

Observations from the co-chairs on Phase I of the EIPC process the modeling/scenario selection exercise:

1. These comments are not intended as criticism of the EIPC process or the study design. It is inevitable with the project of this magnitude done for the first time that there are a number of things one would do differently, if the project were to be repeated. The purpose of these observations is to capture some of those things. . In many ways the experience of the process may be more important than the particular results. It will be important for the Report to be clear that this has been a planning exercise designed to provide useful information to regional planners and others and the intent is not to recommend a construction plan.
2. If repeated, the process would benefit from a more integrated working relationship between the planning authorities, their consultants and the SSC. Understandably, the planning authorities and their consultants have been very careful not to try to influence the SSC in the exercise of its oversight and direction authority. Given the planning authorities' experience with modeling and knowledge of their systems, we believe they could have provided helpful advice that would have resulted in a better modeling and scenario development exercise. A more collaborative process between the SSC, the consultant and the planning authorities would be beneficial in the future.
3. It is important to understand both the study design agreed upon for Phase I and the resulting limitations of the modeling that has been done. The design separated the future generation resource analysis from the transmission analysis. We believe a necessary but significant limitation of this design was an inability in Phase I to optimize generation additions with transmission. Such optimization would have been helpful to the SSC in recommending scenarios for detailed transmission analyses. For instance, the model appears to have located gas generation on a concentrated basis as a result of minor capital cost and/or gas prices differences between regions in the input assumptions. However, if the associated transmission and losses costs for such concentration were factored in, it is quite possible that the generation would have been spread out to be closer to load. In other words, the cost of transmission to locate gas generation for Michigan in Indiana could well outweigh the minor capital cost difference that pushed the generation into Indiana. If this exercise is repeated, scenario selection and specification of generation resource and transmission transfer capability inputs for Phase II would be improved, transmission costs associated with different resource future locations could be accounted for in the Phase I modeling. This would require use of a co-optimization model. We do not know whether such models are available and would meet other study requirements or the relative cost. If use of such a model is not feasible, perhaps generation capital costs and fuel costs by technology should be equalized within somewhat broad bands to prevent unreasonable results. A similar issue exists for wind.

At a certain point transmission and losses costs will offset the benefit of somewhat higher wind capacity factors.

4. Another limitation that should be recognized is the fact that the model did not take into account gas infrastructure needs for the gas generation build – outs it proposed. Accounting for those costs could result in generation location changes, which in turn would alter transmission needs.
5. It is apparent after the modeling that a number of sensitivities made little difference in results.. This occurred in part because of a lack of knowledge on the part of the SSC, which might have been bridged by more advice from CRA or greater participation by the planning authorities. In retrospect, it would have been better to have held off on assigning a number of sensitivities until after a couple futures were run with sensitivities – in other words a more staged or iterative modeling process. In this regard, we recognize that an appropriate balance would need to be struck between budget and schedule concerns, a process that would allow stakeholders to learn from initial runs before specifying all runs.
6. A related observation is that more transmission sensitivities would have been valuable, particularly in light of the purpose of the exercise. Changing the amount of available transmission capacity at more different levels (ie., OL 30, 40, 50, 60 etc.) would have provided more interesting results in terms of generation location and type than many of the sensitivities that were run such as the electric vehicle penetration etc.
7. If possible, it would be desirable in the future for demand response and conservation to be selected by the model as resources rather than forced in.
8. One of the challenges of the stakeholder process is the policy agendas of different groups that may have driven positions based on desired results for purposes beyond the current exercise. Having neutral expertise available from the Labs was very helpful to the group in providing a reasoned basis for decisions. Also, the consensus based structure of SSC governance, along with the ability to clearly caveat results and choices, helped parties with disparate views reach agreement
9. It would be desirable in the future, if the project is repeated to have greater regional balance on the SSC. In some ways, views seemed to be more driven by regional location than by sector differences. Some areas in the interconnection were very engaged in the process and other areas were not as engaged.