

**Hawaiian Electric Companies  
Integrated Grid Plan Stakeholder Council (IGPSC) Meeting  
November 7, 2019**

<b>Meeting Agenda</b>
◆ Welcome and Order of the Day
◆ Stakeholder Council Objectives, Roles and Responsibilities
◆ Stakeholder Engagement Plan
◆ Working Groups Update
BREAK
◆ Updated IGP and Solution Sourcing Process
◆ The Challenges Facing the Company
◆ Discussion and Input

**I. STATUS UPDATE**

**A. Stakeholder Council:** There have been some changes in stakeholder membership because of change in roles and makeup. An updated list of IGP SC members, including those present at the meeting (in-person or via WebEx) denoted with an asterisk:

<b>Organization</b>	<b>Name</b>	<b>Affiliation</b>
HPUC	Dave Parsons*	Chief of Policy & Research
Chair of TAP	Rick Rocheleau	Hawai'i Natural Energy Institute
Community Delegate (Hawai'i)	Jacqui Hoover*	Hawai'i Island Economic Development Board
Community Delegate (Lana'i)	Alberta DeJetley	Publisher/Editor Lana'i Today, Owner/Albert's Farm Lana'i Chamber of Commerce
Community Delegate (Maui)		
Community Delegate (Moloka'i)	Barbara Haliniak	Owner, The Business Depot, Inc., President, Moloka'i Island Foundation
Community Delegate (O'ahu)	Pono Shim	President, CEO O'ahu Economic Development Board
Consumer Advocate	Marcey Chang*	Division of Consumer Advocacy (for Dean Nishina)
DBEDT	Scott Glenn*	CEO, Hawai'i State Energy Office (for Carilyn Shon)
Demand Response	Yvette Maskrey	Honeywell
DOD	Keith Yamanaka*	USAG-HI Directorate of Public Works
Electric Vehicles	Melissa Miyashiro	Blue Planet
Energy Efficiency	Brian Kealoha	Hawai'i Energy
Environmental Advocate	Henry Curtis	Life of the Land
IPP (utility scale resource)	Gerald Sumida	Carlsmith Ball LLP
Local Gov't (Hawai'i)		

Local Gov't(Maui)	Alex de Roode* (online)	Energy Commissioner, County of Maui
Local Gov't (O'ahu)	Robert "Rocky" Mould	Energy Program Manager, Office of Climate Change, County of Honolulu
	Chris Cunningham*	Hazard Mitigation & Long Term Disaster Recovery Program Manager, Office of Climate Change, County of Honolulu (for Rocky Mould)
Small Solar & Storage	Chris DeBone*	Hawai'i Energy Connection
Sustainability Advocate (Local)	Murray Clay*	Ulupono Initiative
Sustainability Advocate (National)	Merrian Borgeson	Natural Resources Defense Council (NRDC)
Large Commercial and Industrial Customer	Barry Usagawa*	Board of Water Supply

Additional members of the public and parties to the IGP docket were in attendance.

Name	Affiliation
John Cole*	Hawai'i Natural Energy Institute
Terry Surles	Hawai'i Natural Energy Insitute
Chris Yunker*	Hawai'i State Energy Office
Michael Schwing	Hawai'i State Energy Office
Kylie Wager Cruz	Earthjustice
Wren Wescoatt*	Progression HI Offshore Wind/Progression Energy
Steve Rymsha (online)*	Sunrun/Hawai'i PV Coalition

## II. STAKEHOLDER COUNCIL OBJECTIVES, ROLES AND RESPONSIBILITIES & STAKEHOLDER ENGAGEMENT

*Slides included in Presentation Materials from November 7, 2019*

The agenda for this IGP SC meeting was built around the discussion that took place during the previous IGP SC meeting held on August 23, 2019. At this meeting, the IGP SC asked for further clarification on the role of the Stakeholder Council in order to effectively fulfill their roles as council members. The following information was provided:

- The IGP process aims to foster collegial, balanced discussions to achieve shared understanding of issues to address in IGP and planning results and to build common ground through iterative discussion and feedback.
- The Stakeholder Council is an advisory group, not a decision-making body. Ultimately, the utility will decide what is presented to regulators, but stakeholders will help develop and provide input that affects the steps along the way. The PUC is the final decision-maker in determining whether plans are appropriate and will issue its decision on those plans.
- This IGP process allows for the utility to incorporate input from the community. Right now, the utility is in phase one of a five step plan that makes up the first IGP cycle (Slide 7). This initial stage, Forecasts and Assumptions, takes customers' needs and feedback, along with previous planning cycle results, and policy goals into consideration. There is no



analyses available to share with stakeholders at this time, but there will be as the process transitions into the second phase: Grid Needs Identification. The Stakeholder Council will play a vital role in these first two phases and will continue to be engaged throughout the process.

### III. **WORKING GROUPS**

*Slides included in Presentation Materials from November 7, 2019*

Similarly, at the August 23, 2019 IGP SC meeting, the council members asked the Companies to provide an update on work that has been done in the Working Groups (WG).

The Company originally established seven Working Groups to align with areas that are most important to customers - Affordability, Reliability and Energy Choices. Some Working Groups have merged to recognize interties between subject matter and to make more efficient use of stakeholder resources. The Working Groups are comprised of a diverse group of individuals and businesses who have the knowledge to provide input on the Working Groups' topics.

#### **A. Standard Contract Working Group (SCWG) & Competitive Procurement Working Group (CPWG): AFFORDABILITY**

*Slides included in Presentation Materials from November 7, 2019*

1. The SCWG started with the Grid Services Purchase Agreement (GSPA), and the Companies' Model Renewable Dispatchable Generation PPA and Model Firm PPA. The group was tasked with the following:
  - a. Determining and documenting the best approach to contracting for energy, capacity and ancillary services from a variety of sources;
  - b. Determining whether a unified contracting approach can apply to all competitive procurement, or if multiple contract forms are required; and
  - c. Proposing a streamlined procurement process to encourage a brisk, competitive and innovative proposal process.

The SCWG closed upon filing of the GSPA on March 29, 2019. The GSPA was utilized in the Grid Services request for proposal (RFP)<sup>1</sup> that is currently in-progress. Future contract-related discussions will take place through other Working Groups (mainly the Competitive Procurement Working Group).

Bids for the Grid Services RFP closed on October 31, 2019. The Stage 2 RFPs on Oahu, Maui, Hawaii closed this week (November 5). The Soft Launch RFP for Non-Wires Alternatives will be issued on November 8, 2019.

2. The Competitive Procurement Working Group (CPWG) is tasked with establishing a fair, efficient, streamlined procurement process that aligns with the utility's grid plans as identified through the IGP process. Adjustments are expected to be made over time as a result of feedback from stakeholders.

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<sup>1</sup> RFP No. 103119-02 for Grid Services from Customer-Sited Distributed Energy Resources RFP issued on August 22, 2019. Bids were received on October 31, 2019.



Stakeholders have expressed concerns about the duration of the process and the need to maintain integration in the overall process.

There have been five meetings in which a good deal of time has been spent discussing the larger IGP Sourcing Process. As agendas have changed based on feedback from the Working Group, the schedule in slide 22 will be updated.

The pace of the CPWG meetings is picking up, mixing in conference calls with in-person meetings. This, along with sending presentation material ahead of the meetings is designed to encourage participation and feedback from stakeholders.

- d. An inquiry was raised regarding the type of generation technology that is being considered. It was explained that for planning purposes, the utility needs to make assumptions about the capabilities of each renewable technology. In modeling, the utility selects resources that can meet the needs of the system. In the procurement process, the utility does not limit the market to any particular technology. Therefore, the RFP focuses on grid needs. The process to define resource needs is being discussed in the Solution Evaluation & Optimization Working Group.
- e. Clarification was sought as to how the input provided by the Working Groups is being incorporated into the RFP process.

Hawaiian Electric reiterated that the RFPs that are already out have been in the works for much longer than the IGP process. Therefore, feedback from the Working Groups will be considered for incorporation in future procurements.

A stakeholder council member shared a concern that with the ongoing procurement for Maui, the size of the procurement could be large enough to achieve 60-80% RPS before the IGP is completed to inform the decision.

In defining the scope of the RFPs, Hawaiian Electric specified the requirements of each grid need being procured in a technology neutral manner. Concerns were raised about the limitations of storage and expectations for producing ongoing power during cloudy days. The standalone storage asked for in the RFP required grid charging to mitigate the effects of poor weather on the resource performance.

As a part of the evaluation, Hawaiian Electric will not be treating all renewable technologies the same because of the very different characteristics and price for each technology. HE will be looking for the optimized portfolio of resources that meets the needs of the system.

Concern was expressed that the proposed Hawaii County general plan does not align with the IGP. Stakeholders are encouraged to share insight, such as this, that could affect plans.



**B. Forecasts and Assumptions Working Group (FAWG), Distribution Planning Working Group (DPWG), Resilience Working Group (RWG): RELIABILITY**  
*Slides included in Presentation Materials from November 7, 2019*

1. The FAWG takes a number of key assumptions into consideration when developing a forecast for each island such as the economic outlook, proposed new large loads or the loss of large loads, and the projected impacts from energy efficiency measures and distributed energy resources. Newer technologies such as electric vehicles and storage are also evaluated given their potential impact on future demand. The forecasts are by island, by layer, and are developed on an hourly basis. The preliminary forecast is in the process of being developed now. It is a process that typically takes 4-5 months to complete.
2. Hawaiian Electric's forecasting department coordinates with internal policy, operational and topic experts on distributed energy resources (DER), Electrification of Transportation (EoT) and Advanced Rate Design Strategy (ARDS) for all forecast updates. The FAWG is providing additional, varied perspectives on a broad range of topics in order to develop a more robust forecast
3. The Working Group has received input on factors that will be considered in forecasts. Some examples that have resulted in changes are:
  - a. The Working Group proposed that the assumed temperature trend was too low and needed to be increased. HE reviewed recommended data sources and revised the assumption.
  - b. A majority of new residential PV systems are being installed with storage. The WG provided guidance that PV with storage would be the predominant choice in the future. The forecast will reflect this assumption.
  - c. The forecast includes an increase in load resulting from the electrification of transportation. Feedback from WG members indicated that the light duty vehicle forecast was too aggressive in light of current population forecasts. As a result, the light duty vehicle forecast is being revised using a new population forecast from the University of Hawaii Economic Research Organization (UHERO).
  - d. The Working Group also provided studies on electrified buses on neighbor islands, which Hawaiian Electric is using to inform the electrified bus forecasts.
4. When or where will other assumptions such as capacity planning criteria be provided and reviewed? The scope of the FAWG includes load forecasts, fuel costs and resource costs. Planning criteria and other model constraints are being identified and will be discussed in the Solution Evaluation and Optimization Working Group. Right now, it's still being broken down on a high-level sourcing diagram. It will probably be



the next topic in the Solution Evaluation Working Group. They're in the process of making sure everyone is comfortable in the next steps and will incorporate feedback from TAP, then will explain how we will apply in the modeling.

5. How are energy efficiencies factored into the forecast? There is an energy efficiency layer that captures energy efficiency measures. The Commission's contractor, AEG, is preparing an energy efficiency forecast as part of the Energy Efficiency Portfolio Standards (EEPS) potential study effort that is currently underway. HE expects to receive a preliminary forecast from AEG in November. It will then be incorporated into the FAWG forecast.
6. In response to a suggestion that the forecast include iterations of possible impact of DER on the load, HE explained that in addition to including a DER forecast, DER could be a resource choice to be evaluated in the analysis along with other resource options (i.e., grid-scale PV or wind). HE requested assistance to define characteristics of the DER resource to include in resource modeling. HE also suggested that discussions on possible impacts of DER are more appropriate in the DER policies docket, including in the advanced rate design strategy.

#### **C. Distribution Planning Working Group (DPWG) & Grid Services Working Group (GSWG)**

*Slides included in Presentation Materials from November 7, 2019*

Local grid services are being defined and identified in the DPWG and bulk system services will be defined and identified as part of the SEOWG. Grid Service needs that are identified in the Working Groups will be incorporated as part of the first IGP procurement cycle.

1. The Soft Launch RFP will be issued on November 18, 2019. The SEOWG and CPWG will incorporate stakeholder feedback on the structure of the RFP as well as services.
2. DPWG will circulate a comprehensive document on how the NWA process will work and will invite stakeholder comments.

#### **D. Resiliency Working Group (RWG)**

*Slides included in Presentation Materials from November 7, 2019*

1. Goal is to incorporate resilience as a criteria input in the grid planning process.
2. Up to this point, the process has involved getting stakeholder input and feedback and reporting out the results at the next meeting.
3. On November 22, 2019, the RWG meeting will include a demonstration of forecast software that examines climate change, sea level rise and wind impacts.



- a. The benefit of the software is that it provides flood forecasting with 10-meter grid accuracy for each location around the five islands served by the Hawaiian Electric Companies. In addition, the software recognizes that the impact of a storm is different across each island.
  - b. When it comes to regional needs, each island's unique issues are being taken into consideration. RWG is looking at the five biggest threats to each island, including lava, wildfires, etc. as identified by the Working Group.
4. After incorporating feedback from the November 22, 2019 RWG meeting, the goal is to send a draft final report to the WG prior to the December meeting. The team will then have four weeks' time to review and incorporate the feedback so that the final report can be completed by the second week of January.
- a. HE explained that the idea of incorporating resilience into a utility resource plan is new. There are no models available yet, so adjustments will be made as we go along.
  - b. Whether the power system as a whole can continue to function after a major disruption is unknown right now. Therefore, HE is looking at the fractal grid being considered by Puerto Rico. With a fractal grid, sections of the grid can remain in service even if other sections are not.
  - c. HE is considering keeping the RWG active beyond the IGP process because it is valuable and provides key information.

**E. Solution Evaluation & Optimization Working Group (SEOWG)**

*Slides included in Presentation Materials from November 7, 2019*

1. The SEOWG will meet one to two times a month leading up to its last meeting in March 2020 at which time it will review all its deliverables.
2. SEOWG continues to evaluate long lead time projects (10+ years) and solicit input on the system needs evaluation.

**IV. UPDATED IGP AND SOLUTION SOURCING PROCESS:**

*Slides included in Presentation Materials from November 7, 2019*

- A. Transmission needs: Assess existing capacity and determine transmission system needs going forward.
- B. Capacity/Energy Needs: Will try to account for costs and resources. As a baseline, the utility will assume a market uptick in DER, allowing resource choice and given the cost forecast to see how it will play out.
- C. The utility will gauge long-term needs (longer project), gauging market interest with the possibility of inputting it into the IGP cycle.



- D. The utility sees a double value in an NWA-type proposal with a solution that provides multiple benefits.
- E. Discussion
  - 1. In response to a request to elaborate on incorporating DER tariffs: The cost for current and future tariffs will be modeled in the resource needs analysis to account for any compensation/resource mechanism to account for the cost.
  - 2. Project lifecycles: Stakeholder suggested that for long term opportunities, a request for information (RFI) is not ideal. It may be ideal to lock in long term prices and built in mechanisms in bids that adjust for cost over long term. RFP with indicative or locked-in pricing gives both sides an advantage. Utility will discuss how future cycles play out over the long term during a future meeting (week of 11/11/19).
  - 3. Are there DER programs for NWA opportunities? Yes. There will be multiple opportunities where programs come up. They will take into account past and projected needs. The new DER Docket may be an appropriate venue to discuss DER programs.
  - 4. Summary of key takeaways:
    - a. Company is making improvements in reflecting stakeholder feedback in subsequent materials. Sending word documents out for review have been helpful.
    - b. Make sure to define the characteristics of resource needs with as much specificity as possible. For example, asking for resources that can provide energy during consecutive cloudy or windless days.
    - c. Need to determine if there is a "right" proportion of resource (i.e., solar vs. wind vs. firm generation vs DER).
    - d. Need to determine how can we integrate resiliency criteria into the planning without crowding out those opportunities with near-term acceleration of RPS achievement.
    - e. Make sure to clarify and incorporate planning criteria to be used in resource modeling.
    - f. Identify integration of DER in a "bottoms up" approach starting from distribution level up to the system level.
    - g. Stakeholders would like to see a feedback loop to iterate on the appropriate amount of DER assumed in the resource plans; but must ensure that DER programs remain cost-effective relative to a competitive procurement.
    - h. Find a way to give more certainty to long term projects

- V. **STAKEHOLDER COUNCIL MEETING PROPOSED CALENDAR:** Meeting dates will follow major points in the process. Dates can be found on IGP website and will be updated as necessary.

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**VI. CHALLENGES FACING THE COMPANY:** The challenge will be multiplied in the future with more projects, their potential impact and a greater chance of a lack of full understanding.

*Slides included in Presentation Materials from November 7, 2019*

- A. There's an understanding among all of the Stakeholders and Hawaiian Electric Companies that integrated grid planning is a complex issue.
- B. Just because there is a plan the work isn't done. That plan needs to be put into action. It requires collaborating with others to implement, and it requires successful interaction, and communication with all involved, particularly the community. A good plan is only useful if it is effectively executed.

**VII. OTHER:**

*Slides included in Presentation Materials from November 7, 2019*

- A. What value can you provide the different communities you represent? In order to effectively implement plans, stakeholders must start thinking about how the utility can work with stakeholders, who are working on behalf of the communities they represent. Hawaiian Electric would like to help in communications, in terms of explaining what it does, its plan, its decisions and discussions. Doing so improves chances when making the transition from plans and procurement to implementation.
- B. Suggestion by stakeholder to consider the community role throughout the IGP process and in the bid evaluation process. Look at the broader local community, the community of people and businesses living around a project and the community of people being served by the project.

**VIII. NEXT STEPS**

- A. Public meetings are planned to start in February.
- B. The Company is looking for feedback from stakeholders on what their communities want in these meetings.
- C. The utility is thinking about distributing a tool kit for stakeholders to use when talking with their communities and asked for feedback in terms of what they would like to see included in that kit in terms of talking points, graphics, etc.
- D. Next IGP SC meeting scheduled for January 2020. Exact date to be confirmed.
- E. A copy of today's presentation will be provided to SC members
- F. IGPSC members can direct questions to [IGP@hawaiianelectric.com](mailto:IGP@hawaiianelectric.com) or reach out directly to Colton Ching.