

External Area Modeling

Study Scope and Next Steps

Validate Option/Case 4 by repeating prior 2 years IRM results

To do this, we would need to undo the existing policy 5 changes and incorporate the case 4 methodology to the externals.

1. Perform tan 45 on existing 2019 IRM base case with case 4 methodology applied
2. Since 2018 IRM has the same external as 2019, perform the tan 45 on the 2017 IRM base case with the case 4 methodology applied.
3. Run LCR optimizer at the IRM found in step 2

Time estimate: 12 working days

Run most recent IRM study by not removing EOPs in neighboring Areas

To do this we would need to increase the EOPS modeled in our neighbors to 10 steps

Then apply policy 5, perform tan 45, and run LCR optimizer at the found IRM

Time estimate: 12 working days

Begin review of individual control Area EA limits

Solicit input from operators

Come up with metrics that show the levels of EA that each external can supply at our hours of need

For example, find the Electric Load Carrying Capability (ELCC) value (to New York) of each external Area

Do this by cutting all ties from one of the external control areas. Firm contracts remain in place. Be sure to cut only the upstream side of any UDR resources. Next, add perfect generation in each of the zones where the external Area's ties enter New York. Increase the size of the generator(s), using the tie capability as the rationing basis, until the LOLE returns to 0.1 days/year. Return to the base case and repeat for each external Area.

Prorate the above values against the 3,500 MW EA limit.

Time estimate: 6 days for each attempt

Explore simplified models of external Areas and topology, if feasible

Test #1

- Model each external control area as a single Area with existing ties (PJM has two ties to zone C, these would need to be combined)
- Limit the tie capability entering New York (by using grouped interface ratings) to the values found above
- Isolate the ties leaving New York in order to eliminate loop flow
- Apply policy 5, perform tan 45, and run LCR optimizer at the found IRM

Test #2

- Again, Model each external control area as a single Area with existing ties

- Place a single perfect generator modeled in each external equal to the above limits
- Apply policy 5, perform tan 45, and run LCR optimizer at the found IRM

Test #3

- Same as Test #2 but remove the tie limits from the interfaces
- Apply policy 5, perform tan 45, and run LCR optimizer at the found IRM

Time estimate: 12, 8, and 6 days

Investigate running the isolated case for NYCA much earlier

Obtain an indication of the direction of the EA benefit accruing to the NYCA much earlier in the study process

To do this, run the isolated case for three scenarios

- 1) Directly before the addition of externals
- 2) After all external data has been updated
- 3) After policy 5 changes have been applied

Time estimate: This work will be performed as time allows