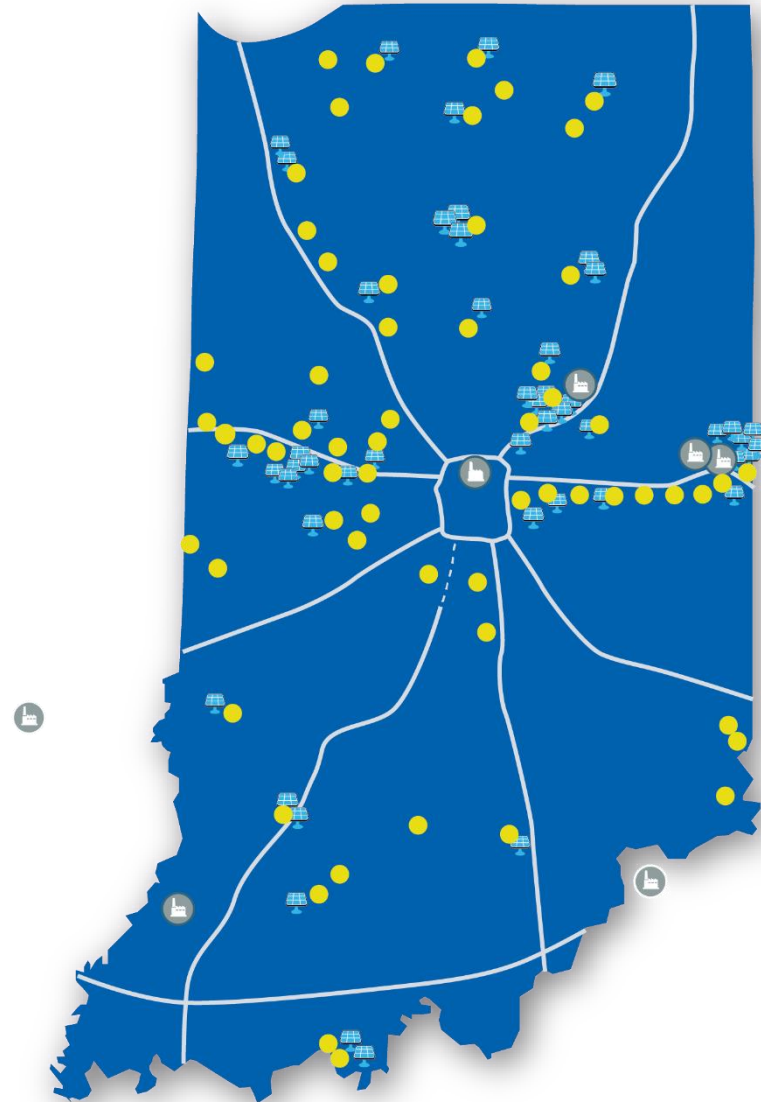
IMPA OVERVIEW

- IMPA is a wholesale power provider
 - Generation assets
 - Purchased power contracts
 - Deliver power to our member communities
 - 1200 MW system load
- IMPA was formed as an Indiana joint action agency in 1980 by 11 communities & currently at 61 members
 - Created to use economies of scale to acquire, construct and finance a reliable supply of low-cost power
- Created by Indiana state statute
- Not-for-profit, political subdivision of Indiana
- Municipal electric utilities distribute the power to residents, businesses and industries
- IMPA operates in BOTH the MISO and PJM markets



IMPA OVERVIEW

- Longstanding mission - Provide low-cost, reliable and environmentally-responsible power through a diverse power supply portfolio
- Wholesale electric rates are among the lowest in the state
- Serve approximately 350,000 people in 61 communities
- Financially strong
 - Annual revenues of approximately \$500 million
 - Total assets, approximately \$2.0 billion
 - A1/A+ Bond Ratings



IMPA PORTFOLIO OF RESOURCES



Gibson Station

- IMPA owns 156 MW
- Co-owned with Duke Energy and Wabash Valley Power Alliance



Trimble County Station

- IMPA owns 164 MW
- Co-owned with LG&E and Illinois Municipal Electric Agency



Prairie State Energy Campus

- Online in 2012; Mine mouth plant with 30-year supply of coal
- IMPA owns 200 MW (12.64%) of plant's 1600+ MW output



Whitewater Valley Station

- Operational control assumed by IMPA in 2014
- Two generating units (35 MW and 65 MW)



Peaking Stations

- IMPA owns 7 combustion turbine units – approximately 400 MW
- 3 in Anderson, 2 in Richmond, 2 in Indianapolis



Alta Farms II Wind Farm

- 75 MW PPA
- Located in Dewitt County, Illinois



Solar

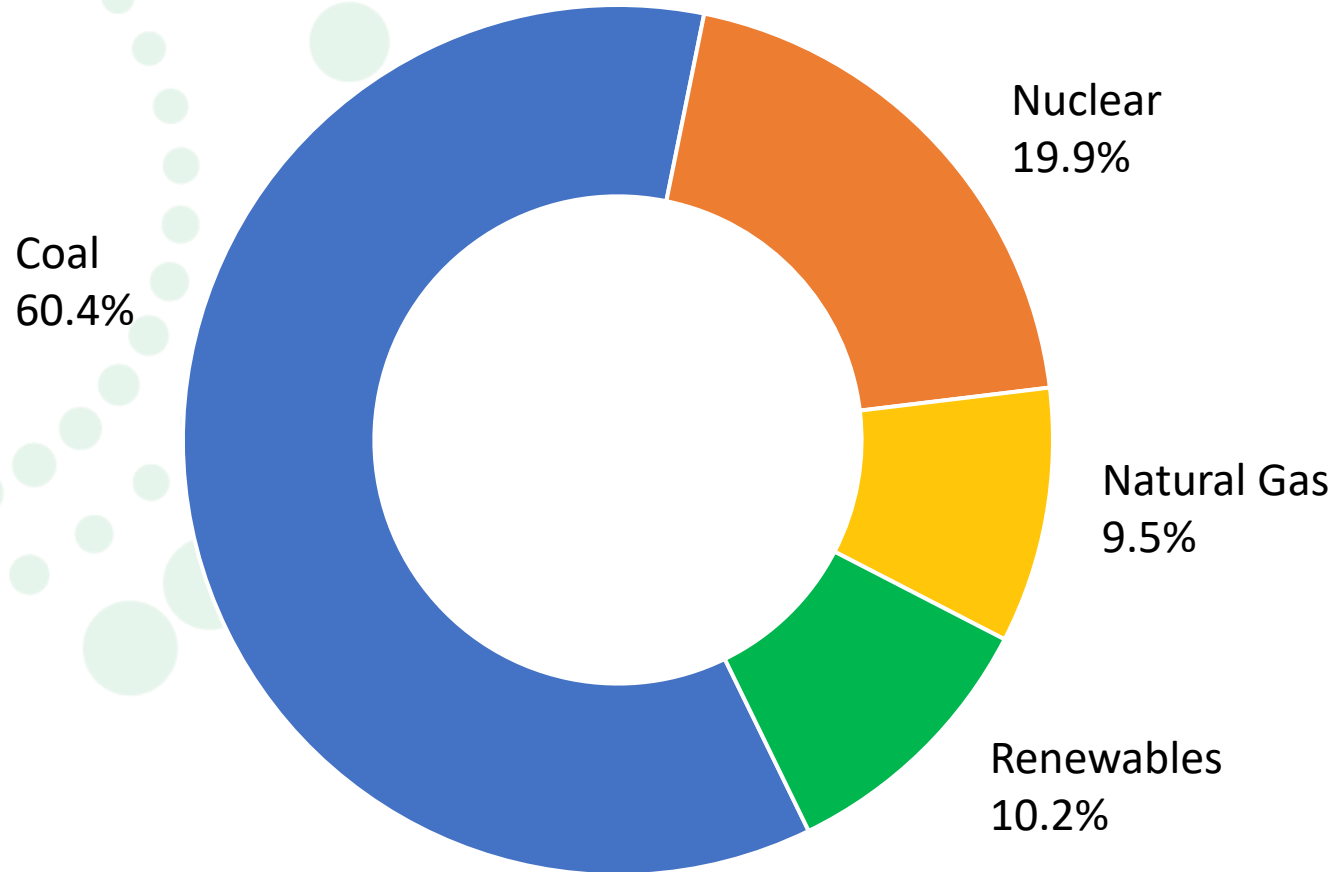
- 50 parks online in 29 member communities
- Total capacity of 196 MW; additional 13 MW expected in the next 1-2 years
- Environmentally-responsible and helps to keep future rates stable



Joint Transmission System

- Indiana and Ohio
- IMPA owns approximately 5.5% of the Joint Transmission System and has invested approximately \$83 million in transmission assets
- Covers approximately two-thirds of the state of Indiana

CURRENT IMPA POWER SUPPLY FUEL SOURCES



FUEL AVAILABILITY – SUMMER 2024



Coal Inventories

- 7 out of 7 units – 31 days



Natural Gas

- Reliant on pipeline availability and local gas distribution company
- National natural gas inventory greater than 5-year average (as of mid-April 2024)



Fuel Oil – Peaking Units

- Anderson Station (CT) – 60+ hours on hand
- Richmond Station (CT) – 60+ hours on hand

SUMMER PREPAREDNESS GENERALLY

- Outage Schedule
 - All outages complete by May 12
- Operations Personnel
 - Schedule modifications as needed
 - Hot weather alerts – staffing 24/7
- Heat stress training
- Peaking and intermediate units ready to run when called upon



IMPA FACILITIES – WATER-RELATED AVAILABILITY

- Combustion Turbines
 - Very low risk: Low volume users supplied by potable water utilities
- Coal Plants
 - Low Risk: No once-through cooling systems. Makeup water sourced from local rivers to supply cooling towers and lakes
 - Gibson Unit 5 utilizes cooling lake
 - Trimble County units utilize Ohio River for makeup
 - Prairie State Energy Campus includes a raw water pond with capacity to meet 30 days of plant water needs in the event river levels drop too low

SEVERE WEATHER EVENTS

- Indiana municipal electric communities have a strong mutual assistance network – utility helping utility, community helping community
- IMPA provides operational assistance to IMPA members
 - IMPA Service Corp provides assistance to all IMPA members as needed
 - IMPA Service Corp has maintenance agreements with 15 member communities to perform ongoing operations & maintenance on member electric distribution systems – emergency/non-emergency
 - Ongoing vegetation management activities – IMPA maintenance service agreements and member utility programs have resulted in reduced frequency and severity of weather-related outages for municipal utilities
 - Mutual aid response from several municipal communities to other municipals throughout Indiana – members helping each other



RESTORATION PROCESS

HOW DO THE LIGHTS GET TURNED BACK ON



- Transmission interruptions
 - IMPA communicates information regarding outages from transmission providers to members as received, including expected restoration times
 - Follow-up communication with members regarding cause for outages
- Restoration protocols
 - Safety is priority – Public citizens and restoration lineworkers
 - Primary restoration focus on transmission and distribution system backbones
 - As possible, critical loads restored first – hospitals, utilities, communications
- Customer Education & Awareness
 - Following widespread outage events, discuss with members and provide information regarding restoration process; share lessons learned

CUSTOMER COMMUNICATIONS & SUPPORT

- Municipal utilities offer customers a variety of support through budget billing & payment plans, energy efficiency assistance, other local support
- Local, community presence – helping your neighbor
- Action alerts sent to customers for awareness – IMPA and utility specific



ADDRESSING WORKFORCE RETIREMENT CHALLENGES

- IMPA recognizes the challenge of balancing an aging industry workforce with maintaining skilled personnel to continue operating a reliable system
- IMPA continually seeks to attract and retain high-level talent that is committed to our mission of providing a low-cost, reliable, environmentally responsible power supply to our member communities
 - Benefits – IMPA has an excellent health care and retirement package
 - Tuition Reimbursement – IMPA offers tuition reimbursement to employees pursuing higher education degrees
- Training
 - IMPA provides extensive technical training to employees as we maintain and operate our diverse power generation fleet
- Apprenticeship Program
 - IMPA offers lineworker apprentice training program
 - Available to IMPA Service Corp and member community lineworkers

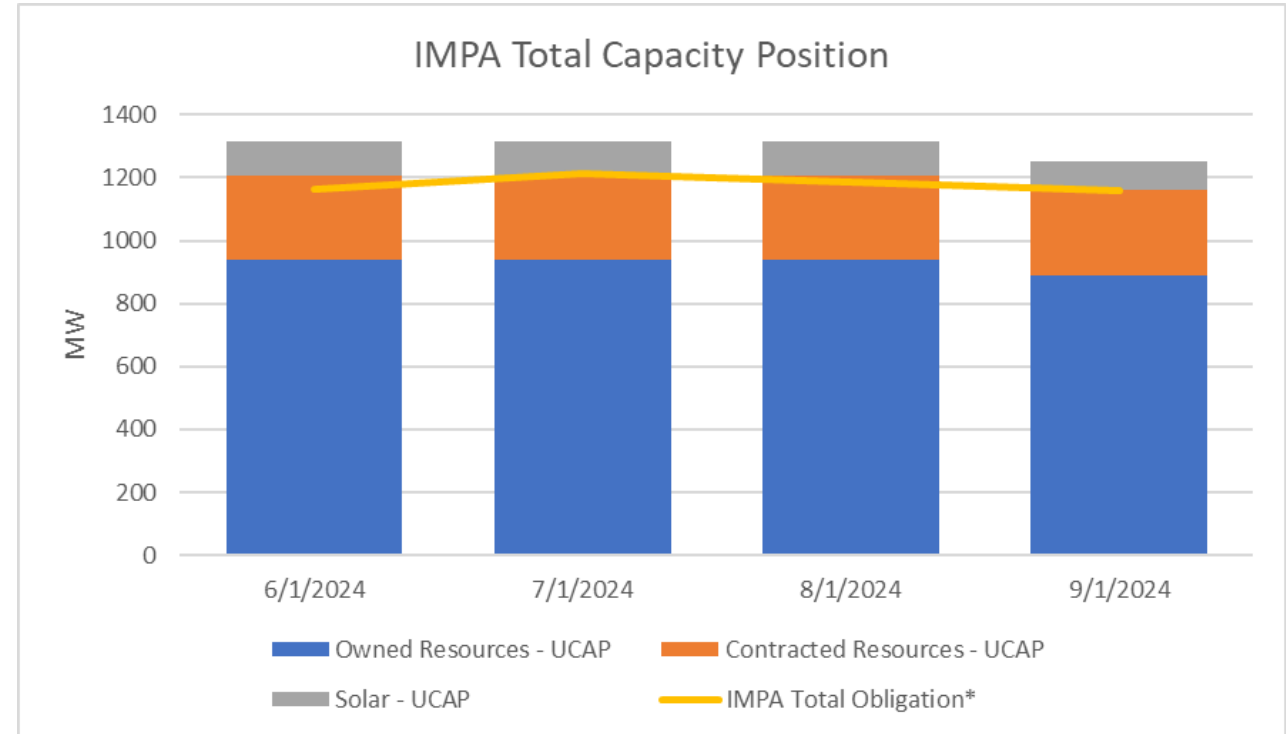


SUPPLY CHAIN CHALLENGES

- General improvement overall
- No known issues for generation
- Distribution Equipment
 - Distribution poles (wood) – 12 week lead time (stable)
 - Distribution pole mounted transformers – 52 week lead time (stable)
 - Distribution pad mounted transformers – 52 week lead time (stable)
 - Pad mounted transformers (3-phase) – 12 week lead time (trending up)

IMPA AGGREGATE

IMPA remains slightly long capacity for this summer.



IMPA Company				
	6/1/2024	7/1/2024	8/1/2024	9/1/2024
Owned Resources - UCAP	936.9	936.9	936.9	889.0
Contracted Resources - UCAP	271.5	271.5	271.5	271.5
Solar - UCAP	108.8	108.8	108.8	89.2
Total IMPA UCAP	1317.2	1317.2	1317.2	1249.7
IMPA Total Obligation*	1163.2	1214.8	1187.2	1160.1
Net Resource Balance	154.0	102.5	130.1	89.6

* Load Obligation is after RTO adjustments

MISO SEASONAL RELIABILITY CONSTRUCTS: IMPA PERSPECTIVE

- Renewable energy is expected to be roughly 9% of total generation over the June '24 – September '24 time period
 - No challenges expected for this summer stemming from variability in renewable generation
- IMPA has a robust CT fleet that enables it to respond quickly to changing system conditions (e.g., solar ramping down and wind drought)
 - Natural gas supply is usually less strained in the summer compared to winter
- Long term, we believe there is value in owning and operating dispatchable generation and continuing IMPA's diversified portfolio approach to resource planning.

MISO SEASONAL RELIABILITY CONSTRUCTS: IMPA PERSPECTIVE

- Seasonal Clearing Price Observations
 - Summer remains higher compared to low Winter clearing.
 - Shoulder season pricing seems to be driven by outage replacement rules.
 - Zone 6 (IN/KY) remains short capacity relative to its PRM
 - External capacity imports have helped ease shortage conditions
- The short implementation timeline has created an imbalance across seasons.
 - High winter reserve margins coupled with little to no solar accreditation results in utilities needing to focus on winter capacity needs.
 - Due to previously contracted solar PPAs, IMPA will likely be long capacity in the summer while needing to either build or contract for winter capacity need.
 - Bilateral market is not yet warming to single season risk (i.e., sellers seem to prefer selling the year).
- MISO's 31 Day Outage Replacement Penalty is arbitrary and excessively high.
 - Creates a negative incentive for resources to compress needed maintenance into shorter time window or postpone to the next season.
 - Could lead to artificially inflated clearing prices
 - May impact system reliability

RTO CHANGES GOING FORWARD: IMPA PERSPECTIVE

- MISO
 - Unpredictable Reserve Requirements
 - Reserve margins are set roughly 6 months before the auction for upcoming planning years
 - Lack of long term forecasted margin makes planning difficult
 - MISO's changing resource accreditation methodologies
 - Previously UCAP
 - Currently "Seasonal Accredited Capacity" (SAC)
 - Moving to Direct Loss of Load (DLOL) – FERC pending
 - Backlogged Generation Interconnection Queue
 - Recently approved FERC filing
 - Expecting a new filing to potentially cap entrants
- PJM
 - Non-functioning capacity market
 - Incentivizes capacity to "leave" the PJM market for neighboring balancing authorities
 - Backlogged Generation Interconnection
 - Electric Gas Coordination and ongoing CT operational challenges

SUMMARY

All preparations have been made for the 2024 summer, including fuel supply adequacy, completed planned and maintenance outages, and additional system checks to ensure reliable delivery of power to our customer base.

Questions?