IGP Joint Competitive Procurement Working Group (Meeting #7) and Solution Evaluation and Optimization Working Group (Meeting #6)

Monday, December 9, 2019
1:00pm - 3:30pm
American Savings Bank Tower, Training Room 1

Attendees

In-person

Christopher Lau, HE
Greg Shimokawa, HE
Isaac Kawahara, HE
Dale Murdock, Newport Consulting
Roderick Go, E3
Mike Wallerstein, HPUC
Clarice Schaffer, HPUC
Gina Yi, HPUC
Marcey Chang, DCA
Rene Kamita, DCA
Lance, DCA
Robert Harris, Sunrun
Wren Wescoatt, Progression Energy
Rocky Mould, City and County of HI
Rebecca Dayhuff Matsushima, HE
Marc Asano, HE
Collin Au, HE
Amanda Yano, HE
Sorapong Khongnawang, HE
Jeremy Laundergan, EnerNex

WebEx

David Parsons, HPUC
Lisa Hiraoka, DCA
Andy McCoy, EPIC
Noelani Kalipi, Progression Energy
Erik Kvam, REACH
James Abraham, HE
Jason Prince, RMI
Kylie Cruz, Earthjustice obo Blue Planet Foundation
Tricia Rohlfing, Hawai'i Pacific Solar
Ken Aramaki, HE
Robert Uyeunten, HE
Yoh Kawanami, HE
Meredith Chee, HE

Objectives

- Clarify and agree on next steps regarding feedback received from stakeholders on:
  - CEAS needs analysis
  - Forecast scenarios vs. RESOLVE sensitivity tests
  - Linkages to and potential dependencies on developments in other dockets (e.g., ARDS, DER)
- Clarify and receive feedback on updated IGP Solution Process
- Develop a deeper understanding of proposed CEAS needs methodology and use of modeling tools
- Clarify SEOWG and CPWG Deliverables, schedule and dependencies within IGP

Agenda

- Welcome & Introductions
  - WG Ground Rules
  - Objectives for today's meeting
- Review latest draft of the proposed IGP Solution Sourcing Process
- Discuss decomposition of Capacity, Energy & AS Needs process step
- Review of RESOLVE and PLEXOS
- Discuss CEAS needs sensitivities
- Provide updates on CPWG & SEOWG process description outlines
- Next Steps

Key Takeaways

- Stakeholders interested in the capabilities of the models to incorporate various parameters such as RPS targets, GHG emissions reduction, EE, EVs, and resiliency.
- Strong stakeholder emphasis on thinking about other ways DERs can be modeled, beyond the forecast. Include operational capabilities of DER in the modeling.
- Stakeholders would like to have more informative discussions about the Grid Services needs identification step and evaluation methodology.
- Stakeholders would like to have a more detailed discussion on the modeling input assumptions soon.

Discussion

I. **RESOLVE/ PLEXOS Model Comparison**

a. Stakeholder would like to know, will there be other scenarios modeled aside from solving for least-cost?

   i. HECO: Yes, the models can solve for multiple objectives in additions to least cost such as RPS targets.

b. Stakeholder asks, in terms of resilience parameters, can RESOLVE model that type of scenario?

i. HECO: We are interested in hearing suggestions for resilience scenarios that we can take back and figure out how to account for that in the modeling.

II. Modeling Inputs

a. Stakeholder asks, how would you represent resilience in RESOLVE?
    i. HECO: We would need to have costs for comparison. For example, what is the cost to harden a resource to increase its resiliency?
    ii. Stakeholder: Additional examples for building resiliency on the system could include transmission upgrades with locational value and resource capabilities to island or black start.
b. Stakeholder asks, is your current modeling of DER common industry practice?
    i. HECO: We model DER as a generator that can serve the load as opposed to a load reduction to better understand the capabilities of DER and what types of services they can provide.
    ii. Stakeholder suggestion to use parameters around DER self-consumption mode and other operational complexities.
    iii. HECO: We're assuming a market uptake of DER in the forecast. DER aggregators can also be a resource choice in the model if the working group can provide additional details on their cost. We would need stakeholder input to define how DER can provide additional services in the models.
    iv. Stakeholder: Is DERs limited to PV only? What about storage?
        1. HECO: DER is not limited to only PV, storage is also considered.
    v. Stakeholder: If you model a DER resource as a generator, do you lose out on it's ability to perform as a storage?
        1. Consultant: Both resources would be modeled.
        2. Consultant: There may be some learnings from other utilities about the DER market that we can incorporate.

III. Solution Evaluation Methodology

a. Grid Service Definitions
    i. Stakeholder asks, is the utility proposing that the capacity services would need to be connected to the AGC?
        1. HECO: There are certain services that need to be connected to the AGC for dispatchability.
        2. HECO: The actual communication comes from the DERMS, however, there will be some interfacing between the DERMS,

EMS (AGC), or the ADMS, dependent on the type of grid service. The AGC signal is meant to indicate that it is on a 4-second control loop.

ii. Stakeholder asks, it looks like you're trying to split the capacity service in two. However, it looks like one of the fast frequency response services was dropped, what changed?
    1. HECO: We still show FFR-1, however, we are finding that there may be a greater need for a faster response time. We may seek FFR-2 in the future, depending how much inertia is on the system.
    2. Stakeholder: There may be value in defining the different types of frequency response, if resources can provide the service faster than others. It might make it easier to fulfill the need by having different types of frequency services.
        a. HECO: The regulating reserve captures the service needed over a 1-minute and 20-minute timescale, which you may see on the mainland defined as a frequency response service.
    3. Stakeholder: Wasn't there supposed to be a working group to talk about Grid Services in detail? How many different services to have, timing of these procurements and programs? Further discussions may be necessary for grid services definitions.
        a. HECO: We did have a separate grid services working group initially, however, this was folded into the Distribution Planning Working Group as the new grid services procured would be based on the distribution needs identified in the DPWG.

iii. Stakeholder: Are the grid service definitions specific to IGP, or is the Company using these terminologies in the other company initiatives for consistency? Will there be a similar understanding across initiatives, such as DER docket or DR docket? Do stakeholders have to be aware of all the different ways the company defines the grid services?
    1. HECO: We want the definitions developed by the IGP process to be used consistently in the relevant dockets.

iv. Stakeholder: Where do your shadow prices come from?
    1. Consultant: The shadow prices are based on actual pricing from RFPs. If you pick this portfolio, these are the resulting changes to the system.

v. Stakeholder: What is the range of scenarios that can be tested in the model?
    1. HECO: Many scenarios can be modeled for comparison. However, each run may take a significant amount of time to complete. Therefore, we would want to be selective and choose sensitivities that provide the most value to the working group.
vi. Stakeholder: Which type of storage resource would be the most economical to pair with a renewable?
    1. HECO: This can be evaluated in the model using the resource cost assumptions.
vii. Stakeholder: Is there a plan to prescribe a set of rules or conditions for refreshing the models or reexamining the resource plans? From a commission and regulatory standpoint, we would like to have the ability to request a refresh of the modeling. For example, if there is a large procurement of projects, would it be possible to refresh the models with the projects and get a refreshed resource plan?
    1. HECO: The cyclical nature of the IGP should refresh the resource plans and modeling on a regular basis. The procurements in this IGP cycle would be a large part of the input assumptions for the next cycle. We would also want to update the assumptions as a complete package, which the IGP is set up to do.

IV. Calculating Value of Services Provided

a. Stakeholder asks, how often would you run the model to select your award group?
    i. HECO: It would depend on if we are evaluating a single resource addition the system, or a portfolio of resources. The portfolio could have multiple combinations, each requiring a run, as well as modeling resources individually, each would have its own run.
b. Stakeholder asks, when would you use this for considering RPS, during RESOLVE or downstream of the evaluation?
    i. Consultant: RPS is a parameter included in the RESOLVE modeling.
c. Stakeholder comment that GHG emissions are a rising issue, and it may go beyond fossil fuels versus renewable sources, such as the emissions from renewable sources such as HPOWER which burns trash and biomass plants which burn trees.

d. Stakeholder asks, RPS and GHG emissions kind of go hand in hand when it comes to large-scale projects, how do you incorporate that into non-price criteria for the development of pricing or programs?
    i. HECO: RPS and GHG emissions could be accounted for in the non-price evaluations of the RFPs.
e. Stakeholder comment, it might be beneficial to think about considering other benefits of project evaluation that go beyond least-cost analysis.
    i. Consultant: We can start with least-cost as a base, then build upon that and identify additional benefits of taking on a resource that might cost $1 more but also reduce more GHG emissions than the lesser priced projects. It would be up to the working group to compare the valuing of the results.

V. Stakeholder Feedback – Pre-RESOLVE Sensitivities

a. Stakeholder asks, what is meant by legacy NEM?
    i. Stakeholder: It seems like this statement ("Legacy NEM self-consumption load shift") is looking into what the benefit would be to NEM customers to self-consume only.
    ii. HECO: Legacy NEM refers to existing NEM customers, who provide uncontrolled export to the grid.
b. Stakeholder asks, would energy efficiency be considered as a sensitivity?
    i. HECO: We could evaluate energy efficiency sensitivities through the sales forecast. We would need the working group's help to determine what the shape of that load reduction would look like.
c. Stakeholder would like to know, will there be a high and low EV forecast?
    i. HECO: There is an EV layer in the forecast. Sensitivities could be considered for EV uptake.
d. Consultant asks stakeholders, would you consider microgrids as a form of grid defection?
    i. Stakeholders: No response.

VI. Competitive Procurement WG

a. Stakeholder reminder to consider procurement options for resources that have a longer timeframe to be put into service (e.g., hydro, etc.).
    i. HECO: We wouldn't exclude those long-term resources from consideration in the CEAS needs portfolio.

CPWG Deliverables Due

- January 2020 – Review of Competitive Bidding Framework (CBF) and first draft of proposed modifications
- February 2020 – Incorporate stakeholder feedback on CBF and produce second draft
- March 2020 – Final draft of proposed modification of CBF

SEOWG Deliverables Due

- 1/23/2020 – Description of the process methodology to be used to identify capacity, energy, and ancillary service needs
- 2/1/2020 – Description of the evaluation methodology for T&D Non-wires RFP
- 3/1/2020 – Description of the evaluation methodology to be used for system resources RFP
- Due 6/1/2020 – Description of the optimization methodology to be used for proposed solutions that may address multiple resource/ grid needs.

CPWG Upcoming Meeting Schedule

Meeting 8 – January 23, 2020	Finalize RFP requirements. Review Competitive Bidding Framework (CBF) and develop initial recommendations for updates in the context of the Prequal and RFP process.
Meeting 9 – February 12, 2020	Develop initial process and requirements description for T&D NWA RFP (informed by Soft Launch); update 2nd draft of CBF recommendations
Meeting 10 – Week of March 2, 2020 (tentative)	Conference call, review 2nd draft of NWA RFP, 3rd draft of CBF recommendations
Meeting 11 – March 13, 2020	Finalize NWA RFP and CBF recommendations

SEOWG Upcoming Meetings Schedule

Meeting 7 – January 23, 2020	Review first draft of CEAS needs Review of modeling
Meeting 8 – February 12, 2020	Lessons learned from Stage 2 RFP Review near-final drafts of all deliverables
Meeting 9 – March 18, 2020	Final Meeting – Final review of all deliverables Discuss any next steps

Next Steps

- CPWG
  - Develop first draft of proposed CBF update for distribution to stakeholders in advance of January working group meeting.
- SEOWG

    - Walk through details of the RESOLVE and PLEXOS modeling:
        - Planning criteria, constraints, grid service needs.
    - Clarifying how the information from the CEAS needs assessment will be used to develop near term and long-term RFPs, and how specific should the RFP be?
    - Reach agreement on the CEAS needs process step by January 23, 2020.
- Feedback may be sent to – IGP@hawaiianelectric.com, or Chris Lau christopher.lau@hawaiianelectric.com (SEOWG), or Greg Shimokawa greg.shimokawa@hawaiianelectric.com (CPWG)