

Regulation for Virtual Combined Cycles

Issue Source

Vistra, Dynegy Marketing and Trade LLC, and CPV are bringing this issue forward for consideration.

Issue Content

The work is intended to address the specific technical issue of the market clearing engine resulting in uneven regulation awards to virtually modeled combined cycles, which is operationally challenging or impossible to achieve. This discrepancy between the unit as modeled versus the unit as operated is due to the “virtual” modeling that splits the steam turbine across the various CTs that, for modelling purposes, appear to be independent units, but operationally they are interrelated.

Key Work Activities and Scope

~~Provide a numbered list of high level work activities that the assigned stakeholder group will need to perform to accomplish its work in resolving the issue. Identify any areas of activity specifically intended and not intended to be addressed.~~

1. Education on virtual combined cycle modeling and how it is handled in energy and ancillary service dispatch and settlements.
2. Education on why the identified problem occurs (e.g., the various inputs into regulation offers, how those flow into the market clearing engine, and why units would receive uneven awards), and how that differs from reg awards for combined cycles that are modeled differently.
3. Education on operational/technical difficulties of operating virtually modeled CCs with different regulation assignments.
4. Education on why a prior-used solution of requesting that PJM even out the regulation assignments across units at a given combined cycle ~~was determined to be no longer an option going forward~~ was viewed as “out-of-market.”
5. Brainstorm possible solutions to ensure that regulation awards are equivalent across a given combined cycle or are assessed according to total plant output or others.

Out of Scope

1. Issues associated with resources following the Reg D signal.
2. Issues associated with the regulation market more generally.

Expected Deliverables

~~Provide a numbered list of high level deliverables that the assigned stakeholder group will produce as a result of its work including analyses, reports, manual changes, governing document revisions, and FERC filings.~~

- 2.1. Updated PJM Manual language (M-11, M-12), as needed, depending on the solution identified.
- 3.2. Governing document revisions and FERC filings only to the extent needed to implement the solution identified.

Decision-Making Method

Tier 1, consensus (unanimity) on a single proposal

Stakeholder Group Assignment

Markets Implementation Committee

Expected Duration of Work Timeline

Work is expected to be completed in 3-6 months.

| Start Date | Priority Level | Timing | Meeting Frequency |
|---|---|--|--|
| 6/9/2024 <u>7/14/202</u> <u>1</u> | <input type="checkbox"/> High <input checked="" type="checkbox"/> Medium <input type="checkbox"/> Low | <input type="checkbox"/> Immediate <input checked="" 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). |