

**To:** SSC Members  
**From:** Roy Thilly and Kevin Gunn  
**Date:** June 3, 2011  
**Re:** Proposal on TLH Methodology and OL25/OL75

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On Monday we face the challenge of reaching consensus on two important issues related to the transmission assumptions to be used in the remaining sensitivities of Future 2. The issues are: 1) whether to use Sensitivity 1 (75% transmission run which is less expansive) or Sensitivity 2 (25% transmission run which is more expansive) as the base case for the remaining sensitivities and, 2) which transmission limit hardening option to use as presented by the NEEM sub-team. Both options average the three proposed methodologies. They differ in the parameters employed. See the NEEM-TX subteam Powerpoint presentation on both these issues.

Discussions in the subteam indicate strongly held views on both sides of these issues. Some believe that using the 25% run would not make sense because the run does not materially change the generation mix but would call for significantly more transmission. Others argue that opening the pipes more changes the location of generation, results in longer distance transfers and changes the generation mix enough for further consideration. There is also concern that restricting the pipes may make the remaining sensitivities less informative.

It is very important that the SSC reach agreement on these issues so that we can keep on a schedule. A deadlock would be a significant defeat for everyone.

**With this in mind, we would like to make a proposal for the group's consideration. It should be noted that this memo does not reflect the position of any sector, but only of the respective chairs in order to frame a discussion on Monday.**

To put these decisions in context a couple of observations may be helpful.

First, the most important consideration at this point should be getting a wide variety of data points for our next step.

Second, we are dealing with a Future, not a Scenario. Least cost concerns are more germane to Scenario development than to Futures development. Doing a detailed transmission planning analysis of the Scenario that includes a transmission build-out that promises no net consumer benefit, compared to a different level of build-out that meets a similar underlying energy policy that *does* have a material net benefit, would not seem to be a good use of resources. We should be clear that all potential build-out benefits, including the optionality/flexibility benefits of a robust grid, should be considered along with costs. We believe it would be a mistake in terms of getting important information on the table to exclude further 25% runs now on the ground that the required build-outs may not be economic. More information on different possible build-out levels, including high level transmission costs and reactions to sensitivity runs, would be valuable.

Third, regardless of how the 25% v. 75% run issue is decided, we already have information on the different impact of these assumptions through Sensitivities 1 and 2. However, we do not have EIPC's high level transmission cost estimates for either level of build-out, after translation to

hard limits. We should have that information, or at least reasonable proxies for it, through our different runs.

Fourth, in running the remaining sensitivities in Future 2 the interesting information will be the delta between the base run chosen and the sensitivity, to see whether a particular variable has a material impact on the result. While the impacts will clearly be somewhat different between a 25% and a 75% case, the general direction of the impact should be similar and we should be able to interpolate between the result and what happens in other futures in determining how we may want to handle the sensitivity variable in Scenario development.

Finally, we are convinced that it would be prudent to reserve 3 rather than 2 sensitivities to give the SSC maximum flexibility in Scenario development. Clearly, the transmission transfer capacity inputs between regions will be very important assumptions in each Scenario. The group may want to develop these assumptions after looking at various runs and arrive at limits that do not match any one 25% or 75% run. The group also will need flexibility to resolve apparent anomalies that result from how the model concentrates generation based on minor cost assumption differences. Other mix and match adjustments may be important.

With these considerations in mind, we would like to propose the following resolution of issues for the SSC's consideration:

**Use the 75% run going forward in Future 2 and agree now to use the 25% run in Future 5 in combination with Option 1 (default) hardening approach.** This will get high level transmission cost estimates for two substantially different but significant build-outs and allow us to see how generally similar sensitivities affect national policy futures with different transmission limits. We will also free up the 75% run now in Future 5 for Scenario development. For comparability, we would also use 75%, not 25% as currently proposed, in Future 3.

**A viable alternative would be to keep Sensitivity 1 (75% run) in Future 5 to see how much opening the pipes matters in this Future (while sticking to the agreement to use the 25% run for the remaining sensitivities in 5). To free up another Sensitivity for Scenario development, we would agree Monday to delete the 25% sensitivity from Future 8.** Reduced demand levels in that Future as a result of other assumptions (conservation and DR) are likely to require less transmission and the results of Future 2 thus far suggest that the resource differences between the proposed 25% and 75% runs may not be great.

This proposal seeks to recognize the concerns of various stakeholders and maximize the data points available to everyone. It would be far preferable to be able to test both transmission cases fully and to have completely comparable runs between our different Futures, but we do not have that luxury.