BEFORE THE PUBLIC UTILITIES COMMISSION OF THE

STATE OF HAWAII

In the Matter of PUBLIC UTILITIES COMMISSION Instituting a Proceeding to Investigate Integrated Grid Planning.	Docket No. 2018-0165

PROGRESSION HAWAII OFFSHORE WIND, LLC'S COMMENTS ON HAWAIIAN ELECTRIC COMPANIES' AUGUST IGP UPDATE

AND

CERTIFICATE OF SERVICE

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Progression Hawaii Offshore Wind, LLC ("PHOW"), by and through its attorneys Schlack Ito, A Limited Liability Law Company, and pursuant to Order No. 37927,[1] hereby submits its comments on the Hawaiian Electric Companies'[2] Integrated Grid Planning Inputs and Assumptions document filed August 19, 2021 ("August IGP Update"),[3] as follows.[4]

I. COMMENTS ON ITEM NO. 4: GRID SCALE PV AND WIND ASSUMPTIONS

PHOW offers several comments on Item No. 4, concerning various assumptions in the August IGP Update relating to grid scale PV and wind resources, which states as follows:

> 4. Do Hawaiian Electric's base assumptions around grid-scale PV (including slope and land constraints) and wind, as well as the "Land Constrained" Scenario, adequately capture the range of stakeholder perspectives, and/or provide a reasonable basis for the first round of IGP modeling?[5]

[1] Order No. 37927, Establishing a Procedural Schedule for the Updated Revised Inputs and Assumptions, issued August 23, 2021 ("Order No. 37927").
[2] Hawaiian Electric Company, Inc. ("HECO" or "Company"), Hawaii Electric Light Company, Inc., and Maui Electric Company, Limited (collectively, "Hawaiian Electric" or "Companies").
[3] The version of the Inputs and Assumptions filed August 19, 2021 supersedes the Companies' prior version filed August 3, 2021.
[4] PHOW's comments on the August IGP Update are timely filed pursuant to Order No. 37927, which states that comments by intervenor parties (such as PHOW) are due on or before September 10, 2021. *Id.* at 3, 6.
[5] *See* Order No. 37927 at 4.

A. The 30% Slope Assumption Is Not Feasible.

PHOW notes with some concern that the August IGP Update reflects a conclusion by the Company that slopes up to 30% could be developed, with some additional cost adder, and this 30% slope assumption should be used as a base case assumption in the grid modeling. For example, the August IGP Update states:

> Further, stakeholders raised concerns on the ease of developing projects at slopes higher than 10% due to the additional work and cost involved. However, other stakeholders felt that higher slopes could be developed, up to 30%, with some additional cost adder. Because some projects have already been developed on steeper slopes, the Company is moving forward with . . . including slopes up to 30%.[6]

PHOW does not agree with the conclusion that slopes up to 30% "could be developed" with "some additional cost adder" for the following reasons.

First, this conclusion is contrary to and not supported by practical, real-world experience of developers of most utility scale solar energy projects. Specifically, the PHOW development team includes developers of solar energy projects with substantial experience in Hawaii and other jurisdictions. Although construction on steeper slopes is technically possible and may be pursued in some cases, it is rarely attempted by large, commercial-scale projects because of the complexity, expense and safety concerns of working on steep surfaces. Based on that experience, it is respectfully submitted that the conclusion that slopes up to 30% high can feasibly be developed with an additional cost adder is not realistic or tenable.

Second, and related to the foregoing, this conclusion dramatically overstates the capacity of solar energy that can be developed on Oahu, and would therefore embed a significant distortion in the energy resource planning and modeling process going forward in the IGP

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[6] Inputs and Assumptions at 20; *see also id.*at 88-90.

process. Specifically, the Alt-1 scenario referenced in the August IGP Update[7] assumes construction on slopes up to 30%, and based on that assumption estimates that more than 3,800 MW of solar PV could be developed on Oahu. The estimate of developing more than 3,800 MW of solar PV on Oahu, founded on the 30% slope assumption, is not realistic or feasible.

While the grid modeling does not dictate which types of projects may be proposed or selected in future procurements, such an overestimate of solar potential will create unrealistic expectations of the solar industry. If the 30% slope assumption remains the base case scenario, then the energy resource planning and modeling process is likely to conclude – inaccurately – that Oahu can develop much more utility scale solar energy than is realistically possible, thereby creating an appreciable risk that the Company and its customers will be disappointed by the low number or high cost of future solar PV projects.

Third, the Company has agreed to show a sensitivity illustrating a "Land Constrained" scenario of approximately 270 acres on Oahu, which PHOW recommended and supports as a more realistic estimate of developable land available for solar PV projects.[8] This Land Constrained scenario is difficult to reconcile with the 30% slope assumption, and should be preferred and utilized as an assumption over the latter. More specifically, it should be used as a base case assumption rather than as a bookend assumption.

Finally, if the Company insists on using the 30% slope assumption, then those solar projects will be significantly more expensive, and that increased cost should be reflected in the resource cost assumptions. The complexity and civil grading work that would be required could potentially increase the cost of large commercial solar PV projects by 10% to 20%, or

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[7] *See id.* at 2 (referencing Alt-1 scenario from the July 30, 2021 Updated NREL Resource Potential Study) ("Alt-1 scenario").
[8] *See* August IGP Update at 108 (describing "Land Constrained [scenario], where development of onshore resources are limited by land constraints[.]").

more. This additional cost should also be reflected in the resource price modeling of solar resource, along with the 30% slope assumption (if used).

B. The August IGP Update Should Reflect the HNEI Report Analysis.

In addition and related to its concerns over the 30% slope assumption, PHOW notes with concern that the August IGP Update fails to properly take into account a key analysis by the Hawaii Natural Energy Resource Institute ("HNEI").[9] Specifically, HNEI previously reported that Oahu could reach a maximum of approximately 70% renewable electricity on solar and batteries. Beyond that, types of resources other than solar plus storage projects would be necessary. The August IGP Update does not appear to reflect this important input from HNEI. To the contrary, it appears to suggest that all of Oahu's generation could potentially be met with solar and battery storage, and thus other technologies or resources may not be necessary – an assumption that is not well supported.

C. Modeling Should Properly Account for Tax Credits.

A further comment relates to the Company's modeling of the available tax credits for solar, onshore wind and offshore wind projects. The relevant date for claiming tax credits is Commercial Operations Date ("COD"). Yet in its grid modeling assumptions, the schedule of federal tax credits lists the latest year that projects may begin or commence construction to qualify for the tax credit, rather than listing the latest year when project may reach its COD. The latter date is a more relevant because it indicates the latest date by which projects may be completed to qualify for the available tax credit. Offshore wind projects, for example, that begin construction or purchase "safe harbor" equipment by 2025 would thereby qualify for the 30% federal tax credit through 2035. The August IGP Update should be clarified and corrected

[9] *See* Hawaii Natural Energy Institute and Telos Energy, "Grid Planning for a Modern Power System in Hawaii: AES Retirement & Replacement Analysis," filed in Docket 2021-0024 on March 15, 2021.

consistent with the foregoing to ensure the benefits of federal tax credits are secured.

D. Modelling Should Also Consider Long-Term Procurement.

In the recent IGP Stakeholder Conference, the Company indicated that the grid modeling would consider offshore wind as an available resource in all modelling scenarios beginning in the year 2030. PHOW supports this assumption insofar as 2030 is the earliest reasonable date by which offshore wind could be available as a resource. If the grid assessment will allow the model to select long term resource technologies such as hydroelectric, pumped storage, flow batteries, geothermal and offshore wind for COD as early as 2030, then the results of the assessment should also address steps to facilitate the procurement of such long term projects by 2030. Accordingly, PHOW would recommend that the Company extend the COD time frame in its next solicitation to allow CODs out to 2035, as doing so would allow a variety of long term technologies to propose projects that may meet the grid needs identified by the assessment.

E. Renewable Energy Zones Should Not Delay Future Procurements and Projects.

As an additional comment, the Company's proposal to develop Renewable Energy Zones ("REZs") and expand the Oahu transmission system to accommodate more renewables is an ambitious process, but this process should not preclude the continued procurement a future energy projects. The REZ proposal would be for a new process that is still under development and has not received Commission approval, and the timing of developing and implementing this process therefore should not precede or in any way serve to delay future projects.

F. Future Procurements Should Include Longer-Term Projects.

The Company did not address the timing of future procurements in the August IGP Update. The Company's plan is to complete the Oahu grid study to inform the next Request for Proposals solicitation ("RFP"). The grid modeling results may select long-term projects such as offshore wind, hydroelectric or solar projects that require transmission upgrades. In prior IGP working group meetings, Company representatives stated that while long term projects are important and necessary, developing a long term RFP would be necessary and complicated.

PHOW suggests that developing a separate format for a long term RFP may not be necessary. Instead, if the Company extends the COD time frame in its next solicitation to allow CODs out to 2035, then it is not necessary to develop a separate "Long-Term RFP." All projects of varying technologies could then compete in the same solicitation and be evaluated based on their proposed completion dates. The Company could select a combination of nearer-term and longer-term projects that best addresses generation and grid needs, based on the results of the upcoming grid assessment.

II. COMMENTS ON REMAINING ITEMS

PHOW appreciates the Commission's identification and description of the various other Items, specifically Item No. 1 (Order No. 37730 Concerns), Item No. 2 (Fuel Forecast Sensitivities), Item No. 3 (Electric Vehicle ("EV") Forecast Sensitivity), Item No. 5 ("Parking Lot" Issues), Item No. 6 (Presentation of Assumptions), Item No. 7 (Future DER Programs Assumptions), Item No. 8 (High and Low Bookend Scenarios), Item No. 9 (Energy Efficiency Forecasts), Item No. 10 (Inputs and Assumptions Discrepancies), and Item 11 (Stakeholder Input).

PHOW has no comments or input on these remaining items at this time, and respectfully reserves its right to comment on such issues in future submissions in this proceeding.

III. CONCLUSION

For all of the foregoing reasons, PHOW respectfully requests the Commission to consider and act upon the foregoing comments with regard to the August IGP Update, and to grant any further relief the Commission deems just and proper.

DATED: Honolulu, Hawaii, September 10, 2021.

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CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this date a copy of the foregoing document was duly served upon the following parties as set forth below:

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