

DIVISION OF CONSUMER ADVOCACY  
Department of Commerce and  
Consumer Affairs  
335 Merchant Street, Room 326  
Honolulu, Hawaii 96813  
Telephone: (808) 586-2800

BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF HAWAII

In the Matter of )  
 )  
PUBLIC UTILITIES COMMISSION ) DOCKET NO. 2018-0165  
 )  
Instituting a Proceeding to Investigate )  
Integrated Grid Planning. )

**DIVISION OF CONSUMER ADVOCACY'S**  
**COMMENTS ON THE AUGUST IGP UPDATE**

Pursuant to the Hawaii Public Utilities Commission's ("Commission") Order No. 37927, Establishing a Procedural Schedule For The Updated Revised Inputs and Assumptions, filed on August 23, 2021 ("Order 37927"), the Division of Consumer Advocacy ("Consumer Advocate") provides its comments on Hawaiian Electric Companies'<sup>1</sup> 2021 Integrated Planning Inputs and Assumptions Revised August 2021 Update that was filed on August 19, 2021 ("August IGP Update").

---

<sup>1</sup> The Hawaiian Electric Companies are comprised of Hawaiian Electric Company, Inc., Hawaii Electric Light Company, Inc., and Maui Electric Company, Ltd. and will collectively be referred to as the "Hawaiian Electric Companies" or "Companies".

## **I. BRIEF PROCEDURAL BACKGROUND.**

On July 12, 2018, the Commission filed Order No. 35569, Instituting an Proceeding to Investigate Integrated Grid Planning (“Order 35569”), which opened in the instant proceeding to facilitate the next cycle of long-term energy planning and the development of resulting plans.

On March 14, 2019, the Commission filed Order No. 36218, Accepting the IGP Workplan and Providing Guidance (“Order 36218”). In Order 36218, the Commission accepted the workplan that was submitted on December 14, 2018, pursuant to Order 35569.

Since the opening of the docket, various working groups have been created and met to discuss various aspects of the Integrated Grid Planning (“IGP”) process.

On November 5, 2020, the Commission filed Order No. 37419, Providing Guidance (“Order 37419”), wherein the Commission, among other things, required the Hawaiian Electric Companies to develop an updated version of the IGP workplan to incorporate the guidance offered in Order 37419 to make the IGP transparent, improve stakeholder engagement, and to be more reflective of an industry-leading process.

On January 19, 2021, the Companies filed their Updated Workplan, wherein, among other things, the Companies sought Commission feedback on their IGP Review Point for the draft inputs and assumptions for its 2020 IGP process modelling.

In the Commission’s Order 37604, the Commission responded to the Companies’ request for feedback by establishing procedural steps that included the opportunity for comments on the first IGP Review Point (“First Review Point”) be filed on

February 25, 2021, and reply comments from the Hawaiian Electric Companies on March 4, 2021.

On April 14, 2021, the Commission issued Order No. 37730 Directing Hawaiian Electric to File Revised Forecasts and Assumptions (“Order 37730”), no later than August 3, 2021.

On August 3, 2021, the Companies filed its updated revised inputs and assumptions, which it subsequently revised on August 19, 2021, for review and approval by the Commission.

## **II. DISCUSSION.**

In Order 37927, the Commission set forth a procedural schedule in order to allow feedback from the parties<sup>2</sup> and reply comments from Hawaiian Electric. The Commission set forth eleven questions to help identify possible areas of feedback from the Parties but made clear that the “these questions are not exclusive, and the Commission encourages the Parties to be more expansive in their comments and address any aspect of the August IGP Update.”<sup>3</sup> The Consumer Advocate offers the following comments, including responses to some of the questions posed in Order No. 37927.

---

<sup>2</sup> Other than the Companies, the Parties in this proceeding are the Consumer Advocate and the intervenors, that are comprised of Life of the Land, Energy Island, County of Hawaii, Hawaii PV Coalition, Hawaii Solar Association, Progression Hawaii Offshore Wind, LLC, Ulupono Initiative, LLC, and Blue Planet Foundation.

<sup>3</sup> Order 37927, at 5.

**A. THE COMPANIES SHOULD PROVIDE FURTHER SUPPORT FOR THEIR ELECTRIC VEHICLE FORECASTS.**

In the August 2021 Update, Hawaiian Electric included additional EV Forecasts for the level of EV adoption – base, low, high, and freeze – in combination with managed and unmanaged EV charging. While the Consumer Advocate appreciates the sensitivity analyses that have been included (as opposed to previously relying on a single EV forecast),<sup>4</sup> the Consumer Advocate continues to have concerns over the reasonableness of the EV forecasts.

At the June 4, 2021 Technical Conference, Hawaiian Electric proposed using its low and high forecasts, which reflect a 30% decrease and increase from the base case, respectively.<sup>5</sup> In response to questions around the low EV forecast, the Consumer Advocate suggested Hawaiian Electric map out the corresponding level of new EV sales that would need to occur in order to attain the projected share of EVs on the road in order to provide context for the reasonableness of the forecast. The Consumer Advocate notes that in Order 37730, the Commission directed Hawaiian Electric to continue discussing with the Technical Advisory Panel (“TAP”) and with the Parties and prepare to transparently explain the following decisions at the technical conference “whether the bookend sensitivities adequately consider the appropriate range

---

<sup>4</sup> CA Comments on First Review Point, filed on February 25, 2021, at 7.

<sup>5</sup> Hawaiian Electric Reply Comments, filed on March 4, 2021, at 7; IGP Technical Conference Presentation Slides, by Hawaiian Electric on June 4, 2021, at 66. The Consumer Advocate notes that the underlying data for the low and high forecasts are not provided (slides 52 to 54) in the corresponding EoT\_forecast\_IGP.xlsx file from the January 20, 2020 FAWG, and requests that Hawaiian Electric file all underlying assumptions and outputs relating to the low and high forecasts similar to the base case (i.e. number of EVs, EV penetration, vehicle miles travelled, daily kWh, MWh sales per vehicle by island). In addition, as the “high” case has currently been revised to reflect 100% EVs on the road by 2045, please also provide accompanying spreadsheets.

of scenarios, including a “worst case scenario” (emphasis added).<sup>6</sup> Given that the number of EVs on the road and their usage (vehicle miles travelled) largely determine the load forecast attributable to EVs, the Consumer Advocate emphasizes the need to reexamine the underlying assumptions in combination with other benchmarks to provide a realistic assessment.

Using other benchmarks to help gauge the reasonableness of the forecasts is not only important for the low case, but also in light of revisions to the high EV forecast—from an original 30% increase in the share of EVs on the road from the base case<sup>7</sup> to 100% ZEV saturation by 2045 (as provided in the Transcending Oil Report).<sup>8</sup> The Consumer Advocate recognizes the intent of the high EV adoption scenario to capture the best-case scenario of meeting the four county mayors’ commitment to a 100% renewable ground transportation and the State’s net negative carbon target by 2045 (HRS 225-P),<sup>9</sup> but raises, consistent with the notes from the June 4, 2021 Technical Conference, whether it would also be appropriate to consider a less aggressive pathway given the large divergence between the base case of 51% EVs on the road (and the tension between overbuilding and underbuilding EV infrastructure).<sup>10</sup> Though much of the emphasis is on the share of EVs on the road to inform the load forecasts, it is helpful to consider how these forecasts corresponds to the share of new EV sales. As currently

---

<sup>6</sup> Order No. 37730, at 40.

<sup>7</sup> IGP Technical Conference Presentation Slides, by Hawaiian Electric on June 4, 2021, at 66.

<sup>8</sup> August 2021 Update, at 14 and 58-59.

<sup>9</sup> See SWTG Presentation Slides, by Earthjustice and Blue Planet Foundation on June 17, 2021.

<sup>10</sup> IGP Technical Conference Notes, June 4, 2021, at 9.

proposed, reaching 100% saturation by 2045 would require 100% of new light-duty vehicle sales on Oahu to be electric in 2030.<sup>11</sup> This is in stark contrast to Hawaii’s new EV market share in 2020 of 5.3%.<sup>12</sup> Given this, it would be helpful to consider what the new EV market share would be in 2030 and 2045 be under Hawaiian Electric’s original high forecast (30% increase from the base case) and whether such a scenario also be considered. The Consumer Advocate views the 100% EV saturation scenario as more of an “Ultra high” scenario<sup>13</sup> and believes additional flexibility should be built into the planning process to accommodate deviations from forecasts. This would help mitigate the impact to customers to the extent that infrastructure investment needs are related to policy goals, which the Consumer Advocate believes should not be funded solely or mostly through utility rates.

## **B. THE UNDERLYING ASSUMPTIONS BEHIND THE ENERGY EFFICIENCY FORECASTS SHOULD BE PROVIDED.**

As Hawaiian Electric continues to work with Applied Energy Group (“AEG”) to develop supply curves and likewise adjust its energy efficiency layers due to potential double-counting,<sup>14</sup> the Consumer Advocate seeks to better understand and evaluate the

---

<sup>11</sup> The Transcending Oil Report by Rhodium Group found that all vehicles sold in Hawaii by 2030 would need to be electric in order to reach 100% EVs on the road by 2045 (see ([https://rhg.com/wp-content/uploads/2018/04/rhodium\\_transcendingoil\\_final\\_report\\_4-18-2018-final.pdf](https://rhg.com/wp-content/uploads/2018/04/rhodium_transcendingoil_final_report_4-18-2018-final.pdf), at 25).

<sup>12</sup> Alliance for Automotive Innovation (2021). Advanced Technology Vehicle Sales Dashboard. Data compiled by the Alliance for Automotive Innovation using information provided by IHS Markit (2011-2018, Nov 2019-2021) and Hedges & Co. (Jan 2019-Oct 2019). Data last updated 8/26/2021. <https://autoalliance.org/energy-environment/advanced-technology-vehicle-sales-dashboard/>

<sup>13</sup> The Consumer Advocate maintains this view even though Hawaiian Electric’s forecast does not include medium and heavy-duty vehicles.

<sup>14</sup> Response to PUC-HECO-IR-7.a.

assumptions behind the forecasts used—Achievable – Business as Usual (“BAU”), Codes & Standards, and Achievable – High. Though stated broadly in the AEG Market Potential Study,<sup>15</sup> the August 2021 Update,<sup>16</sup> and in Response to PUC-HECO-IR-6, it remains unclear what exactly is included and the reasons as well as sources for the assumptions made. In Response to PUC-HECO-IR-6 which asks to explain in detail what is included, Hawaiian Electric states:

Business as Usual includes savings from realistic customer adoption of energy efficiency measure through future programs that are similar in nature to existing programs. Codes & Standards includes Federal appliance standards, state standards, and state and local building codes. Achievable High is an achievable potential that incorporates future non-program interventions such as new codes & standards and market transformation.

The AEG Market Potential Study outlines the types of achievable residential and commercial measures, though the underlying assumptions used to determine “realistic customer adoption” in BAU do not appear to be provided. The AEG Report also states that the BAU “assumes gradual maturation of future interventions which are similar to those in the market today.”<sup>17</sup> Some preliminary questions based on these broad statements include, how do historical adoption trends affect the baseline projections? What growth rate is assumed? For Codes & Standards, the Consumer Advocate recommends that a summary, timeline, and corresponding adoption impact of each Federal appliance standard, state standards, and state and local building codes be provided. For Achievable High, the AEG Market Potential Study “assumes adoption

---

<sup>15</sup> State of Hawaii Market Potential Study. August 5, 2020. Prepared by AEG. (“AEG Market Potential Study”), at 34-35.

<sup>16</sup> August 2021 Update, at 53-54.

<sup>17</sup> AEG Market Potential Study, at 35.

ramps up linearly to a maximum limit of 85% participation, which is consistent with previous potential studies as well as other planning guidance in other regions of the country.”<sup>18</sup> These referenced studies should be provided along with further explanation and accompanying assumptions for each measure type. For example, is 85% market adoption reasonable to assume across all measure types? In sum, it would be extremely helpful to review detailed bottom-up spreadsheets with formulas intact that calculate the potential savings for each of the scenarios.<sup>19</sup> The Consumer Advocate looks forward to discussing further in upcoming meetings with the Parties.

The Consumer Advocate will continue to participate in the stakeholder working groups and appreciates the opportunity to offer these comments.

DATED: Honolulu, Hawaii, September 10, 2021.

Respectfully submitted,

By /s/ Dean Nishina

DEAN NISHINA

Executive Director

DIVISION OF CONSUMER ADVOCACY

---

<sup>18</sup> AEG Market Potential Study, at 35.

<sup>19</sup> The Appendix A – Final Annual Results spreadsheet available at <https://www.hawaiiieps.org/8-5-2020-market-potential-study-rel> only provides the final results with hard-coded numbers.



**CERTIFICATE OF SERVICE**

I hereby certify that a copy of the foregoing **DIVISION OF CONSUMER ADVOCACY'S COMMENTS ON THE AUGUST IGP UPDATE** was duly served upon the following parties electronically to the e-mail addresses below pursuant to HAR § 16-601-21(d), as modified by Order No. 37043 Setting Forth Public Utilities Commission Emergency Filing And Service Procedures Related To COVID-19, filed on March 13, 2020.

DEAN MATSUURA  
DIRECTOR, REGULATORY RATE  
PROCEEDINGS  
HAWAIIAN ELECTRIC COMPANY, INC.  
P.O. Box 2750  
Honolulu, Hawaii 96840-0001  
Email: [dean.matsuura@hawaiianelectric.com](mailto:dean.matsuura@hawaiianelectric.com)  
[regulatory@hawaiianelectric.com](mailto:regulatory@hawaiianelectric.com)

MELISSA MIYASHIRO  
CHIEF OF STAFF  
BLUE PLANET FOUNDATION  
55 Merchant Street, 17<sup>th</sup> Floor  
Honolulu, Hawaii 96813  
Email: [melissa@blueplanetfoundation.org](mailto:melissa@blueplanetfoundation.org).

ISAAC H. MORIWAKE #7141  
KYLIE W. WAGER CRUZ #10165  
EARTHJUSTICE  
850 Richards Street, Suite 400  
Honolulu, Hawaii 96813  
Email: [imoriwake@earthjustice.org](mailto:imoriwake@earthjustice.org)  
[kwager@earthjustice.org](mailto:kwager@earthjustice.org)

Attorneys for Blue Planet Foundation

JOSEPH K. KAMELAMELA  
CORPORATION COUNSEL  
ANGELIC M.H. HALL  
DEPUTY CORPORATION COUNSEL  
COUNTY OF HAWAII  
101 Aupuni Street, Suite 325  
Hilo, Hawaii 96720  
Email: [Joe.Kamelamela@hawaiicounty.gov](mailto:Joe.Kamelamela@hawaiicounty.gov)  
[AngelicMalia.Hall@hawaiicounty.gov](mailto:AngelicMalia.Hall@hawaiicounty.gov)

Attorneys for County of Hawaii

WILLIAM J. ROLSTON  
DIRECTOR  
ENERGY ISLAND  
73-4101 Lapa`au Place  
Kailua Kona, Hawaii 96740-8424  
Email: [willenergyisland@gmail.com](mailto:willenergyisland@gmail.com)

BEREN ARGETSINGER  
KEYES & FOX, LLP  
P.O. Box 166  
Burdett, NY 14818  
Email: [bargetsinger@keyesfox.com](mailto:bargetsinger@keyesfox.com).

TIM LINDL  
KEYES & FOX, LLP  
580 California Street, 12<sup>th</sup> Floor  
San Francisco, CA 94104  
Email: [tlindl@keyesfox.com](mailto:tlindl@keyesfox.com).

Counsel to Hawaii PV Coalition

ROBERT R. MOULD  
HAWAII SOLAR ENERGY ASSOCIATION  
P.O. Box 37070  
Honolulu, Hawaii 96817  
Email: [rmould@hsea.org](mailto:rmould@hsea.org).

HENRY Q CURTIS  
VICE PRESIDENT FOR CONSUMER AFFAIRS  
LIFE OF THE LAND  
P.O. Box 37158  
Honolulu, HI 96837  
Email: [henry.lifeoftheland@gmail.com](mailto:henry.lifeoftheland@gmail.com)

DOUGLAS A. CODIGA  
MARK F. ITO  
SCHLACK ITO  
A Limited Liability Law Company  
Topa Financial Center  
745 Fort Street, Suite 1500  
Honolulu, Hawaii 96813  
Email: [dcodiga@schlackito.com](mailto:dcodiga@schlackito.com).  
[mito@schlackito.com](mailto:mito@schlackito.com).

Attorneys for Progression Hawaii Offshore Wind, LLC

GERALD A. SUMIDA  
ARSIMA A. MULLER  
CARLSMITH BALL LLP  
ASB Tower, Suite 2100  
1001 Bishop Street  
Honolulu, Hawaii 96813  
Email: [gsumida@carlsmith.com](mailto:gsumida@carlsmith.com)  
[amuller@carlsmith.com](mailto:amuller@carlsmith.com)

Attorneys for Ulupono Initiative LLC

DATED: Honolulu, Hawaii, September 10, 2021.

/s/ H. Amond

---