



September 15, 2021

The Honorable Chair and Members
of the Hawai'i Public Utilities Commission
Kekuanao'a Building, First Floor
465 South King Street
Honolulu, Hawai'i 96813

Dear Commissioners:

Subject: Docket No. 2018-0165
Instituting a Proceeding to Investigate Integrated Grid Planning
Hawaiian Electric Companies' September Status Update

This letter provides a brief status update regarding the Hawaiian Electric Companies'¹ recent Integrated Grid Planning (“IGP”) Inputs and Assumptions (“I&A”) submissions and upcoming Grid Needs Assessment (“GNA”) Review Point, along with an update on the Technical Advisory Panel (“TAP”) membership.

I&A and GNA Review Point Update

On August 3, 2021, the Companies submitted their updated and revised IGP I&A and Distribution DER Hosting Capacity Grid Needs documents in the subject proceeding.² On June 18, 2021 the Companies provided a schedule update, and again as a part of the August 3, 2021 submission, the Companies notified the Commission and stakeholders that there were additional tasks which could not be completed until certain inputs and assumptions were finalized or which otherwise required additional time to develop. The Companies anticipated that these remaining tasks were expected to be completed and submitted together with the GNA Review Point by October 1, 2021.

During a meeting of the IGP Stakeholder Technical Working Group (“STWG”) held on September 7, 2021, the Companies reviewed the I&A document and responded to questions from stakeholders to help facilitate development of comments in response to questions from the Commission which were submitted on September 10, 2021. As a part of that STWG meeting, the Companies informed stakeholders of the status of the remaining tasks which included:

- Update circuit level hosting capacity needs for DER integration (using the bookend DER forecasts)
- Locational DER and load forecasts (LoadSEER)
- Transmission Renewable Energy Zones Analysis (REZ)

¹ Hawaiian Electric Company, Inc., Hawai'i Electric Light Company, Inc., and Maui Electric Company, Limited are collectively referred to as the “Hawaiian Electric Companies” or the “Companies.”

² The August 3, 2021 filing was superseded by an August 19, 2021 revision which corrected certain formatting, figure and table references, and numbers that were inadvertently misstated.

- Review of modeling methods, planning criteria and grid service rules with the TAP
- ERM Testing (RESOLVE and PLEXOS)
- Energy Efficiency Supply Curves (AEG)

The Companies notified the stakeholders that although it was anticipated that the majority of the remaining tasks would be completed by October 1, 2021, submission on that date would not allow sufficient time for the Companies to review the work in progress with stakeholders and receive comments on that work. Accordingly, and consistent with the Commission's earlier guidance to provide stakeholders with "meaningful opportunities to develop and improve the IGP process and the plans"³, the Companies provided a tentative meeting and filing schedule to review and address the remaining tasks with stakeholders as follows:

September 23, 2021	TOU Adoption Evaluation for Non-DER/-EV customers and Final EE Supply Curve Meeting (AEG)
Week of October 4, 2021	Circuit Hosting Capacity and Locational Forecasts, REZ Assessment, System Security Process; and Expected deliverables
Week of October 11, 2021	ERM Analysis and HNEI Probabilistic Assessment
TBD	Review changes incorporated based on stakeholder feedback
First week of November 2021	Anticipated submission of GNA Review Point

During the meeting, the stakeholders did not have any comment on or express any objection to the schedule presented. The Companies invited the stakeholders to provide any future comments or feedback to the Companies directly.

TAP Update

At the June 23, 2021 Stakeholder Council meeting, the Companies discussed adding a TAP member consistent with Order No. 37730 at pages 40-41, as well as the appointment of a new TAP Chair.⁴ Rick Rocheleau, current TAP Chair, expressed an interest to rotate from the Chair position due to other work commitments. This rotation was expected, as the 2018 IGP workplan envisioned the Chair to rotate every two years. The Companies appreciate Rick's leadership and commitment and dedication in serving as Chair for more than two years.

³ Order No. 37419, Providing Guidance, issued on November 5, 2020 in the subject proceeding (at 10-11).

⁴ See

https://www.hawaiianelectric.com/documents/clean_energy_hawaii/integrated_grid_planning/igp_meetings/2021_0623_presentation_slides_igp.pdf at 7.

Several members of the Stakeholder Council expressed interest in forming a smaller group to address the TAP membership and the Chair position. Representatives from Ulupono Initiative, Life of the Land, Hawaii Natural Energy Institute, and the Commission Staff met to discuss the TAP membership and structure. The smaller group of stakeholders were agreeable to the following modifications to the TAP:

- The addition of Dr. Debbie Lew, Associate Director, Energy Systems Integration Group. Dr. Lew's background is in wind, solar and distributed energy resource integration with a focus on 100% clean energy. She was previously a consultant, a senior technical director at GE Energy Consulting, and held a variety of roles during her 16-year tenure at the National Renewable Energy Laboratory, including secondment to Hawaiian Electric Company. She is the Immediate Past Chair of the IEEE Power & Energy Society's Wind and Solar Power Coordinating Committee.
- The addition of Dr. Mathias Fripp, Associate Professor at the University of Hawai'i at Mānoa. Dr. Fripp is a UHERO Research Fellow and Associate Professor of Electrical Engineering. He earned his PhD from the Energy and Resources Group at the University of California, Berkeley, in 2008. His research specializes in modeling the technical and economic performance of power systems with large shares of renewable energy, particularly focusing on the potential for demand-side response to ease the integration of intermittent renewable resources. Dr. Fripp has been an active participant in the Power Supply Improvement Plan and IGP processes.
- Incumbent TAP members, Dr. Andy Hoke, Senior Engineer, National Renewable Energy Laboratory, and Dr. Aidan Tuohy, Principal Project Manager, Electric Power Research Institute, will serve as Chair and Vice-Chair, respectively.

The new additions to the TAP will join the existing core TAP members:

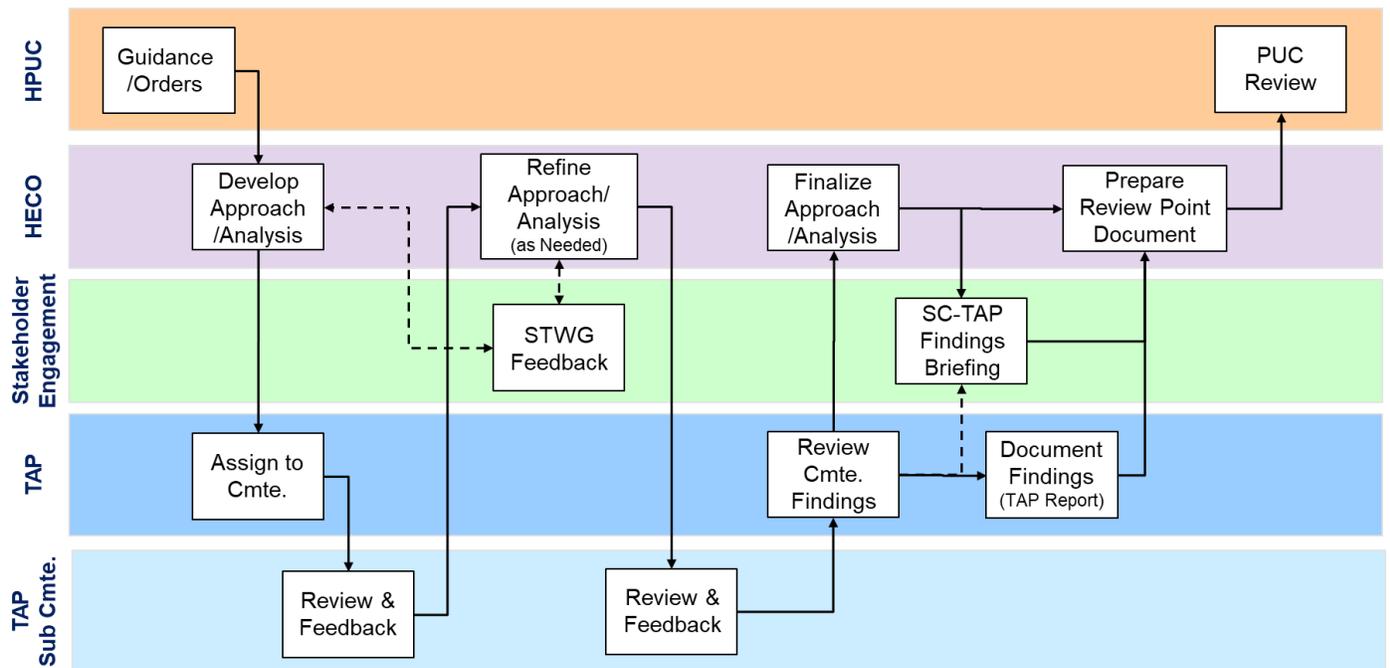
- Dr. Kevin Schneider, Chief Engineer & Manager, Distribution and Demand Response, Pacific Northwest National Laboratory
- Jeff Burke, Director, Resource Planning, Arizona Public Service
- Dana Cabell, Director, Integrated System Strategy, Southern California Edison
- Dr. Rick Rocheleau, Director, Hawaii Natural Energy Institute⁵

The smaller stakeholder group discussed potential funding opportunities for the TAP as it was recognized that the forthcoming phases of IGP will require additional effort on the part of the Chair. As a first option, U.S. Department of Energy funding will be pursued.

On September 9, 2021, the Companies held a meeting with the TAP to discuss its schedule and workplan. To streamline the review of various work products and optimize

⁵ Additionally, as consultants to Hawaii Natural Energy Institute are Derek Stenclik and Mathew Richwine, founding partners of Telos Energy, and Dr. Terry Surles.

members' time, the TAP will form three subcommittees to leverage the expertise of various members. The subcommittees will each be led by a TAP member who will be responsible for working with the Companies to coordinate meeting agendas, topics and materials for review. The three subcommittees are: (1) Distribution, (2) Transmission, and (3) Resource Adequacy and Modeling. As topics for review and discussion arise, the TAP Chair will assign the topic or issue for review to the appropriate subcommittee. The following figure illustrates the general process that the Companies and the TAP will utilize in reviewing various work products.



In the months of September and October the subcommittees will meet to continue the review of the modeling methods, tools, and planning criteria (and grid services). The intent is for the TAP to finish its review and submit its reported findings and recommendations by the beginning of November in time for the next Review Point filing. However, as shown in the figure above, the TAP process may require additional time depending on the discussions that take place. It is possible that the TAP's review could extend into the November timeframe.

After Commission approval of the Inputs and Assumptions Review Point and the forthcoming Grid Needs Assessment Methodology Review Point, the Companies will be able to commence the Grid Needs Assessment phase. During this period, the TAP will be engaged to review various work products throughout the GNA phase.

The Honorable Chair and Members
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September 15, 2021
Page 5

The Companies appreciate the opportunity to provide this status update to the Commission and stakeholders.

Very truly yours,

/s/ Marc Asano

Marc Asano
Director, Integrated Grid Planning

c: Service List

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(Docket No. 2018-0165)

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