MISO'S REGIONAL TRANSMISSION PLAN

Thompson Adu, PhD
Senior Manager
Expansion Planning, MISO

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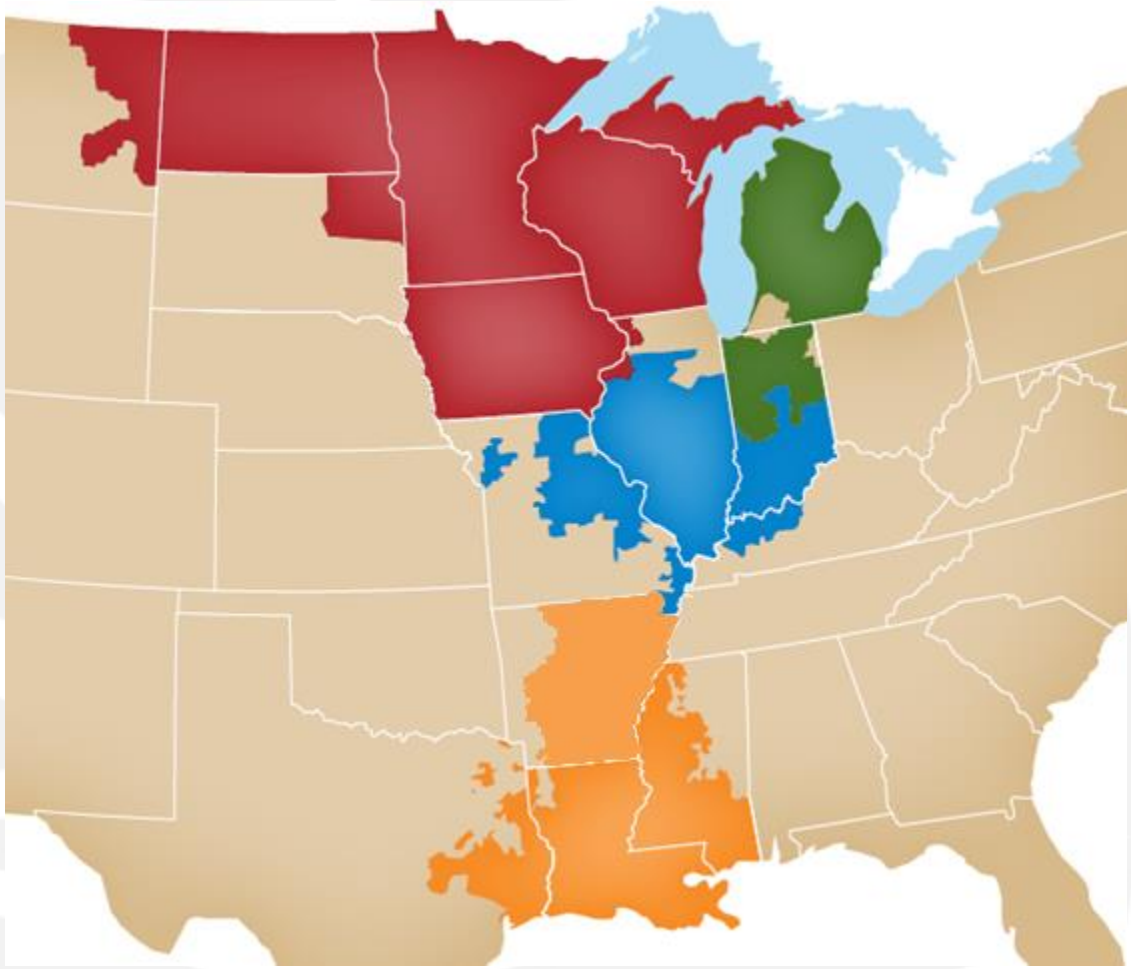
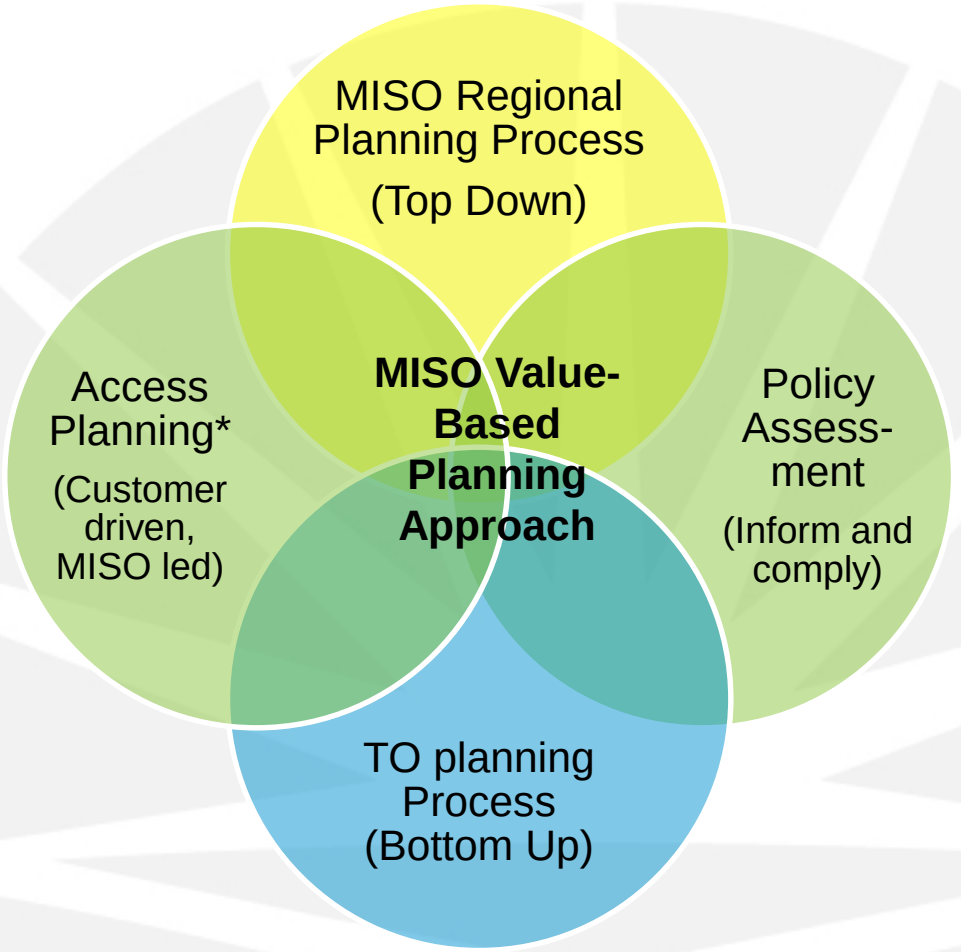
MISO Footprint

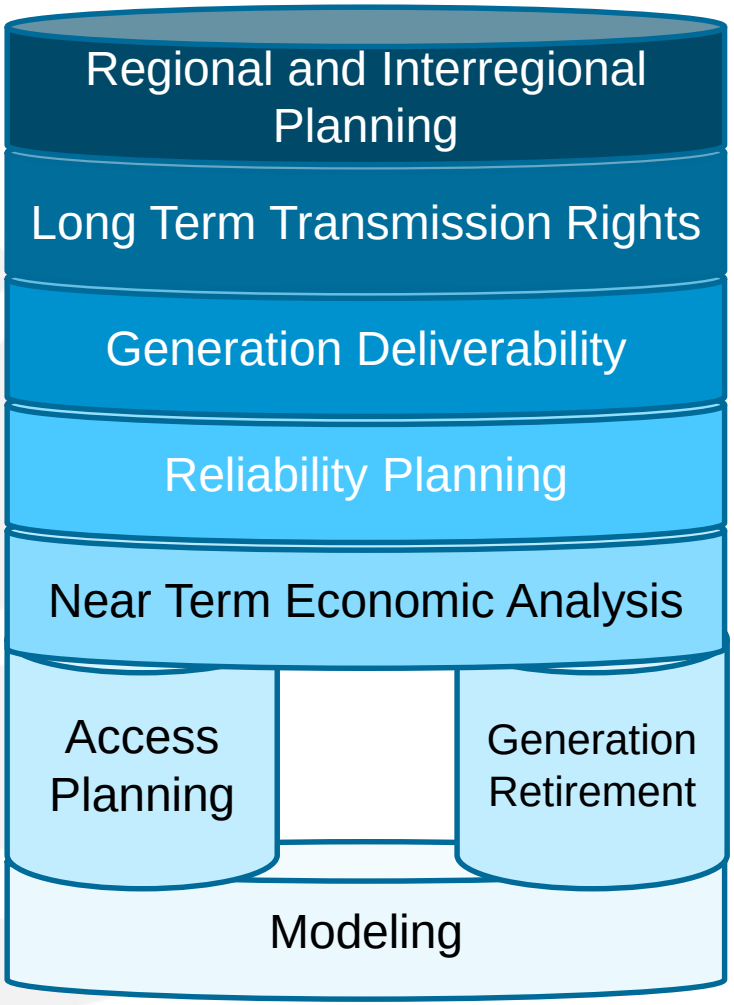


MISO Functions

- Provides all market services for energy, operating reserves, and transmission service
- Manages and administers the Energy and Operating Reserve markets Tariff
- Certified Balancing Authority
- Administers the Day-Ahead and Real-Time Energy and Operating Reserves Markets
- Reliably Operates the transmission system
- Coordinates Transmission Planning Services

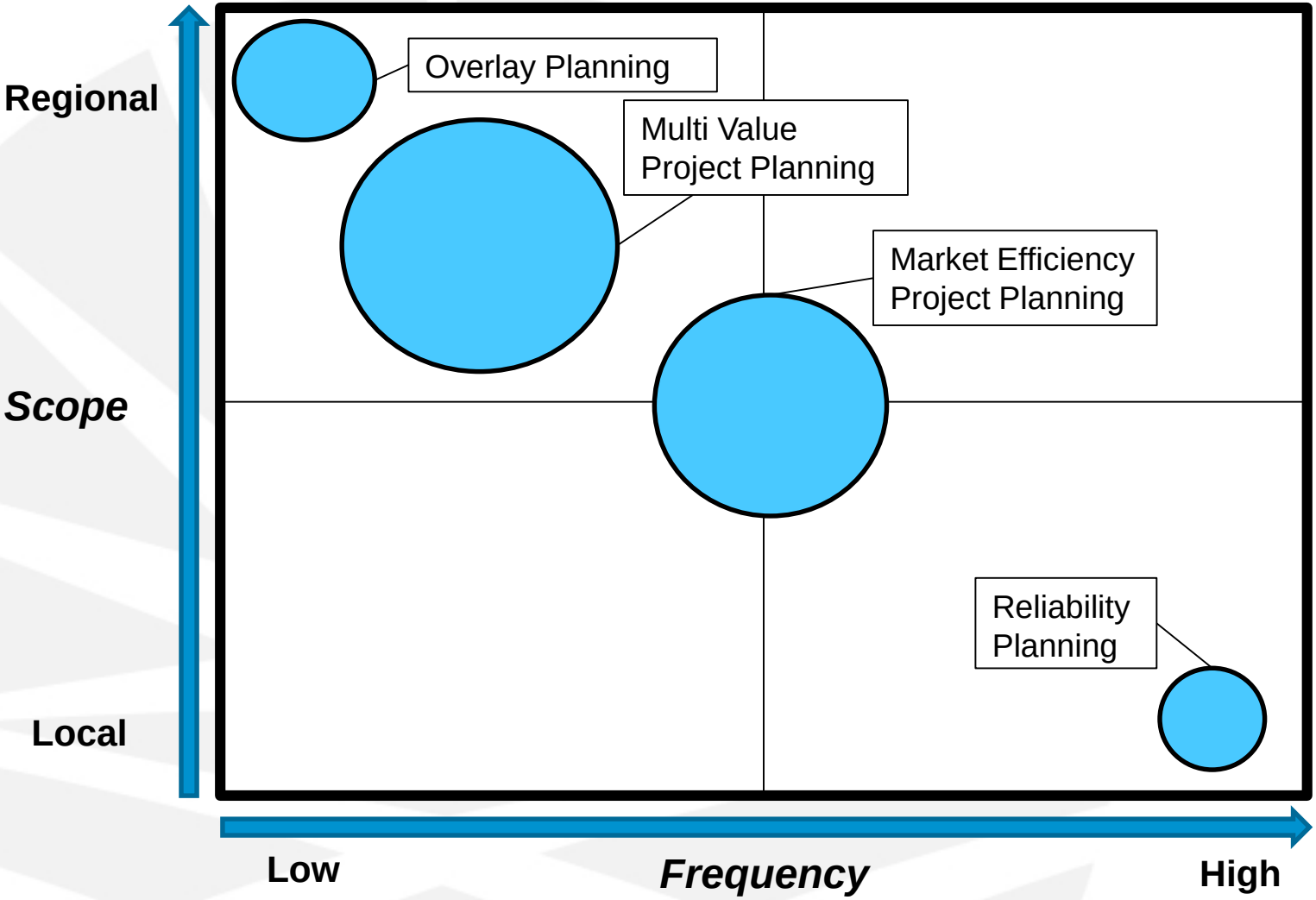
Planning Process Implementation





*Access Planning includes both the long term Transmission Service Queue and the Generator Interconnection Queue.

Planning Cycle Frequency



Note: Circle size indicates study duration

MISO Planning Objectives

Fundamental Goal: The development of a comprehensive expansion plan that meets reliability needs, policy needs, and economic needs

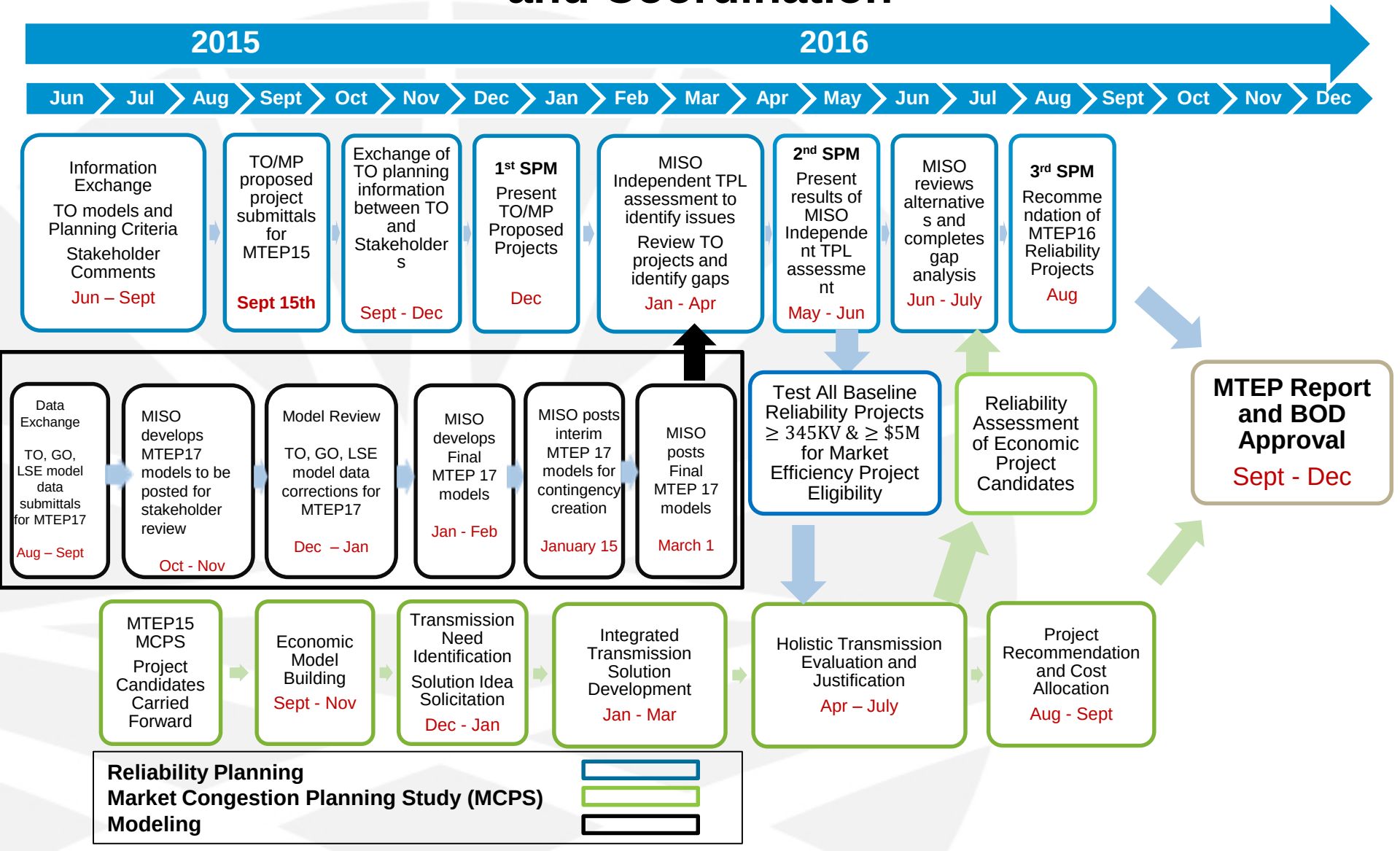
- Provide a transmission infrastructure that upholds all applicable NERC and Transmission Owner planning criteria and safeguards local and regional reliability through identification of transmission projects to meet those needs.
- Support state and federal energy policy requirements by planning for access to a changing resource mix.
- Make the benefits of an economically efficient energy market available to customers by identifying transmission projects which provide access to electricity at the lowest total electric system cost.
- Provide an appropriate cost allocation mechanism that ensures that costs of transmission projects are allocated in a manner roughly commensurate with the projected benefits of those projects.
- Analyze system scenarios and make the results available to state and federal energy policy makers and other stakeholders to provide context and inform the choices they face.
- Coordinate planning with neighboring planning regions to seek more efficient and cost-effective solutions

MISO Transmission Planning Results: 2008-2015*

Multi Value Projects	Develop a regional transmission network that provides economic, public policy and reliability benefits	$5.2 billion in new transmission projects •1.8 to 3.0 benefit-cost ratio •650 reliability constraints solved •Multiple generation policies enabled
Market Efficiency Projects	Create transmission to unlock the economic benefits provided by the MISO market	$87.1 million in new transmission projects •1.5 - 2.3 benefit/cost ratio
Baseline Reliability and Other (Reliability) Projects	Ensure the system is reliable and in compliance with all applicable standards	1,858 new transmission projects •$4.4 billion due to NERC standards •$6.3 billion due to local standards or needs
Generator Interconnection and Transmission Service Delivery Projects	Reliably and efficiently interconnect new generators Facilitate the reliable transfer of power through and across the MISO footprint	$1.519 billion transmission investment approved

*Statistics tentatively reflect all projects approved or requests processed from 2008 - 2015

MTEP16 Reliability and Economic Planning Timeline and Coordination



Snapshot of Cost Allocation

Allocation Category	Driver(s)	Allocation to Beneficiaries
Participant Funded ("Other")	Transmission Owner identified project that does not qualify for other cost allocation mechanisms.	Paid by requestor (local pricing zone)
Transmission Delivery Service Project	Transmission Service Request	Generally paid for by Transmission Customer; Transmission Owner can elect to roll-in into local pricing zone rates
Generation Interconnection Project	Interconnection Request	Primarily paid for by requestor; 345 kV and above 10% postage stamp to load
Baseline Reliability Project	NERC Reliability Criteria	Paid by local pricing zone
Market Efficiency Project	Reduce market congestion when benefits are 1.25 times in excess of cost	345 kV and above: 80% distributed to local resource zones (LRZs) commensurate with expected benefit, 20% postage stamp to load
Multi-Value Project	Address energy policy laws and/or provide widespread benefits across footprint	100% postage stamp to load

Example of MISO Regional Project

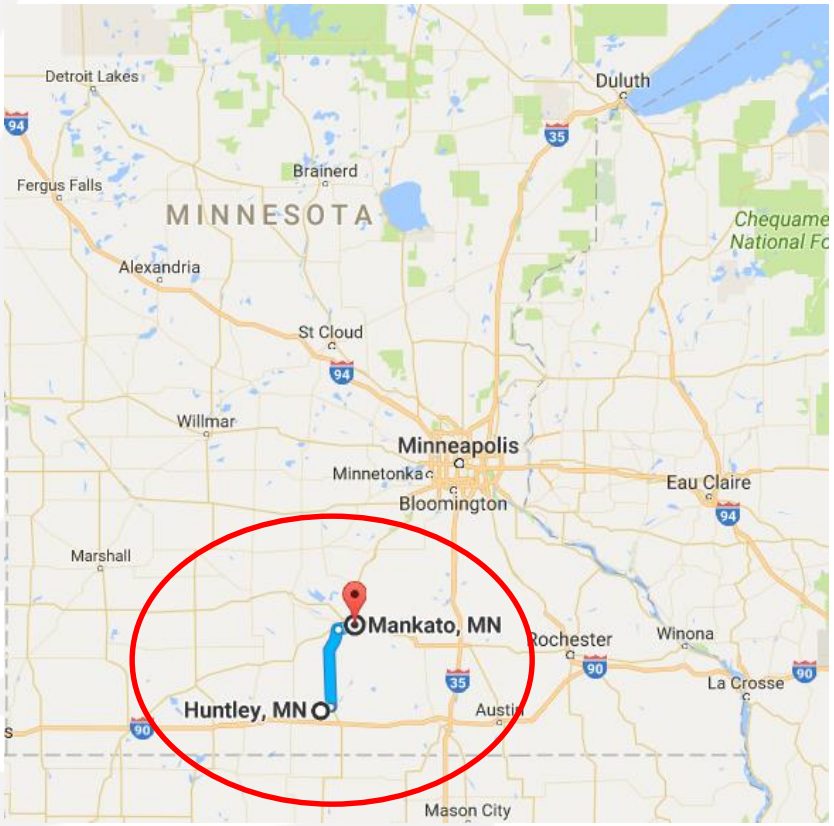
Duff- Rockport-Coleman

- To relieve the congestion in southern Indiana
- 345 kV upgrade
- Approved in MTEP15 cycle
- Currently in Bidding process

Example of MISO Regional Project

Huntley – Wilmarth 345 kV

- To relieve the congestion in southern Minnesota and Northern Iowa
- 345 kV upgrade
- Has been recommended for MTEP16 board approval



Summary

- MISO regional planning objectives
- Input to the MISO regional plan
- MISO transmission plan statistics
- Reliability and Economic project timeline
- Cost Allocation
- MISO regional projects examples

Questions

- **Thompson Adu**
  - **tadu@misoenergy.org**
  - **(317) 249-4973**