

Western Markets Exploratory Group

Market Design Straw Proposal for CBS

June 2023

Table of Contents

1	Market Design Straw Proposal Approach	3
2	Market Design Task Force	3
3	Abbreviations	5

1 Market Design Straw Proposal Approach

To conduct the Cost Benefit Study (CBS), WMEG required a Market Design Straw Proposal to define the key market elements which will be inputs to that Study. The Straw Proposal needed to provide sufficient detail to support clarity among the WMEG participants about the potential market design and enable a shared understanding with the CBS vendor on the Study assumptions.

The WMEG members primary planned approach for the Straw Proposal was to base it on existing Market designs, including the CAISO, MISO and SPP Markets. Pursuant to votes at the Markets Committee in April and May 2023, the Market Designs which were selected were the CAISO EIM and SPP WEIS plus the working definitions of the CAISO EDAM and SPP Markets+ proposals.

During the CBS effort, both CAISO and SPP held many stakeholder workshops and released multiple drafts of the proposed EDAM and Markets+ designs. These ultimately culminated in the EDAM Final Proposal issued in December 2022 and the Markets+ Service Offering issued in November 2023.

2 Market Design Task Force

To support the CBS, a Market Design Task Force (MDTF) was formed in August 2022. The Task Force met approximately weekly through February 2023. The Task Force reviewed the elements of the EIM, WEIS, EDAM and Markets+ proposals. In a few cases we also reviewed aspects of the SPP Integrated Marketplace and CAISO MRTU market.

Key topics addressed by the Market Design Task Force for the CBS include:

- Market Product Definition – How energy, flexibility/imbalance and contingency reserves would be treated in the model and how this treatment would vary by Case.
- Forecast Error – Review options to simulate load and Variable Energy Resource (VER) forecast error which could be used to simulate Real-Time variance as well as generate the flexibility/imbalance reserve requirements.
- Participation – How different kinds of generation would be treated, including hydro and battery energy limits, VER curtailment costs, and short and long start units. Additionally, concepts of load and generation Bids/Offer and Market Power Mitigation were discussed. Members also update the assumptions for their generation fleets, including costs, resources additions, and retirements.
- Fuel Price – Fuel price forecasts and basis differentials were defined.
- Resource Adequacy/Sufficiency – The team considered Resource Sufficiency tests and consequences for Resource Insufficiency but ultimately decided that this could not be modeled effectively. A separate Task Force considered Resource Adequacy concepts.
- Transmission Availability / Rights / Costs – The Transmission Sub Group developed the topology, the Tie Zone concept, and defined TTC like values to enable zonal transfers. Additional discussion on the mechanisms for transmission participation in the EDAM and Markets+ designs resulted in a sensitivity case (APP #3).

- Price Formation – Analysis of the SPP Fast Start Pricing (FSP) mechanism which was included in the CBS for the Markets+ footprint.
- Hurdle Rates – What kinds of rates, costs and risks apply to create transactions and how they differ between the Cases. Rates were defined for transmission costs, marketing friction, cross-market congestion risk and GHG. Initial hurdle rates included a high cost for cross-Market transfers to represent high levels of friction at the initial implementation of the DA Markets. The cross-Market hurdles were reduced in later cases to represent improved operations and coordination between Market Operators which might be possible after a few years of Market maturation. Some participants further studied the effect of Cross-Market hurdles (APP #5). represented were created to represent The GHG costs were determined by a separate Task Force based on the Market Designs and incorporated in the CBS.
- Financial Settlement – Consideration of how transactions are financially settled in a simulated Day-Ahead and Real-Time manner similar to how the Market Operators settle. This also included distribution of transmission revenue, marketing friction revenue, congestion revenue, and GHG revenue.
- Financial Participation – Discussed virtual bidding and financial transmission rights and how they could be included. Ultimately, these concepts were not modeled.
- Special Cases – Individual outreach to address special contracts / agreements, participation models, financial responsibility, GHG hurdle locations and many other factors required for the modeling.

The Market Design Task Force completed definition of the required modeling choices and presented them to the MC for approval. Key assumptions are described in the CBS Report.

Following the publication of initial CBS results, the MDTF resumed discussion to evaluate and discuss the CBS results.

3 Abbreviations

CAISO	California Independent System Operator
CBS	Cost Benefit Study
EIM	Energy Imbalance Market
GHG	Green House Gas
Markets+	SPP Markets Plus
MDTF	Market Design Task Force
MISO	Midwest Independent System Operator
MRTU	Market Redesign and Technology Upgrade / CAISO Full Day-Ahead Market
SPP	Southwest Power Pool
TTC	Total Transfer Capability
WEIS	SPP Western Energy Imbalance Service
WMEG	Western Markets Exploratory Group