



MTEP23 Reliability Planning Scope Overview

3rd South Region Subregional Planning Meeting

September 8, 2023

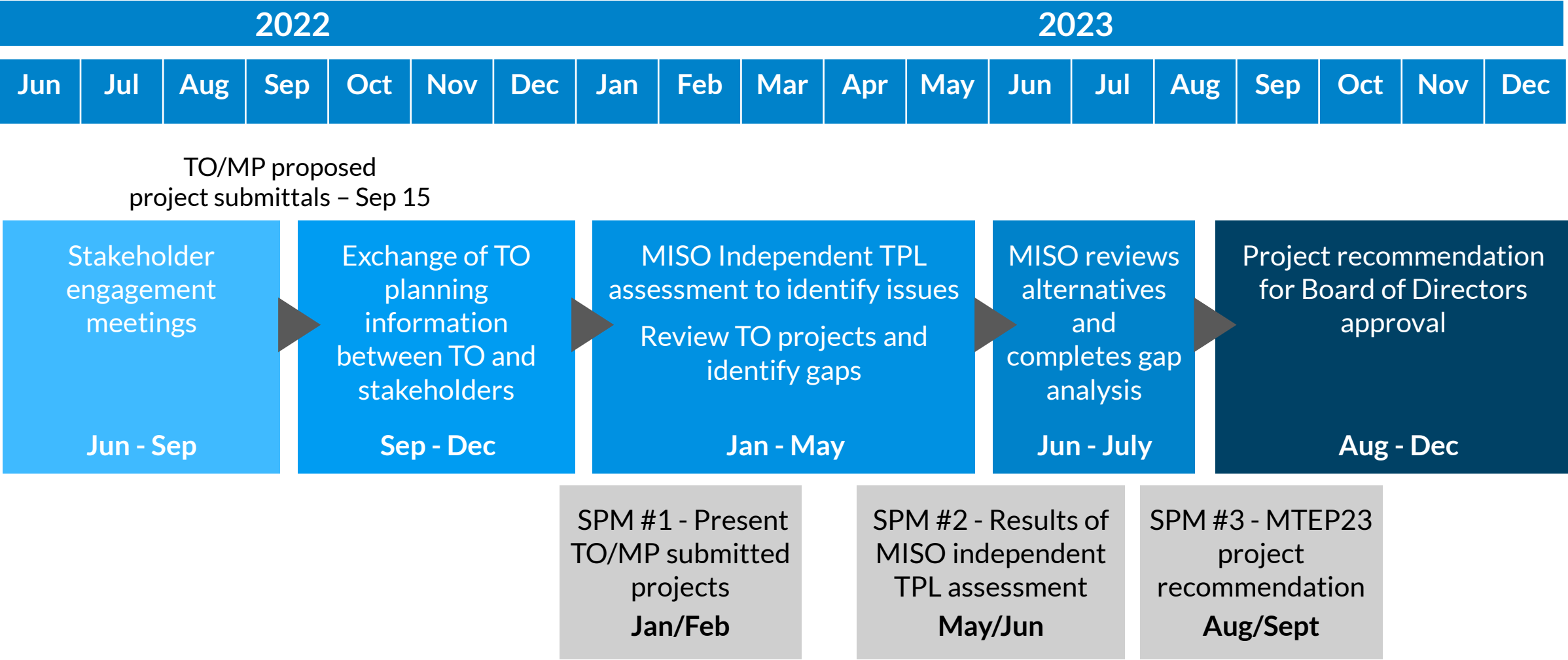
Purpose & Key Takeaways



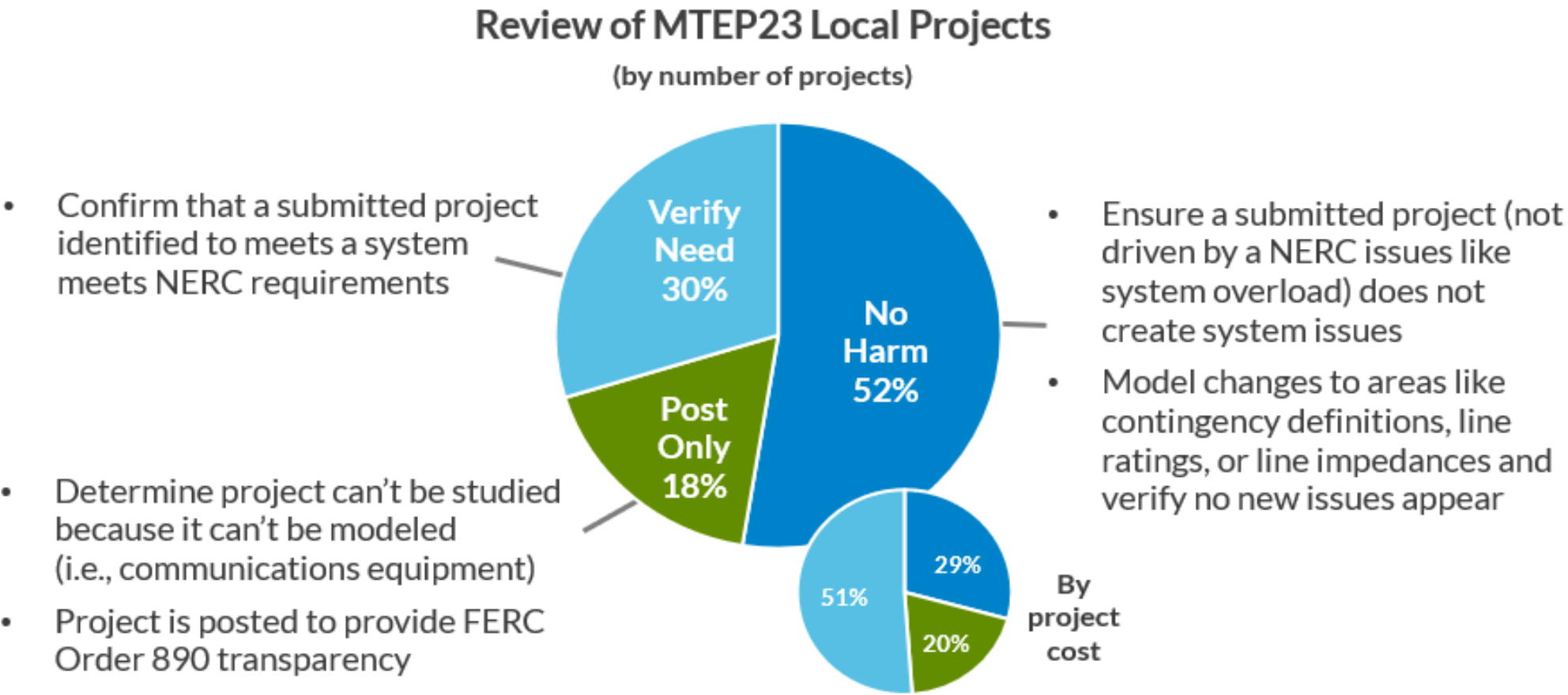
To provide an update on MISO's evaluation of MTEP23 proposed reliability projects

- 578 new projects, at a cost of \$9.4 billion, are targeted for MTEP23 Boards of Directors' approval in December
- 76 new projects are proposed in the South region, at a cost of \$4.3 billion
- Expedited Project Review increased in 2023 mainly driven by new load interconnections
- Today's focus is to review projects MISO is recommending for MTEP23 Appendix A
- In December, MISO staff will present the recommended MTEP23 Appendix A projects, as well as the report, for BoD approval

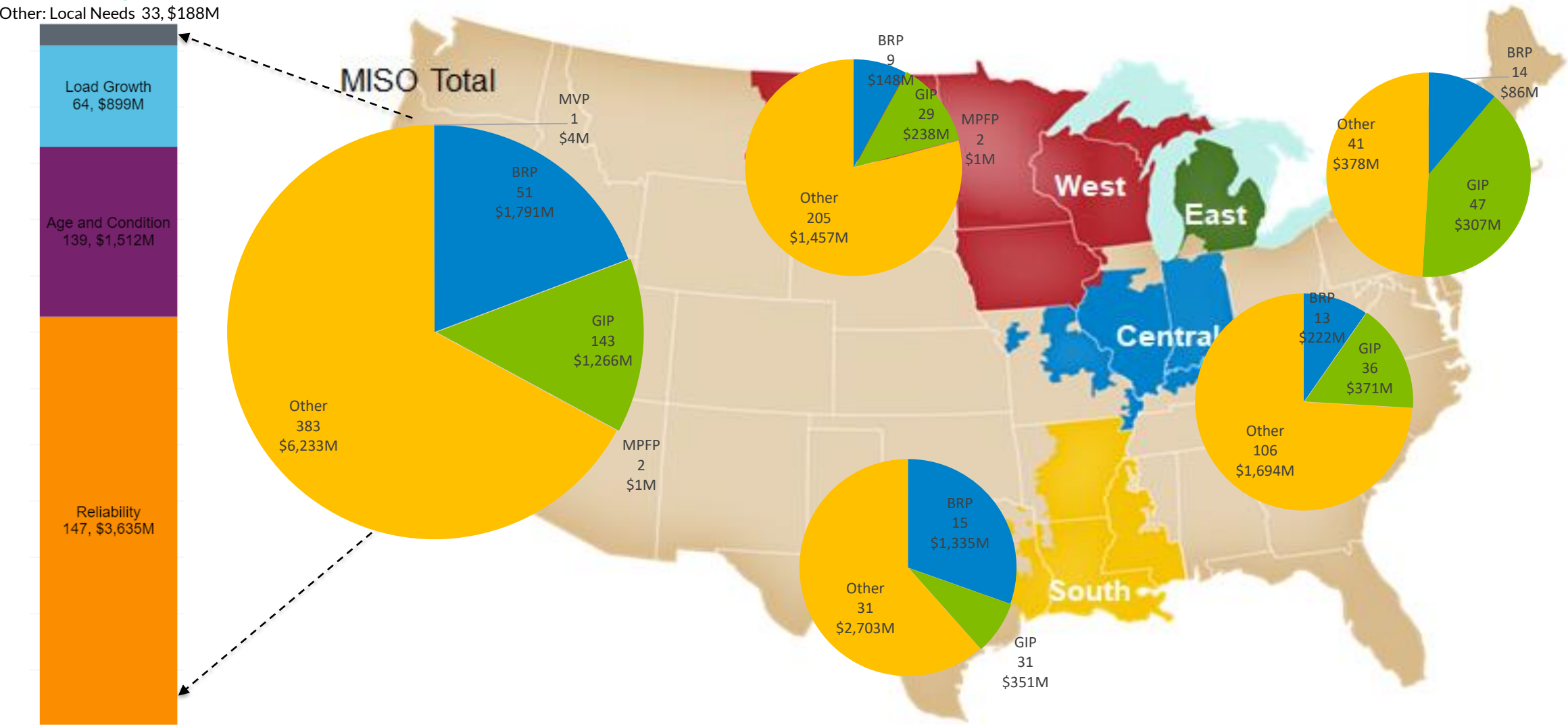
Stakeholder engagement is critical to the planning process



MISO’s review of projects varies based on the project drivers, system needs, opportunities for alternatives, cost allocation, and other factors.



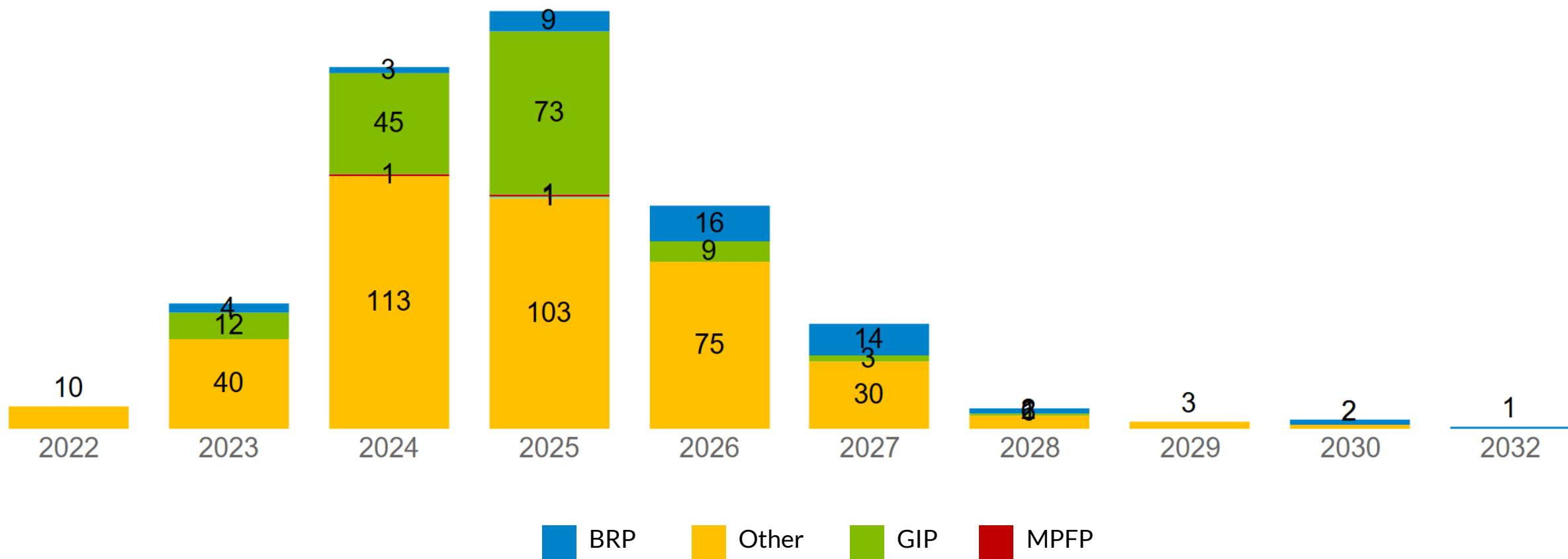
In MTEP23, 578 new projects, at an estimated cost of \$9.4 billion, are targeted for BOD approval in December



Project information as of August 21, 2023.

Statistics do not reflect all economic projects, GIPs, or TDSPs currently under evaluation in separate planning processes.

Most MISO MTEP23 projects will go into service within the next few years



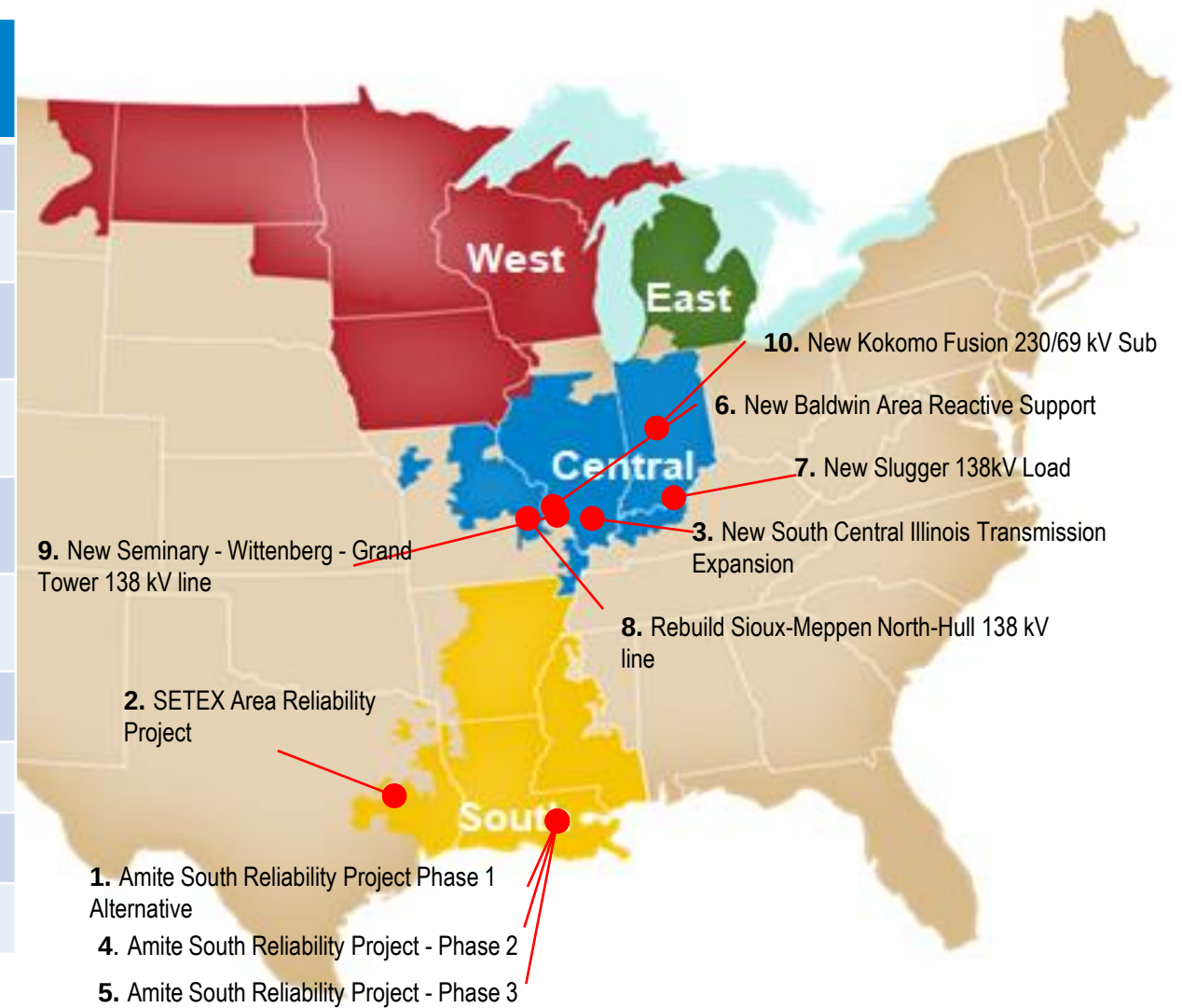
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MISO MTEP23 Top Ten Target A Projects

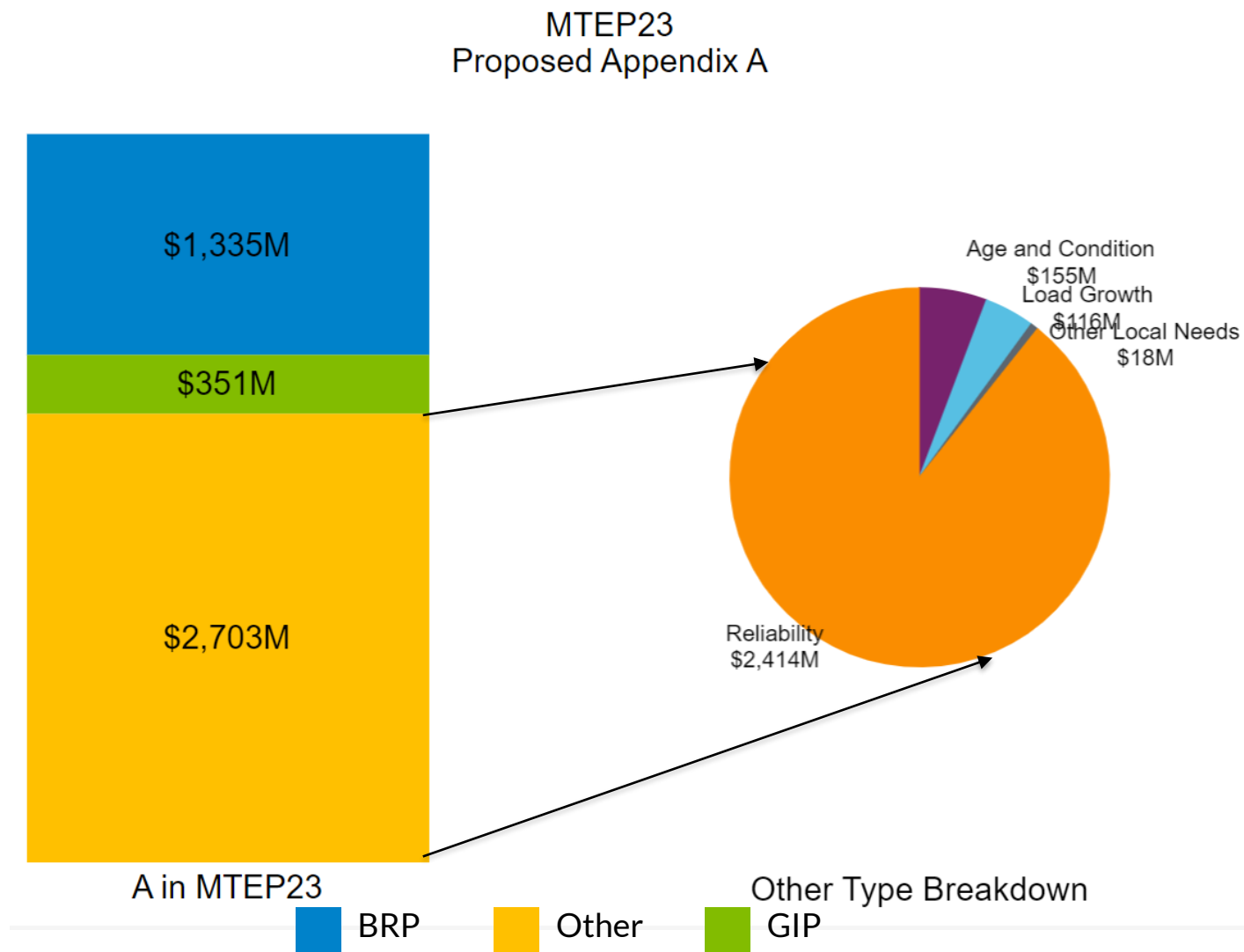
Rank	Project ID	TO	Project Type*	Expected ISD (min)	Estimated Cost (\$M)
1	25242	Entergy Louisiana	Other – Local Reliability	12/6/2028	1,700.0
2	23952	Entergy Texas	BRP	12/19/2030	1,111.0
3	23026	Ameren Illinois	Other – Local Reliability	6/1/2028	334.3
4	23957	Entergy Louisiana	Other – Local Reliability	6/30/2026	290
5	23959	Entergy Louisiana	Other – Local Reliability	11/16/2027	260
6	22966	Ameren Illinois	Other – Local Reliability	6/1/2027	170
7	23925	Duke Energy	Other – Load Growth	12/31/2029	123
8	22801	Ameren Missouri	Other – Age and Condition	12/1/2026	78
9	23846	Ameren Missouri	BRP	12/31/2026	68
10	23964	Duke Energy	Other – Load Growth	12/31/2024	63



Project information as of August 21, 2023.

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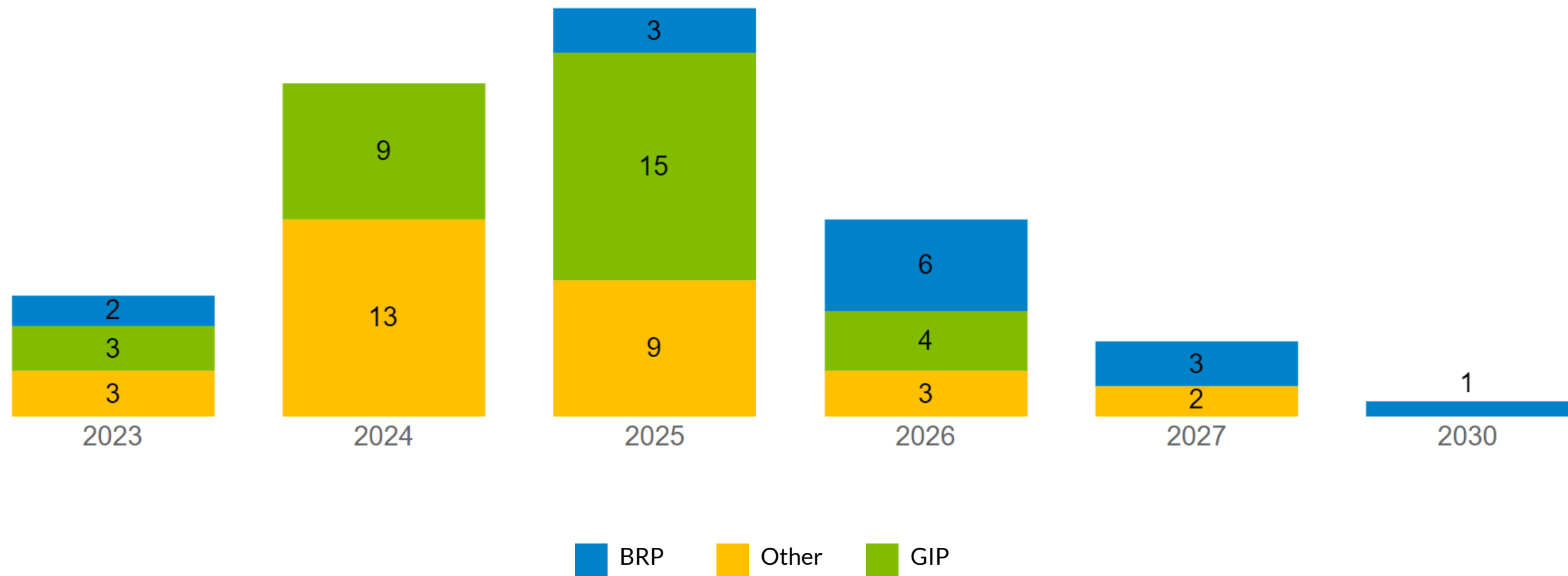
Proposed investment for the South Region for MTEP23



Project information as of August 21, 2023.

Statistics do not reflect all economic projects, GIPs, or TDSPs currently under evaluation in separate planning processes.

The majority of South Region's MTEP23 projects go into service within the next three years



Project information as of August 21, 2023

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MISO South top 10 Targeted Appendix A projects represent 41% of the overall cost of \$8.8 Billion



Blanket Asset Renewal Projects excluded from ranking
Project information as of August 21, 2023

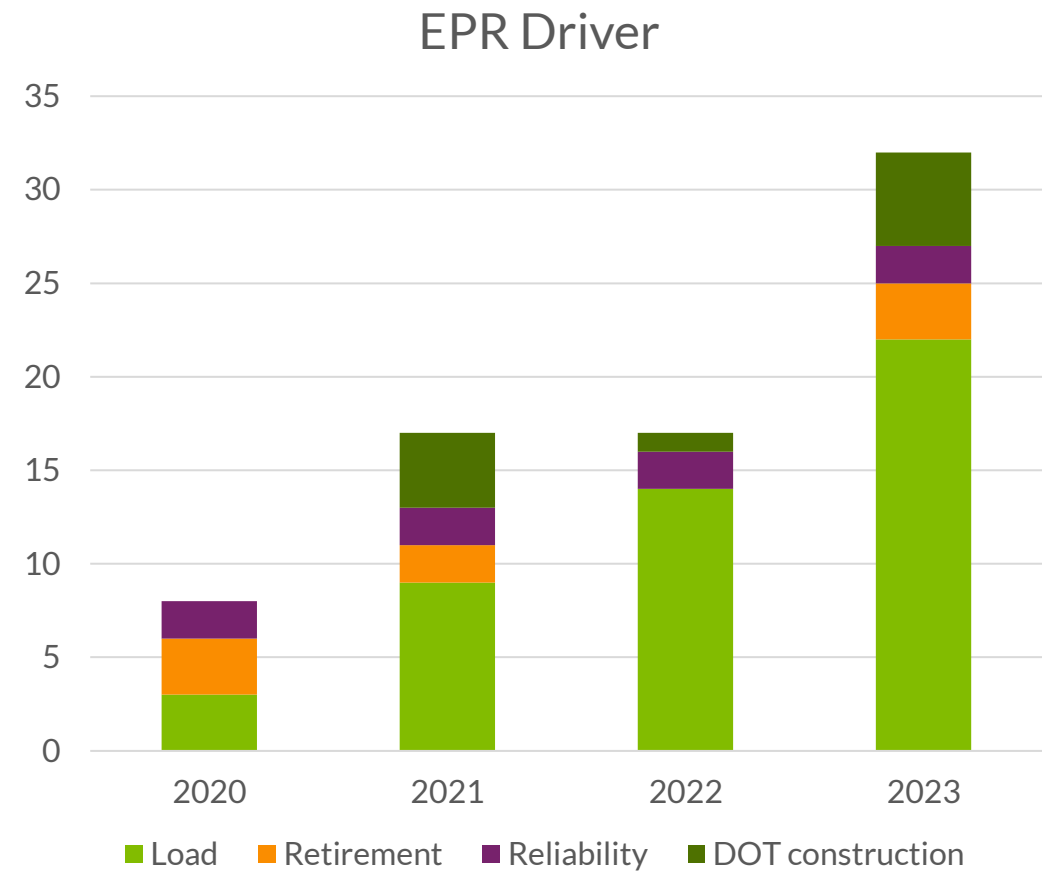
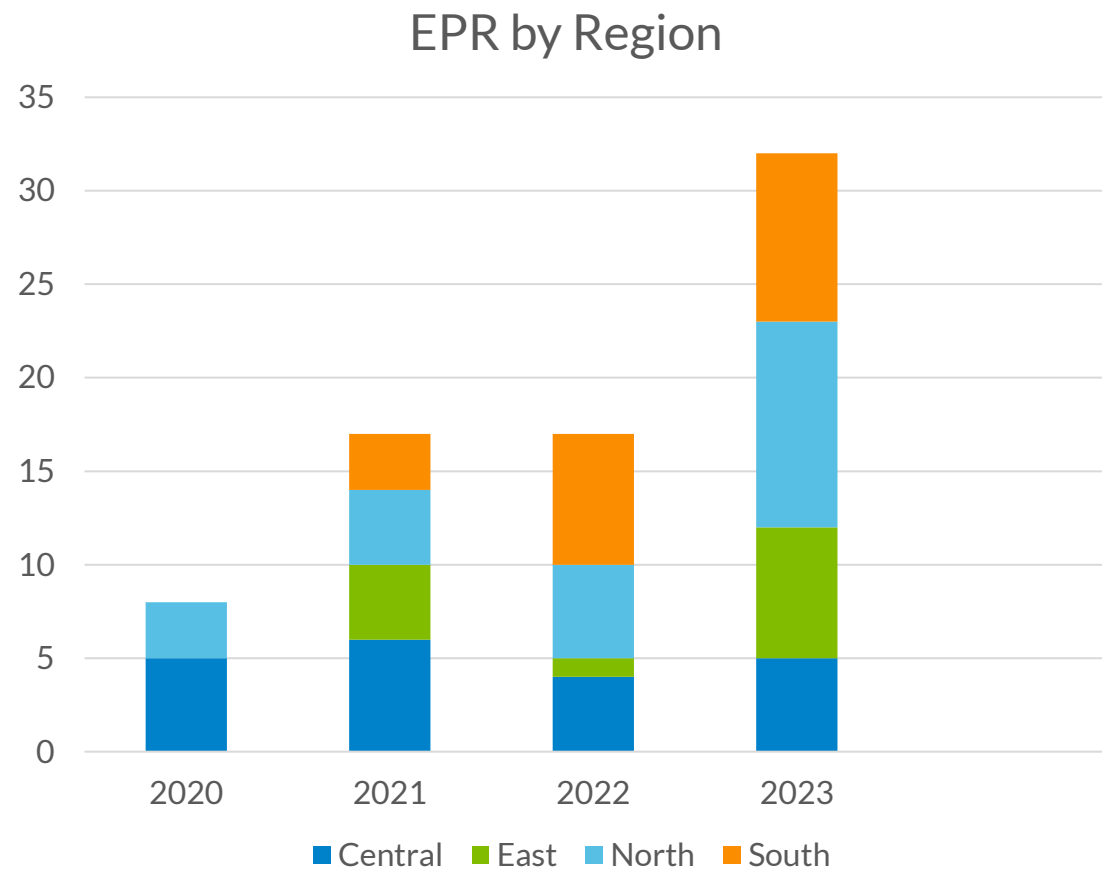
Rank	Project ID	TO	Project Type*	Expected ISD (min)	Estimated Cost (\$M)
1	25242	Entergy-LA	Other - Local Reliability	12/6/2028	1,700
2	23952	Entergy-TX	BRP	12/19/2030	1,111
3	23957	Entergy-LA	Other - Local Reliability	2/12/2027	290
4	23959*	Entergy-LA	Other - Local Reliability	11/16/2027	260
5	23932	Entergy-MS	Other - Age and Condition	12/31/2024	50.4
6	24252	Entergy-LA	GIP	9/20/2025	45.2
7	23934	Entergy-LA	Other - Age and Condition	12/31/2024	43.9
8	15654	Entergy-LA	BRP	12/1/2026	39.9
9	24416	CLECO	BRP	7/15/2027	35.6
10	23870	Entergy-TX	Other - Age and Condition	12/31/2024	34.2

Four of which are in the Top 10 of all MTEP23 projects.

*Project Types as defined by MISO Tariff Attachment FF. Additional details provided in Appendix of this presentation.

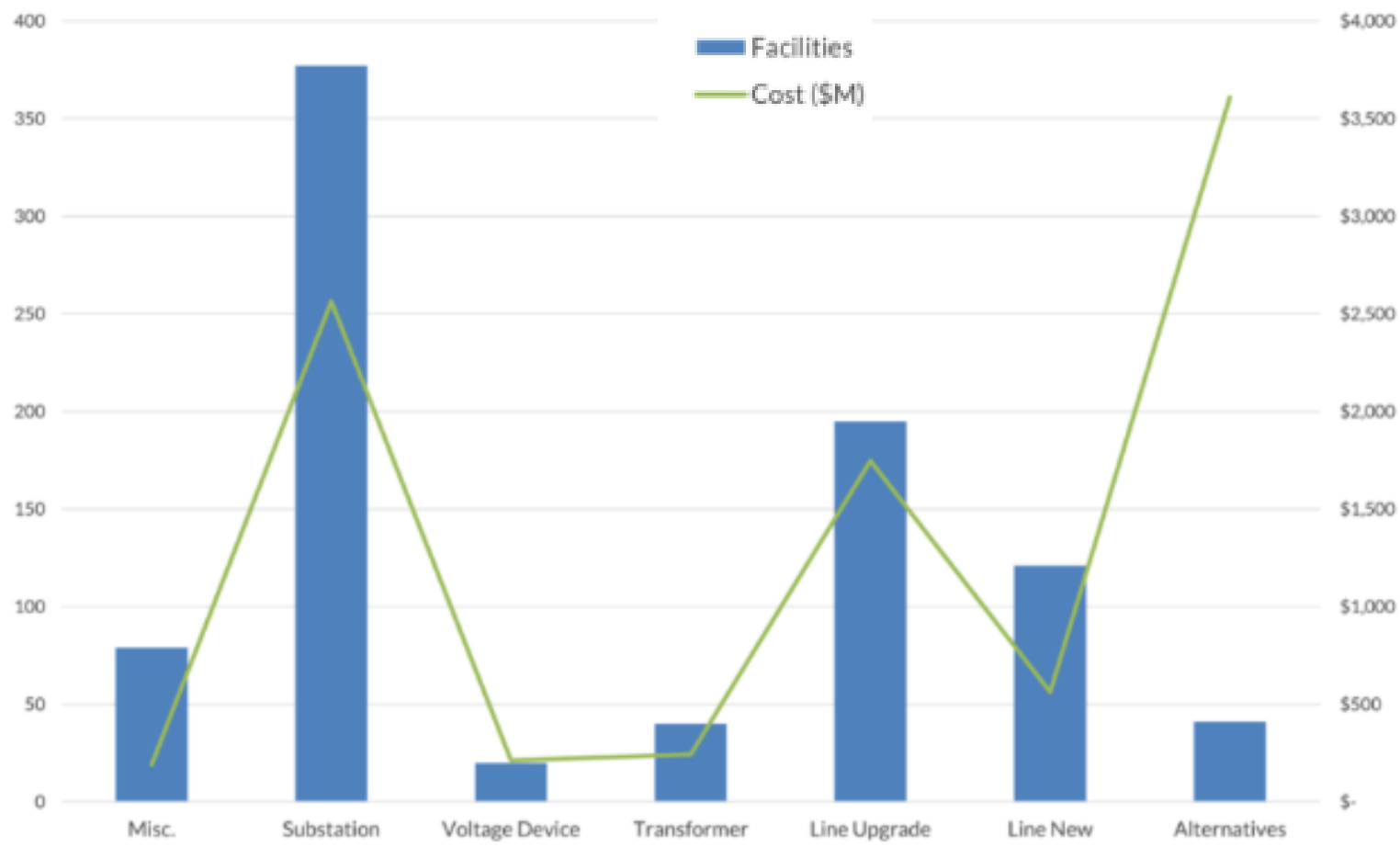
* Amite South Reliability Project - Phase 3 to be posted for December Board Approval

Expedited Project Review (EPR) requests nearly doubled in 2023.



MISO identified multiple projects in MTEP23 to develop transmission alternatives which represent over 40% of total investment

MTEP23 Appendix A Projects by Facility Type, Count & Investment



Alternatives were selected for some projects in East and South regions

Project Selected to explore alternatives	Region	Project Type	Estimated Cost(\$M)
New South Central Illinois Transmission Expansion	Central	Other	159.35
DSG Reliability & Resiliency Project *	South	Other	164.20
SETEX Area Reliability Project	South	BRP	1111.00
Amite South Reliability Project - Phase 1 *	South	Other	1442.60
Amite South Reliability Project - Phase 2	South	Other	290.00
Amite South Reliability Project - Phase 3	South	Other	260.00
OTP Lake Preston, SD Load Addition	West	Other	39.05
OTP Milbank, SD Load Addition	West	Other	23.38
Elephant - Phase 1 *	East	Other	63.10
New Long John to Dayton 138 kV	South	BRP	24.90
Ft. Redwood – Rawhide 115 kV	South	BRP	13.49

MISO performed an economic screener for large MTEP23 projects in MISO South

Economic Screening of MISO South Projects

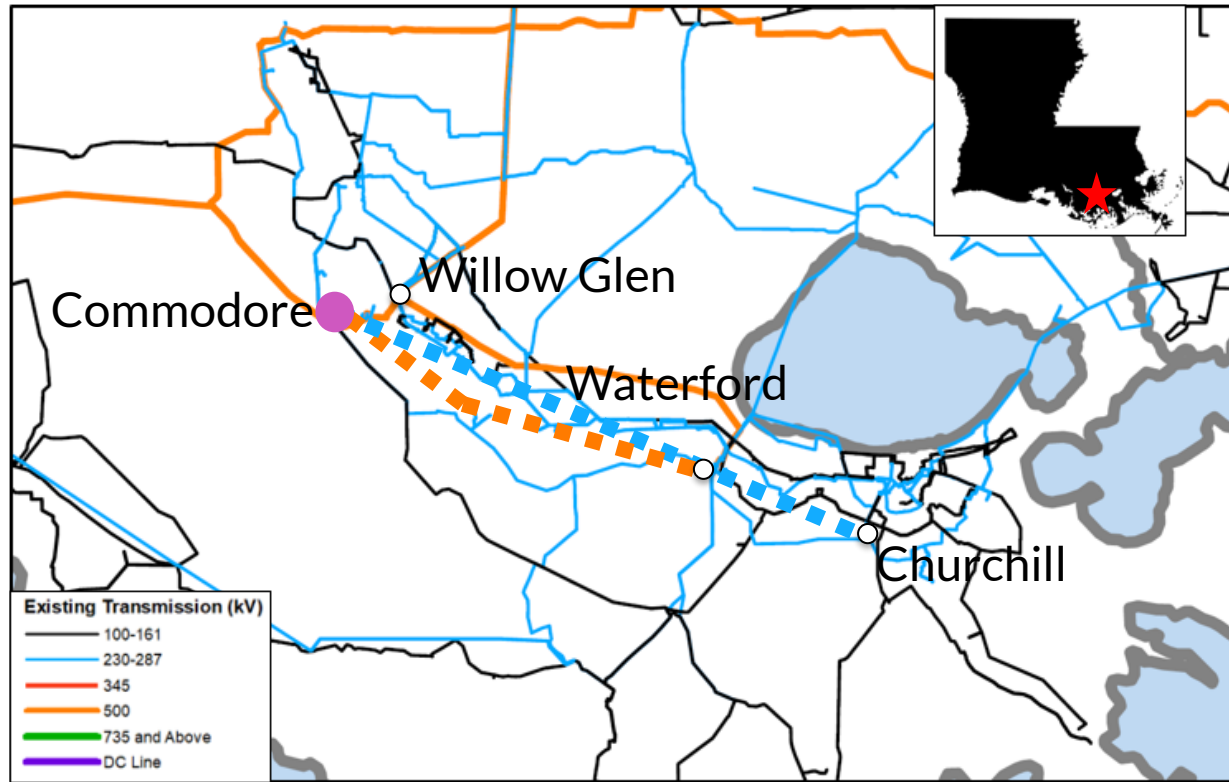
- Amite South Phases 1, 2, & 3, DSG, SETEX
 - All 5 projects screened as a portfolio
 - Studied in PROMOD using MTEP21 F1 Series, Years 10, 15, & 20
 - Threshold for further analysis is 0.9 20-year B/C ratio
- B/C ratio of project portfolio is 0.01
 - No single project reached B/C ratio of 1.25 required for MEP

MISO studies alternative projects, member submitted or MISO designed, to ensure cost, feasibility to construct, and enhanced future reliability benefits align.

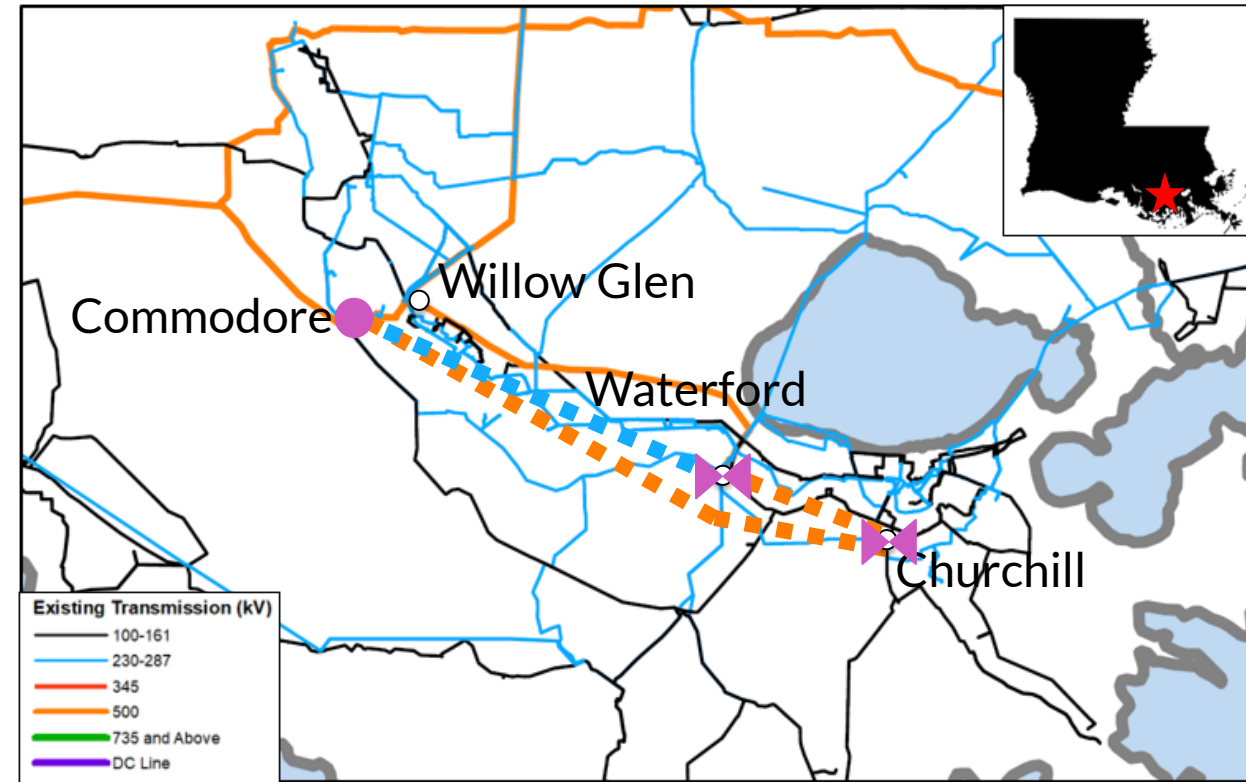
South Region: Enhanced Future Reliability Benefits

- Replace DSG Reliability & Resiliency Project and Amite South Phase I with Alternative
- Total cost of alternative is \$1.7 B
- Ties 230 and 500 kV systems together at three points instead of two
- Grows load serving capability across 2 load pockets instead of one

MISO Selected an alternative project in place of two proposed projects in MTEP23.

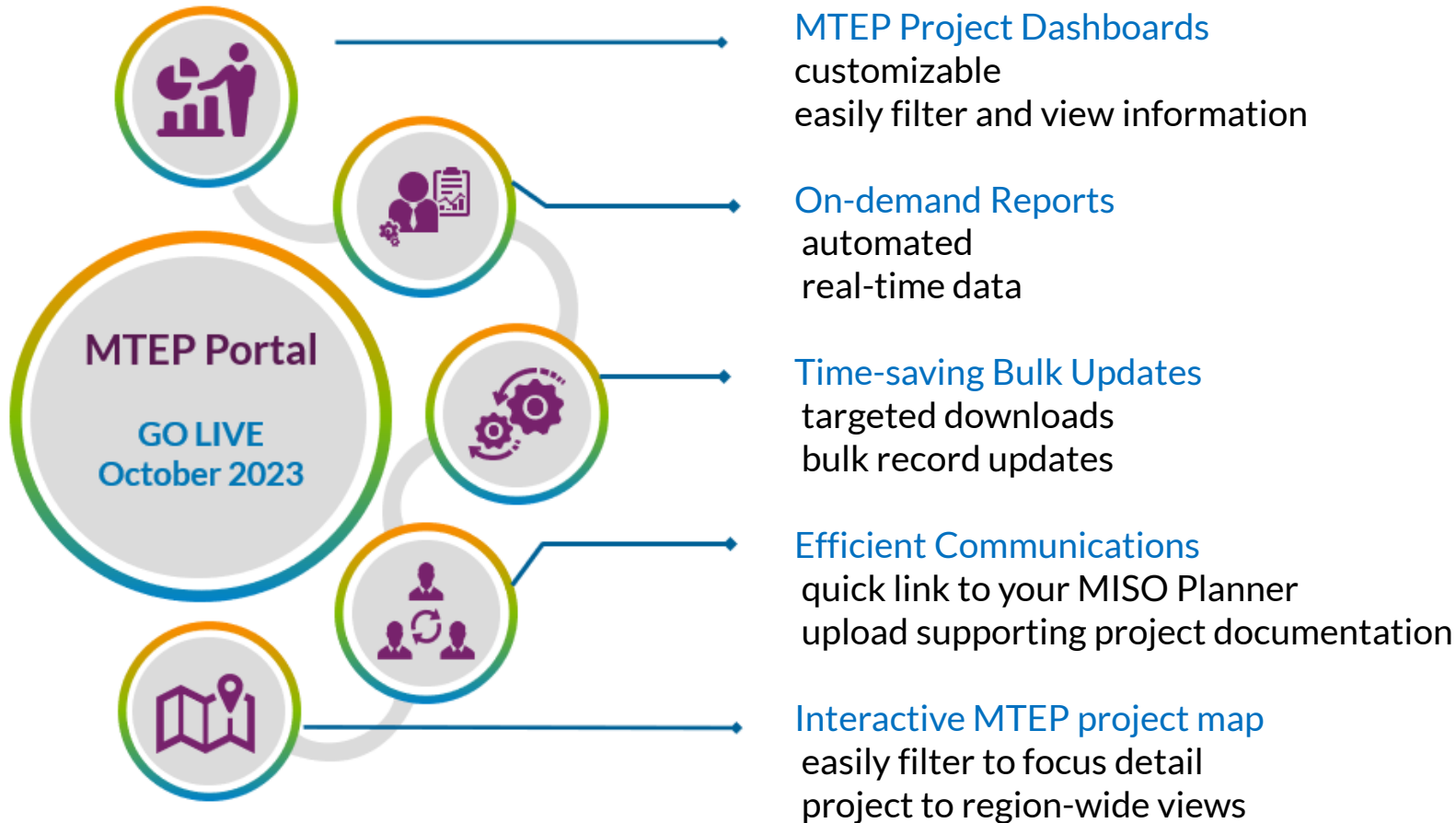


Proposed Projects:
Amite South Ph 1
DSG Reliability Project



Selected Alternative:
Commodore-Waterford-Churchill 500 kV Loop

The new MTEP platform will support MISO's inclusive stakeholder planning process and provide greater efficiencies needed as planning becomes more complex.



MTEP Portal Transition

Existing Shutdown: September 15th, 2023

Data Migration Begins: September 16th, 2023

New Portal Active: October 17th, 2023

Recorded Training Sessions:
<https://www.misoenergy.org/planning/planning/#t=10&p=0&s=&sd=>



Questions?

Appendix

Project Types

Allocation Category	Driver(s) & Requirements
Baseline Reliability Project	Network Upgrades identified in the base case as required to ensure that the Transmission System complies with applicable national Electric Reliability Organization (“ERO”) reliability standards and reliability standards adopted by Regional Reliability Organizations and applicable within the Transmission Provider Region.
Generation Interconnection Project	New Transmission Access Projects that are associated with interconnection of new or increase in generating capacity of existing generation.
Market Participant Funded Project	North American Electric Reliability Corporation (NERC) Reliability Criteria
“Other” Project	Do not meet the criteria to be considered as Baseline Reliability Projects, New Transmission Access Projects, Market Efficiency Projects, or Multi Value Projects. May include projects to satisfy Transmission Owner and/or state and local planning criteria other than NERC or regional reliability standards, interconnect new Loads, relocate transmission facilities, address aging transmission infrastructure, replace problematic transmission plant, improve operational performance or address other operational issues, address service reliability issues with end use consumers, improve aesthetics including but not limited to undergrounding overhead transmission facilities, address localized economic issues, and address other miscellaneous localized needs.
Market Efficiency Project	Meet Attachment FF requirements for reduction in market congestion and are eligible for regional cost allocation. Projects qualify as MEPs based on cost and voltage thresholds and are developed to produce a benefit to cost ratio of 1.25 or greater.
Multi-Value Project	Meet Attachment FF requirements to provide regional public policy, economic and/or reliability benefits. Costs are shared with loads and export transactions in proportion to metered MWh consumption or export schedules.
Transmission Delivery Service Project	Required to satisfy a transmission service request. Costs are generally assigned to the requestor.

MTEP23 is finalized in Q4 of 2023

