

Performance Impact of multi-schedule model in Market Clearing Engine (MCE) in nGEM Enhanced Combined Cycle (ECC) and Energy Storage Resource (ESR) models

Issue Source

Issue charge being brought forth by PJM.

Issue Content

Address the performance impact due to multi-schedule model in the MCE with nGEM ECC and ESR model.

Key Work Activities and Scope

1. KWA#1: Review previous education, as needed, on existing multi-schedule model treatment and impact to performance in MCE. (completed on 10/20/2022 as part of Combined Cycle Modeling Education Workshop)
2. KWA#2: Review proposed solutions and timelines to reduce performance impact due to multi-schedule model in MCE.
3. KWA#3: Refine proposed solutions defined in KWA#2 or develop a potential solution to reduce the performance impacts of multi-schedule model in MCE.

Areas in scope:

- a. Method by which commitment software determines the preferred schedule for commitment and dispatch for Day-ahead and Real-time energy market for all types of resources.
- b. Offer structures in PJM's Day-ahead and Real-time energy markets.
- c. Market Power Mitigation, if required, based on solution.

Areas not in scope:

- a. Detailed ECC model and ESR model requirements.

Expected Deliverables

1. Changes to multi-schedule model in MCE to reduce the performance impact.
2. Changes to manual and governing document revisions.

Decision-Making Method

Tier 1, consensus

Stakeholder Group Assignment

MIC – Special Sessions if needed

Expected Duration of Work Timeline

It is estimated that effort could take 6 months. The work would begin as soon as the Issue Charge is approved. A solution is needed by the end of Q2 2023 in order to develop the detailed requirements for nGEM ECC model.

Start Date	Priority Level	Timing	Meeting Frequency
2/1/2023	<input checked="" type="checkbox"/> High <input type="checkbox"/> Medium <input type="checkbox"/> Low	<input checked="" type="checkbox"/> Immediate <input type="checkbox"/> Near Term <input type="checkbox"/> Far Term	<input type="checkbox"/> Weekly <input checked="" type="checkbox"/> Monthly <input type="checkbox"/> Quarterly

Charter

(check one box)

<input type="checkbox"/>	This document will serve as the Charter for a new group created by its approval.
<input checked="" type="checkbox"/>	This work will be handled in an existing group with its own Charter (and applicable amendments).

More detail available in M34; Section 6