

BPA's Annual Joint Operating Committee Annual Meeting

February 28, 2023



Agenda

Topics	Presenter
Intro and Joint Operating Committee (JOC) rules	Cherilyn Randall
Updated EMT Modeling	Dimitry Kosterev
Oversupply <ul style="list-style-type: none">• 2022 Season Overview• Loss Waivers• System Test	Mark Tucker and team
Outage Coordination	Cherilyn Randall



Introduction & JOC Rules



Introduction and JOC Rules

- JOC meetings are open meetings to all interested parties, though they are targeted towards generation owners/operators.
- Non-JOC member participation is welcome however the meeting focus is to ensure JOC members (BPA and generator owners/operators) are able to address all issues.
- JOC members (BPA and generator owners/operators) may propose agenda items, recurring or non-recurring, for future JOC meetings.
- JOC meetings are for discussing and reporting on operational issues that affect large portions of the generation fleet. Development of new policies or procedures may require a series of meetings outside of the JOC meetings. Issues that affect only one or two generators will be handled outside of the JOC.

Updated EMT Modeling



NERC IBR Strategy

- NERC Published its Inverter-Based Resource Strategy Document in September 2022
https://www.nerc.com/comm/Documents/NERC_IBR_Strategy.pdf
- EMT “studies will become increasingly necessary to ensure reliable operation of the BPS”
- EMT Standards are under development
- Increasing number of Transmission Planners have implemented EMT requirements, e.g. ERCOT, ISO-New England, PacifiCorp

EMT Modeling

- Generator developers will be required to provide accurate and validated EMT models before entering Interconnection System Impact Study or Cluster Study
 - Developers would need to have designed their collector system, chosen their manufacturer, etc. before the studies
 - Inverter OEM changes later in the process constitutes material modification and requires re-studies

- EMT models are studies are to be used to address the following reliability risks identified by NERC
 - Disturbance ride-through
 - Weak system conditions (low Short Circuit Ratio)
 - Control interactions

BPA's Approach to EMT Studies

- BPA will update its Technical Requirements for Generation Interconnection to reflect emerging NERC EMT requirements
- Change to LGIP/SGIP application:
 - EMT models required for valid application
- All generators will be screened for disturbance ride-through
 - BPA will define screening process

BPA's Approach to EMT, cont'd

- EMT Studies will be required for
 - Weak grid connection, e.g. $SCR < 5$
 - Electrical proximity to other IBRs, SVC or HVDC terminal
 - Electrical proximity or likelihood of being radial from series caps

- Possible EMT mitigations:
 - Developer controller + relay tuning, 'premium' OEM control packages
 - RAS
 - STATCOM / Grid Forming (GFM) inverter or SVC/Condenser
 - New transmission lines

Oversupply Management Protocol

Transmission Joint Operating
Committee

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2022 OMP Recap

- The Jan-Jul water volume for 2022 was 105.8 MAF. The NWRFC 30 year (1991 – 2020) Jan-Jul water volume average is 103.7 MAF.
- In 2022, there were 11 days with OMP for a total of 29,057 MW and a total of 60 hours.
- This affected 33 generators totaling \$664,454 in displacement costs for the season.
- In 2022 the Columbia Generating Station was used to mitigate OMP. The amount of economic displacement in June 2022 from CGS was 171,530 MW.
- Losses waived totaled 50,068 MW.

OMP Generator Displacement Costs 2023 Submittal Period

- The submittal period for generators to provide their facility's displacement costs will begin March 2023.
 - Generators can register on the [Accion site](#).
 - Submissions must be completed by March 15.
- Per Attachment P, generators must submit their facility's displacement costs for inclusion in the Least-Cost Displacement Curve.
 - Failure to submit costs will result in a displacement cost of \$0/MWh for that facility.
 - Cost from last year do not carry over. Need to resubmit each year.

Minimum Generation Reminders

- Minimum Generation Values are entered into the Customer Data Entry (CDE) System.
 - Min Gen levels are equal to or less than a resources schedule or generation estimate.
 - Hourly values that maybe modified until 20 minutes prior to the operating hour.
 - Resources may follow their maximum ramp rate when following a Dispatch Order to reduce to their Min Gen.
 - If no Min Gen is provided the resource will be directed to 0 during OMP.
 - See the OMP Business Practice for more information at:
<https://www.bpa.gov/transmission/Doing%20Business/bp/Pages/Business-Practices.aspx>

Reminders for 2023

■ Waiving Loss Obligations

- BPA will make the determination to waive losses on the day prior to the WECC preschedule trading day.
- Loss obligations will be cleared from the OATI Loss Module/CDE by 5am on the WECC preschedule trading day.
- If a transmission customer schedules loss returns for a waived hour, then its loss tags will be curtailed for that hour.
- No changes were made to last year's loss waivers program

■ Important Dates

- 3/15/23 – Displacement cost data is due for new year.
- 4/1/23 – New displacement cost data takes effect.

OMP Annual System Test

- OMP Annual System Test to be conducted the week of March 13th.
- OMP will be tested for one hour, likely less.
- No displacement of generation below schedules is expected.
 - All Generators should limit to Schedule (or Generation Estimate for behind-the-meter).
 - No Cost Generators are not required to reduce to Minimum Generation
- No OMP credits or FTC for OMP will apply
 - Generation Imbalance billing still applies.
 - Failure to respond will likely get a phone call after the fact from BPAT Operations or your Transmission AE.
 - Compliance with other Dispatcher directives will apply as always.

OMP Assistance

- Questions regarding the Accion website should be directed to:
https://oversupply.accionpower.com/_bpa_1901/accionhome.asp
- For other questions on BPA OMP, email techforum@bpa.gov with “Oversupply” in the subject heading.

Outage Coordination

- **Boardman 115/230 kV transformer – entire month of April**
- **Rock Creek 230/500 kV transformer – entire month of May**

- <https://www.bpa.gov/energy-and-services/transmission/outage-coordination>