2016 TEP- Stakeholder comments and TO responses – 12/01/2015

What is the purpose of the sensitivity studies? How will the findings be used?

Attachment 21- Steady State Extreme Load Sensitivity

Numerous transmission constraints were identified – will any of the constraints be addressed/mitigated?

The TPL-001-4 is a new standard that LG&E and KU Transmission Planning used in the 2016 TEP. This standard requires certain sensitivities studies to be performed. Projects do not have to be built for these sensitivities unless they are identified in more than one sensitivity but could be built by the TO if the TO feels the risk supports the project. The TO encourages the LSE's comments on whether they feel the projects are justified.

Attachment 22 – Steady State Off Peak Sensitivity

Displacing coal generation with CT generation sounds like a re-dispatch analysis rather than analyzing transmission flows under light loads with the expected/normal dispatch order. Please explain.

The TPL-001-4 is a new standard that LG&E and KU Transmission Planning used in the 2016 TEP. An Off Peak (summer shoulder) analysis was performed as part of the 2016 TEP with generation dispatched in merit order. This sensitivity is a variation on that model with generation re-dispatched. This standard requires certain sensitivities studies to be performed. Projects do not have to be built for these sensitivities unless they are identified in more than one sensitivity but could be built by the TO if the TO feels the risk supports the project. The TO encourages the LSE's comments on whether they feel the projects are justified.

Attachment 23 – Start Up Sensitivity

Please explain the study methodology – start-up of single or multiple generating units during the seasonal peak hour? Why not study start-up of TC2 – the largest LKE unit at seasonal peak? Were all other generators assumed to be on-line or available during startup events? Startup of a single coal unit or CR7 coincident with seasonal peak would be abnormal – simultaneous start-up of multiple units at seasonal peak would be very unusual.

There were specific TSRs for startup power at Ghent, Mill Creek, and Cane Run. These TSRs for your reference are numbers LGE-2013-016 (79109783), LGE-2013-014 (78849620), LGE-2013-002 (77761351). The ITO feels that to preserve the startup power for these TSRs that a specific sensitivity must be performed each year as part of the TEP. It is not expected that there will be any projects required due to this sensitivity. Startup power TC was never a TSR so sensitivities were not requested by the ITO.

Attachment 25 – NITS Capacity Sensitivity

Please explain Table 1 unit ratings – why do ratings decrease and some go to zero in future years?

Table 1 of Attachment 25 is the generation that was on in each particular model that is required to serve the load also in that model. Table 1 is not a rating of the units. Since the NITS capacity of a generation is only one value and is the same in summer, winter and off-peak etc., the CT values are higher in the summer model that what the CT's are actually able to run when the temperature is at 104 degrees. Therefore, the NITS capacity model is not realistic for summer but is more realistic for winter. Operating guides rather than projects will be used for the NITS capacity sensitivity if the constraint only exists in the NITS capacity N-1 analysis. Projects will be built if criteria violations show in the NITS capacity analysis under system intact conditions.