

# Offer Schedule Selection

MIC

February 8, 2023

IMM



Monitoring Analytics

# Issue

- **PJM seeks to shorten the computational time of the market clearing engine (MCE) by selecting offer schedules using a rule based approach rather than optimization.**
- **The IMM seeks to improve the offer schedule selection process to ensure that market power is mitigated.**
  - **This will also shorten MCE computational time.**

# PJM Whitepaper

- **PJM published a summary of its perspective on the issue.**
- **PJM's whitepaper outlines six options for a rule based approach to schedule selection.**
- **PJM's issue charge presented to the MIC, as revised in January 2023, would only allow PJM's preferred option to be pursued by stakeholders.**
- **PJM's preferred solution would weaken market power mitigation. The IMM will oppose any FERC filing of the schedule selection possibilities described in section VII of PJM's whitepaper.**

# PJM Whitepaper Options

## **VII. Options defined as In Scope under PJM Issue Charge**

- 1. Schedule selection based on predefined formula**
- 2. Schedule selection based on predefined formula using PLS only for emergency and alert days**

## **VIII. Options Out of Scope under PJM Issue Charge**

- 1. One set of parameters for all offers**
- 2. All offers are cost-based and parameter limited.**
- 3. All offers are parameter limited.**
- 4. Create a new schedule from the lowest cost, most flexible offer parameters.**

# PJM Whitepaper Options

**PJM preferred**

## ~~VII. Options defined as In Scope under PJM Issue Charge~~

1. Schedule selection based on predefined formula
2. Schedule selection based on predefined formula using PLS only for emergency and alert days

## VIII. Options Out of Scope under PJM Issue Charge

1. One set of parameters for all offers
2. All offers are cost-based and parameter limited.
3. All offers are parameter limited.
4. Create a new schedule from the lowest cost, most flexible offer parameters.

# PJM Whitepaper Options

**PJM preferred**

## VII. Options defined as In Scope under PJM Issue Charge

1. Schedule selection based on predefined formula
2. Schedule selection based on predefined formula using PLS only for emergency and alert days

## VIII. Options Out of Scope under PJM Issue Charge

1. One set of parameters for all offers
2. All offers are cost-based and parameter limited.
3. All offers are parameter limited.
4. Create a new schedule from the lowest cost, most flexible offer parameters.

**IMM preferred**

## Option VII.1

- **Schedule selection based on predefined formula based on assumed operation at Eco Min or Eco Max and assumed run time.**
- **This option is not acceptable to the IMM.**
- **The approach is oversimplified and will create new opportunities for suppliers to structure their offers in a way that avoids mitigation.**

## Option VII.1 Example

- **If the formula evaluates the resource at Eco Min,**
  - **suppliers could include a markup at all offer points above Eco Min.**
- **If the formula evaluates the resource at Eco Max,**
  - **suppliers could block load their resources at Eco Max**
  - **avoid parameter mitigation based on their turn down ratio.**
- **This option weakens market power mitigation. This option creates more issues than the status quo.**



## Option VII.2

- **Schedule selection based on predefined formula using PLS only for emergency and alert days.**
- **This option is not acceptable to the IMM.**
- **This option has the same problems as option VII.1.**

## Option VIII.1

- **One set of parameters for all offers.**
- **Market power mitigation must be addressed.**
- **This option is only possible if the parameters are always required to be parameter limited.**
- **Not possible under PJM revised issue charge.**

## Option VIII.2

- **All offers are cost-based and parameter limited.**
- **This option is acceptable to the IMM because market power mitigation is addressed.**
- **Not possible under PJM revised issue charge.**

## Option VIII.3

- **All offers are parameter limited.**
- **Both sets of schedules still need to be passed to the MCE for determination of the lowest offer as is done under the status quo rules.**
- **Crossing curves need to be addressed.**
- **The limitation to one set of parameters should make this computationally feasible.**
- **Not possible under PJM revised issue charge.**

## Option VIII.4

- **Create a new schedule from the lowest cost, most flexible offer parameters.**
- **Not possible under PJM revised issue charge.**
- **This is the IMM's recommended approach as explained in the IMM's comments to FERC.**
- **[IMM Comments, Docket EL21-78 \(October 15, 2021\) at 18-19.](#)**

## Option VIII.4 (continued)

- **Resources will continue to submit price-based and cost-based offers.**
- **The goal is to mitigate the market power of resources when PJM identifies that they have market power.**
- **Mitigation will be performed by PJM, there will be no need to submit a new schedule.**
- **This solution applies mitigation to offers with markup and inflexible operating parameters when required by the market power test.**

## Remove Multischedule Model

- **The section of PJM's whitepaper titled Remove Multischedule Model from Market Rules is unclear.**
- **The IMM disagrees with PJM that other RTOs do not have a multischedule model in their market rules.**
- **All RTOs have market power mitigation,**
  - **Including price-based offers, cost-based offers, parameter limits, and a market power test.**
  - **This is a FERC requirement for market based rates.**
- **The cost-based offers and parameter limits are calculated by the IMM in some cases. In all cases, multiple schedules exist in some form.**

## Remove Multischedule Model (continued)

- **The IMM agrees that the other RTOs do not have the MCE selecting which schedule to use.**
- **The market power mitigation rules determine which offers and operating parameters to use in the other RTOs.**
- **The IMM's recommended approach, option VIII.4, also has this feature.**
- **Under the IMM's recommended approach, the market power mitigation rules select the offers and parameters, not the MCE.**



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