



Energy Offer Upward Mitigation Fix

*Proposal to address “upward mitigation”
issue of the FERC’s Show Cause Order*

Andrew Withers

ECONOMIST



Upward Mitigation Fix: Summary

WMPP ID:
174

Proposed Effective Date: December 15, 2023

- Upward mitigation of energy Supply Offers may create inefficiencies in ISO-NE's energy markets.
- Today's discussion introduces a proposed market rule change to eliminate the potential for upward mitigation of energy Supply Offers.
- This targeted change can be implemented for the 2023/2024 winter season, under an expedited schedule.



BACKGROUND AND CHANGE RATIONALE



Background

Recap of Show Cause Order

- The Commission found that “ISO-NE’s existing Tariff, in particular, provisions related to the mechanics of its market power mitigation and the consideration of any proposed fuel price adjustment, may be unjust and unreasonable.”
- ISO was directed to: (1) show cause as to why its Tariff remains just and reasonable and not unduly discriminatory or preferential; or (2) explain what changes to its Tariff would remedy the identified concerns.
- The ISO’s assessment determined that market rule changes aimed at eliminating upward mitigation are warranted.



Background

Summary of current mitigation rules

- Terminology:
 - Supply Offer: *energy offer parameters submitted by participant.*
 - Reference Level: *energy offer parameters calculated per Appendix A.*
- Uses of the Reference Level (under current rules):
 - A. Identify potentially non-competitive Supply Offers (i.e., test conduct);
 - B. Measure the effect of potentially non-competitive Supply Offers (i.e., test impact); and,
 - C. Replace (in entirety) the Supply Offer for dispatch and settlement, when mitigation is required.



Rationale for Change

- As evidenced by events on December 24, 2022, existing mitigation rules may result in a resource's incremental energy offers being mitigated to Reference Levels that exceed the offers (“upward mitigation”).
- Upward mitigation of energy Supply Offers may create inefficiencies in ISO-NE's energy markets.
 - Resources that are willing to sell energy at a price less than their Reference Level may be prevented from doing so.
 - This can result in inefficient dispatch, which is reflected in market clearing prices and system production costs.
 - Upward-mitigated resources may face negative financial consequences.



PROPOSAL



Proposal

A targeted change to existing mitigation practices can prevent upward mitigation

- The proposed change is to compare each financial parameter (e.g., block or component) of the Supply Offer and Reference Level and use the **lesser of the two values** when performing certain automated mitigation procedures.
 - This differs from current practice, where the entirety of the Supply Offer is replaced with the Reference Level.
- In particular, the lesser of the Supply Offer and the Reference Level will replace the Reference Level for the purposes outlined on slide 5 (see A, B, and C).
 - There is a limited exception in the application of commitment mitigation conduct tests, which is discussed on slide 15.

Proposal

A targeted change to existing mitigation practices can prevent upward mitigation

- This change to current market rules would, on its own, prevent upward mitigation.
- We expect that this market rule change can be implemented by December 15, 2023.
 - Implementation by this date requires an expedited schedule.
- The next two slides presents an illustrative example of the ISO's proposal.

Proposal

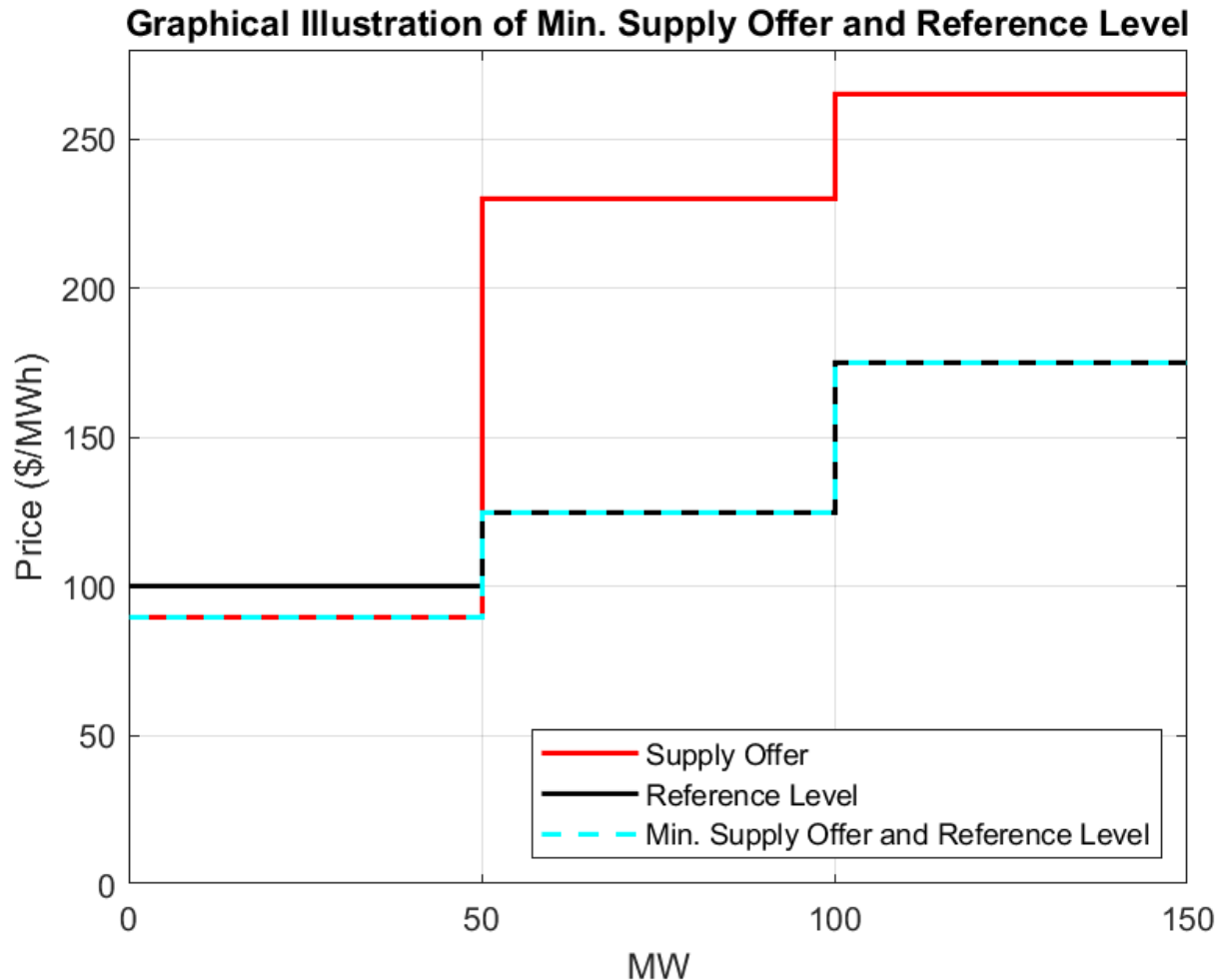
Illustrative example of lesser-of logic

- Consider a hypothetical resource with the Supply Offer and Reference Level given in the table below.
- In the figure on the following slide, the dashed-blue line (lesser of Supply Offer and Reference Level) will replace the black line (Reference Level) for the purposes listed on slide 5 (A, B, C).

Segment	Supply Offer (\$/MWh)	Reference Level (\$/MWh)	Lesser of Supply Offer and Reference Level (\$/MWh)
1	90	100	90
2	230	125	125
3	265	175	175

Proposal

Illustrative example of lesser-of logic



PROPOSED DESIGN DETAILS



Proposed Design Details

Conduct test continues to identify potentially non-competitive offers

- Conduct tests identify Supply Offers that are potentially inconsistent with competitive conduct by evaluating the extent to which a Supply Offer exceeds the Reference Level.
 - A resource fails the conduct test by submitting a Supply Offer that exceeds the Reference Level by more than the applicable threshold value.
- Under the proposal, there is a mechanical change to how conduct tests are evaluated. However, this mechanical change will not result in any changes in conduct test outcomes compared to current market rules (*further below*).

Proposed Design Details

Conduct test continues to identify potentially non-competitive offers

- The conduct tests will use the lesser of the Supply Offer and the Reference Level to identify potentially non-competitive Supply Offers.
 - This is a mechanical change to the conduct test; there is no change in conduct test outcomes compared to current market rules.
 - For numerical illustration of this outcome, see Example 1 (Appendix).
- Therefore, conduct tests will continue to identify Supply Offers that are potentially inconsistent with competitive conduct by evaluating the extent to which Supply Offers exceed the Reference Level.

Proposed Design Details

Conduct test: exception to mechanical change

- The calculation of Low Load Cost, which serves as the basis for the various commitment mitigation conduct tests, will continue to use the Reference Level.
 - The calculation of Low Load Cost involves summing three Supply Offer components (start-up cost, no-load cost, and energy offer at Ecomin).
- Using the lesser-of logic for this calculation would make it more likely that a Supply Offer fails the commitment mitigation conduct tests than if the calculation used the Reference Level.
 - Such an outcome is not consistent with the proposal.

Proposed Design Details

Mechanical changes to Real-Time impact test

- The Real-Time impact test evaluates the extent to which a resource's Supply Offer raises market clearing prices.
- Mechanically, the impact test calculates the difference between two locational marginal prices ("LMPs"):
 - The first LMP is calculated using the Supply Offer ("*offer run*").
 - The second LMP is calculated replacing all financial parameters of Supply Offers that fail the conduct test with the Reference Level ("*mitigation run*").
- A Supply Offer fails the impact test if the difference between these two LMPs is greater than the applicable impact test threshold value.

Proposed Design Details

Mechanical changes to Real-Time impact test

- The only proposed change to the Real-Time impact test is mechanical, and pertains to how the “mitigation run” LMP is calculated:
 - The mitigation run LMP will be calculated replacing all financial parameters of Supply Offers that fail the conduct test with the lesser of the Supply Offer and Reference Level.
- In other words, the financial parameters from Supply Offer blocks that are less than the corresponding Reference Level will remain at their offer price.
 - This is different from current practice in which *all* financial parameters—irrespective of whether they exceed the reference price or not—are replaced with corresponding Reference Level values.

Proposed Design Details

Consequence of failing mitigation screens

- Currently, for all mitigation types in Market Rule 1 Appendix A § III.A.5, if a Supply Offer fails the applicable mitigation screens (either conduct test or conduct and impact tests), then all financial parameters of the Supply Offer are replaced with the Reference Level.
- Under the proposal, if a Supply Offer fails the applicable mitigation screens, then only the financial parameters of the Supply Offer that exceed the Reference Level are replaced with the Reference Level.

Proposed Design Details

No changes to the following practices in Market Rule 1 Appendix A

- No change to any structural test (§ III.A.5.2).
- No change to applicability of any mitigation type (§ III.A.5.5).
- No change to any conduct test threshold (§ III.A.5.5).
- No change to any impact test threshold (§ III.A.5.5).
- No change to the duration of mitigation (§ III.A.5.6 – III.A.5.8).
- No change to how Reference Levels are calculated (§ III.A.7).

TARIFF REVISIONS OVERVIEW



Summary of Proposed Tariff Changes

Tariff Section	Description of Change	Reason for Change
III.A.5.4.	Added “lesser of” language to Calculation of Impact Tests in the Real-Time Energy Market	Prevent upward mitigation
III.A.5.5.1.4.	Added “lesser of” language to General Threshold Energy Mitigation Consequence of Failing Both Conduct and Impact Test	Prevent upward mitigation
III.A.5.5.2.4.	Added “lesser of” language to Constrained Area Energy Mitigation Consequence of Failing Both Conduct and Impact Test	Prevent upward mitigation
III.A.5.5.3.3.	Added “lesser of” language to Manual Dispatch Energy Mitigation Consequence of Failing the Conduct Test	Prevent upward mitigation

Summary of Proposed Tariff Changes (*cont'd*)

Tariff Section	Description of Change	Reason for Change
III.A.5.5.4.3.	Added “lesser of” language to General Threshold Commitment Mitigation Consequence of Failing Conduct Test and conformed	Prevent upward mitigation
III.A.5.5.5.3.	Added “lesser of” language to Constrained Area Commitment Mitigation Consequence of Failing Test and conformed	Prevent upward mitigation
III.A.5.5.6.3.	Added “lesser of” language to Reliability Commitment Mitigation Consequence of Failing Test	Prevent upward mitigation
III.A.5.5.7.3.	Added “lesser of” language to Start-Up Fee and No-Load Fee Mitigation Consequence of Failing Conduct Test and conformed	Prevent upward mitigation

CONCLUSION AND NEXT STEPS



Conclusion

- Upward mitigation of energy Supply Offers may result in inefficient energy market dispatch.
- The ISO proposes that the lesser of the Supply Offer and Reference Level, rather than the Reference Level alone, be used for the purposes outlined in this presentation.
 - This change will eliminate the potential for upward mitigation of energy offers.
- This targeted change can be implemented for the 2023/2024 winter season (effective December 15, 2023).

Stakeholder Schedule

Stakeholder Committee and Date	Scheduled Project Milestone
Markets Committee September 12-13, 2023	Introduce proposed Market Rule 1 Appendix A revisions
Markets Committee October 11-12, 2023	Vote
Participants Committee November 2, 2023	Vote

The ISO plans to file the proposed Tariff revisions shortly after the Participants Committee takes action and seek an expedited Commission order such that the proposed revisions could be effective by December 15, 2023.

Questions

Andrew Withers

(413) 540-4797 | JWITHERS@ISO-NE.COM



APPENDIX



Example 1: Despite mechanical changes to conduct test, there is no change in conduct test outcomes

- This example illustrates the mechanical changes to the conduct test, as well as conduct test outcomes, in the context of General Threshold Energy Mitigation.
- Under current market rules, the conduct test evaluates the Supply Offer against the Reference Level (see column [C], table next slide).
- Under the proposal, the conduct test evaluates the Supply Offer against the lesser of the Supply Offer and the Reference Level (see column [E]).
- The example illustrates that, while the mechanics of the conduct test change, the outcome of the conduct test does not change, relative to current market rules:

Example 1: Despite mechanical changes to conduct test, there is no change in conduct test outcomes (cont'd)

- The Supply Offers for segment one (\$90/MWh, which is less than the Reference Level, \$100/MWh) and segment three (\$265/MWh, which is greater than the Reference Level, \$175) pass the conduct test both under current market rules and under the proposal.
- The Supply Offer price on segment two (\$230/MWh), which is greater than the Reference Level (\$125/MWh), fails the conduct test under both current market rules and under the proposal.

Table 1: Example #1, Mechanical Change to Condcut Test Does Not Change Conduct Test Outcomes

	[A]	[B]	[C]	[D]	[E]
Segment	Offer Price (\$/MWh)	Existing Reference Level (\$/MWh)	Condcut Test, Existing Reference Level (Pass/Fail)	Lesser of Ref. Level and Offer (\$/MWh)	Conduct Test, Lesser of Ref. Level and Offer (Pass/Fail)
			$[A]-[B] > \min(3*[B], 100)$	$\min([A], [B])$	$[A]-[D] > \min(3*[D], 100)$
1	90	100	Pass	90	Pass
2	230	125	Fail	125	Fail
3	265	175	Pass	175	Pass