

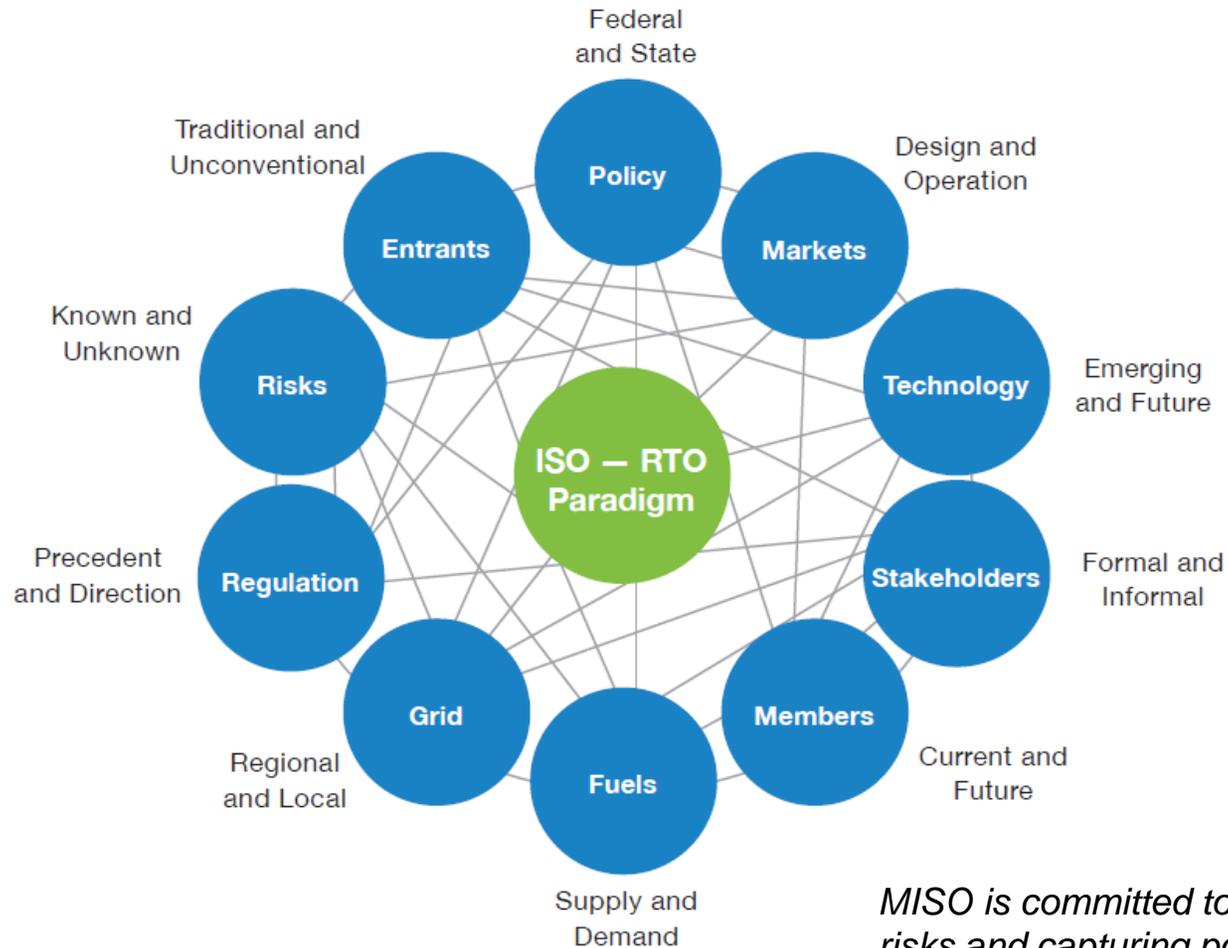
# **CEE 21st Annual Meeting/Think Day, December 7-8, 2016**

***Electric Power Issues, Part 2 – What Future for  
Competitive Markets?***

**MISO presentation**

# As the electric industry continues to change, many challenges and opportunities are created for MISO and its members

## Externalities

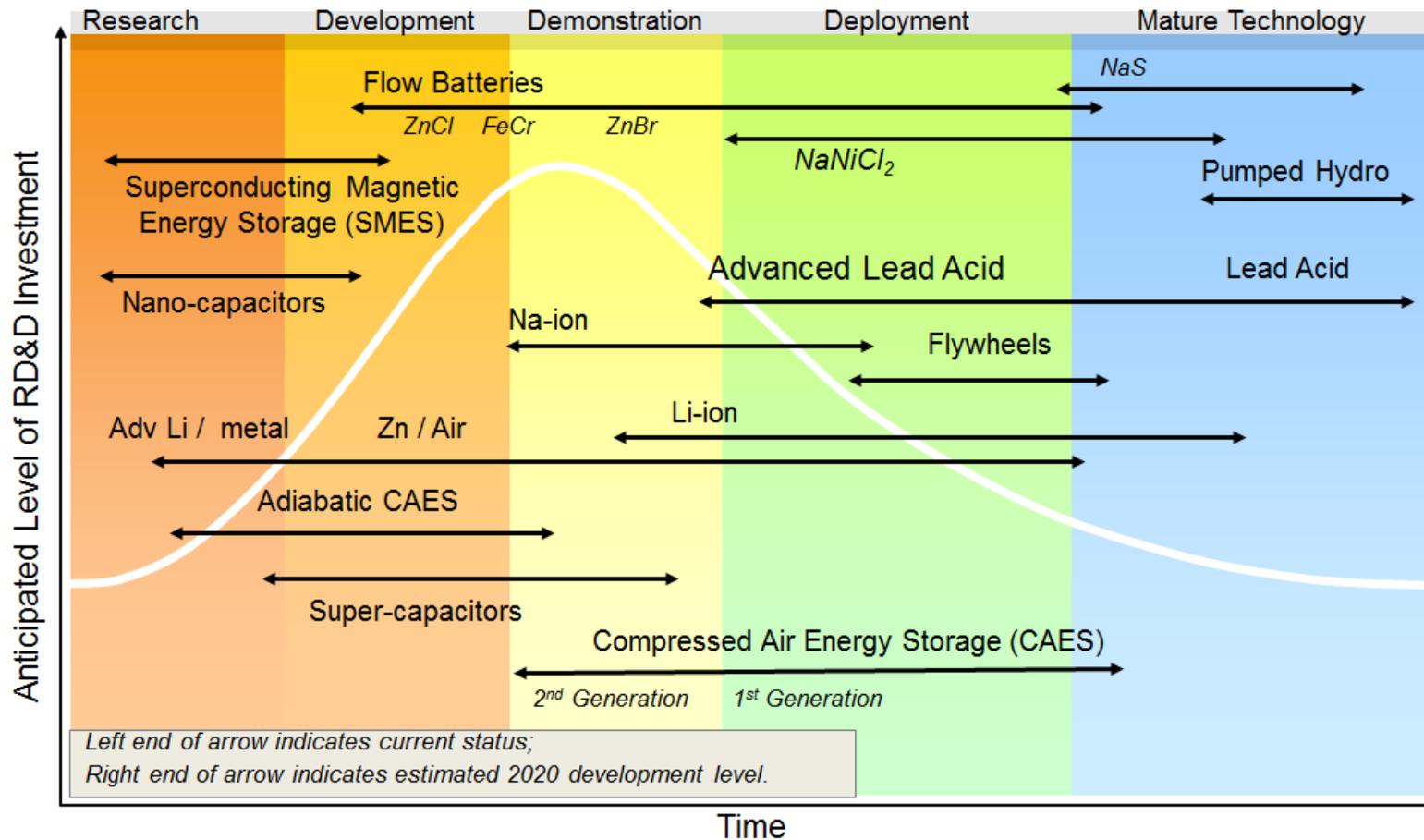


*MISO is committed to mitigating the risks and capturing potential value afforded by shifts in the industry*

# Need to research and partner with stakeholders now, ahead of the technology curve

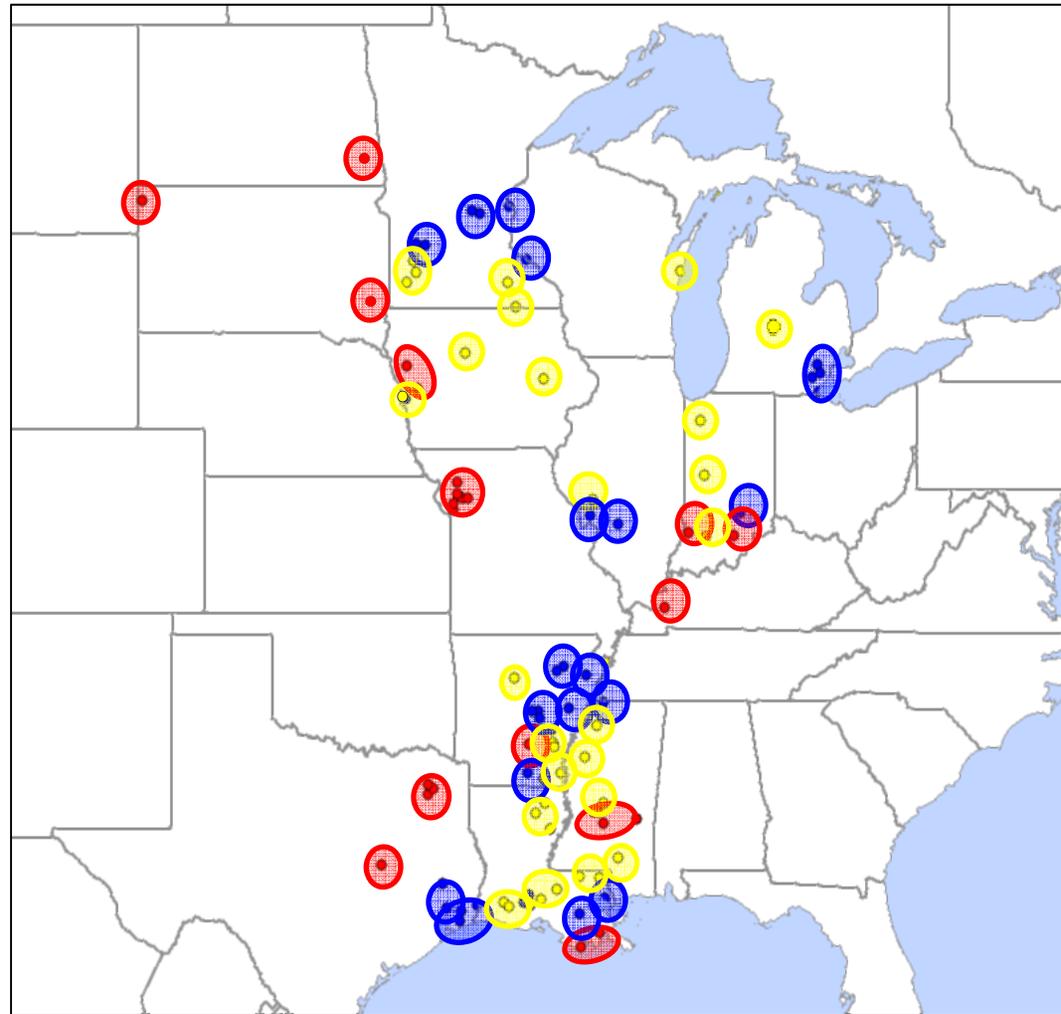
- Utility scale energy storage
- Utility scale solar
- Distributed Energy Resources
- High Voltage Direct Current (HVDC) Transmission
- Synchrophasors

# Energy Storage technology advancement projected; adoption is growing where policy is supportive



# Minimal solar penetration today, but economics and public policy are driving to higher penetration potential

Solar Generation Queue locations



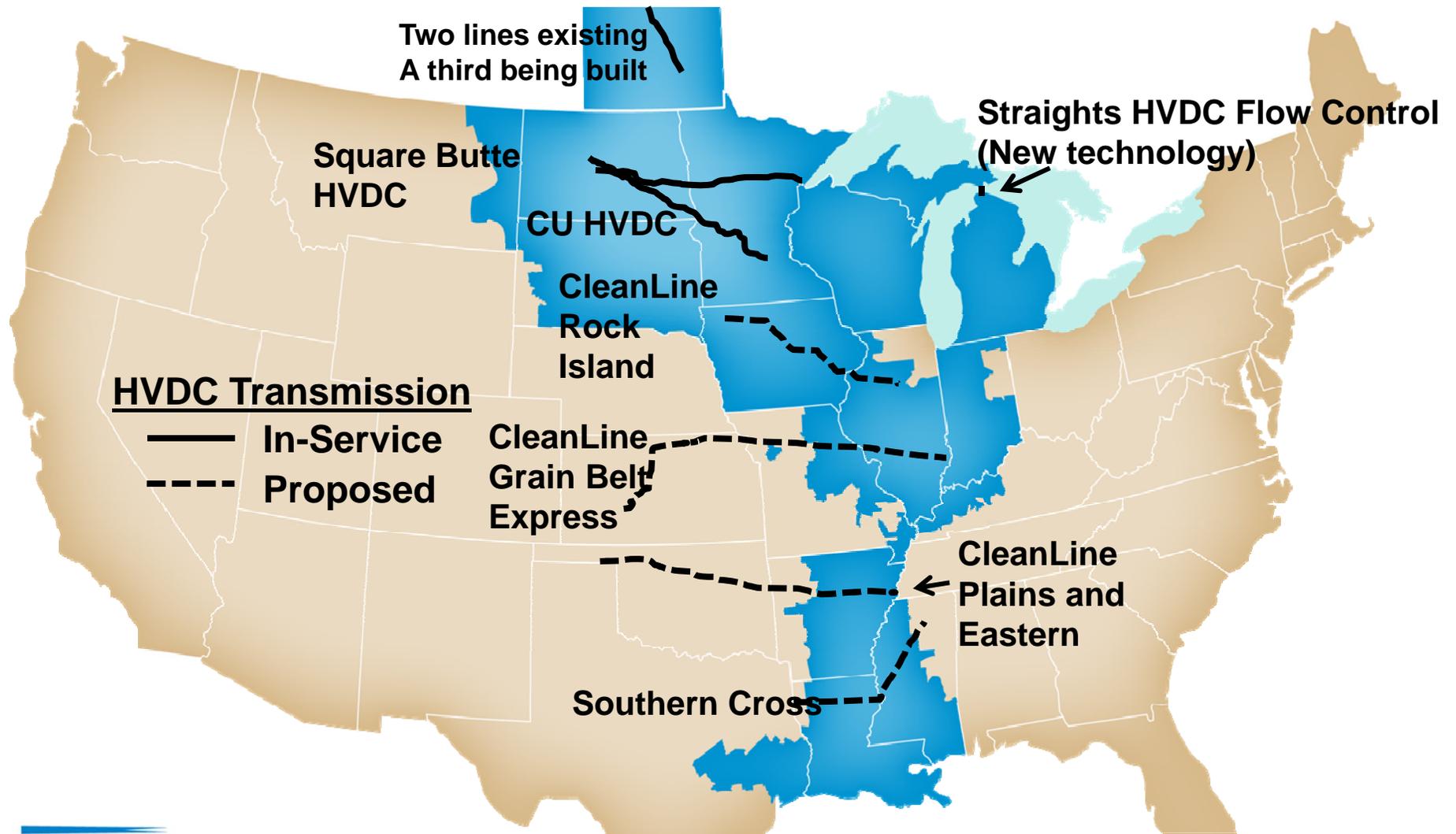
Key:

- Active GI Queue
- Withdrawn GI Queue
- Additional high potential locations

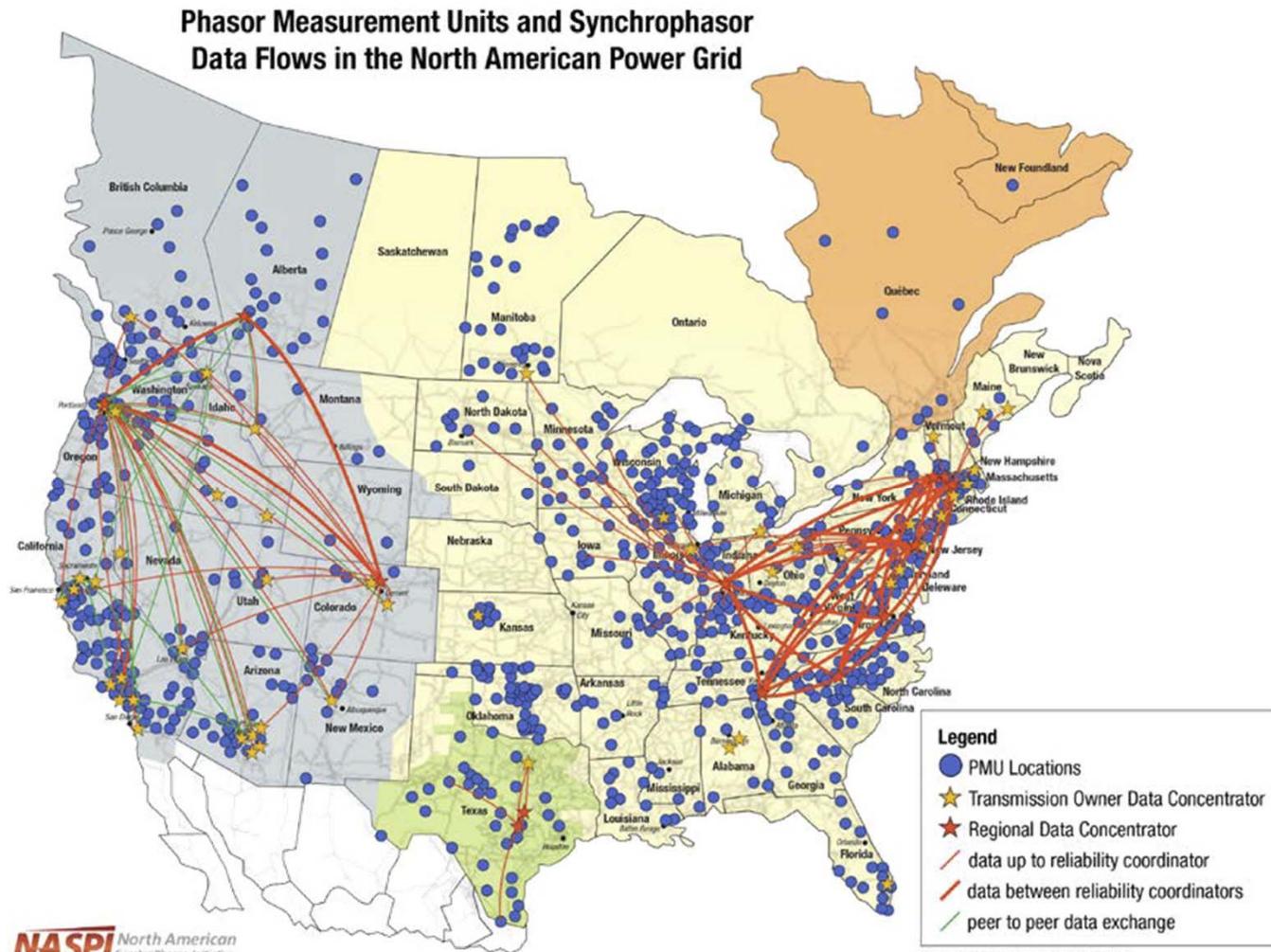
**Growth of distributed energy resources in MISO has been slow thus far, but we're actively studying opportunities for integration**



# HVDC technology is both in-use and being evaluated for expanded use in the MISO footprint



# MISO's use of synchrophasor technology will continue to evolve as the technology continues to mature



# Working together to ensure the evolving resource portfolio is utilized reliably and economically

