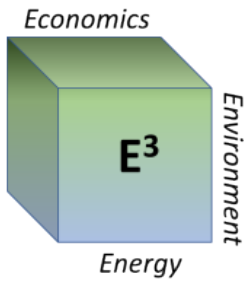


Comprehensive MSOC Proposal:

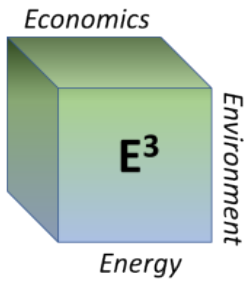
Paul M. Sotkiewicz, Ph.D.

June 23, 2022



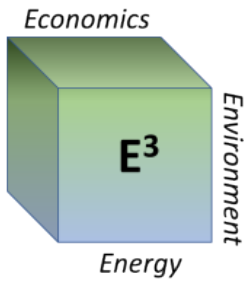
Default MSOC

- **Objective:** Provide a means to reflect risks and opportunity costs based on historic event data, current Net CONE, and Penalty rate and hours in the tariff
- **Advantage:** Reduces need for IMM and PJM review of all offers
- **Features:**
 - Updates each year based on recent PAI and changes in Net CONE
 - Starting with over 10 years of historic event data should be stable going forward
 - Back cast shows it is likely the marginal offer will be reviewed
 - Applies to entire offer and cannot be broken into segments
- **Implementation:** Immediate for the 2024/2025 BRA in December 2022.



Use of Net ACR and Use of CPQR

- **Objective:** Ensure offers reflect reasonable estimates of costs where costs are not certain and guards against market power
- **Advantage:** Mostly well-understood by for CPQR
- **CPQR:**
 - Can show based upon opportunity costs with different expectations of PAI based on well-fined models with data and analytical support
 - Model features can include weather data (including extremes and deviations from normal), correlated outages of resources (forced and maintenance outages), Monte Carlo simulations
- **Properties:**
 - Allows for an offer at CPQR is the remaining Net ACR < 0 .
 - Allows Market Seller to choose mothball or retirement ACR.
 - If choosing retirement and not clearing, it must retire.
 - If choosing mothball and not clearing it can remain an energy resource.
 - Allow a Market Seller to make a one-time election for costs that may be considered variable in Manual 15, but also could be considered Fixed O&M to either be included as part of the cost-based energy offer in the Fuel Cost Policy or excluded in the Fuel Cost Policy and be included in RPM offers. This is an irreversible decision



Unit Specific Review Process

- **Objective:** Transparency in data, modeling, and communication
- **Properties:**
 - PJM may develop its own unit specific MSOC if it disagrees with the IMM or Market Seller Cap.
 - All models and data sets and methodologies used to make the IMM and PJM determinations must be made available to the market seller prior to determinations being issued.
 - All detailed outputs such as hourly energy, reserve, regulation commitments must be provided for the EAS offset as determined by PJM and the IMM.
 - All disagreements with the Market Seller's submitted information must be answered in writing by PJM and the IMM with a detailed explanation and any supporting data and analysis backing the disagreement.
- **Timing:**
 - The model and data documentation used by the IMM must also be provided to the Market Seller to evaluate the reasonableness to the Market Seller 150 days prior to the auction. This assumes a forward-looking EAS for the unit specific offer cap.
 - Market Seller at 120 prior to auction provide PJM and IMM with all supporting documentation for its unit specific MSOC.
 - IMM has 90 days to make its EAS determination and provide to Market Seller if it differs from the Market Seller.
 - Market Seller 85 days before auction informs PJM of agreement/disagreement with IMM determination
 - PJM 63 days prior to auction issues its determination to Market Seller leaving 22 days to make its determination and Market Seller sufficient time to file at FERC for a determination under Section 205