

Technical Advisory Panel (TAP) Meeting #4
Tuesday, November 19, 2019
9:00am – 11:00am
Waterhouse Conference Room 107, WebEx

Attendees

In-person

Christopher Lau, HE	Sorapong Khongnawang, HE	Rick Rocheleau, HNEI
Michael DeCaprio, HE	Brian Lum, HE	Derek Stenclik, Telos
Christopher Kinoshita, HE	Terry Surles, HNEI	Matthew Richwine, Telos
Vladimir Shvets, HE	John Cole, HNEI	
Collin Au, HE		

WebEx

Dale Murdock, Newport Consulting	Jeffrey Burke, APS	Marisa Chun, HE
Jeremy Laudergeran, EnerNex	Julia Matevosjana, ERCOT	Amanda Yano, HE
Anderson Hoke, NREL	Robert Sheridan, National Grid	Ken Aramaki, HE
	Daniel Lum, HE	

Objective

- Discuss the high-level IGP Solution Sourcing Process to set the framework for the detailed process steps
- Discuss the role of the TAP given the latest Commission guidance on independent evaluation in the IGP process

Agenda

- Review latest draft of the proposed IGP Solution Sourcing process
- Discuss decomposition of Capacity, Energy, and Ancillary Services Needs process step
- Discuss aging of units and unit retirement considerations
- Review of the latest IGP order issued on November 4, 2019
- Next Steps

Discussion

- I. **Updated IGP Solution Sourcing Process**
 - a. Stakeholder would like to know how is DR (Demand Response) considered in the IGP Solution Sourcing Process?
 - i. HECO: The DR and DER (Distributed Energy Resources) would be considered through proposals in the procurements or parallel efforts to develop new programs.
 - b. Stakeholder asks, how does DER play a role in the process?

- i. HECO: Forecasted DER growth is used as an input into the needs identification process.
- c. Stakeholder would like to know more about the Transmission Needs step, in terms of when the assessment will start?
 - i. HECO: This is intended to be a high-level analysis until we receive the detailed transmission models. There are two tracks: 1) where we try to capture short-term transmission projects, and 2) where we try to capture long-term transmission projects.
- d. Stakeholders would like more information about how DER programs will be integrated into the non-wires alternative (“NWA”) sourcing step.
 - i. HECO: The idea is to see what types of NWA solutions are proposed to address the identified distribution needs. A distribution need could best be met by DER aggregators in a procurement, a DER program, or traditional investment if that is better suited to address the needs.
- e. Stakeholders would like more information about what is included in the Review Points.
 - HECO: The Review Point is intended for the Companies to present a summary of IGP process steps for Commission and Consumer Advocate review.
- f. Stakeholder asks if electric vehicle (EV) adoption will have an impact beyond just the forecast, into the Transmission and Distribution level needs. Is it part of the whole analysis?
 - i. HECO: There is a base level of EV forecast that is assumed. There may be sensitivity analyses to look at the impacts of a large uptake of EVs onto the distribution system, and possibly longer-term impacts at the transmission-level.

II. **Capacity, Energy, and Ancillary Service Needs**

- a. Stakeholder comment, RESOLVE seems like a good screening tool, but it seems like it has limitations. If we could know more now, in terms of what are those limitations are, it would be helpful. Recommendation is to use RESOLVE as a screening tool and not necessarily to fully rely on the outcomes from the RESOLVE model as there may be capacity shortfalls. When you get to higher storage penetration levels and multiple years of data, you may not be properly capturing storage properly. Recommend incorporating PLEXOS for the detailed analysis.
- b. Stakeholder concern that RESOLVE does not capture the DER accurately. It is still a good tool, but it seems some value of DERs may be missed.
- c. Stakeholder asked why do we need to load-shed and how do we remedy this issue? The model doesn’t always solve for contingency scenarios, and that need isn’t identified. It doesn’t seem like RESOLVE can capture this.
- d. Stakeholder suggestion is to use a 20-year horizon in RESOLVE, followed by a 3-year horizon in PLEXOS to analyze the value of storage in terms of LOLE (Loss of Load Expectation).

- i. HECO: Our current planning criteria uses LOLE, and we are looking into adjusting our planning criteria to include a reserve margin.
 - ii. Stakeholder comment that it's more of a matter of using varying weather patterns in PLEXOS to identify system performance constraints and needs.
 - 1. RESOLVE may not accurately capture certain weather years and over-select solar plus storage. Expect to see capacity shortfalls in PLEXOS when checking the resource adequacy of the RESOLVE output.
- e. Stakeholder would like to know, in terms of the forecast, will there be only set values, or would there be sensitivities as well?
 - i. HECO: The FAWG is planning to have a draft of the forecast by the next working group meeting in January 2020 and to develop future sensitivities.
- f. Stakeholder asked if renewable energy zones are modeled in RESOLVE to consider the transmission costs of interconnecting future renewables.
 - i. HECO: Yes, we will be creating renewable energy zones with varying transmission costs.
 - ii. Stakeholder commented that trade-offs of locating a project in one place over another should be considered.
- g. Stakeholder asked, when you say you're being technology agnostic, what kinds of resources are you looking at?
 - i. HECO: All types may be proposed for consideration.
- h. Stakeholder asked whether RESOLVE will model the resource potential for various resources?
 - i. HECO: The plan is to refresh the NREL potential study, which includes the estimated resource potentials for onshore wind and PV.
- i. Stakeholder asked whether the undersea cable will be considered in the IGP?
 - i. HECO: It is not being planned for in this IGP cycle.
 - ii. Stakeholder: At some point, someone would need to consider that idea.
- j. Stakeholder concern that increasing the load will decrease your RPS. As more renewables come online, the percentage might not show a difference.

III. Generating Unit Concerns on Age and Retirement

- a. Stakeholder asked why AES is not being kept online or its contract renegotiated? Coal is one of the cheapest resources out there.
 - i. HECO: The AES plant is a large generator that has operational limitations in terms of ramping up and down. Emissions are also a concern.
- b. Stakeholder asks, what is the risk analysis for these generating units taken offline?
 - i. HECO: The energy reserve margin criteria will ensure that adequate capacity and energy is available.

- ii. Stakeholders would want to know why some resources are not a one for one replacement between a thermal generator and solar plus storage project.
 1. HECO: A replacement resource would need to be able to provide all of the same services that could be provided by a thermal generator in order to be a one for one replacement.

IV. IGP Order No. 36725 Providing Guidance

- a. Stakeholder needs more detail on types of documents to be reviewed, volume of documents, and timeline.
- b. Stakeholder suggestion that this may be a good time to restructure the panel and modify or add personnel with the appropriate expertise or experience for each review point.

Next Steps

- Work towards finalizing the IGP Solution Sourcing Diagram to begin development of individual process step details
- Discuss the set of grid service needs and their definitions that will be identified by the planning models in the first IGP cycle
- Next meeting – TBD, 2020
 - Feedback and questions may be sent to Chris Lau at christopher.lau@hawaiianelectric.com or igp@hawaiianelectric.com