



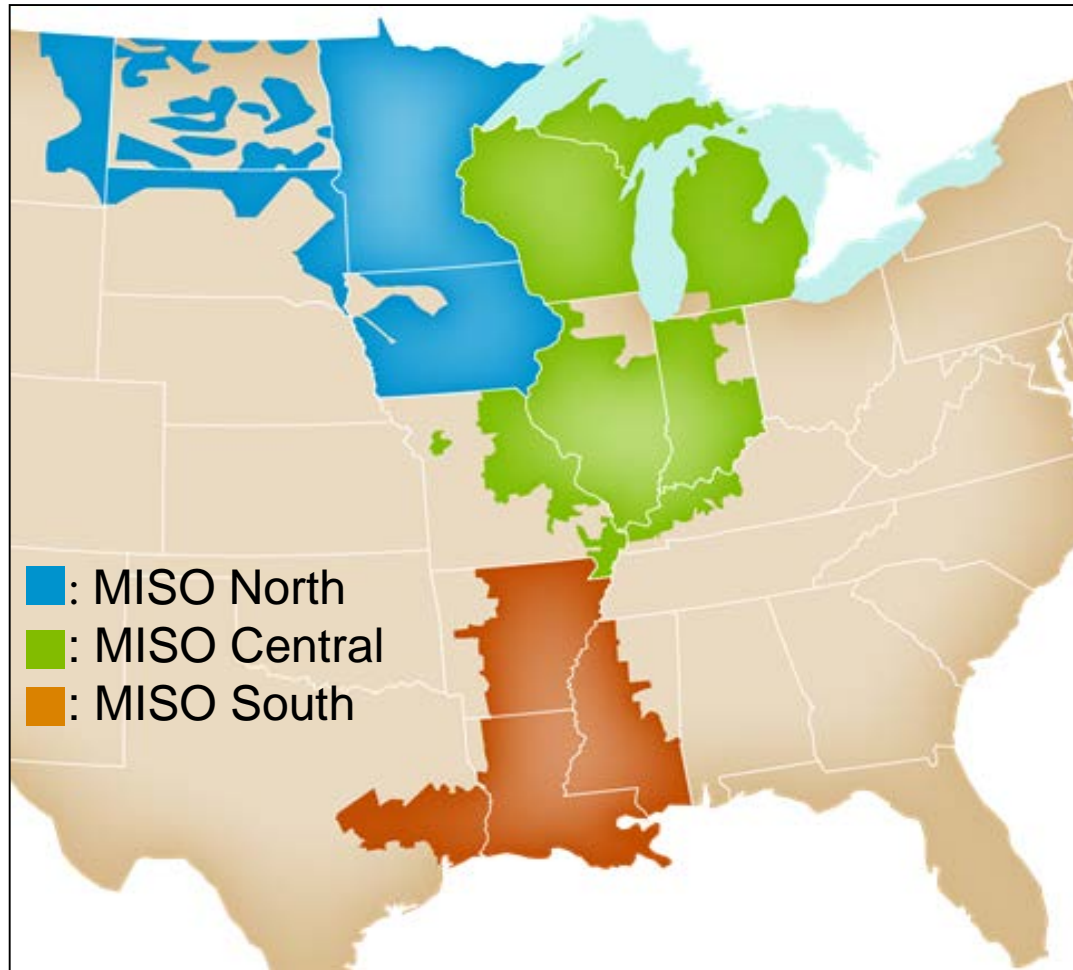
# MISO Perspective

UP Energy Summit 2017  
February 16, 2017

# Today's Topics

- Brief Overview of MISO
- What's changed since last year?
  - Status of System Support Resources (SSRs)
  - New Generation Projects in the Upper Peninsula
  - Presque Isle Update
- Long-term reliability in the Upper Peninsula
  - Resource Adequacy Outlook
  - Michigan Study Requests

# MISO is an independent, non-profit organization in 15 U.S. States and one Canadian province



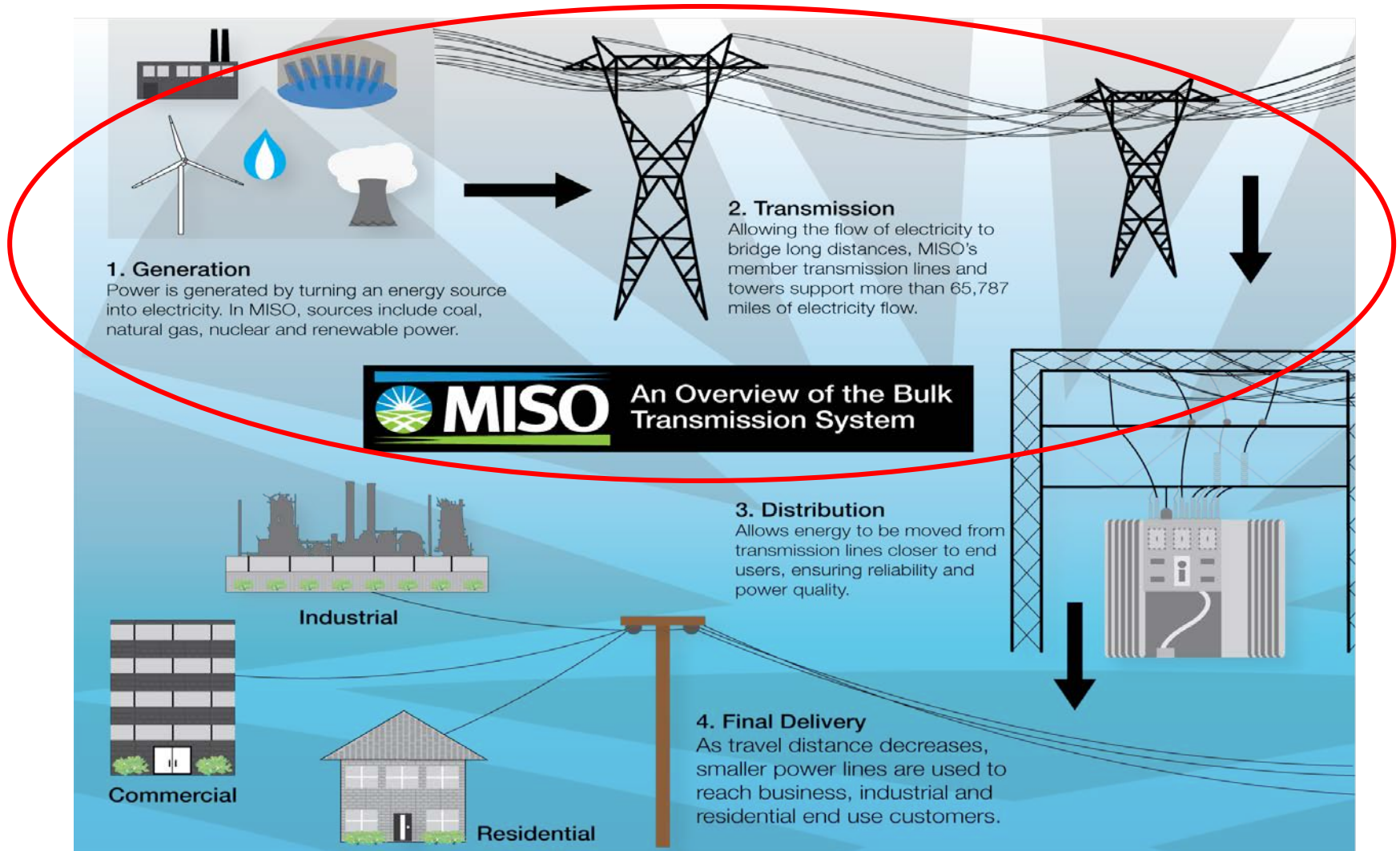
## MISO by-the-numbers

High Voltage Transmission	65,853 miles
Installed Generation	177,388 MW
Installed Generation	1,594 Units
Peak System Demand	127,125 MW

## Mission

**Work collaboratively and transparently with our stakeholders to enable reliable delivery of low-cost energy through efficient, innovative operations and planning.**

# MISO manages flows on the transmission system by directing generator usage



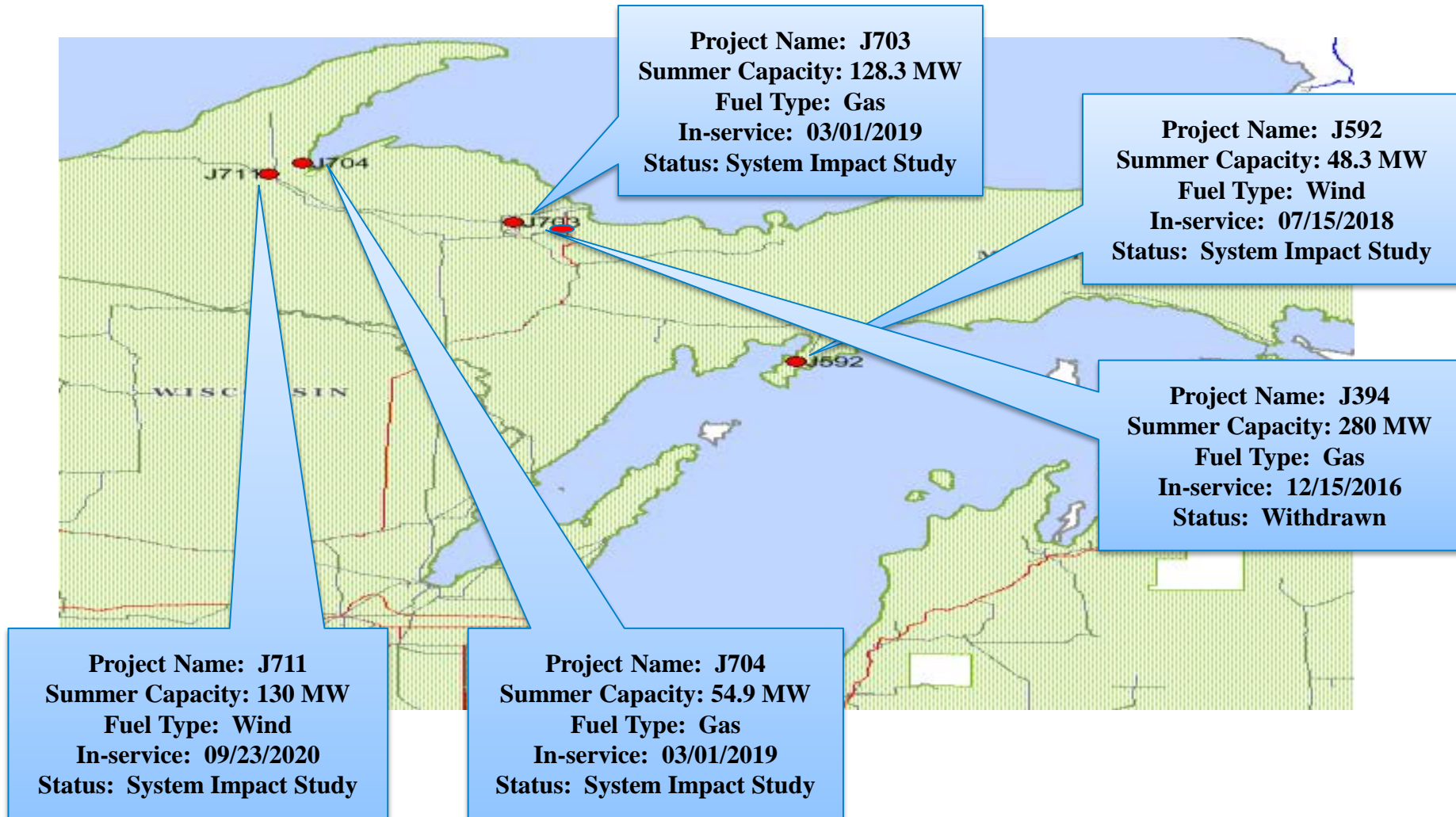
# Status of System Support Resources (SSRs)

**White Pine Unit 1**  
**Owned by: White Pine Electric**  
**Power, LLC**  
**Retirement**  
**No longer exists**  
**~20 MW**





# New Generation Projects

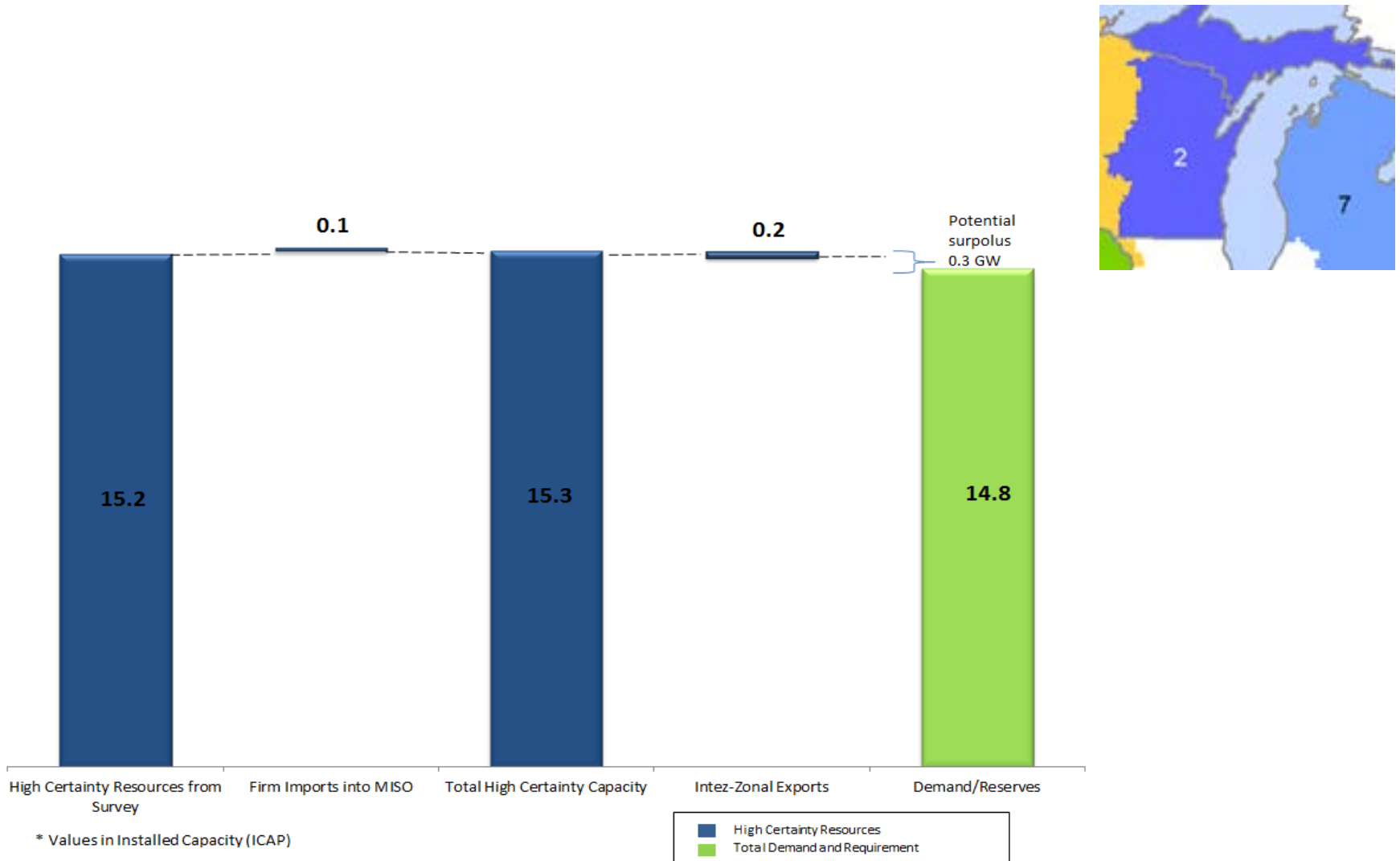


# Presque Isle Update

- Litigation still ongoing at FERC over fixed costs
- Presque Isle reallocation methodology approved at FERC
  - Suspended until litigation finalized
- Presque Isle still expected to retire in 2020



# Resource Adequacy Outlook 2021 for Zone 2

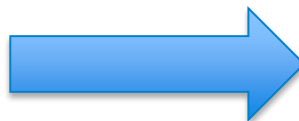
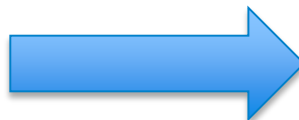
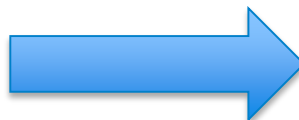




# Michigan Study Requests

## Phase 1

- Michigan Public Service Commission and the Michigan Agency for Energy requested a study be performed to help the State of Michigan better understand the impacts of declining reserve margins on emergency situations.
- The study focused on Fermi 2 and Palisades Nuclear Power Plants being offline and hotter than normal weather conditions in the Lower Peninsula for the summer of 2018
- The results of the study were released on January 31, 2017, and the results indicate that if all existing generation remains online, Michigan would be able to meet summer 2018 requirements.
- Demand response programs were also determined to be the most cost-effective mechanism to bridge any gap for resource needs.



## Phase 2

- Governor Snyder and MAE requested a study to help Michigan understand the potential production cost savings, reliability, and resource adequacy benefits of transmission including increased import capability, and generation expansion in Michigan.
- The study will analyze near and long term transmission expansion options to better connect the Upper Peninsula of Michigan to the Province of Ontario as well as to the Lower Peninsula of Michigan.
- The study will begin in late-February 2017 and build upon the work that was completed in Phase I.
- MISO expects the transmission analysis study to take about a year to complete

# Questions?



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