Agenda

• High Level Process Overview
• Current Challenges and Solutions to MISO Interconnection Queue
Why a Generation Interconnection Process?

- To study the reliability impact of the new interconnection—FAC-002
- Identify required network upgrades
  - Reliable Interconnection
  - Reliable Deliverability
Interconnection Service Explained

- **Energy Resource Interconnection Service**
  - Allows for proposed generator to interconnect
  - Allows proposed generator to participate in the real time market

- **Network Resource Interconnection Service**
  - Allows for proposed generator to sell capacity
  - Deliverability is maintained in the MTEP Process
Each Phase consists of a planning study
- Phase I – Powerflow Study
- Phase II and III Powerflow, Stability, and Short Circuit Studies

Interconnection Customers can elect to proceed or Withdraw at Decision Points
- Proceeding puts certain milestone payments at risk
Generation Interconnection Challenges

The current generator interconnection queue consists of 554 projects totaling 92.5 GW.

Notes:
- The queue size grew by 239 projects and 40.7 GW with the addition of DPP-2018-APR queue cycle.
- Detailed queue cycle information can be found on the next page or MISO’s website.
- For the latest information on the Interconnection Process Task Force (IPTF) – visit MISO’s website.
Current MISO Queue Challenges

- Current total queued generation is approximately 90 Gigawatts
  - For reference total peak load of MISO is approximately 128 Gigawatts
- Non-Linear power system behaviors are being observed in stressed areas
  - Same electrical locations of the transmission system
- Large number of projects requires significant data management
  - Needs to be exported to SPP, PJM, etc
- Project Speculation
  - Project speculation raises everyone's network upgrade costs
MISO Queue Solutions

• Earlier model development
  • Identify issues prior to study kickoff occurs, longer review

• Enforcing the MOD-32 requirements
  • Using standard stability models to increase data capability

• Shift tasks in the process
  • Creation of powerflow models first and then the stability models instead of simultaneous development
  • Delegate plant design issues to interconnection customers

• Site control
Current Results

- MISO April South 2018 Model out for review
  - Study kickoff to occur in first quarter 2019
- MISO February West 2017 using new tariff process
  - Only a powerflow study will occur in Phase I. Stability model development during Phase I.
- Tighter Interconnection Customers requirements
  - Proper model submittal, Site Control
- Project data stored in Model on Demand
Contact

- David Brauch
- dbrauch@misoenergy.org