MISO Transmission Expansion Plan – MTEP24

Advisory Committee

October 22, 2024

Purpose & Key Takeaways

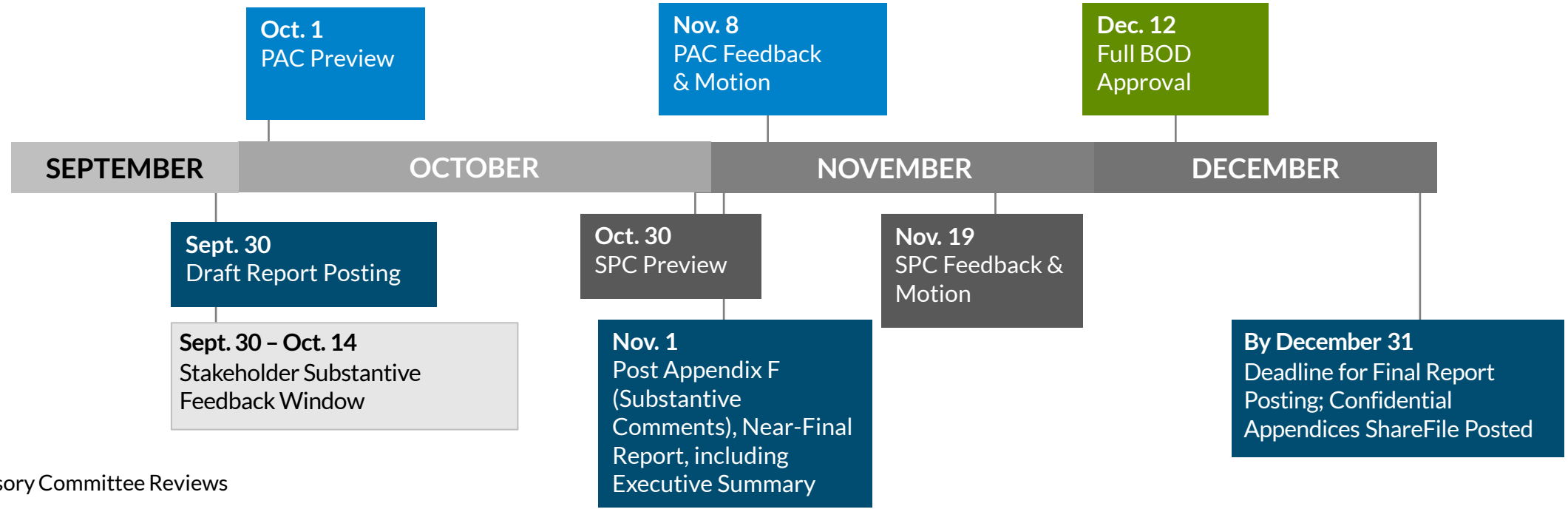
Purpose:

Provide a summary of the MTEP24 Report and review next steps

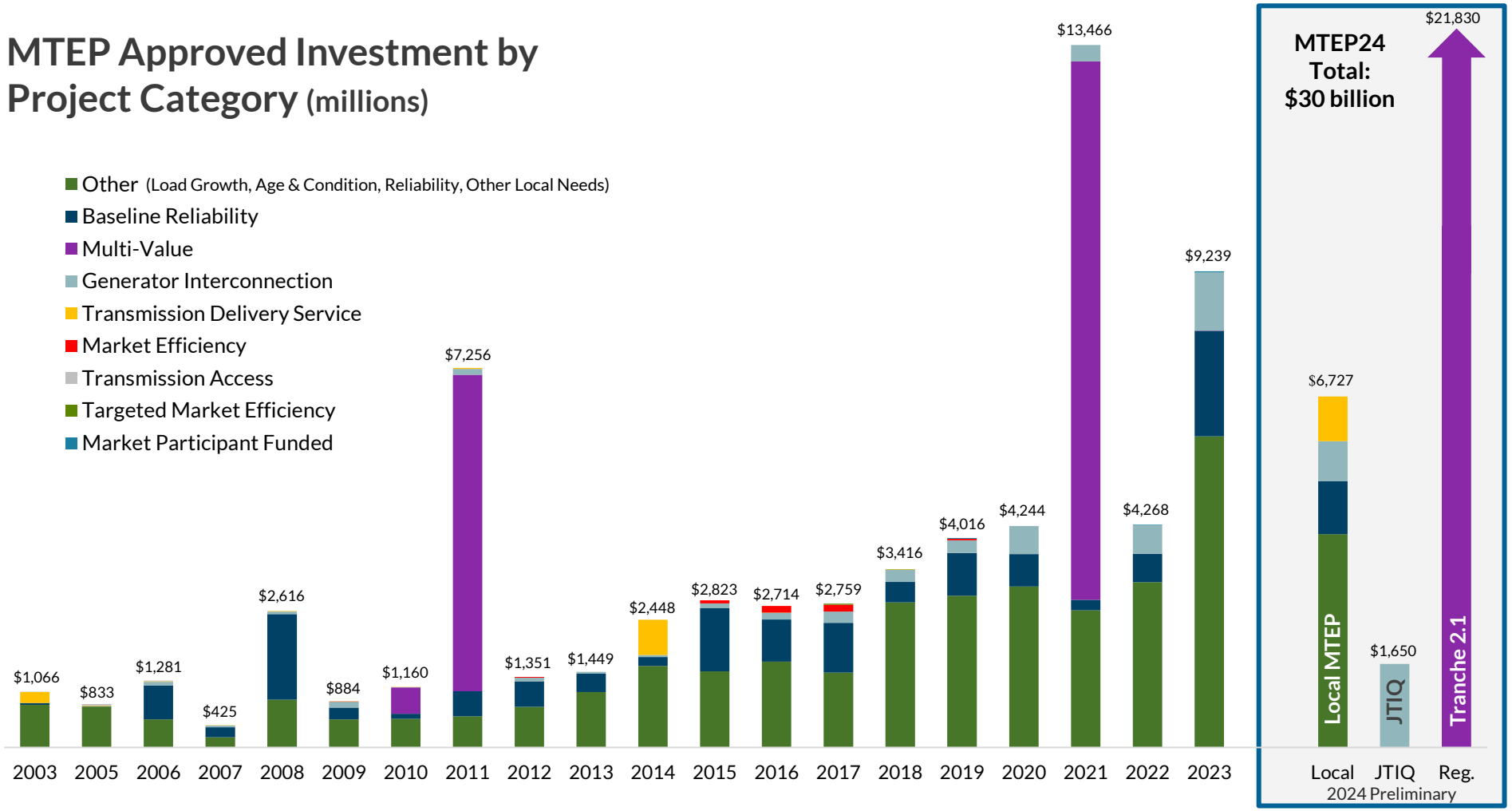
Key Takeaways:

- MTEP24 includes local reliability, regional/long range transmission and JTIQ projects
- MTEP24 draft report was publicly posted Monday, September 30th
- Stakeholder substantive comment period was open from September 30th – October 14th
- Stakeholder comments will be reviewed at the November 8th PAC and November 19th SPC meetings

MTEP24 Report Timeline

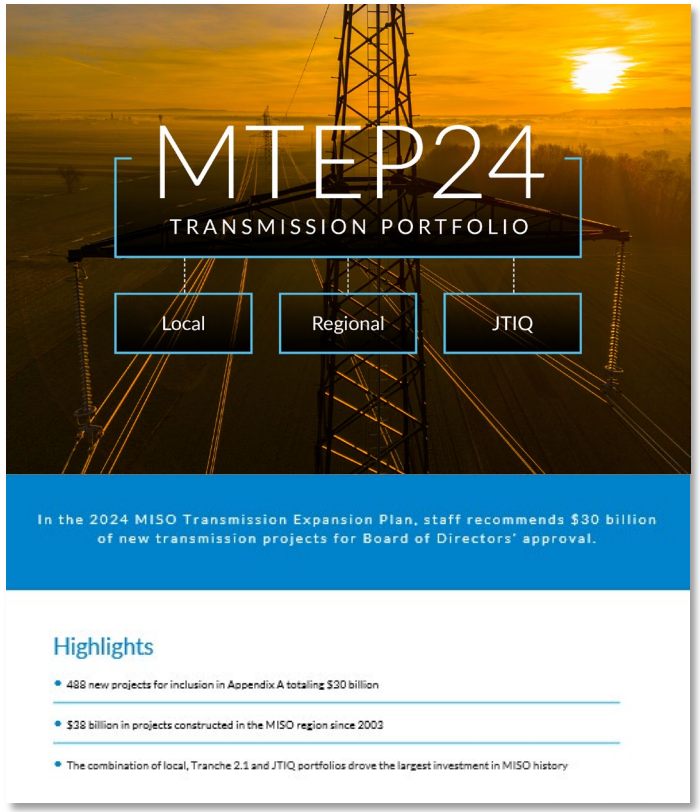


MISO's Board of Directors has approved over $67 billion in transmission investment throughout its history



*Other = Projects based on local needs including reliability, economics, equipment age and condition, environmental, etc.
Numbers provided are as approved by the Board of Directors (2024 pending approval).
Interr. = Interregional. Reg. = Regional

In total, MTEP24 will be the largest investment in MISO's history and includes local reliability, regional and JTIQ projects



MTEP24 Report

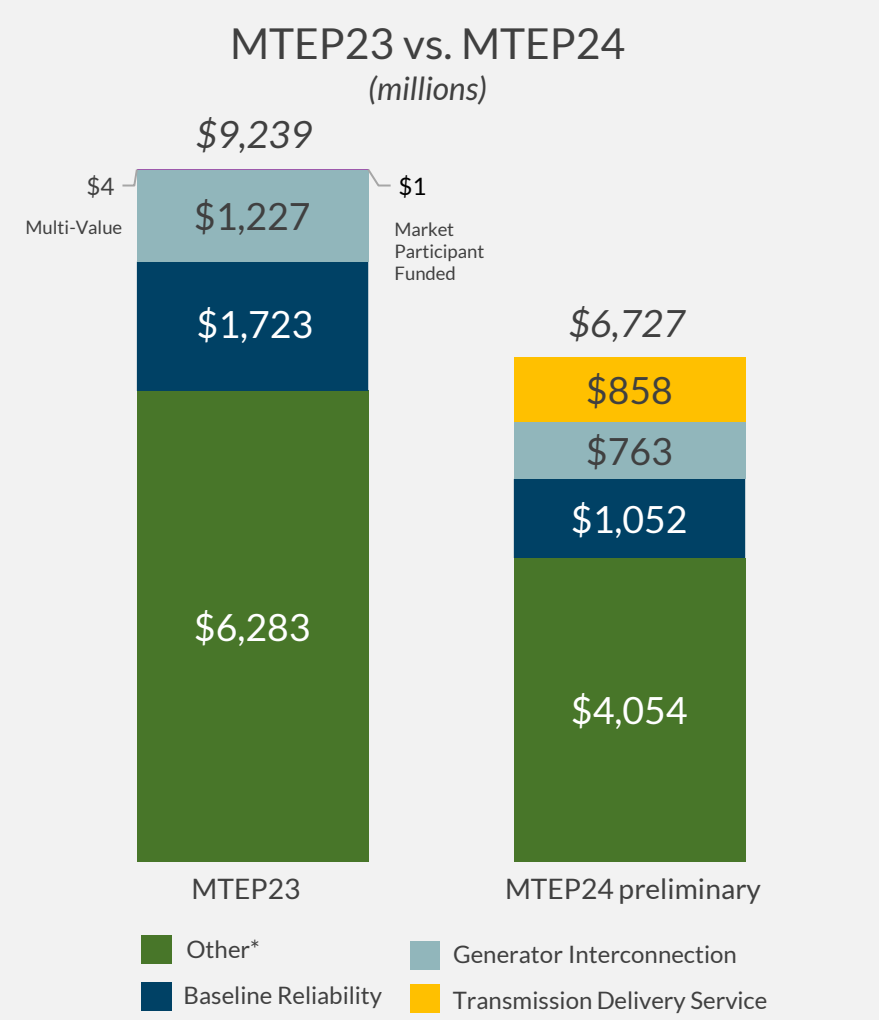
	Local	Regional	JTIQ
Total Investment	$6,727	$21,830	$1,650
Total Projects	459	24	5
Total Miles	932	3,631	490

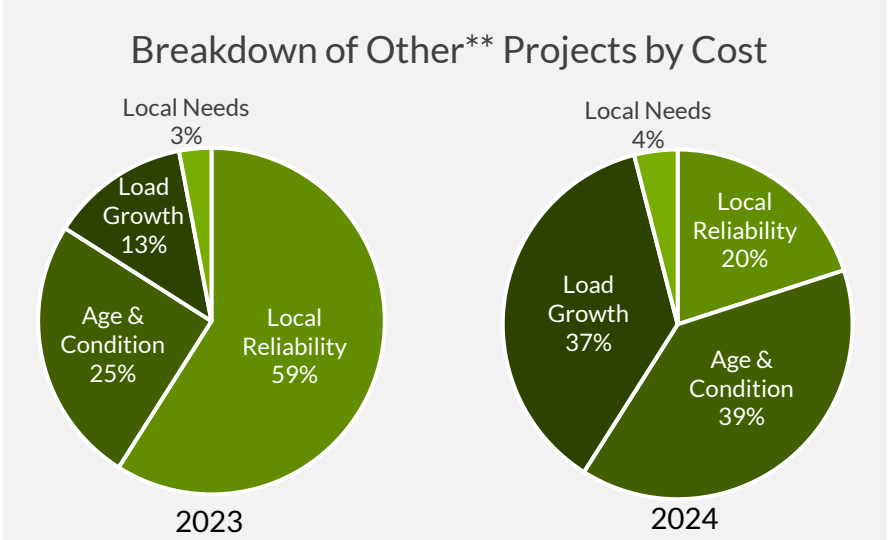
$30 Billion TOTAL INVESTMENT | **488** TOTAL PROJECTS | **5,053** TOTAL MILES

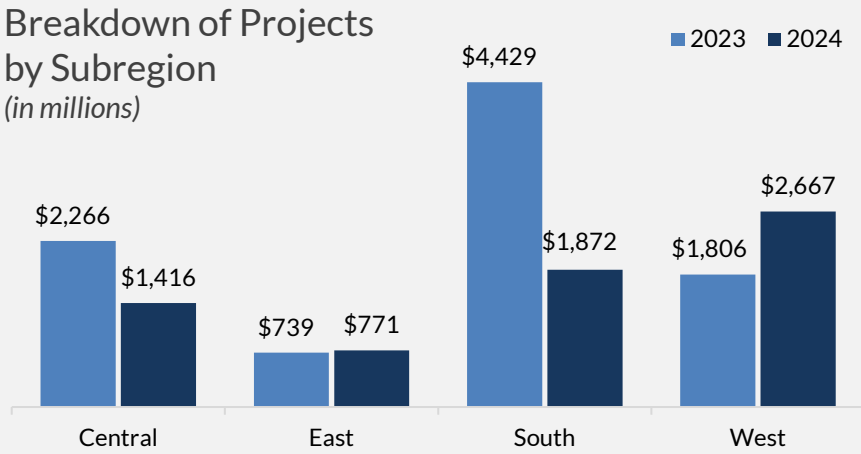
Totals include regional and interregional investment, projects, and mileage for the full portfolios; including equipment in neighboring systems.

Local

459 new projects totaling $6.7 billion for MTEP24 local projects will be recommended for approval in December





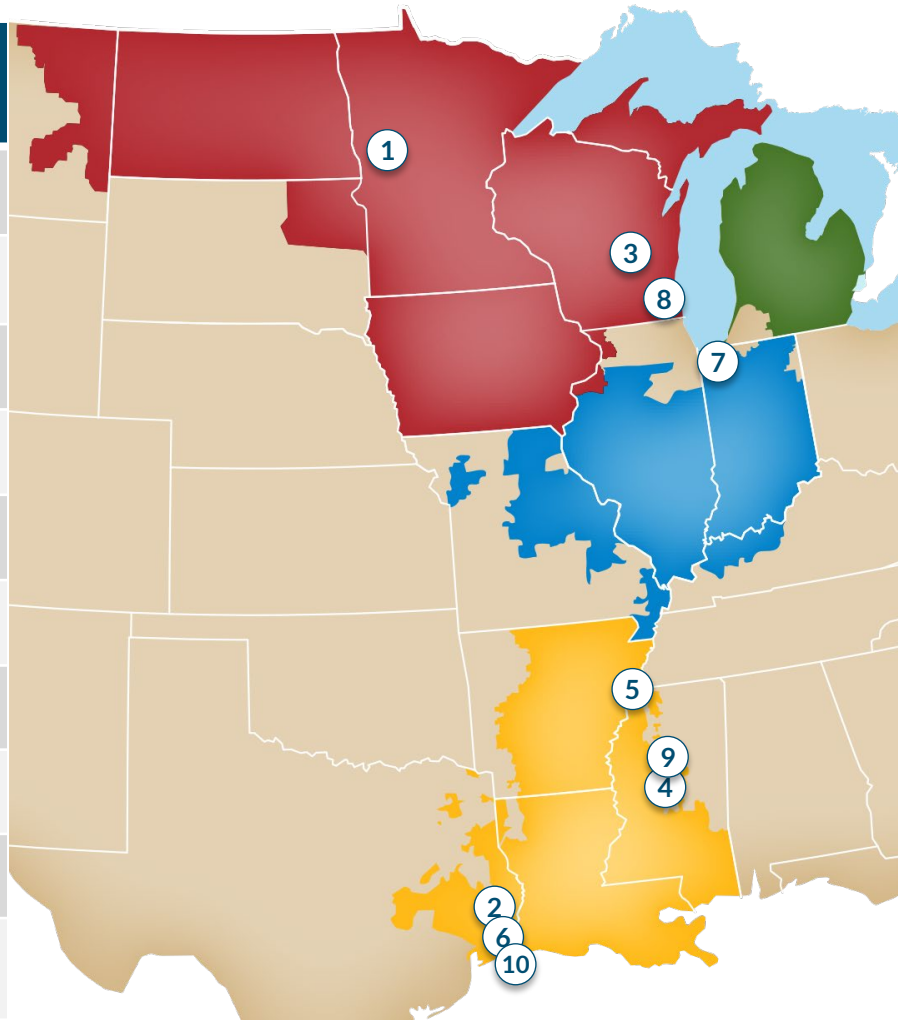


Project information as of August 27, 2024. *Other = Projects based on local needs including reliability, economics, equipment age and condition, environmental, etc. **Breakdown categories are informational only and do not indicate new project types for cost allocation.

Local

The proposed top 10 projects represent roughly 31% of costs for local MTEP projects and primarily address load growth

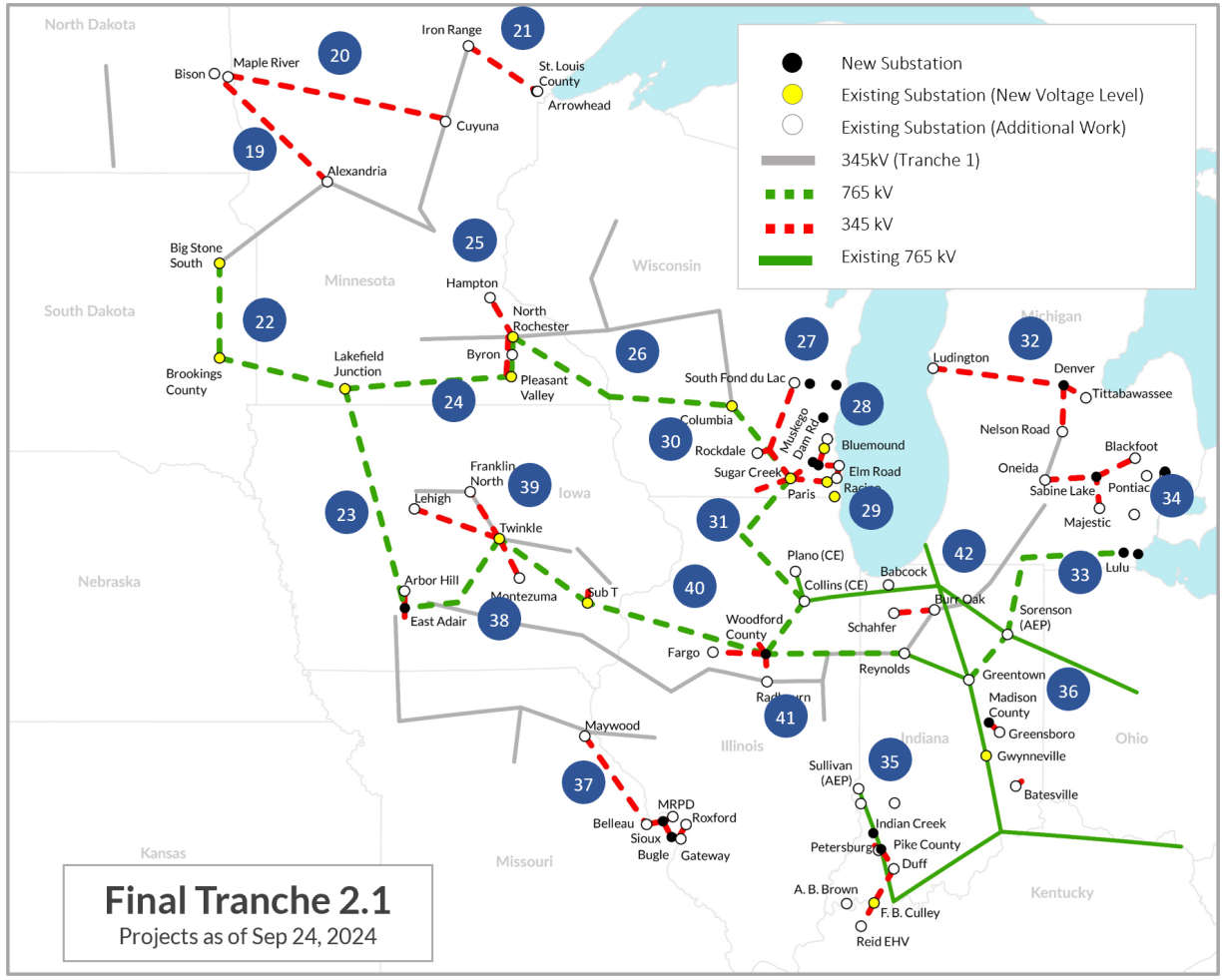
Rank	Project Name	Project Driver	Cost *(millions)*
1	HVDC Modernization Project	Transmission Delivery Service	$800
2	Cypress to Legend 500 kV line	Baseline Reliability	$406
3	Dodge County, DIC, New Substation	Other – Load Growth	$161
4*	Andes 500/230 kV Substation	Other – Load Growth	$158
5	Galet 500/230 kV New Substation	Other – Load Growth	$142
6*	Sandling 230 kV Customer Load Addition Project	Other – Load Growth	$114
7*	Aetna Synchronous Condenser	Other – Local Reliability	$91
8*	Racine County, DIC, Nimbus Substation	Other – Load Growth	$89
9*	Virlilia 230 kV Substation	Other – Load Growth	$80
10*	Legend to Sandling 230 kV Circuit 2 Project	Baseline Reliability	$77



Project information as of August 27, 2024.
* Projects studied through Expedited Project Review (EPR) process.

Regional

The final estimate for LRTP Tranche 2.1 is $21.8 billion for projects across the MISO Midwest subregion

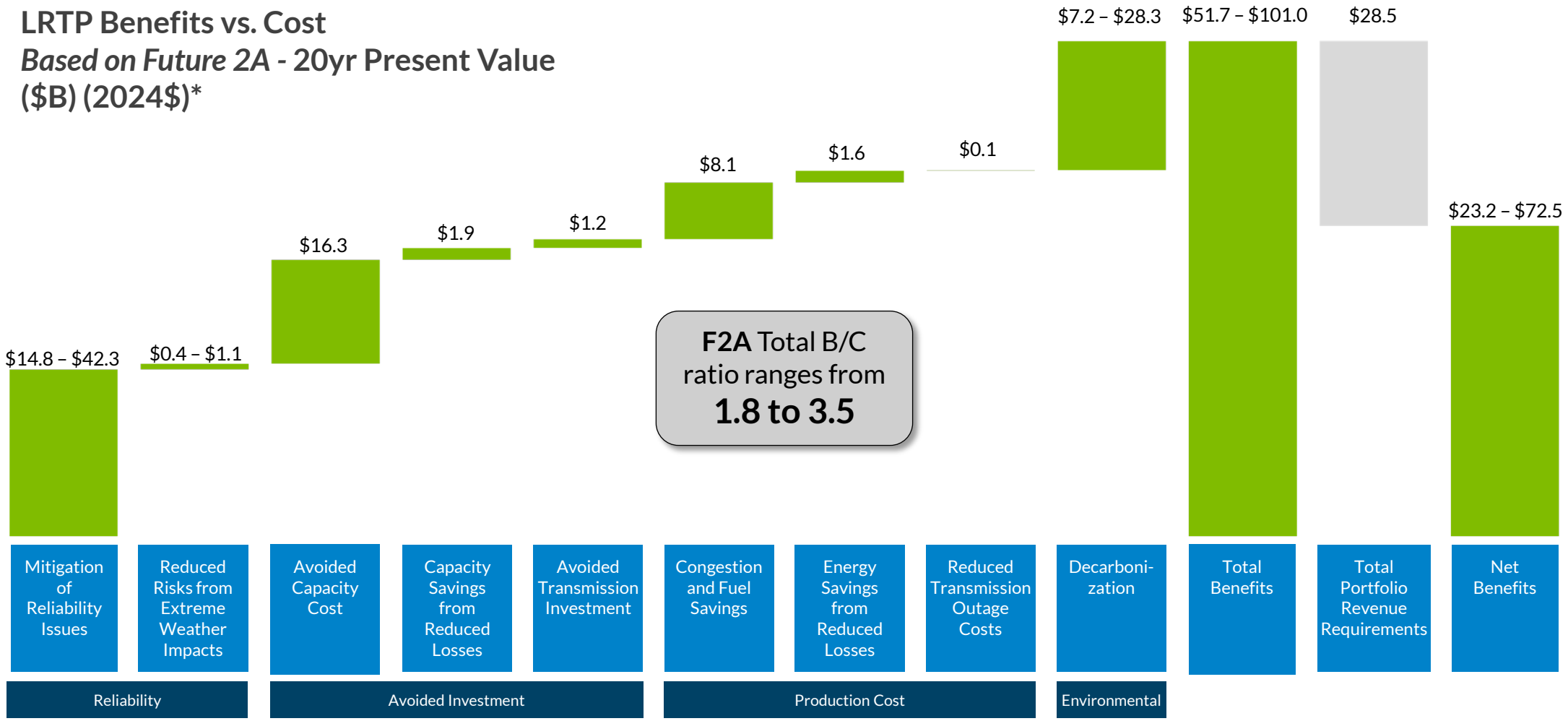


ID	Project Name	Predominate kV	Targeted ISD	Est. Cost ($M, 2024)
19	Bison - Alexandria	345	2032	$216
20	Maple River - Cuyuna	345	2032	$908
21	Iron Range - Arrowhead	345	2032	$428
22	Big Stone South - Brookings County - Lakefield Junction	765	2034	$1,459
23	Lakefield Junction - East Adair	765	2034	$1,375
24	Lakefield Junction - Pleasant Valley - North Rochester	765	2034	$1,166
25	Pleasant Valley - North Rochester - Hampton Corner	345	2032	$222
26	North Rochester - Columbia	765	2034	$1,924
27	Rocky Run - Werner - North Appleton	345	2032	$212
28	South Fond du Lac - Rockdale - Big Bend - Sugar Creek - Kitty Hawk	345	2032	$1,102
29	Bluemond - Arcadian - Waukesha - Muskego - Elm Road - Racine	345	2032	$731
30	Columbia - Sugar Creek	765	2034	$743
31	Sugar Creek - Collins	765	2033	$733
32	Ludington - Denver - Tittabawassee & Nelson Road	345	2032	$1,553
33	Greentown - Sorenson - Lulu	765	2033	$1,310
34	Oneida - Sabine Lake - Blackfoot & Majestic	345	2032	$584
35	Southwest Indiana-Kentucky	345	2032	$743
36	Southeast Indiana	345	2032	$578
37	Maywood - Belleau - MRPD - Sioux - Bugle	345	2032	$888
38	East Adair - Marshalltown - Sub T	765	2034	$1,583
39	Lehigh - Marshalltown - Franklin North & Montezuma	345	2032	$588
40	Sub T - Woodford County - Collins & Reynolds	765	2033	$2,298
41	Woodford County - Fargo & Radbourn	345	2032	$422
42	Burr Oak - Schahfer	345	2032	$68
	Total Portfolio Cost		Total	**$21,830**

* Costs as of 9/24/2024 in 2024$. Tranche 2.1 project numbering starts at 19 to continue the LRTP project numbering from LRTP Tranche 1 that ended with 18.

Regional

The Tranche 2.1 portfolio under Future 2A provides multiple benefits with total value that exceeds the cost of the projects



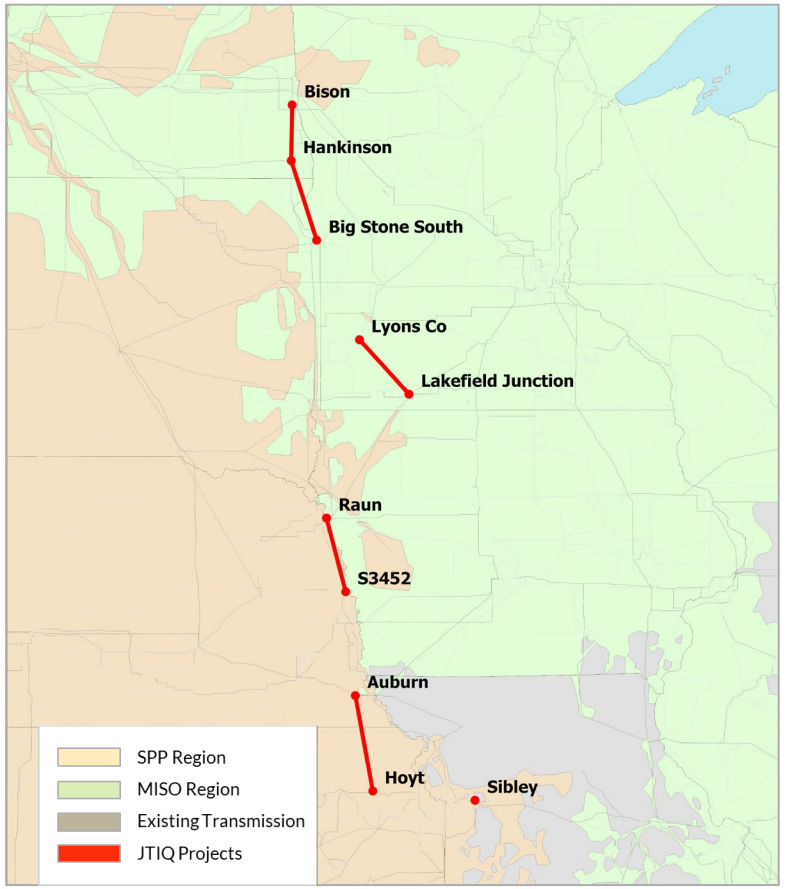
*Estimated costs as of 9/24/2024. Assumes 7.1% discount rate. Benefit ranges reflect changes in assumptions for the value of lost load (mitigation of reliability issues/extreme weather impacts) and carbon reduction values (decarbonization). Additional details on the methodology for each LRTP Tranche 2.1 metric available in whitepaper.

JTIQ

The JTIQ Portfolio includes five projects estimated at $1.6 billion; some costs will be offset by funds from the DOE GRID program

- ☑ Agreement reached on cost allocation
- ☑ Selected for Department of Energy grant
- ☑ Finalize cost allocation and study process Tariff language
- ☑ Seek FERC approval of Tariff revisions in 2024
- ⇨ Request Board approval*

☑ Complete ⇨ To Do



If FERC does not approve MISO's Tariff filing by November 14, JTIQ projects will not be included in the December Board vote.

Questions?