

**Michigan Technical Study Task Force Meeting Notes – April 13<sup>th</sup> Lansing, MI**

1. Three models will be used to evaluate the BRP projects in addition to the 2014 summer peak model. 85% peak case with 5 Ludington units generating, 85% peak case with 1 unit pumping, 70% case with 4 units pumping. An additional 85% peak case with 6 Ludington Units pumping will also be created.
2. The total load of ITC and METC in 2019sp model is more or less the same as in the 2014sp model. This appears inconsistent with other MISO regions.
3. The total load in WPSC has a 4% growth in 2019sp model when compared to the load in 2014 sp model. CE noted they would check the history and forecast load data of WPSC. CE also noted they will review how much generation of WPSC was modeled in 2014 and 2019 models?
4. P1850: According to the substation information provided by ITC, it is difficult to install a new circuit into Southfield station, since there is no place left in this substation. Overloads were also shown in shoulder case with 5 Ludington units pumping in ITC studies. More overloaded elements were shown in ITC studies. MISO will validate with MTEP off peak models (Ludington Pumping and generating).
5. There has been a change in scope and potential change in In-Service dates of a couple customer interconnection request projects such as P2543, 2544, 2475, 2546, 1872. MTEP Project Database needs to be corrected by TO to reflect changes before 2<sup>nd</sup> SPM.
6. Some projects: 2507, 1810 etc. replacing all line structures or to rebuild the whole line, ITC/METC needs provide engineering description about the damages on these structures. Such as provide the percentage of damaged towers and the extent of damage. The outage records such as weather, tree falling, and unknown records do not clearly demonstrate need to replacing all line structures and line rebuild.
7. P1856, P1828 no overload violations were shown in summer peak case. Need to check if there are violations shown in shoulder cases. Need to check if the rating of Argenta-Palisades is correct in the model. ITC stated before project rating should be 1092 MVA. (Although, in METC P1828 report Rate B is noted as 1413 MVA).
8. P2520 Cable Termination Replacement 2011. No preliminary list was provided for 2011. It is not Midwest ISO's expectation that the information would be available so far in advance, but

agree that at some point in the future, DB will need to be updated..

9. P2522 Power Plant Control Relocation. This project is incorrectly tagged in our DB as an ITC project. It should be a METC project. Additionally, scope should be directed to 2011 year. Midwest ISO will correct ISD to reflect December 2011 and change reporting TO field.
10. P2539 2538 2516 2517 NERC Loadability compliance. This standard will apply on 345kV lines within the first quarter of standard being approved. These projects are for 100 kV line relay upgrades (first 39 months after standard is approved). Need to document how many lines need new relays, as opposed to re-calibration of existing relays. Are all lines considered critical facilities?
11. P1864 2521 1823 1824 2499 Relay Betterment Program .OPG is not appropriate for long lines, which is not needed for METC lines.
12. P2532 2533 2509 2510 Wood pole replacement. The majority cost of these projects is the change cost. ITC replaces the individual damaged wood poles based on their long term testing methodology.
13. For the not converged contingencies of P1806 and P2501. Check the loads rating in the model. Check the capacitors in the adjacent area. Force them online by changing voltage schedules. Manually run the contingency.
14. P240 Garfield-Hemphill. This project will only mitigate the constraint on this line. Check the loading of other lines in this region. Evaluate an alternative of adding a new sub in this region if all other line loadings are reasonably low (indicating that this line needs to be upgraded as opposed to a more cost effective longer term solution).
15. P2500 Murphy second transformer. The load in this region may not decrease in 85% peak case. Need to coordinate with ITC to model these loads appropriately in the 85% peak case.
16. P646 Edenville Jct.-Warren 138kV ITC stated that there may be sag limit violations that have most likely not been captured in the study. ITC needs to provide MISO with sag limit rating so that we can use that when identifying overload and potential redispatch alternatives.
17. P1810 Iosco-Karn. There is a related project in METP08. Need evaluate the contingencies from last year to see if project is needed to accommodate Ludington Pumping.
18. P662 Weeds Lake. ITC stated that they had studied tying in 345 kV line to Twin Branch. This reduced Michigan Import Capability therefore tying in line to Rob Park was the preferred

alternative. CE questioned the need to build a project for two simultaneous transformer outages. MISO stated that all overloads will be tested for redispatch. Additionally, load shed up to 300 MW will also be used to test mitigation in peak case.

19. P2489 Keystone-Tippy. Check the status of keystone peaking units: Livingston and Gaylord units in the peak and shoulder peak cases.
20. All constraints identified in peak case will be evaluated for mitigation via load shedding and or generation redispatch. All the constraints in shoulder case will be evaluated for mitigation via generation redispatch per MISO's redispatch methodology. This is in addition to other potential transmission alternatives.
21. Evaluate the impact of the future generation projects. Coordinate with related groups in MISO. Roger City generator System Impact Study may reveal need for some of the baseline reliability projects such as Iosco – Karn. CE commented that it may be prudent to modify the construction schedule of the project to move south to north rebuilding the south line sections sooner than north. This may avoid potential conflicts in construction schedules of line upgrades needed for Baseline System needs and those for accommodating new generator.
22. DTE also asked to check if the Wind Integration Study in the thumb would require re-build of Hunters Creek to Pontiac 120 kV line to 345 kV or another higher voltage class (P2541, 2542). In that case, there is no need to do Project 2542 unless very urgent.