

Market Mitigation & Analysis

Energy Reference Levels for ESR Participation

What are Energy Reference Levels?

- Thresholds that NYISO establishes that provide Market Participants with a framework for conduct as well as provide NYISO a more defined way to monitor Market Participant conduct
- Reference levels are based on MP cost data submissions submitted via **Reference Level Software (RLS)**
 - **RLS**
 - Access to current and historical reference levels
 - Submit and check status of data submissions and reference level adjustment requests
 - Generates DAM and RT reference levels by unit on a daily and hourly basis



ESR Reference Levels will be based on Opportunity Cost Adjustments

Main steps to calculate the opportunity cost for an ESR:

1. Determining an expected LBMP path for the day to use as a baseline
2. Determining the ESR's maximum revenue for each MW segment included in the unit's Reference Curve in the RLS for every hour of the day
3. The difference in the maximum revenue between the MW segments is used to determine the opportunity cost for that MW range for each hour

ESR-specific constraints used in calculation of maximum revenue for each MW segment for every hour of the day:

- State of Charge Energy Level at the start of HB 0, assumed to be zero
- State of Charge Energy Level at the end of the hour used for calculation
- Lower Operating Limit
- Upper Operating Limit
- Lower Storage Limit
- Upper Storage Limit
- Round Trip Efficiency
- Maximum number of Round trips allowed in the day

Communication Timeline

