



Updates on Additional Items from FERC's Show Cause Order

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Proposed Effective Date: TBD

- In this presentation, the ISO provides further consideration and discussion regarding additional items included in the FERC Show Cause Order
 - ISO expects to propose changes to the Fuel Price Adjustment (FPA) process that would enhance the efficiency of ISO-NE's energy markets by allowing resources greater flexibility to reflect different fuel costs across their output range
 - The ISO is still investigating whether changes to the duration of General Threshold Energy Mitigation are appropriate at this time

EXPECTED CHANGES TO THE FPA PROCESS



Overview

- In this module, we provide:
 - Background on how the FPA process works now
 - Economic rationale for a change to the FPA process
 - Current thinking on FPA design change
 - Overview of next steps



Background: FPAs allow resources to reflect higher expected fuel costs in their Reference Levels

- A resource's Reference Level represents the ISO estimate of the resource's operating cost
- By default, a resource's Reference Level may be calculated on the basis of a fuel price index
- This index price is a lagging value and may not reflect current market conditions
 - The index value is typically lagging by one day, due in part to the different alignments of the gas and electric markets
- If a resource expects to buy fuel at a cost greater than the index price, it may wish to reflect those higher fuel costs in its Reference Level
 - Resource can achieve this by submitting FPA



Background: Currently, resources cannot represent multiple fuel costs in their Reference Levels

- The current FPA process applies a single fuel price value to all of the financial parameters of a Supply Offer (i.e., start-up fees, no-load fee, and incremental energy offer blocks)
- This “all-or-nothing” approach does not allow resources to reflect different fuel costs on different Supply Offer components
- In practice, a resource’s fuel costs may increase as its energy output increases. Some reasons for this include:
 - Bid-ask spreads
 - Limited gas volume and higher priced gas in the intra-day gas market
 - Other types of (typically higher priced) fuel contracts (LNG, option gas)

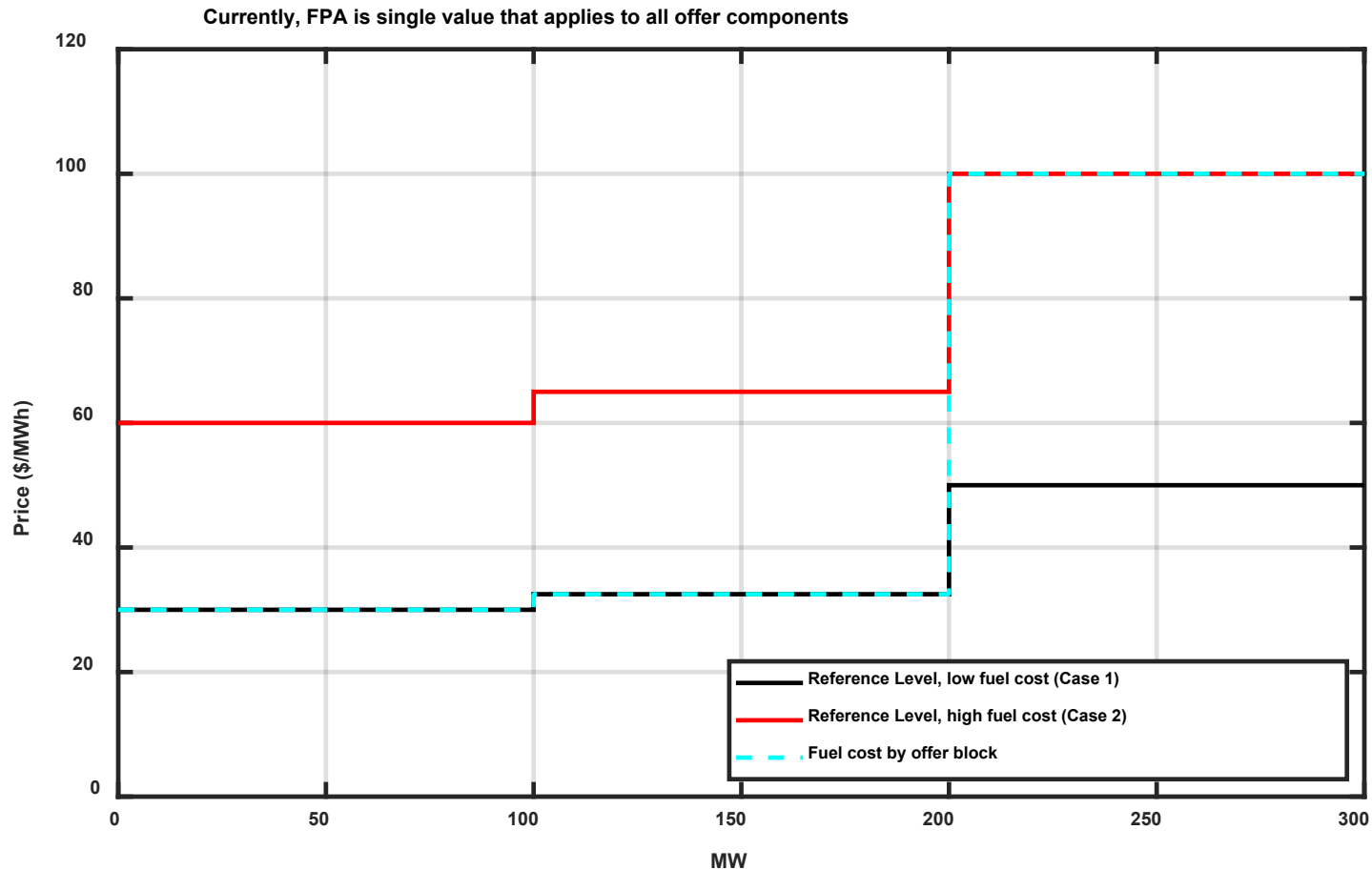


Rationale for change: Allowing resources to input multiple FPAs may improve market efficiency

- Today, a resource that would incur different fuel costs for different energy output levels can effectively choose between one of two cases:
 - Case 1: Reference Level based on lower fuel price (e.g., index price). This option *understates* fuel cost for offer blocks with higher fuel costs
 - Case 2: Reference Level based on higher fuel price (e.g., expensive intraday gas). This option *overstates* fuel costs for offer blocks with lower fuel costs
- Neither case allows the resource to accurately reflect its fuel costs over its entire offer
- The figure on the next slide illustrates this concept. A hypothetical resource has three offer blocks, and a higher cost of fuel for the third offer block. The figure provides:
 - The Reference Level based on the fuel cost for blocks one and two (i.e., Case 1)
 - The Reference Level based on the fuel cost for the third offer block (i.e., Case 2)
 - The resource's actual fuel costs for each offer block



Rationale for change: Allowing resources to input multiple FPAs may improve market efficiency (cont'd)



Rationale for change: Allowing resources to input multiple FPAs may improve market efficiency (cont'd)

- Limiting a resource to a single FPA can contribute to inefficient energy market dispatch if the resource is subject to mitigation
- To illustrate this point, we walk through two scenarios:
 - First, where the Reference Level is set based on the fuel cost from higher cost offer blocks
 - Second, where the Reference Level is set based on the fuel cost from lower cost offer blocks
- In each scenario, energy market dispatch could be inefficient when the resource is subject to mitigation



Rationale for change: Allowing resources to input multiple FPAs may improve market efficiency (cont'd)

- First, suppose the resource's Reference Level reflects the fuel price from higher cost offer blocks (e.g., Case 2)
 - In this case, the Reference Level would overstate the fuel cost for lower-cost offer blocks.
- Currently, if the resource is subject to mitigation, such offer blocks would be “mitigated up” to the higher Reference Level
 - This could result in the resource being uneconomically dispatched down, which would result in inefficient energy market dispatch and potential negative financial consequences for the resource
- However, the proposed change to energy offer mitigation (“lesser-of approach”) eliminates the potential for upward mitigation, and therefore this potential source of inefficiency

Rationale for change: Allowing resources to input multiple FPAs may improve market efficiency (cont'd)

- Next, suppose the resource's Reference Level reflects the fuel price from lower cost offer blocks (e.g., Case 1)
 - In this case, the Reference Level would understate the fuel cost for higher-cost offer blocks
- If the resource is subject to mitigation, such offer blocks would be mitigated to the lower Reference Level, which could result in the resource being uneconomically dispatched up
- A change to the FPA process would attenuate this potential source of inefficiency (which the proposed change to energy offer mitigation would not do)

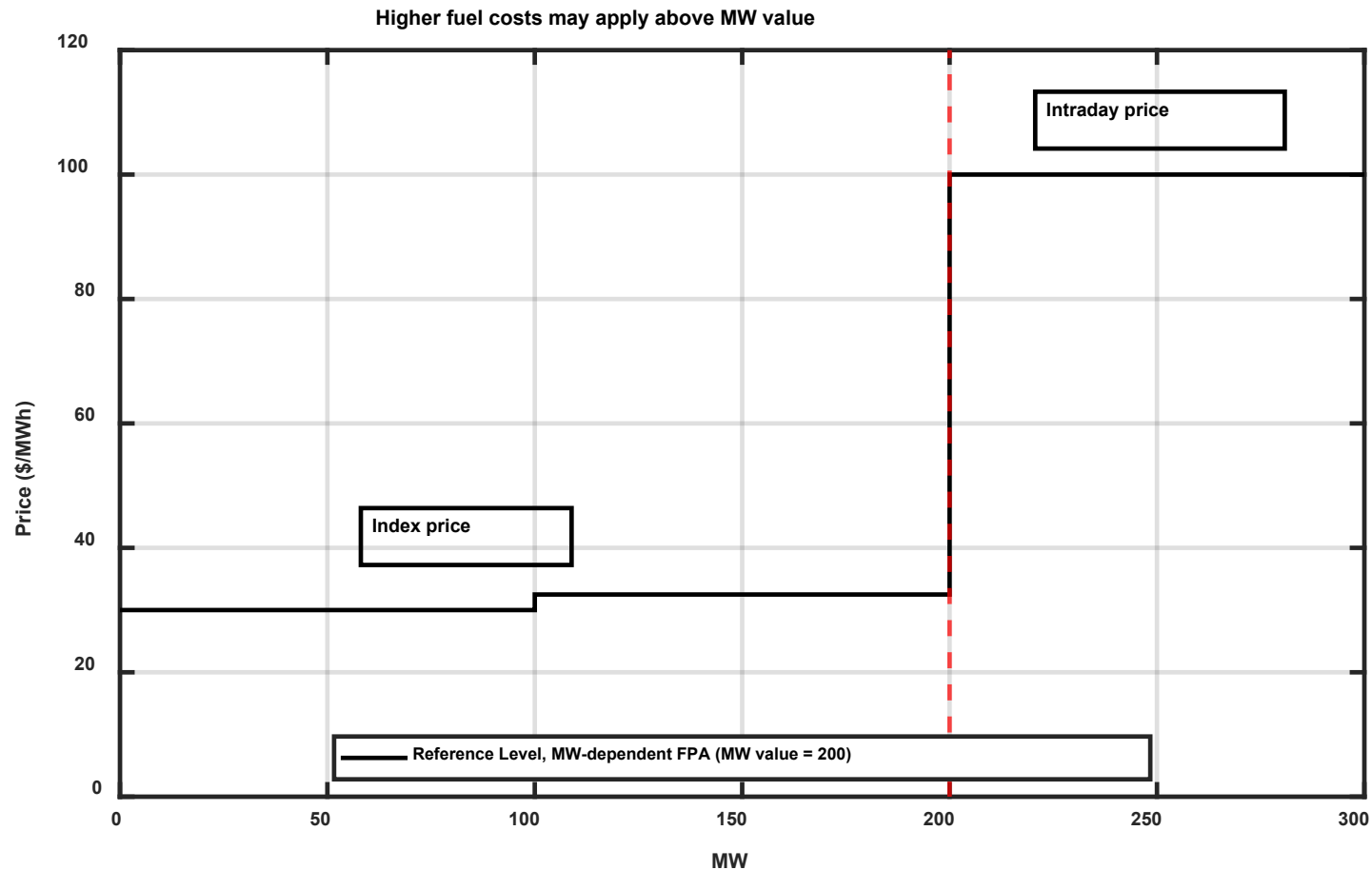
Current thinking: Megawatt (MW)-dependent FPAs enhance market efficiency by allowing multiple fuel costs in Reference Levels

- Design concept: a resource can submit a MW value, an FPA which may apply to offer components above the MW value, and an FPA which may apply to offer blocks below the MW value
 - This proposal would allow a resource to reflect up to two different fuel costs in its Reference Level
 - The price that applies below the MW value would also apply to Start-Up and No-Load Fees
- Benefits of design change:
 - Address the inefficiency that may arise if a resource's Reference Level understates its fuel costs for certain offer blocks (example: uneconomically dispatched up, see previous slide)
 - Allow resources flexibility to reflect different fuel costs across their output range

Example: Resource could specify that higher fuel costs apply only above a MW value

- Suppose a resource is dispatched at 200 MWs in the Real-Time Energy Market
- Further, suppose the index price accurately reflects the resource's fuel costs if it continues to operate at its current output level
- However, if the resource is dispatched above its current output level, it would have to buy more expensive intraday gas to accommodate the higher dispatch
- The resource could submit the following information to indicate that the fuel cost for its output above its current dispatch is higher than the index price (see graph, next slide)
 - A MW value (equal to 200 MW)
 - A fuel price (i.e., the intraday price) that applies to offer blocks above the MW value

Example: Resource could specify that higher fuel costs apply only above a MW value



Changes to FPA process: Next steps

- Stakeholder schedule: The ISO will not be able to complete our assessment and design changes to the FPA process by February. In the November Energy Offer Upward Mitigation Fix filing the ISO expects to request that FERC hold the 206 proceeding in abeyance for longer, to allow for further consideration
- Implementation: ISO is still investigating when MW-dependent FPAs could be implemented
 - Implementation date may depend on existing IT priorities
 - The ISO will provide information on implementation details and timeline at upcoming Markets Committee (MC) meetings
- Tariff changes: The ISO is still determining which changes to the Tariff may be required as part of the expected change to the FPA process
- Stakeholder input: The ISO welcomes feedback on this conceptual approach to enabling greater FPA flexibility

DURATION OF GENERAL THRESHOLD ENERGY MITIGATION



Overview

- In the May 5, 2023 FERC Show Cause Order, ISO was asked to consider whether market power screens should continue testing for conduct and impact beyond the first hour that a participant's resource(s) are flagged for mitigation (in the real-time market)
- ISO continues to evaluate whether changes to the duration of General Threshold Energy Mitigation (GTE) are sensible at this time



Background: Current GTE mitigation process

- GTE mitigation applies only in the Real-Time Energy Market
- Currently, GTE mitigation begins when a resource, owned by a pivotal supplier, fails the GTE conduct and impact tests
- Duration of GTE mitigation: GTE mitigation continues until the supplier is no longer pivotal for one complete hour (Market Rule 1, Appendix A, § III.A.5.6)
- Informational consideration: a supplier is notified when one of its resources is subject to GTE mitigation. In effect, the supplier learns that it is pivotal
 - When a supplier is pivotal, it means that some of its output must be dispatched to satisfy energy balance and reserve requirements
 - This has implications: if and how to change the duration of GTE mitigation (more, next slide)

Considerations for potential changes to GTE mitigation

- The preceding informational consideration highlights that, if conduct and impact tests were used to help determine the duration of GTE mitigation, ISO would have to carefully evaluate the threshold values that are in effect once a pivotal supplier is first mitigated
- For example, the existing threshold values may not be suitable when a supplier knows it is pivotal:
 - If a supplier knows that it is pivotal, it could price (some) of its energy output \$99 above the Reference Level
 - If an offer \$99 above a resource's Reference Level is not reflective of its operating costs, then competitive market forces and market power mitigation may not discipline such potentially non-competitive conduct
- Next steps: The ISO thinks that the duration of GTE mitigation is reasonable, but will further study how it could evaluate conduct and impact test thresholds that would be appropriate to determine the duration of GTE mitigation, in light of the information provided here, and the time and resources needed for such evaluation

Stakeholder Schedule

Stakeholder Committee and Date	Scheduled Project Milestone
Markets Committee September 12-13, 2023	Provide interim updates
Markets Committee October 11-12, 2023	Introduce current thinking on expected changes to FPA process, provide further considerations on duration of GTE mitigation
Participants Committee November 7-8, 2023	Provide further updates on changes to FPA process

Questions

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APPENDIX



Overview

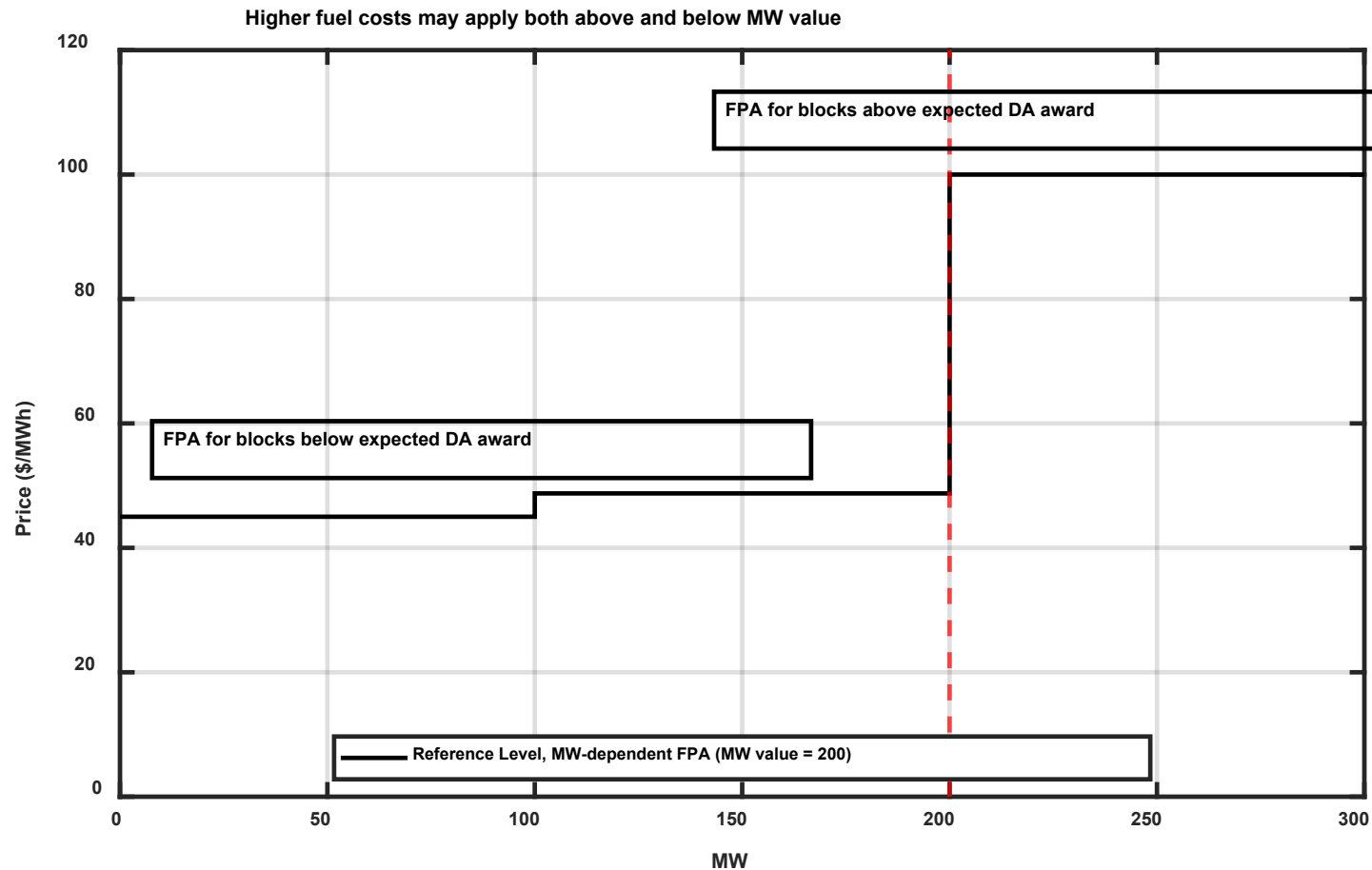
- This appendix contains additional examples that illustrate current thinking on the functionality of the MW-dependent FPA design
- First, a resource could specify that higher fuel costs apply both above and below a MW value
- Second, a resource may continue to apply single FPA to the entire Reference Level if it chooses



Example: Resource could apply FPAs that apply above and below MW value

- Suppose a resource expects to be committed at 200 MWs in the DAM
- The resource expects to incur one fuel cost for offer blocks up to its expected DA commitment, and another (higher) fuel cost for offer blocks above its expected commitment level
- The existing index price is not sufficient to cover either expected cost. Consequently, the resource submits:
 - A MW value (equal to 200 MW)
 - A fuel price that applies to offer blocks above the MW value (greater than the index value)
 - A fuel price that applies to offer blocks below the MW value (this fuel price is also greater than the index value)

Example: Resource could apply FPAs that apply above and below MW value



Example: Resource may continue to apply single FPA to entire Reference Level if it chooses

- If a resource chooses, it may apply a single FPA value to the entire Supply Offer. In other words, the existing FPA functionality will still be available for those resources whose fuel costs do not change as their output changes
- To achieve this, the resource would:
 - Submit *no* MW value
 - Submit a single price value that then applies to the entire Supply offer



Example: Resource may continue to apply single FPA to entire Reference Level if it chooses

