

2019 ITP Economic Model Benchmarking Final Presentation

The final presentation for the 2019 ITP Economic Model Benchmarking milestone has been posted to SPP.org. The results provided are representative of PROMOD simulations of the 2019 ITP Y2 Economic Model compared to SPP Operations data and 2017 ITP10 PROMOD simulations. Also, please note that a 2017 ITP10 PROMOD simulation implementing the lower natural gas forecast utilized in the 2019 ITP is included in many of the comparisons as a reference. This simulation is labeled as “2017 ITP10*” throughout the presentation.

Please review and provide any feedback by Wednesday, July 11, 2018. SPP Staff will request approval by email vote on Thursday, July 12, 2018.

The following items are included in the presentation:

- Input Comparisons:
 - Natural Gas and Coal Price
 - Annual Energy & Capacity by Fuel Type
- Capacity Factors & Average Energy Costs
- Renewable Output
- LMPs
- Interchange
- Adjusted Production Cost
- Generator Outages
- Reserve Margin
- Congestion
- Additional Notes

The final Benchmarking results posted today reflect the following changes/updates to the Economic Model since the preliminary results presented at the June ESWG meeting:

- Incorporated Pass 5b Y2 Summer Peak Powerflow model
 - PMAx changes:
 - Affected Units: Eastman Cogeneration Facility, North Omaha 4 and 4a
 - Changes came through AECl updates and OPPD updates to allow BR and BA PMAx's to match
 - Bus mapping changes:
 - Non-impacting change that was an expected result due to changing from Pass 5a to Pass 5b powerflow models
 - AEPW and AEPW in Golden Spread had Demand Groups flipped, which flipped appropriate load totals.
- Applied MTEP18 Industrial and Interruptible Loads (Generators) curtailment prices
- Turned off Aux Loads in Powerbase to reflect Load Review
- Corrected curtailment application criteria:
 - Some units had the -\$35 and \$0 curtailment price flipped
 - The -\$35 is in 2016 dollars, so this price was escalated for all renewables
 - For PROMOD translation reasons the \$0 curtailment price is reflected as \$0.10

- Adjusted Operational Spinning reserves
 - MISO: Used MTEP18 PROMOD Powerbase as source
 - AEI and TVA: Used ABB F16 PROMOD Powerbase as source
- Updated Specific Weighted Hubs to capture load changes and new powerflow
- Updated Generator Automatic Maintenances case to reflect model changes
- Applied winter ratings for translated branches
- Adjusted KKEEWATINOHK DC Line modeling to reflect the 2017 ITP10 MW flow to eliminate translation issues
- New Automatic Maintenance to reflect scenario changes

These files can be found on SPP.org under “SPP Documents → Engineering & Planning in the “ITP Postings (formerly in Order 1000 Documents)” folder.

File Name	Description
2019 ITP Benchmarking_Final_20180703.ppt	Final Economic Model Benchmarking Presentation

Helpful Links

- [Transmission Owner Selection Process \(formerly Order 1000\) home page](#)
 - [Order 1000 Documents](#)
 - [Detailed Project Proposal \(DPP\) page](#)
- [SPP Transmission Planning Page](#)
 - [All notice postings previously on the SPP.org home page are now on this page](#)
 - [ITP Postings \(formerly in Order 1000 Documents folder\) here](#)
- SPP Request Management System ([SPP RMS](#)) is the preferred method for inquiries and data submissions. Click on this link and then “Register Now” if you are not already registered.
 - Quick Picks to use in RMS:
 - “GlobalScape Access Request” Quick Pick for access to GlobalScape for models
 - “ITP-Project Inquiry” Quick Pick for questions/comments regarding projects
 - “ITP-Modeling Inquiry” Quick Pick for input regarding modeling
 - “ITP-DPP Submittal” Quick Pick for DPP submissions
 - “ITP-Data Submission” Quick Pick for responses to ITP data requests and surveys from SPP
- [SPP RMS](#) is the preferred method for receiving all inquiries and solution submittals.