Value Proposition Workshop

February 20, 2026

Purpose & Key Takeaway

Purpose

To provide MISO stakeholders a clear, shared understanding of **why** the Value Proposition is evolving and **how** MISO is approaching updates, so it remains an accurate, transparent and trusted representation of the value created across the region.

Key Takeaways

- MISO is updating the Value Proposition framework to reflect the value it delivers in managing today's more complex grid
- Methodology changes center on adding components of value missing from previous artifacts, updating our estimates to reflect tightening system conditions, and aligning value reporting with MISO services
- Today we will review the framework and indicative results and are asking for feedback by March 6

Final 2025 Value Proposition results will be shared in June

Value Proposition Redesign Stakeholder Workshop

February 20, 2026

Topic	Time
Welcome	1:35
Section 1: Introduction and Overview	1:40
Section 2: Proposed Methodology Update	2:00
Section 3: Indicative Results	3:15
Next Steps	3:30
Additional Q&A	3:40
Adjourn	4:00

Introduction & Overview

Amy Hackbarth, Policy Planner
Strategic Assessments | MISO

MISO TIMELINE

Reliability Coordination & Market Implementation

- 1996-2001: MISO becomes first RTO
- 2003-2004: Joint Operating Agreements with PJM & SPP
- 2005: Energy Markets Implemented
- 2009: Ancillary Services Implemented

Value Expansion

- 2011: Value-based Transmission Planning; South Region Integration

Start of the Portfolio Evolution > Decarbonization

- 2020: Introduction of Reliability Imperative
- 2022: Seasonal Resource Adequacy Construct; Long Range Transmission Tranche 1

Grid Operation Complexity

Rapid Load Growth

- 2024: Reliability-Based Demand Curve; Accreditation; Long Range Transmission Tranche 2.1
- 2025: Generator Interconnection Queue Improvements; Expedited Resource Additions Study (ERAS)
- 2026: Automation

Clean Energy Future

- 2040

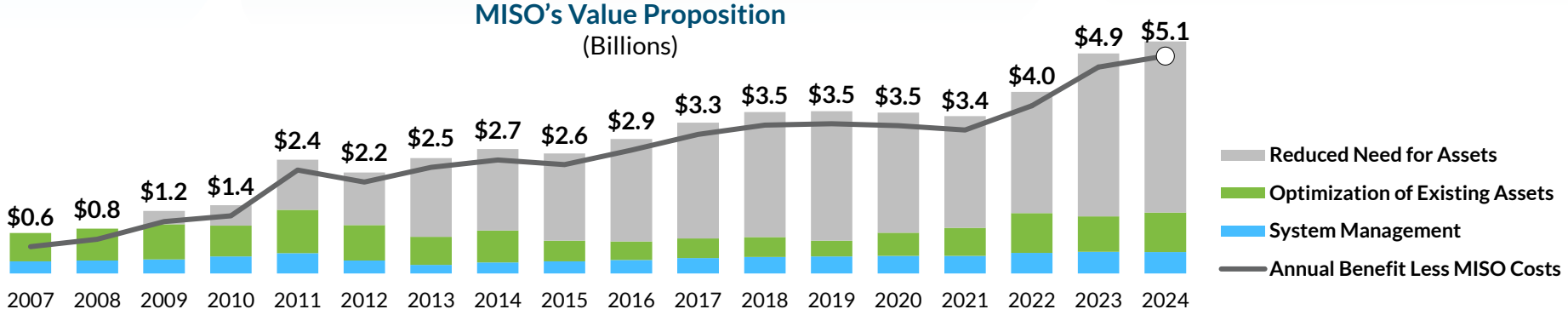
Value Driver Evolution

MISO's Value Proposition measures region-wide value as system and value drivers evolve.

Since 2007, the framework has undergone incremental updates, reflecting historically stable system conditions.

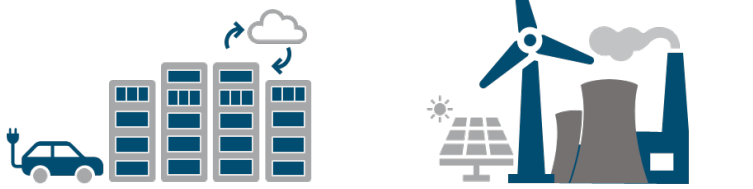
MISO's Value Proposition

(Billions)



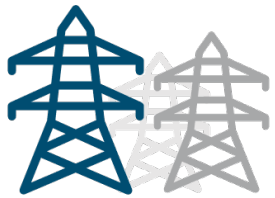
MISO's Value Proposition is a trusted foundation, but as grid complexity increases, it must evolve to accurately reflect the value MISO provides in meeting these challenges

EVOLVING LANDSCAPE → VALUE ENABLEMENT → VALUE MEASUREMENT



Electricity Demand is **ACCELERATING**

Resource Mix is **SHIFTING**



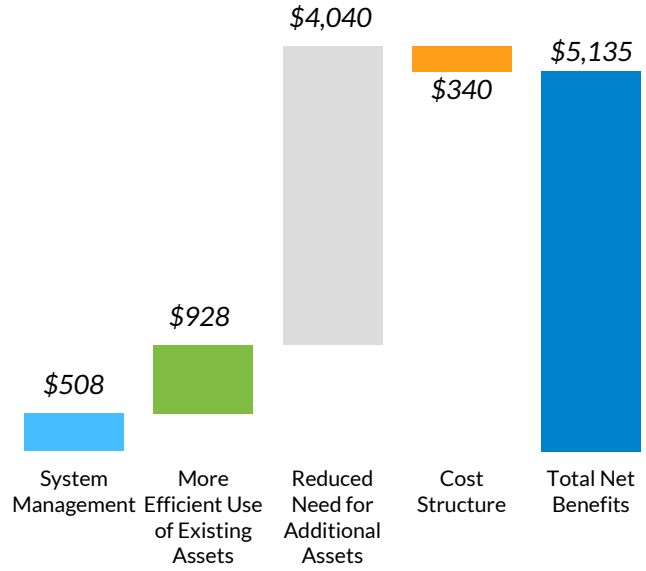
Transmission Planning is **EXPANDING**

Operational Risk is **INCREASING**

MISO's **Reliability Imperative** defines how we respond to evolving reliability challenges. Delivering on this work is creating new sources of value for our members

- MARKET REDEFINITION
- OPERATIONS OF THE FUTURE
- TRANSMISSION EVOLUTION
- SYSTEM ENHANCEMENTS

Legacy Value Proposition Framework, 2024 Benefit ($M)



Without evolution, the Value Proposition risks misalignment with measured and delivered value as MISO's role in managing reliability and market efficiency evolves.

MISO identified five design principles to guide our update to the Value Proposition

Completeness

Fully capture MISO's value in the evolving landscape while avoiding double counting

Consistency

Align previous and future assessments and artifacts

Alignment

Demonstrate how MISO's core services contribute to our overall value

Efficiency

Streamline our assessment processes without sacrificing accuracy

Transparency

Maintain trust through our conservative and consistent approach

We focused on components of value missing from our previous artifacts (transmission planning), updating our estimates to reflect evolving system conditions, and aligning value reporting with MISO services

Transmission Planning Value	**Regional Transmission Planning:** Value increases as MISO expands its transmission system to meet future demand and resource mix, and interconnect energy resources.
Tightening System Conditions	**Energy Market Benefits:** As system conditions tighten, energy value is increasingly driven by real-time constraints and scarcity events rather than average conditions, making actual market outcomes a more accurate reflection of system value than weather-normalized modeling. **Capacity Benefits:** As reserve margins tighten, the capacity benefit metric must shift to reflect real reliability constraints and system investment needs, not surplus-condition assumptions.
Aligning Value with MISO Services	**Framework Alignment:** Strengthening alignment between MISO's core services and member value by evolving metrics to reflect real system conditions and actual market outcomes.

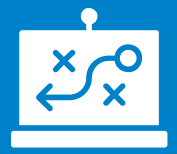
Today's workshop will focus on reviewing initial methodology updates and indicative results. Feedback will be used to inform framework finalization

Proposed Methodology Update

Dr. Kathleen Spees
Principal | The Brattle Group

Brattle conducted an independent assessment of MISO's Value Proposition aligned to the design guiding principles

SCOPE OF BRATTLE REVIEW INCLUDED:



Top-down review to assess consistency of benefit categories with MISO's primary functions and core services

Bottom-up, line-by-line review of calculation methods and assumptions

Recommendations for updating calculation methods

Indicative/prototype estimates, comparing 2024 Value Proposition estimates under prior vs. revised

MISO's Value Proposition measures system value created through centralized, regional planning and coordinated grid operations

Updated Value Proposition is reorganized to report benefits created by MISO's core services across the following three categories:

Managing Efficient & Reliable Operations

Competitive Energy and Ancillary Markets **lower production costs**, by coordinating mutually beneficial trade through efficient grid scheduling and managing reliability events

Supporting Cost-Effective Resource Investments

By capitalizing on resource and load diversity via regionally-coordinated reliability assistance, MISO members and states can **reduce capacity investments** and procure a more **cost-effective supply mix** while maintaining reliability

Regional Transmission Planning

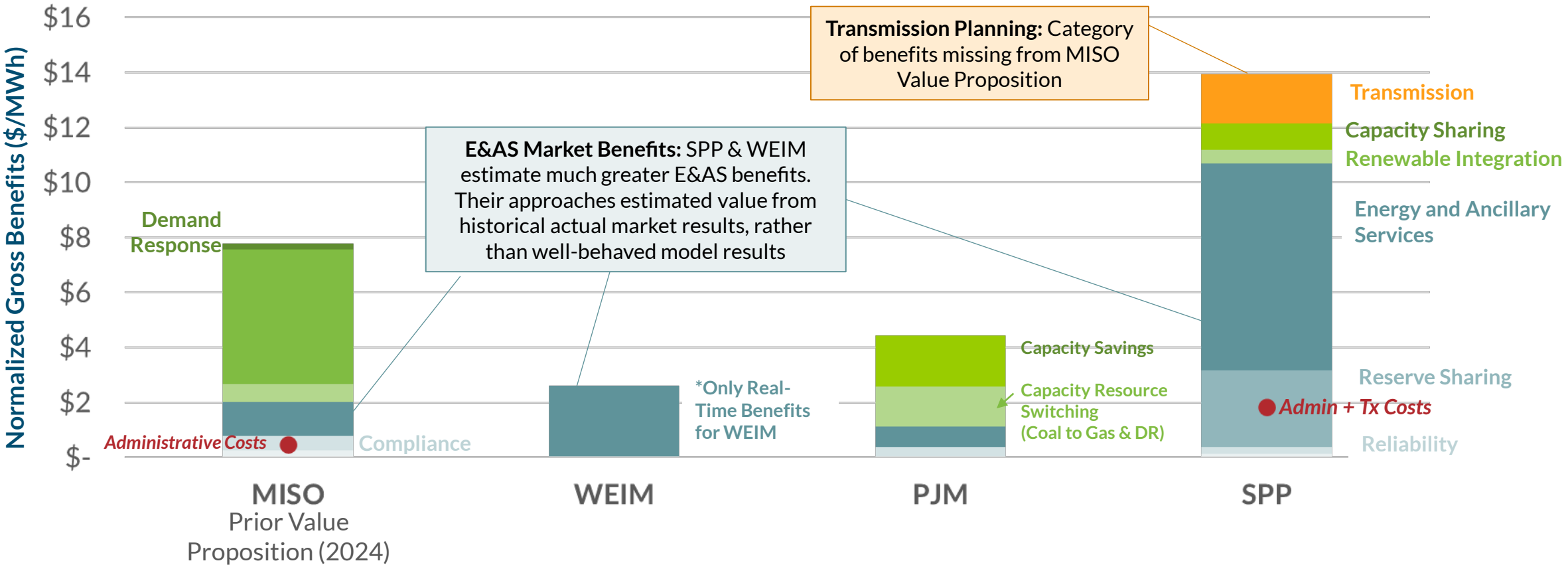
Regional transmission planning helps interconnected areas **access cheaper power,** enhance reliability, and reduces need for localized investments

Value Proposition estimates: How much do members benefit from MISO's core services (compared to a but-for scenario without MISO)?

		Managing Efficient & Reliable Operations	Supporting Cost-Effective Resource Investments	Regional Transmission Planning
Without MISO	How do utilities operate in non-RTO areas?	• Isolated balancing areas • Local congestion management • Individual compliance requirements • Pancaked, uncoordinated seams • **Self-provision of balancing services & curtailment management**	• Planning reserve margins above non-coincident peak, islanded planning • Local renewable development for RPS • Each utility builds local dispatchable supply to back up renewables • **Utilities pre-build to manage individual load growth & uncertainty**	• **Local transmission planning at smaller scale, limits access to lower-cost supply across the footprint** • Lower transparency and coordination of generator interconnection
With MISO	How do members benefit from MISO's services?	• **Energy & Ancillary Services markets to maximize benefits of trade & region-wide renewable balancing** • Consolidated compliance • Seams coordination • Outage coordination • Enabling new technologies	• **Load diversity benefits** • **Right-size builds (trade surpluses & deficit via bilaterals & PRA)** • Regional reliability balancing results in higher capacity value of renewables & batteries • Improved renewable siting • Risk sharing for large load integration	• **Regional transmission planning allows access to lower-cost supply & multi-value projects** • Interregional coordination • Open access queue

Peer Comparison: Benchmarking to other RTO Value Proposition studies

Benchmarking to other RTO studies illustrates variation in benefit categories and methods, with modest differences in resulting estimated value in most categories (normalized to system size). Biggest differences are observed in Energy & Ancillary Services (EAS) markets, transmission planning, and investment/capacity benefits



Sources: $ Benefits from MISO 2023 Value Proposition (2024), PJM Value Proposition (2019), SPP 2023 Member Value Statement (2024), Western Energy Imbalance Market Benefits Report: First to Fourth Quarter 2024; Normalized benefits estimated based on Net Generation data from S&P Capital IQ for SPP, MISO, PJM and WECC; WEIM load assumed to be ~79% of WECC load.

Overview of recommended updates

- **Recommend revised benefit categories,** that are closely aligned with MISO's three core services, to more clearly communicate how these services create cost savings across the membership. Categories:
  1. Managing Efficient & Reliable Operations
  2. Regional Transmission Planning
  3. Supporting Cost-Effective Resource Investments
- **Greenhouse Gas (GHG) benefits** explicitly tabulated in both tonnes and $ terms, but not added to the system-wide total (individual members can consider GHG benefits as relevant for their state or organization)
- **Recommended method refinements** described in following slides

Largest Increases (Decreases) in 2024 Benefits Case	
+ $3.3 Billion* *indicative	E&AS market benefits appear substantially under-stated. Adapting WEIM method based on realized actuals may capture more realistic benefits
+ $1.6 Billion	Transmission planning incremental benefits mapped in from regional planning studies. Benefits will grow over time as more projects come into service
–$2.1 billion	Capacity benefits reduced after method refinements. Offsetting positive & negative impacts (overall, more defensible and durable value estimate)
= $2.8 billion	Total increase in MISO net benefits
+$1.4 billion* *indicative	GHG benefits, if added @ $32/tonne & explicitly reported

*Energy market benefits are indicative estimates, informed by peer RTO estimations, pending final implementation of updated methodology. Associated GHG benefits are also indicative

Category 1: Managing Efficient & Reliable Operations

Why are the E&AS market benefit estimates lower than peer RTOs?	What is missing from the current approach?	Recommendation
MISO's historical PROMOD modeling estimates are developed using well-behaved, predictable system conditions and modeling assumptions. This can miss the value created under real-world conditions that are hard to predict and manage for individual utilities acting in isolation.	• Extreme weather conditions (current model considers a weather-normal year) • Wind, solar, and load forecast uncertainties (current model is perfect foresight) • Surprise resource outages • Extended transmission outages • Daily fuel price variability • Real-time rebalancing (current runs consider only day-ahead, hourly outcomes)	**Update E&AS methodology to capture actual market outcomes,** aligning with real-time constraints, scarcity events, and increasing operational risk

Rough indicator: Potential E&AS benefits indicated by peer RTO studies

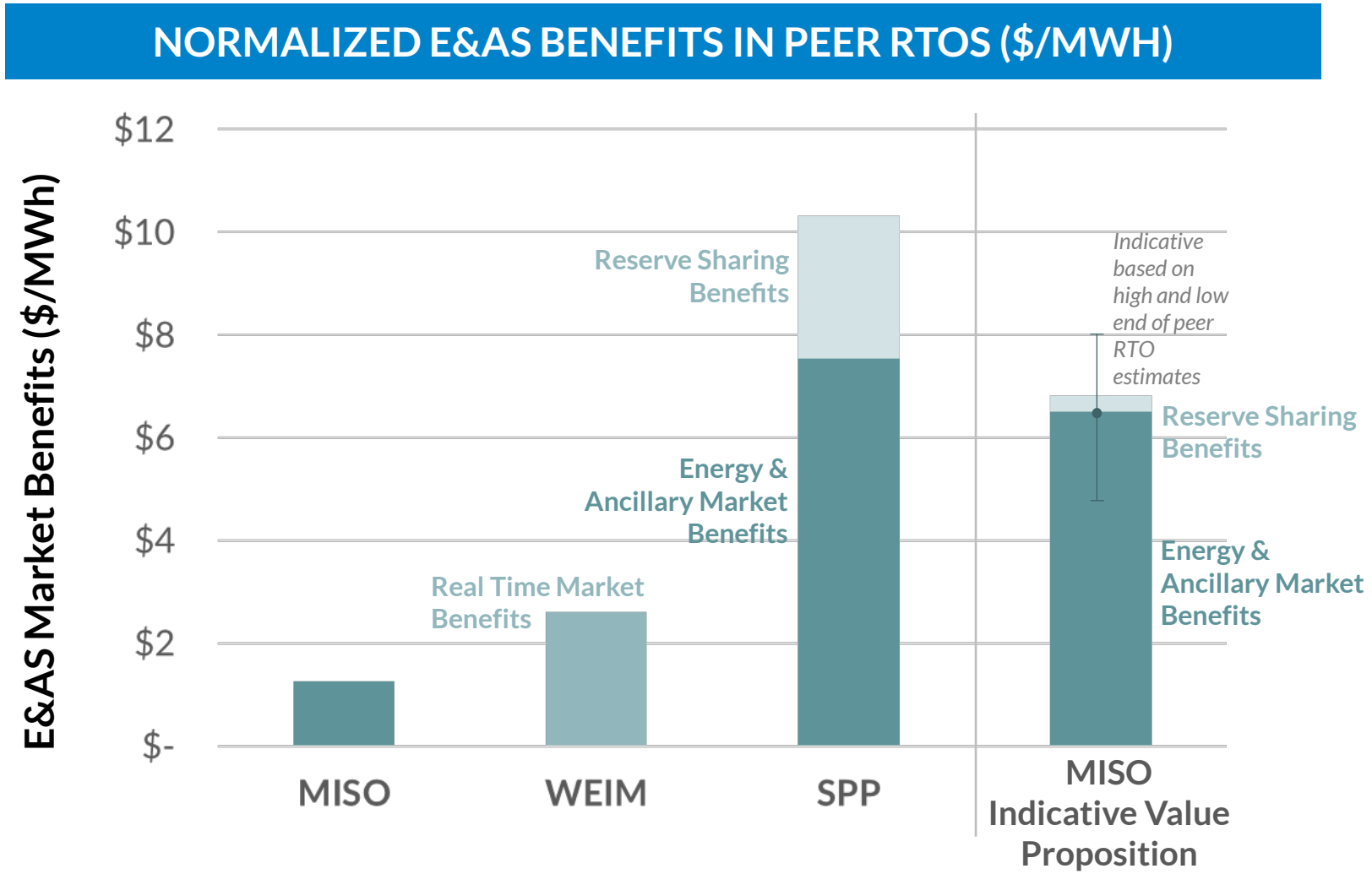
Brattle and MISO are developing an enhanced E&AS market benefit methodology, WEIM and SPP values are currently used as indicative.

E&AS Market Benefits:

- Indicative value is in the range of ~$5-8/MWh on a load normalized basis ($3.4-5.4 billion per year)
- Compared to $1.25/MWh under current MISO approach

Reserve Sharing Benefits:

- In addition, we recommend incorporating an investment cost savings from reserve sharing (less capacity needed due to lower system-wide contingency reserves)
- Captures a currently missing benefit of $0.32/MWh ($215 million/year)



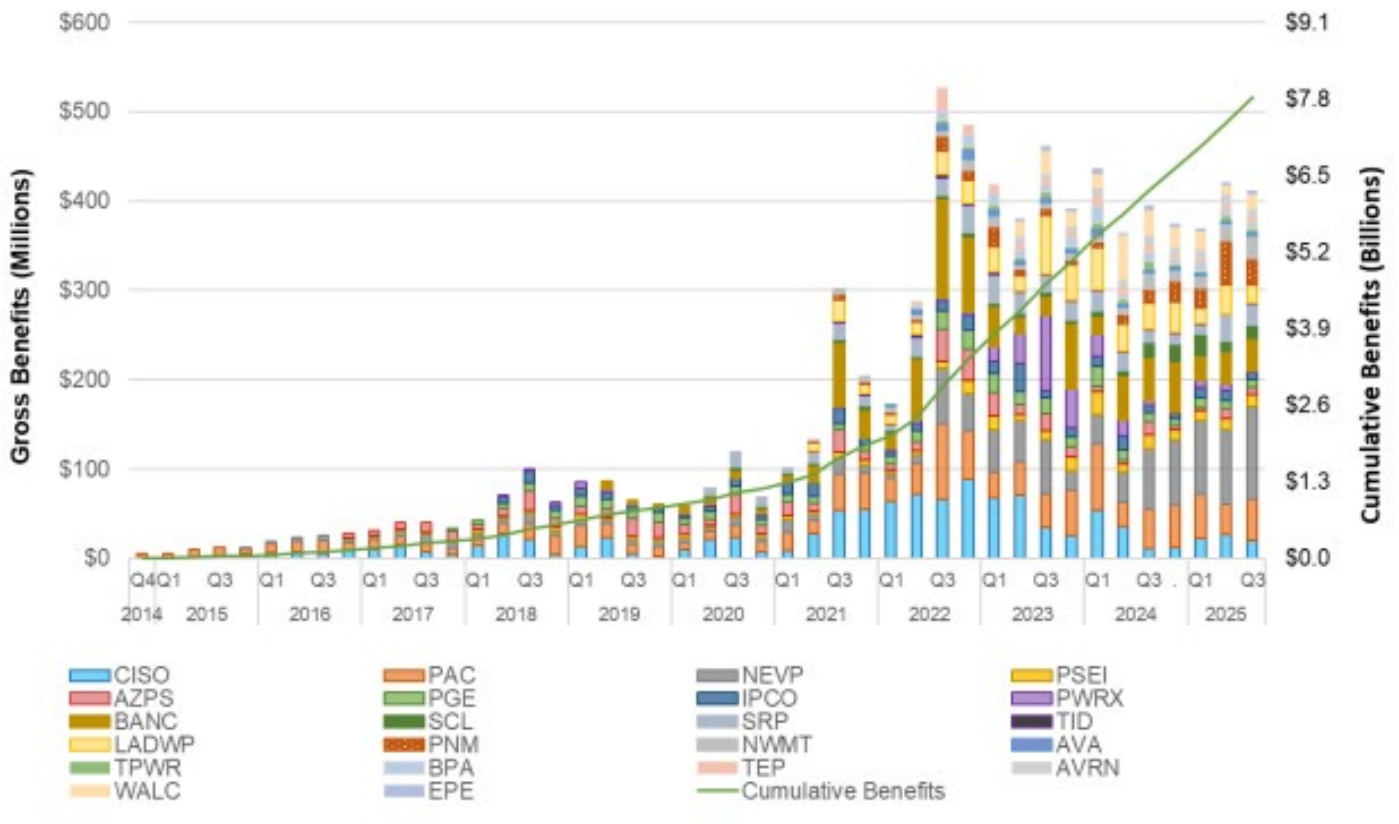
Sources: $ Benefits from MISO 2023 Value Proposition (2024), PJM Value Proposition (2019), SPP 2023 Member Value Statement (2024), Western Energy Imbalance Market Benefits Report: First to Fourth Quarter 2024; Normalized benefits estimated based on Net Generation data from S&P Capital IQ for SPP, MISO, PJM and WECC; WEIM load assumed to be ~79% of WECC load.

Deeper dive: WEIM approach to estimating E&AS market benefits

WEIM market benefits reports offer a different overall approach to estimating market benefits. Based on:

- Derived from 5-minute historical market data (rather than simulations), which captures realities of complex system, gas price shocks, outages, forecast uncertainties
- Result illustrates greater volatility in value (more value during extreme events and when members have greater diversity in costs and conditions)
- Benefits of trade calculation approach explicitly captures net benefit of market participation to both buyers & sellers

WEIM IMBALANCE MARKET BENEFITS REPORT (Q3 2025)



See: Western Energy Imbalance Market Benefits Report: Third Quarter 2025; EIM Quarterly Benefit Report Methodology

Proposed MISO Update: Estimate benefits of trade amongst all LBAs

LBA Benefits of Trade =

Adjusted Production Cost without MISO — Adjusted Production Cost with MISO

- **Sellers:** benefit from realizing market revenue above incremental production costs
- **Buyers:** benefit by purchasing energy at lower LMP than their but-for fuel costs

Adjusted Production Cost =

\+ LBA Production Cost

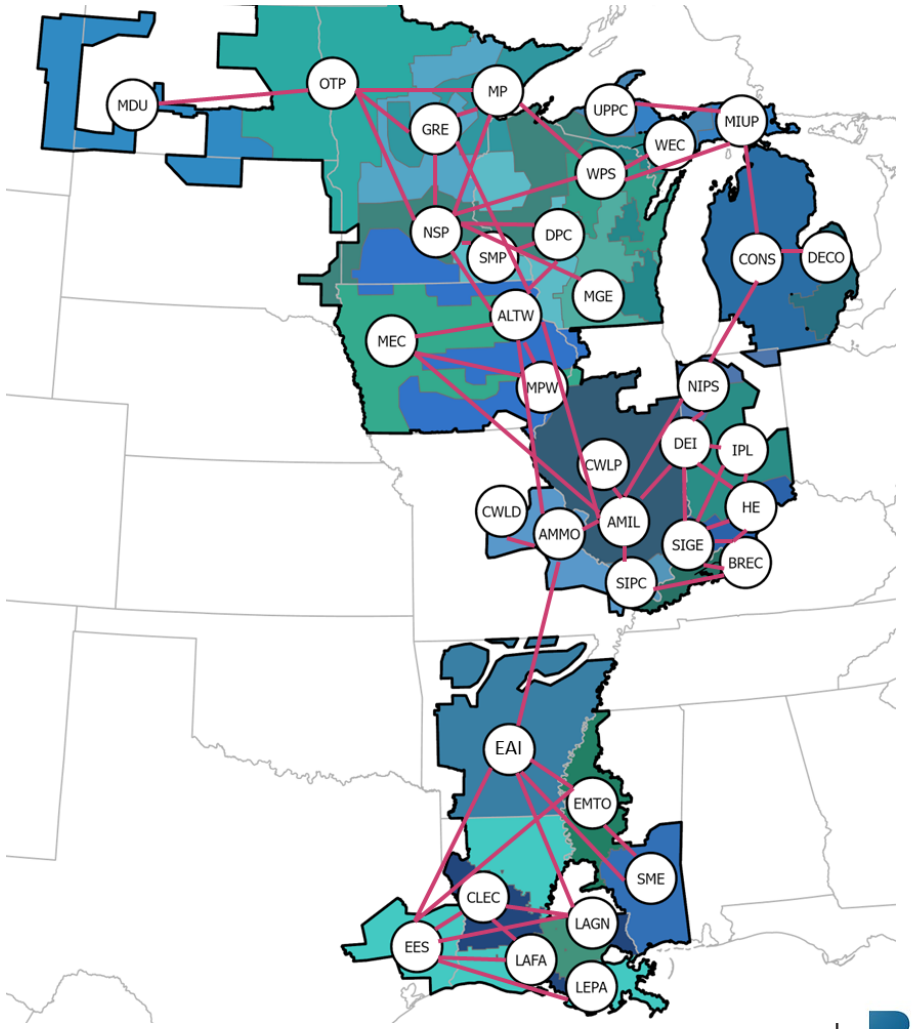
\+ Cost of Imports × Load LMP

— Revenue from Exports × Gen LMP

— Congestion Refunds

≈ Integrated Utility Supply Cost

MISO LBAS



Proposed MISO Update: Estimation of costs with and without MISO

With MISO
Adjusted Production Costs

- MISO conducts centralized market processes for resource commitment and dispatch across day-ahead and real-time market timeframes
- **Cost calculated as:** Summation of 5-minute real-time actual production costs (dispatched supply quantity × supply costs)

Without MISO
Adjusted Production Costs

Conduct without MISO case in 3 steps, focused on primary functional differences in how members operate with and without MISO

Step 1: Unit Commitment

- Utilities (treated as LBAs) conduct unit commitment independently based on day-ahead load & renewable forecasts
- Imports/exports enabled, but with a hurdle rate reflecting preference for self-commit
- Individual ancillary service requirements

Step 2: Inter-LBA Trade

- Utilities engage in optimized inter-LBA trade, but with a hurdle rate reflecting transaction costs (transmission rates under point-to-point scheduling)
- Imports/exports fixed on an hourly basis

Step 3: Real-Time Balancing

- Each LBA must conduct real-time (5-minute) balancing independently
- **Cost calculated as:** summation of final 5-minute production costs (supply quantity × supply costs)

Summary of Updates: Managing Efficient & Reliable Operations

Change	Reason for Recommendation	Indicative Impact (Millions)
Prior Value Proposition Benefits		**$1,434**
Change 1: Enhance E&AS estimation to capture missing value	Updates E&AS market methodology to use historical market data to address substantial under-estimate of value	$3,443* *indicative
Change 2: Include reserve capacity sharing benefits	Less capacity needed due to lower system-wide contingency reserves will result in investment cost savings (valued at Net CONE, see later section)	$215
Change 3: Remove improved reliability benefits category	Previous approach estimated reliability benefits of assumed improvements to transmission availability. Updated E&AS method (from Change 1 above) will attempt to estimate value more directly based on real-world outcomes during challenging and emergency conditions	($337)
***Indicative* Value Proposition Benefits**		**$4,755***
Avoided GHG benefits reported (but not added to system-wide total)	GHG benefits derive from more efficient resource dispatch in the E&AS market. Now valued at $32/tonne^ (reported separately so individual states and members can include as appropriate)	$1,362* *indicative

+$3.3 Billion

*Energy market benefits are indicative estimates, informed by peer RTO estimations, pending final implementation of updated methodology. Associated GHG benefits are also indicative

^ The $32/tonne cost is based on an average of High ($47.8/tonne) and Low GHG ($12.6/tonne) cost assumptions in LRTP 1 and MISO Value Proposition Forward Looking evaluations, inflated to 2024$

Category 2: Regional Transmission Planning

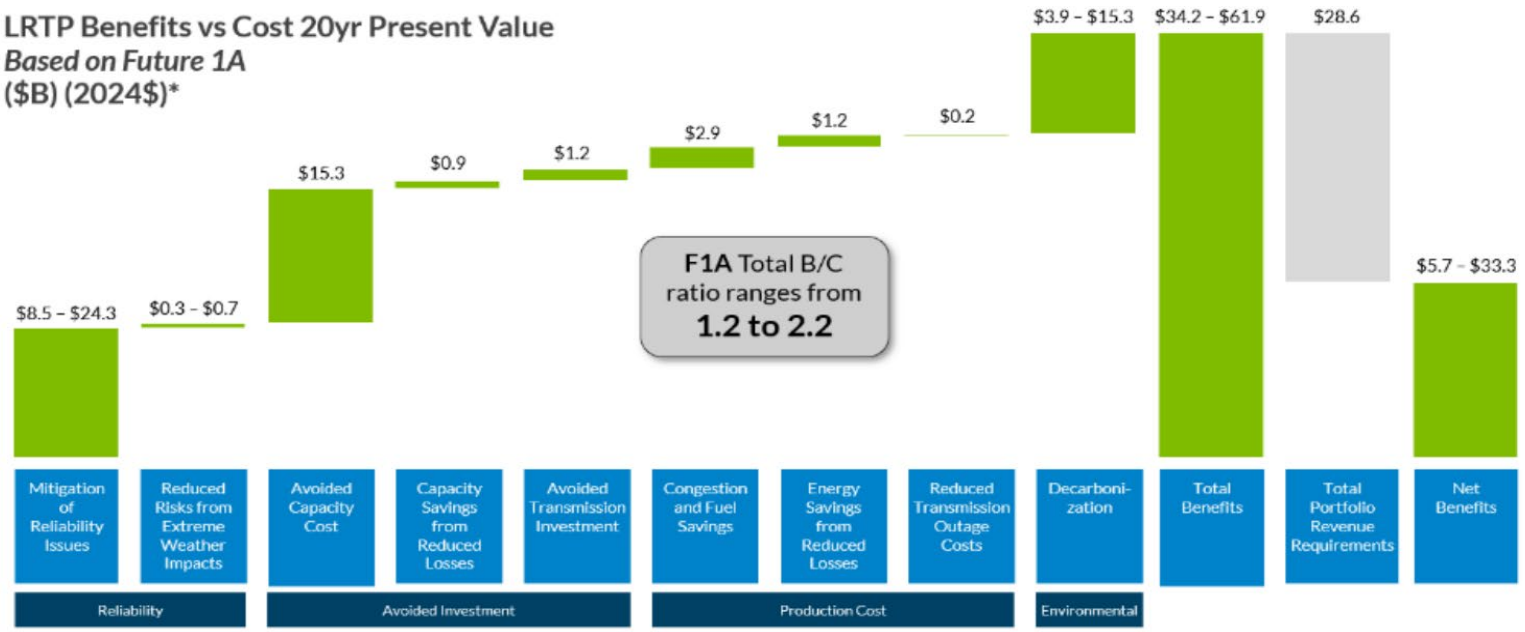
How should the Value Proposition account for transmission planning benefits?	Incorporating transmission planning benefits acknowledges:	Recommendation
The Value Proposition should capture benefits of regional transmission projects that would not occur in a no-MISO world, where isolated utility planning limits trade and regional diversity benefits.	• MVP project portfolio that is now coming into service • Upcoming LRTP Tranche 1 and Tranche 2.2 projects that will come into service over the coming years • Growth in regional benefits enabled by a more robust transmission system, enabling states and members to capture more gains from trade and leveraging diversity across the footprint • Benefits derive from meeting future demand & resource mix, preparing for integration of large loads, and managing uncertainties via system-wide, scenario-based portfolio planning	**Add new benefit category to account for the value of regional transmission planning**

Proposed Approach: Adapt transmission planning studies

Recommend to adapt existing long-term transmission planning studies into the Value Proposition

- Assume reliability-based projects would have proceeded even without MISO under balkanized planning
- Adapt benefits from transmission planning studies (MVP, LRTP Tranche 1, LRTP Tranche 2.1)
- No changes to methods or results (but utilize most current estimates from upcoming Triennial Review when available)
- Review other categories of the Value Proposition to ensure consistency and remove overlapping benefits

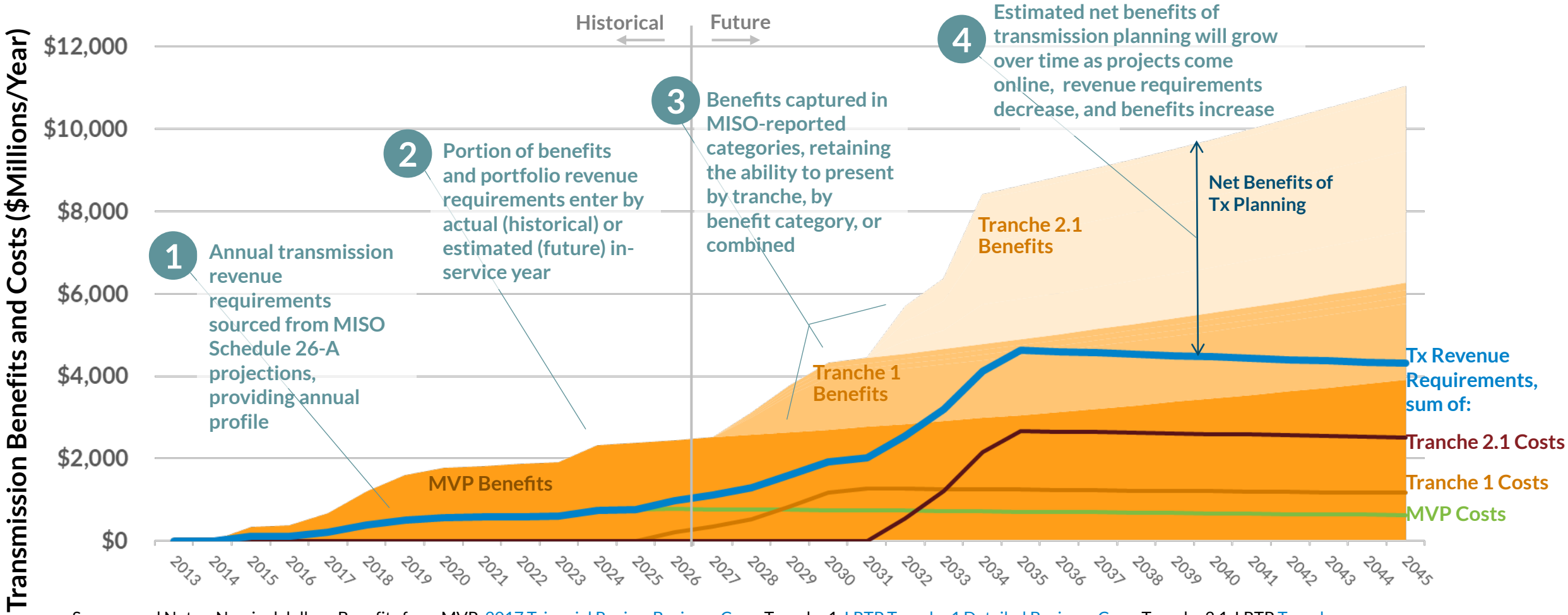
EXAMPLE: TRANCHE 2.1 BENEFITS TO BE ADAPTED INTO THE VALUE PROPOSITION



Sources: Long Range Transmission Planning; MTEP24 Chapter 2 – LRTP Tranche 2.1 Portfolio; LRTP Tranche 1 Portfolio Detailed Business Case; MTEP17 MVP Triennial Review Report117065.pdf

Integrating transmission planning benefits into the Value Proposition

BENEFITS BY TRANCHE OVER TIME



Sources and Notes: Nominal dollars. Benefits from MVP, 2017 Triennial Review Business Case; Tranche 1, LRTP Tranche 1 Detailed Business Case; Tranche 2.1, LRTP Tranche 2.1 Detailed Business Case Analysis. Benefits derived from reported 40-year NPV benefits, levelized, and converted to nominal dollars, and are assumed to extend throughout the life of the asset. Revenue Requirements from MISO Schedule 26-A Indicative Annual Charges. MVP Revenue Requirement in historical years determined as capital-cost-weighted percentage of in-service facilities each year times 2026 revenue requirement, deflated at 2.5% per year.

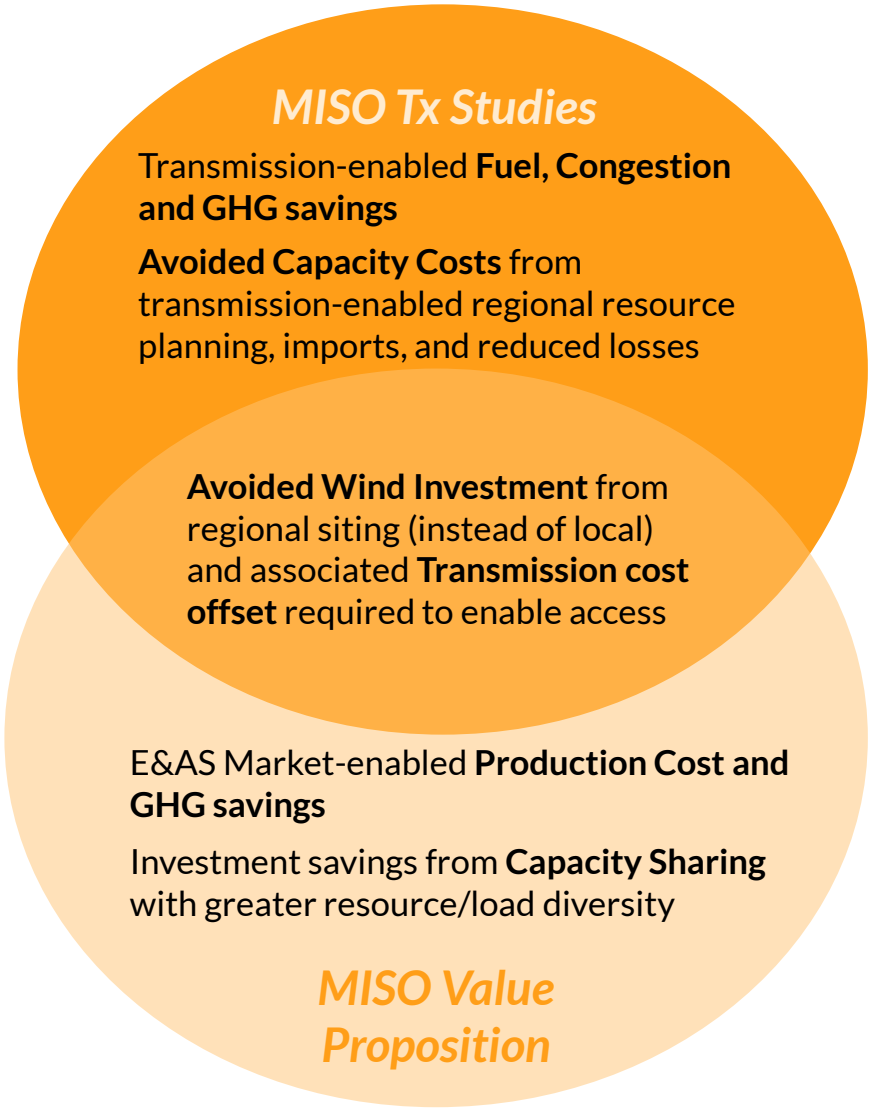
Consistency review: Removing overlapping benefits between Value Proposition & transmission planning studies

Recommend to remove:

- A portion of wind integration benefits (related to MVP projects in 2024)
- Transmission cost offset to renewable benefits (also now accounted for in transmission benefits category)

No change to other categories:

- Value Proposition and transmission studies measure benefits relative to similar cost categories (investment cost savings, production cost savings)
- Benefits are additive. Value Proposition measures benefits of an RTO; while transmission studies measure benefits of additional transmission



Summary of Updates: Regional Transmission Planning

Change	Reason for Recommendation	Indicative Impact (Millions)
Prior Value Proposition Benefits		**$0 Transmission** **+$438 Renewable***
Change 1: Include MVP net benefits for 2024	Net benefits from MVP 2017 Triennial Review Business Case should be included to account for the benefits of regional transmission planning	$1,593
Change 2: Remove Transmission Cost offset from renewable siting benefits	The cost of the MVP projects that enable the optimally-sited wind are now already be accounted for in calculation done to estimate the net benefits of these projects (Change 1) and should not be deducted twice	$159*
Change 3: Remove MVP-related portion of "Avoided Wind Turbines" benefits	The gross benefits of "Avoided Wind Turbines" enabled by the MVP projects should not be accounted for in the renewable siting benefits as well. Hence, this should be removed from the Renewable siting benefit	($106)*
Updated Value Proposition Benefits		**=$1,593 Transmission** **+ $491 Renewable***

Note: *Under updated categorization, Renewable Resource Optimization benefits will be reported under *Category 3: Supporting Cost-Effective Resource Investments* in the revised Value Proposition (described here alongside transmission only to describe updates required to avoid overlapping benefits).

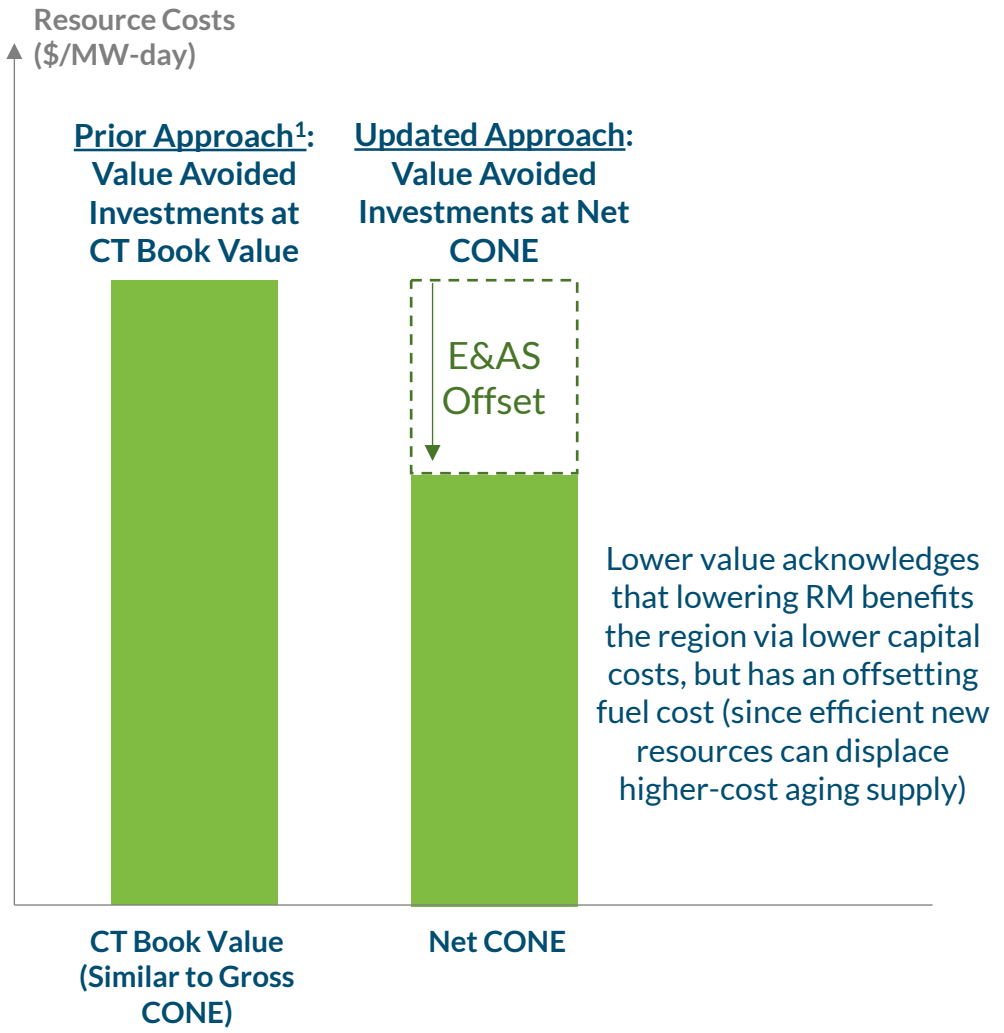
Category 3: Supporting Cost-Effective Resource Investments

How does MISO enable value?	How does investment value change as planning reserves tighten and the mix evolves?	Recommendation
Historically, the largest share of the Value Proposition has been captured in avoided and lower-cost capacity investments, including through reserve sharing and lower-cost resource portfolio; with many utilities able to defer new investments for several years via MISO membership.	*What stays the same:* • Lower system-wide reliability requirement enabled by a large footprint with diversity in supply and demand *What changes:* • Tighter reserve margins, increasing system complexity, and greater regional diversity may shift value toward E&AS markets • Potential that the "tight" season driving capacity investments may not always be the summer • As members invest in a variety of technologies, value of MISO is not just in reducing the total quantity of investment, but providing signals to guide an efficient & complementary mixture of resources across diverse states and members (system-wide, locationally, seasonally)	**Update capacity benefit methodology to reflect tightening system reserve margins and shifting investment resource mix**

Recommendation: Switch to Net CONE for valuing avoided capacity

Rationale: Why change from prior CT book value[1] (conceptually similar to Gross CONE), to lower Net CONE parameter as the basis for valuing avoided capacity?

- Adopt PRA Gross & Net CONE parameters for consistency
- Switch to Net CONE more relevant now because E&AS is becoming larger (previously CT Gross and Net CONE were similar in MISO, but this is no longer the case with lower reserve margins and higher E&AS offset)
- Net CONE will acknowledge that reducing capacity investments has two offsetting effects:
  - Lower capital costs (estimated by CONE)
  - Higher variable fuel costs (estimated by net E&AS offset, particularly relevant if new resource will operate frequently and offset higher-cost aging capacity supply)
- Net CONE will also be more stable with changing reference technologies (whether marginal technology is battery, gas CC, gas CT). However Net CONE is more similar across all economic technologies (theoretically identical in long-run equilibrium)
- Net CONE will be more robust to system changes and more stable over time



[1] Prior monetization utilized the book value of a combustion turbine (CT) from NREL's Annual Technology Baseline. Avoided costs were annualized using a fixed annual charge rate that incorporated return on capital, property tax, insurance, and depreciation.

CONE = Cost of New Entry
E&AS = Energy & Ancillary Services
CC = Combined Cycle
CT = Combustion Turbine

Summary of Updates: Supporting Cost-Effective Resource Investments

Change	Reason for Recommendation	Indicative Impact (Millions)
Prior Value Proposition Benefits		**$4,023**
Change 1: Firm Imports Not Free	Acknowledge that members must pay for firm imports without MISO, adjust so that firm imports are not treated as free supply	$1,068
Change 2: Switch from Book value[1] to Net CONE & UCAP from PRA	Transition to using MISO PRA parameters Net CONE, to improve consistency (and maintain same reference resource.) Net CONE is representative of capacity cost of asset, after taking account any incremental production cost savings from addition of new, efficient capacity	($2,538)
Change 3: Calculate Value Relative to Tight Season	Capacity Requirement during tightest season will determine system investments and should thus be the basis of evaluation (different from current approach of valuing each season and then taking an average)	($645)
Change 4: Apply Net CONE to DR Value (minus Cost of PRA offer price)	Similar to Change #3, value capacity avoidance at Net CONE of reference technology (and cost of DR based on PRA offer prices for cleared DR) Also use tight season to determine MW of DR enabled	($31)
Change 5: Adjust Renewable Siting benefits for overlaps with MVP projects	Updates to avoid overlaps with Transmission benefit category (see prior slides on transmission)	$53
Updated Value Proposition Benefits		**$1,930**

-$2.1 Billion

[1] Prior monetization utilized the book value of a combustion turbine (CT) from NREL's Annual Technology Baseline. Avoided costs were annualized using a fixed annual charge rate that incorporated return on capital, property tax, insurance, and depreciation.

Other Non-quantified Benefits

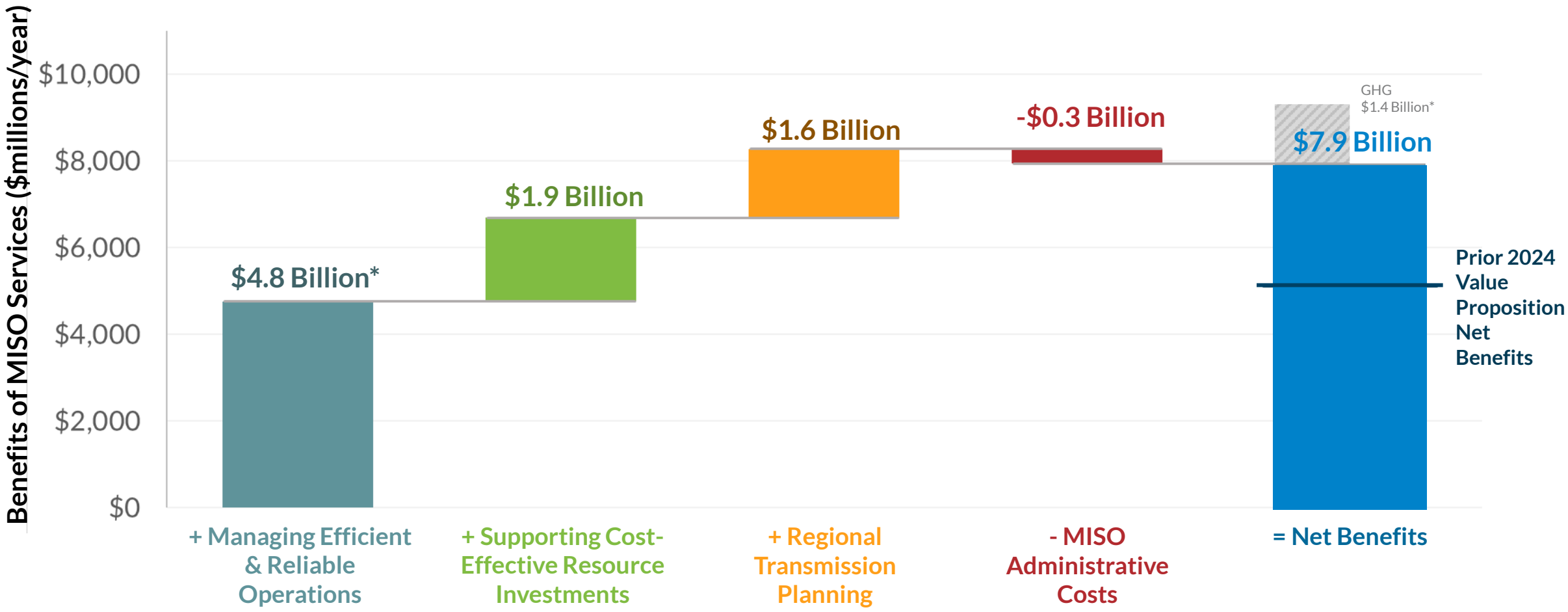
Qualitative benefits under discussion	Recommendation
• Seams coordination • Enabling state policies & member goals • Open access interconnection queue • Emerging technologies integration • Public health from lower air quality emissions • Large load integration • Enhanced ELCC sharing • Employment, tax revenues & GDP	• **The Brattle review also identified other benefits of MISO that have not been quantified in the current update** • **A qualitative discussion of these benefits should be included in the Value Proposition until there is a robust way to quantify the same**

Indicative 2024 Results Under Both Methodologies

Dr. Kathleen Spees
Principal | The Brattle Group

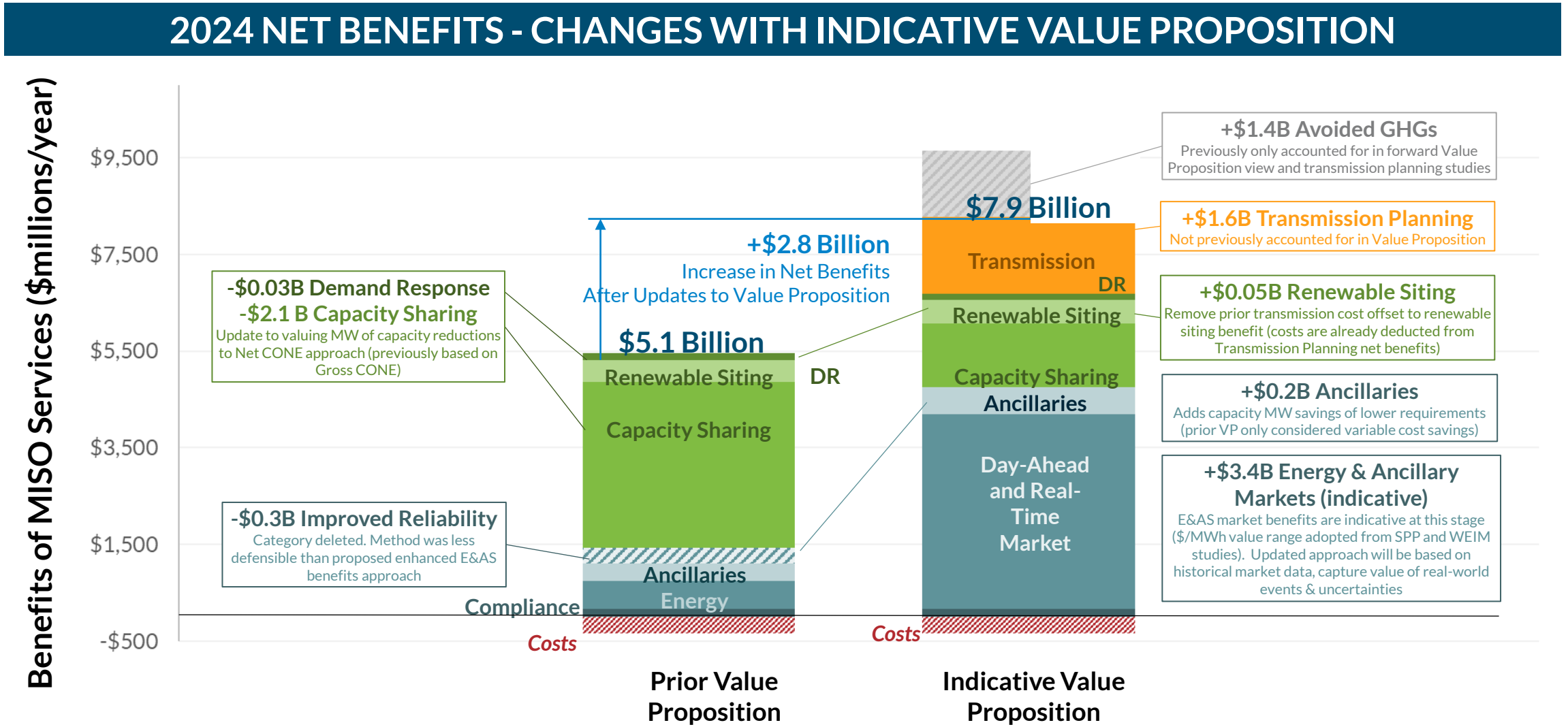
Indicative 2024 benefits after methodology updates

YEAR 2024 ECONOMIC BENEFITS OF MISO SERVICES AFTER METHOD UPDATES



Notes: Benefits and costs in nominal dollars. Prior value Proposition benefits are from the 2024 Value Proposition. Benefits include GHG emissions valued at $32/tonne. E&AS market benefits are highly uncertain at this stage ($/MWh value range adopted from SPP and WEIM indicative range).

2024 Value Proposition under prior vs. proposed methods



Notes: Benefits and costs in nominal dollars. Prior value Proposition benefits are from the 2024 Value Proposition GHG benefits are valued at $32/tonne.

Next Steps

Beibei Li, Manager
Strategic Assessments |MISO

Stakeholder Feedback Request

- MISO requests feedback on **Value Proposition Redesign Methodology** by March 6, 2026
  - Please provide feedback on the following:
    - Will the proposed methodology updates improve accuracy? What additional refinements or adjustments should MISO consider?
    - Will the updated Value Proposition be useful for member and state decision making? What can improve the usefulness of the study?
- Feedback requests and responses are managed through the Feedback Tool on the MISO website: https://www.misoenergy.org/engage/stakeholder-feedback/

MISO adjusted the Value Proposition publication timeline to accommodate the complexity of redesign and support stakeholder engagement

Contact

Strategic Assessments,
StrategicAssessment@misoenergy.org