



# MISO-SPP Joint Targeted Interconnection Queue Study

SIG/NAGF/NERC/EPRI Generation Interconnection Workshop  
August 9, 2022

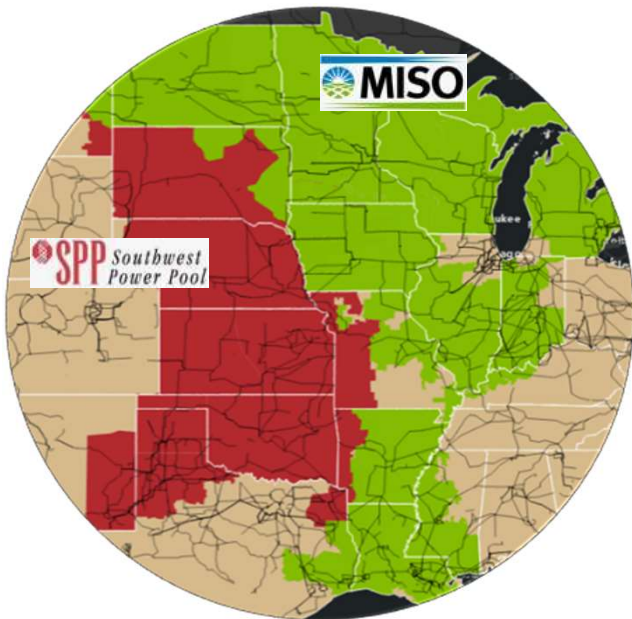
# Executive Summary



- First of its kind study - The SPP-MISO Joint Targeted Interconnection Queue (JTIQ) Study focuses on optimizing transmission needed for interconnection across the seams for the evolving resource mix
- Seven potential projects have been identified to allow the interconnection of low-cost resources beneficial to both regions
- Exemplary Interregional MISO-SPP Coordination
  - Queue Process Alignment and Relative Queue Priority updates approved by FERC in June 2022
- MISO and SPP are looking to replace the Affected System Study (AFS) process within individual queue cycles, with JTIQ; design discussions continue with stakeholders through monthly meetings

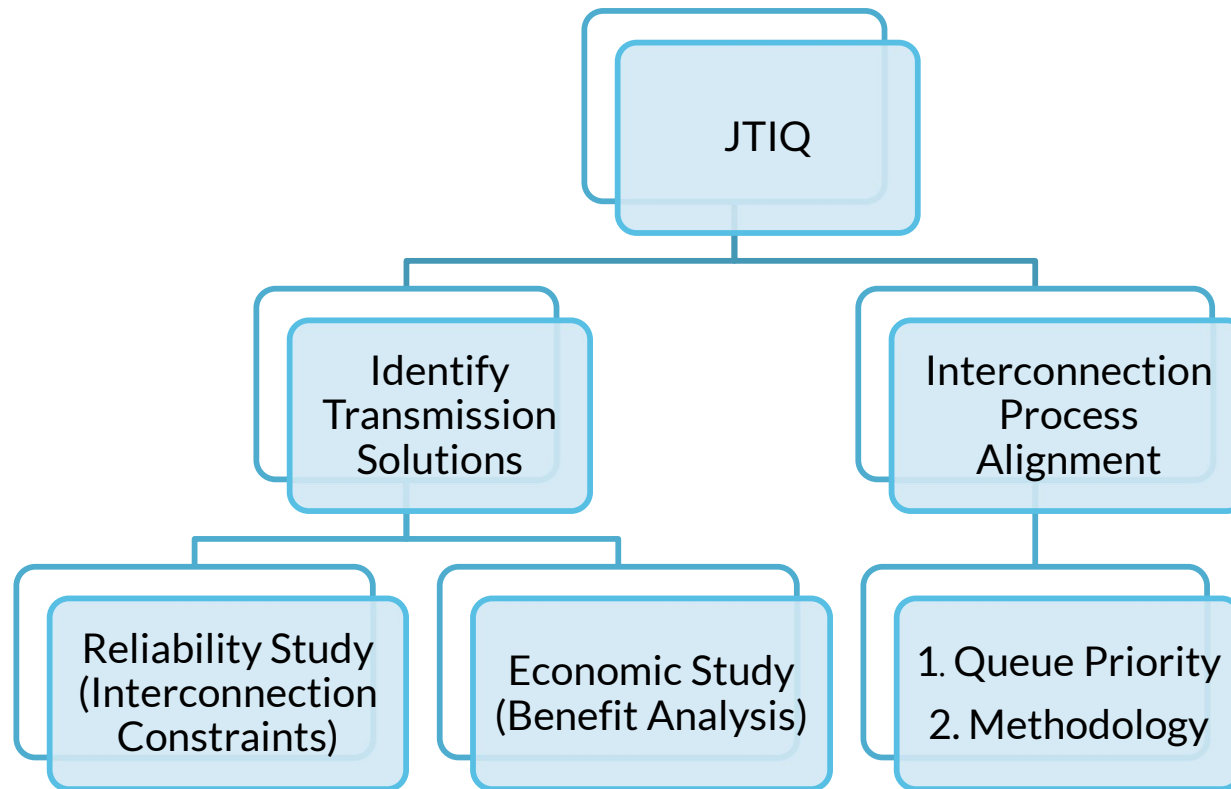
# JTIQ Need – Why now?

The SPP-MISO JTIQ Study focuses on optimizing transmission needed for interconnection across the seams for the evolving resource mix



- SPP and MISO are experiencing similar resource mix shifts
- The transmission system is at capacity along the SPP-MISO seam
- Upgrades are too costly for small groups of interconnection customers, contributing to churn in the queue
- The study accomplishes what FERC Affected System Studies were meant to achieve

# The work scope focused on two aspects, identify transmission solutions and process alignment



# MISO and SPP coordinated the JTIQ study assumptions, but used separate models

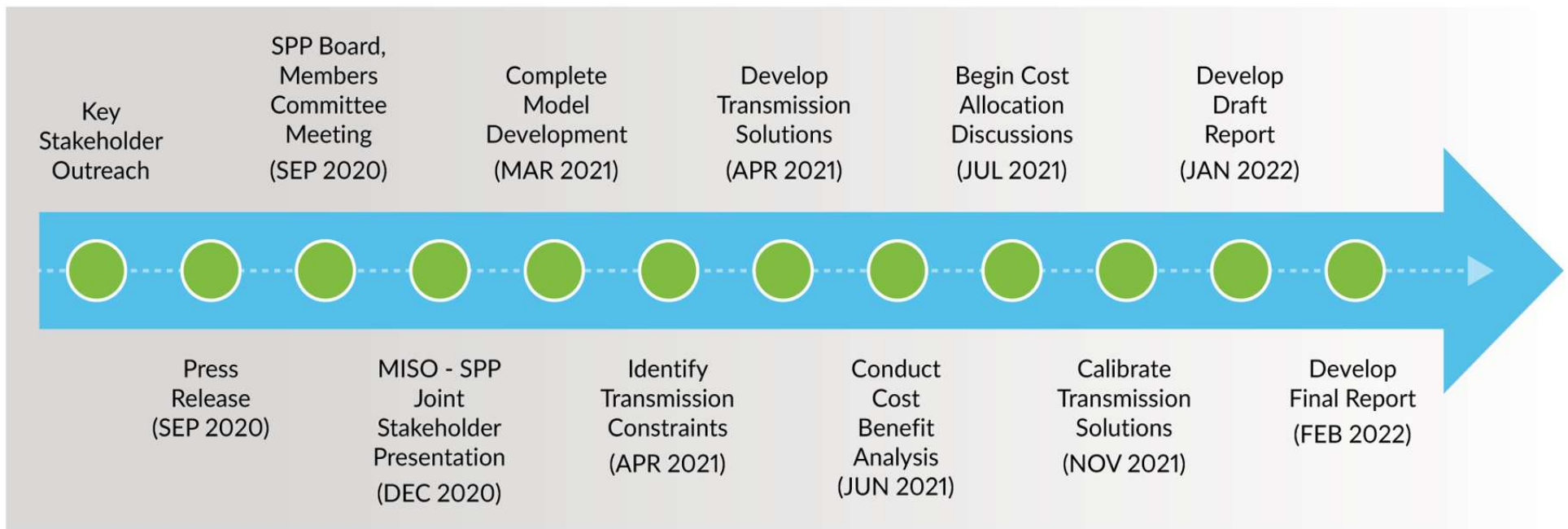
## SPP

- 2021 ITP 2 year and 5 year out models
- Summer Peak, Light Load, Winter Peak
- Single Group Study
  - 2023 Summer Peak
  - 2026 Light Load
  - 2026 Summer Peak
  - 2026 Winter Peak
- Deactivations – Age Based (Futures)
- New Interconnections (Futures and Queue)

## MISO

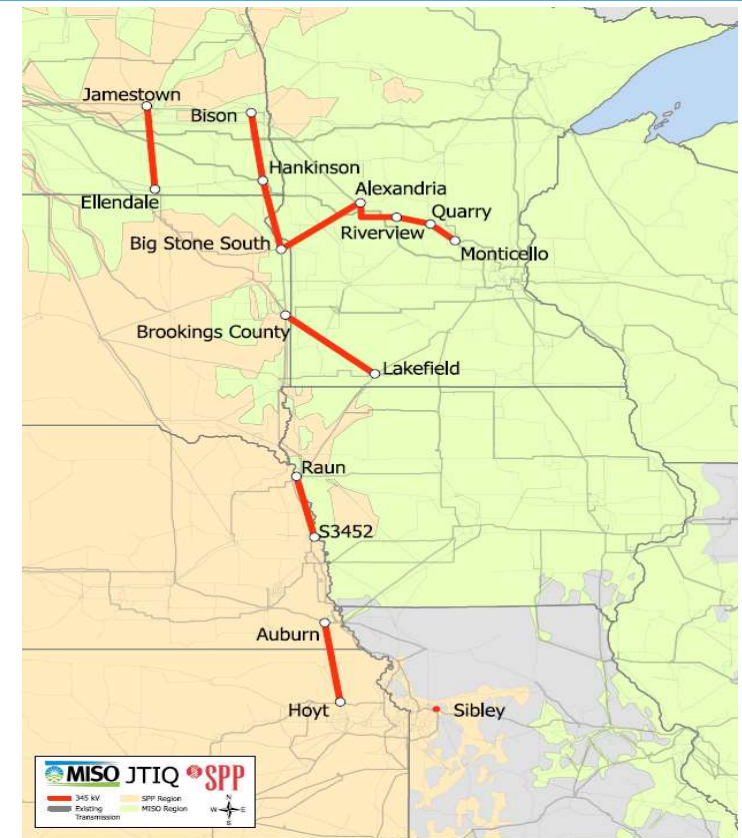
- MTEP 5 year and 10 year out models
- Summer Peak and Summer Shoulder
- Single Group Study
  - 2025 Summer Shoulder
  - 2025 Summer Peak
  - 2030 Summer Shoulder
  - 2030 Summer Peak
- Deactivations – Age Based (Futures)
- New Interconnections (Futures and Queue)

# Study Timeline



# JTIQ Portfolio includes a seven-project portfolio with an estimated cost of \$1.65B

- Improves reliability by fully resolving targeted transmission constraints identified in the study
- Increase interregional transfer capability
- Enhancement of ~28.6 GW in combined system interconnection capacity
- Provides economic Adjusted production cost benefits to each RTO (Assumes no LRTP Tranche 1)
  - \$724 Million to MISO
  - \$247 Million to SPP
- MISO-SPP Interconnection Process Alignment
  - Relative Queue priority - First Ready First Serve



# JTIQ Portfolio/LRTP Overlap

JTIQ Portfolio	Location by RTO	Cost (\$M)
Bigstone - Alexandria - Riverview - Quarry - Monticello 345 kV	MISO	424.5
Jamestown - Ellendale 345 kV	MISO	165
Bison - Hankinson - Big Stone South 345 kV	MISO	476
Brookings Co - Lakefield 345 kV	MISO	331
Raun - S3452 345 kV	MISO - SPP	144.4
Auburn - Hoyt 345 kV	SPP	90.5
Sibley 345 Bus Reconfiguration	SPP	18.8
<b>Total Cost of Portfolio of Projects</b>	<b>MISO - SPP</b>	<b>1,650.2</b>

↓  
Projects included in LTRP Tranche 1

MISO PV Benefit (\$M)	SPP F2 20Y Benefit (\$M)	SPP-MISO Combined B/C
724.23	246.74	0.60

Only Adjusted Production Cost (APC) savings are accounted in Benefit and B/C calculations (assuming no LRTP Tranche 1)

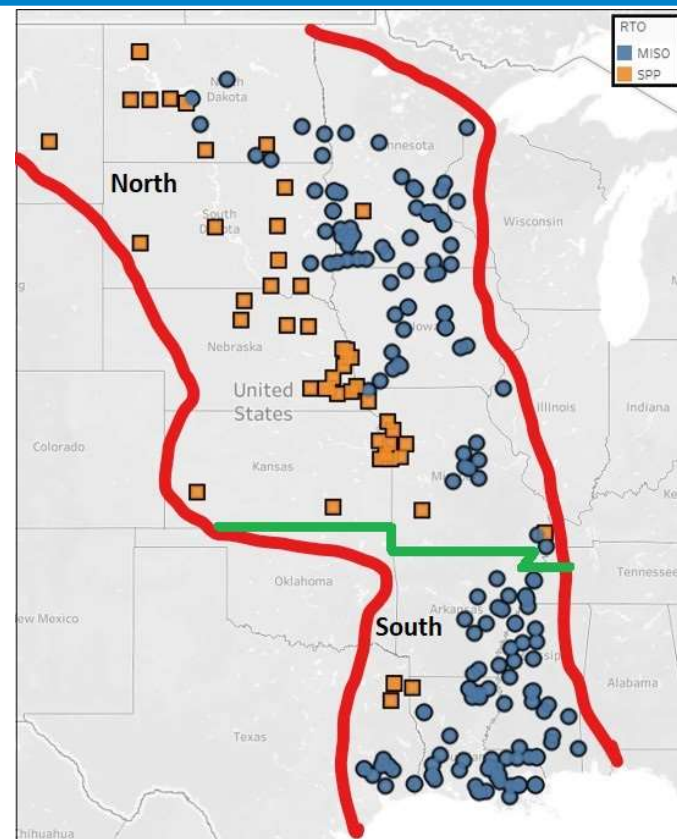


# Stakeholder Cost Allocation discussions

- JTIQ replacing Affected System study process between MISO and SPP
  - Post ongoing JTIQ Affected System transmission needs will be identified through a periodic future JTIQ(s).
- Forward looking Periodic JTIQ(s) will pre-determine transmission needs and affected system costs of future DPP and DISIS interconnection requests
  - Will consider interconnection queue trends in DPP and DISIS
  - Mitigate existing and future AFS constraints utilizing futures generation input
  - Proposed to occur at least every two years
- Assigns a **predetermined \$ per MW** of capacity charge to applicable interconnection requests in JTIQ AFS Zone
  - Zonal charge will be adjusted accordingly based on future JTIQ studies
- Takes advantage of cost sharing opportunities between GI customers and load

# JTIQ AFS Zone Concept

- JTIQ AFS Zone
  - Representative of transmission facilities around MISO-SPP entire seam most likely to be impacted by DISIS and DPP interconnection requests (DFAX -5%)
  - Generators connecting on facilities within the JTIQ AFS Zone will be assigned a pre-determined AFS charge (\$/MW)
  - AFS Zone will be split into two regions – North and South
  - Screening will be performed before start of Phase 1 to identify the DISIS or DPP requests that are in JTIQ AFS Zone



# Benefits of JTIQ replacing AFS process

- **Provides cost and timing certainty** for GI requests in MISO and SPP
  - GI customers would know affected system cost at the start of DPP or DISIS
  - Completion of DPP or DISIS can conclude the study process for requests in those processes without having to wait for separate AFS study results
- Eliminates unknown AFS Network Upgrades
- AFS study cost is eliminated
- Eliminates timing delays on AFS study coordination
- Builds on notion of interconnection zones contemplated by FERC's transmission planning NOPR
- Identifies more optimized network upgrades as compared to individual MISO & SPP AFS processes

# JTIQ Roadmap to FERC Filing Q4 2022

- Next JTIQ Stakeholder meetings – August 22, 2022
- Draft updates to MISO/SPP Joint Operating Agreement (JOA)
- MISO present JTIQ concept/JOA changes at stakeholder forums
  - IPWG – Seek feedback
  - PAC – Seek feedback
- SPP present JTIQ concept/JOA changes at stakeholder forums
  - GIUF/SAG & CAWG/RSC/MOPC – Seek feedback
  - Board of Directors
- Additional Joint Stakeholder meeting(s) – Present final plan
- FERC Filing Q4 2022



# Questions?

Contact Information: Andy Witmeier [awitmeier@misoenergy.org](mailto:awitmeier@misoenergy.org)