

**Exhibit 1**  
**Hawaiian Electric Companies' Development of the Proposed Final Variable RFPs**

The Hawaiian Electric Companies'<sup>1</sup> process for developing their draft request for proposals ("RFP") for Variable Renewable Dispatchable Generation and Energy Storage for O'ahu, Maui and Hawai'i Island (the "Draft Renewable RFP") and draft Request for Proposals for Delivery of Grid Services from Customer-Sited Distributed Energy Resources on the islands of O'ahu, Maui and Hawai'i ("Draft Grid Services RFP") was set forth in Exhibit 1 of the Companies' April 1, 2019 filing in this docket ("April 1<sup>st</sup> Filing").<sup>2</sup> In developing the competitive bidding process for each of the Draft RFPs, the Companies established and followed the following guiding principles ("Guiding Principles"):

- 1. The Companies' Power Supply Improvement Plans ("PSIP") provide the roadmap;<sup>3</sup>**
- 2. Transparency, predictability and streamlining lowers costs to customers and fosters trust in the process;**
- 3. Community engagement is critical to near-term and long-term project success;**
- 4. Coordination and collaboration of all parties involved is necessary to achieve a successful and timely procurement; and**
- 5. There is no perfect answer; tradeoffs must be considered.**

As directed by the Commission in Order No. 36356, *Providing Guidance on the Hawaiian Electric Companies' Proposed Phase 2 Draft Requests for Proposals for Dispatchable and Renewable Generation*, issued by the Commission on June 10, 2019 ("Order 36356"), as further clarified by Order No. 36406, *Addressing the Hawaiian Electric Companies' Motion for*

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<sup>1</sup> The "Hawaiian Electric Companies" or "Companies" refers collectively to Hawaiian Electric Company, Inc. ("Hawaiian Electric"), Hawai'i Electric Light Company, Inc. ("Hawai'i Electric Light"), and Maui Electric Company, Limited ("Maui Electric").

<sup>2</sup> The Draft Renewable RFP and the Draft Grid Services RFP are jointly referred to herein as the "Draft RFPs."

<sup>3</sup> While the Companies' procurement targets have far exceeded the near-term action plans stated in the PSIP, it is still important for the Companies to look to the PSIP and its next tranche of energy in expanding the targets for this solicitation. The Companies attempted where possible to keep the increased energy targets in line with future resource procurements under the PSIP. In addition to setting forth timelines for the additions of renewable energy, the PSIP details what other changes and improvements are necessary to incorporate such renewable energy onto the Companies' grids in a timely and cost-effective manner while maintaining system reliability. Increasing the targets will, as noted by the Companies at the Commission's May 2, 2019 status conference for this docket, require an acceleration of system upgrades in parallel. This is very important to ensuring the procured resources utilization can be maximized and placed on the Companies' grids in a safe and reliable manner. If the targets are increased and not tied back to the PSIP, there is a risk that necessary grid improvements will be missed. The PSIP did not anticipate such an accelerated adoption of variable renewable energy, so while the Companies are looking to the PSIP as a roadmap, the PSIP can no longer provide complete assurance of what is needed to integrate the increased procurement targets. Therefore, the Companies will have to carefully evaluate any such needs upon project selection.

*Clarification of Order 36356*, issued by the Commission on July 5, 2019 (“Order 36406”), the Companies have worked closely with the Independent Observers (“IOs”) appointed by the Commission to determine what revisions to the Draft RFPs and supporting documents were appropriate in connection with the guidance in Order 36356 and Order 36406. The Companies found the input and guidance from the IOs to be helpful and appreciate the collaborative approach taken by the IOs. The Companies were also encouraged by the interest and engagement of the many stakeholders reflected by their attendance and participation at the status conferences and the number of thoughtful submitted comments in response to the Companies’ Draft RFPs. The Companies truly believe that collaboration of all stakeholders will be necessary to achieve the Companies’ procurement objectives and to successfully achieve the State’s 100% renewable energy goal. To that end, all of the feedback received to date has been given careful consideration and where appropriate has been used to clarify or improve the Draft RFPs and proposed competitive bidding process. To ensure successful execution of this phase of the competitive bidding process (“Stage 2” or “Phase 2”), the Companies also adhered to their Guiding Principles in developing the proposed final Stage 2 Request for Proposals for Variable Renewable Dispatchable Generation and Energy Storage for O‘ahu, Maui and Hawai‘i Island (“Proposed Final Renewable RFPs”), proposed final Request for Proposals for Delivery of Grid Services from Customer-Sited Distributed Energy Resources on the islands of O‘ahu, Maui and Hawai‘i Island (“Proposed Final Grid Services RFP”),<sup>4</sup> and supporting documentation, as further explained below.

This Exhibit 1 describes major changes made to the Draft RFPs and supporting documents to develop the Proposed Final RFPs, as well as the Companies’ rationale for maintaining certain provisions, and the Companies’ approach in doing so.

### **Procurement Targets and Scope**

Based on guidance from the Commission through the series of status conferences and orders issued in this docket, the scope of both the Draft Renewable RFP and the Draft Grid Services RFP has expanded beyond the resources identified in PSIP, as was done in the Stage 1 Requests for Proposals for Variable Renewable Dispatchable Generation for O‘ahu, Maui and Hawai‘i islands issued in February 2018 (“Stage 1”). As stated in the Companies’ May 20, 2019 filing in this docket (“May 20<sup>th</sup> Filing”), “the Companies also understand the Commission’s desire to accelerate renewable energy procurements to replace not just the needed capacity from the loss of [the Kahului Power Plant (“KPP”)] and expiration of the AES power purchase agreement (“PPA”), but also the energy provided from those facilities.” To this end, the Companies have increased the procurement targets in the Proposed Final RFPs to the levels identified in the May 20<sup>th</sup> Filing. In addition, the Companies revised the target MWh for

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<sup>4</sup> The Proposed Final Renewable RFP and the Proposed Final Grid Services RFP are jointly referred to herein as the “Proposed Final RFPs”.

Hawai'i Island to specify a total amount of 444,000 MWh while retaining the right to not procure the total amount if doing so would not provide benefits to customers.

*Grid-Charged Storage*

The Commission recognized the increased procurement targets set forth by the Companies in the May 20<sup>th</sup> Filing as a step in the right direction.<sup>5</sup> However, the Commission remained concerned with the use of grid-charged storage. In Order 36356, the Commission encouraged “the Companies, in conducting their portfolio evaluation and selection process, to ensure that stand-alone energy storage charged with fossil fuels is the last resort in meeting any capacity needs.”<sup>6</sup>

As noted in the May 20<sup>th</sup> Filing, the Companies recognize the Commission’s concern that grid-charged storage may be primarily charged with fossil fuel. However, as noted in both the April 1<sup>st</sup> Filing and May 20<sup>th</sup> Filing, this is not the intent when allowing grid-charged storage. The grid charging acts as a load, which will be charged by the sum total electric energy generation on the grid. The operation of the generation resources will continue to follow the guiding principles of (1) maintaining system reliability, (2) managing costs, (3) meeting contractual obligations, and (4) maximizing renewable energy. Thus, even in the near-term, the dispatch will follow present commitments to renewable energy providers. As stated in the May 20<sup>th</sup> Filing:

When storage facilities are charged from the grid, the initial grid “energy” used for charging will be excess available renewable energy that would otherwise be curtailed including solar and wind energy produced by independent power producers (“IPPs”), distributed energy sources, and Company-owned facilities. If storage facilities must be further charged from the grid, the energy used for charging may need to be energy generated from fossil fuels, in the near-term. However, the amount of fossil fuels used in charging is expected to be limited, in particular if the expanded energy target is met in large measure with renewable energy projects paired with storage.<sup>7</sup>

The Companies have noted that both the energy and capacity supplied by AES and KPP on O‘ahu and Maui, respectively, must be replaced to meet customer energy requirements.<sup>8</sup>

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<sup>5</sup> Order 36356 at 10.

<sup>6</sup> Id. at 14.

<sup>7</sup> May 20<sup>th</sup> Filing at 6-7.

<sup>8</sup> April 1<sup>st</sup> Filing, Exhibit 1, pages 2-3.

In traditional terms, energy represents the amount of electricity a generator produces over a specific time period (i.e., megawatt-hours). Capacity represents the maximum output an electricity generator can produce (i.e., megawatts). Storage does not add capacity directly, but allows some of the energy from generation resources to be shifted from one time of day to be used later. Thus, storage is not a precise capacity substitute for output provided at all times of the day by electricity generators such as AES and KPP, storage is sought in the O‘ahu and Maui Stage 2 RFPs, respectively, to provide capacity-like features to the respective island electric grids by enabling energy from excess capacity and energy in low demand periods to be used during anticipated high demand periods.

For O‘ahu, the 200 MW storage solicitation is intended to ensure that the capability to serve high demand periods without the AES facility will be in place upon its contract expiration and includes the ability for standalone storage projects to meet this requirement. For Maui, the 40 MW storage solicitation is intended to ensure that the capability to serve high demand periods without KPP will be in place upon its retirement and includes the ability for standalone storage projects to meet this requirement.<sup>9</sup>

Ideally, a replacement for the capacity service that the AES and KPP facilities would have provided would be available at all hours. Standalone storage can provide a sufficient replacement for anticipated high demand periods. Standalone storage charged from the utility grid can be managed by the system operator to be charged from all resources available, and therefore can ensure that excess energy from lower demand periods can be used to provide needed service in higher demand periods. Storage projects that are paired with renewable generation and which can only be charged by the paired generation, such as the renewable energy projects awarded in the Stage 1 RFPs, have a more limited ability to provide the capacity service at all hours than AES and KPP would have provided because the renewable energy source must be available to charge and re-charge such storage projects.

Based on experience from successfully completing the Stage 1 evaluation, the Companies have expanded their Stage 2 evaluation to incorporate portfolio analyses. Acknowledging that projects paired with renewable generation are able to contribute to meet the MW targets of the O‘ahu and Maui RFPs but have limited ability to do so when the renewable resource is unavailable (as compared to standalone storage), the Companies have proposed an innovative way to account for the varying degree to which the storage resource is able to stand ready to serve customers. Storage projects that are paired with renewable generation and that can only be charged by the paired renewable generation will receive a credit of 10% of the storage MW rating towards meeting the RFP’s capacity MWs sought. The Companies will give up to 100% credit of the storage MW rating (depending on the amount of grid-charging) towards meeting the RFP MW requirement for a storage project that is paired with renewable generation if the project

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<sup>9</sup> May 20<sup>th</sup> Filing at 3.

developer allows up to the maximum 25% grid charging of the storage facility permitted during the five-year federal Investment Tax Credit recapture period.

This innovative approach allows the broadest participation of projects to meet the RFP MW requirements without a bias towards standalone storage. The Companies also note that for either standalone storage or renewable projects paired with storage to provide effective replacement capacity service for AES and KPP, the storage facilities must be able to be grid-charged. This allows the storage facilities to provide the capacity service when needed. As noted above, the Companies expect to charge such storage facilities with available renewable energy. However, there may be times when fossil fuel charging of such storage facilities, whether standalone or paired (if allowed) is needed to ensure sufficient energy will be shifted to the storage facilities to serve customers during high demand periods. This will be less likely in the future as the Companies progress towards the State's 100% renewable energy goal.

#### *Contingency Storage*

Through Orders 36406 and 36410,<sup>10</sup> the Companies acknowledge the Commission's concerns regarding the approach to procuring fast frequency response for contingency ("FFR1"). Through numerous proceedings such as the PSIP (Docket No. 2014-0183), Demand Response, (Docket No. 2015-0412), and Contingency and Regulating Reserve Battery Energy Storage System project (Docket No. 2018-0102), the question has not been whether a FFR1 service is needed for the Companies' island grids with high levels of renewable energy; rather, the question has been whether the Companies are acquiring those services at the lowest reasonable cost with consideration for all alternatives available. Indeed, other jurisdictions such as the Electric Reliability Council of Texas ("ERCOT")<sup>11</sup> have identified a need for FFR1 services.

The Companies have modified the Proposed Final Renewable RFPs to allow renewable plus storage projects to provide the FFR1 service for Hawai'i Island. This modification will allow all types of technologies and proposals (e.g., DER, stand-alone, and paired resources) to compete to fulfill this need. As noted in the transmittal letter to this filing, the Companies made this addition upon review of Order 36406. Given the timing of the receipt of Order 35406 and this filing, there was not sufficient time to clearly flush out all of the particulars associated with such decision and the Companies did not have the opportunity to discuss specific requirements

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<sup>10</sup> Decision and Order 36410 in Docket No. 2018-0102 issued July 8, 2019 ("Order 36410")

<sup>11</sup> ERCOT states, "Fast Frequency Response (FFR) is MW response faster than the existing [primary frequency response] PFR. It will, in the event of a sudden power imbalance, increase the time to reach the frequency nadir and mitigate the [rate of change of frequency] in the same period. During periods with low inertia, i.e. periods with low load/high non-synchronous generation, in the absence of this service much higher capacity of [Primary Frequency Response] will be needed to ensure that sufficient capability is available to arrest fast frequency decay in the event of sudden power imbalance." Available at <https://www.ferc.gov/CalendarFiles/20140421084800-ERCOT-ConceptPaper.pdf> at 17.

with the IOs. Also, as noted in the transmittal letter to this filing on July 9, 2019, the Companies received Order 36410 denying without prejudice Hawaiian Electric's request to commit approximately \$104 million for a Contingency and Regulating Reserve ("CRR") Battery Energy Storage System ("BESS"). The Companies are reviewing the Order 36410 and evaluating whether changes to the Proposed Final RFPs will need to be made to address the CRR BESS Order..." Further, in the Companies' May 20<sup>th</sup> Filing noted the need with regards to the Proposed Final Grid Services RFP to define specific requirements associated with the FFR1 services.

Based on the foregoing, the Companies will work with the IO to further refine and clarify the FFR1 and FFR2 definition and requirements whether such resource comes from grid services, paired projects or a standalone battery. However, in general FFR1 services are required, with sufficient quantity and characteristics, to avoid unacceptable customer outages and possible system failure of the systems during contingencies, particularly loss of generation, and other disturbances. The need for FFR1 exists today as excessive customer outages occur for events such as generator trips. This is in part driven by the behavior of the distributed resources on the system during faults and contingencies, but also as the result of displacement of conventional synchronous plants. FFR 1 will become increasingly necessary to help stabilize system frequency and avoid excessive customer outages for commonly occurring grid disturbances as the system dynamics change as conventional plants are further displaced. In order to provide the reliability benefits, FFR1 must respond with a high degree of accuracy with in the required time frames and with the required response to system disturbances, which are by nature, unplanned and may occur at any time. Therefore, the resource providing the FFR1 service must maintain a high level of fidelity to the design characteristics and maintain its ability to respond at all times or will risk failure to improve reliability, and if operating improperly, has the potential to worsen system disturbances. For this reason, the Companies will require 24x7 availability of the FFR1 capacity to ensure the FFR1 is always ready and available to provide the needed service during disturbances. Consequently, the capacity dedicated to providing FFR1 must also be allowed to grid charge such that if the FFR1 capacity has been depleted, it can be replenished immediately and stand ready for the next contingency event. The FFR1 deploys energy only when frequency exceeds a disturbance deadband. Therefore, the amount of energy cycled will be far less than energy shifting storage –FFR1 is providing a reliability service, rather than designed to serve customer demand. For example, the FFR resource should only need to grid charge following a contingency event and while renewable generation is not available to charge the BESS. Additionally, 18 MWh of FFR energy that may need to be grid-charged for each contingency event in a year is a negligible amount of energy relative to the 444,000 MWh annual energy target for Hawai'i Island.

### **Portfolio Selection & Evaluation**

Order 36356 specified that the Companies should continue to work with the IOs to update the Proposed Final RFPs and internal evaluation protocol documents to explicitly document the

criteria used to evaluate a proposal, including, to the extent possible, updating forecasts and assumptions used in the evaluation and selection process.<sup>12</sup> On June 10, 2019, the Companies filed (“June 10<sup>th</sup> Filing”) their internal evaluation protocol documents, the Variable Renewable Dispatchable Generation and Energy Storage Stage 2 Proposal Receipt and Proposal Evaluation Protocol (“Renewable Evaluation Protocol”) and the Delivery of Grid Services Via Customer-Sited Distributed Energy Resources Bid Receipt and Bid Evaluation Protocol (“Grid Services Evaluation Protocol”). The Renewable Evaluation Protocol and the Grid Services Evaluation Protocol are collectively referred to herein as the “Evaluation Protocols.” Since the RFPs will use a closed bidding process, the Companies filed the Evaluation Protocols on a confidential basis.

As noted in the Companies’ June 10<sup>th</sup> Filing, the Companies incorporated feedback from the Commission, Consumer Advocate and other stakeholders to refine the evaluation process, including but not limited to, strengthening the requirements for self-build proposals, providing for the selection of projects from the Proposed Final Grid Services RFP to be used as inputs into the base case for the evaluation of projects for the Proposed Final Renewable RFP, providing for a combined evaluation of FFR from the Proposed Final Grid Services RFP and contingency storage from the Proposed Final Renewable RFP, and clarifying other modeling assumptions. Since the June 10<sup>th</sup> Filing, the Companies have continued to work with the IOs to further refine the Evaluation Protocols, including documenting within the Evaluation Protocol documents the assumptions and forecasts that will be updated for the base case used in the evaluation of projects submitted in response to the Proposed Final Renewable RFPs. In addition, to the extent such revisions are not confidential portions of the closed bidding process, the Companies have worked to incorporate the revisions in the Evaluation Protocol Documents into the Proposed Final RFPs.

### **Procurement Timeline**

Echoing the Companies’ comments at the status conferences and in their April 1<sup>st</sup> Filing, comments from developers expressed concerns about the achievability of a 2022 guaranteed commercial operations date (“GCOD”). The Commission also “views the procurement timeline for Phase 2 as a critical component to the overall success of Phase 2.”<sup>13</sup> Per the Commission’s guidance set forth in Order 36356 and later clarified in Order 36406, with the exception of the need to replace AES and KPP and the contingency storage need for Hawai’i Island, the Companies’ Proposed Final Renewable RFPs allow for a GCOD of December 31, 2025. Using a revised non-price criterion to evaluate GCOD, priority will be given to projects that can reach GCOD earlier than this date. Allowing projects to propose a GCOD up to December 31, 2025 will provide opportunities for more robust competition by giving Proposers additional time to develop projects that may not be shovel-ready in the near future.

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<sup>12</sup> Order 36356 at 13-15.

<sup>13</sup> Order 36356 at 16.

Due to the need to replace the capacity of AES before the expiration of the AES PPA and KPP before its retirement, for the reasons set forth in the Companies' numerous filings in this docket, the Companies are requiring a GCOD of June 1, 2022 for the 200 MW of energy storage needed on O'ahu and a GCOD of April 30, 2023 for the 40 MW of energy storage needed on Maui. Further, as previously noted, the Companies will be seeking a GCOD of no later than December 31, 2022 for the contingency storage need on Hawai'i Island to reduce as quickly as possible, the number of incidents of excessive underfrequency load shed and mitigate the present risk of system failure which has been created by the behavior of legacy DG-PV. This date will also allow for a combined evaluation of the contingency storage and the FFR1 services being sought under the Proposed Final Grid Services RFP.<sup>14</sup>

Attached as Exhibit 2 to this filing, the Companies have also provided revised timelines for the remainder of the RFP process. These timelines may need to be further adjusted based on the timing of the Commission's approval of the Proposed Final RFPs. The Companies currently anticipate selecting projects for the Proposed Final Renewable RFP by the end of April 2020 and for the Proposed Final Grid Services RFP by the end of December 2019.

Due to the significantly increased procurement targets and the direction from the Commission in Order 36356 "to allow for negotiation of the PPAs as a whole,"<sup>15</sup> the amount of negotiations necessary for the numerous Renewable Dispatchable Generation Power Purchase Agreements for Wind and Solar ("RDG PPAs"), Energy Storage Power Purchase Agreement ("ESPPA"), and Grid Services Purchase Agreement ("GSPA") (the RDG PPAs, ESPPA, and GSPA, collectively referred to herein as the "Contracts") needed to meet procurement targets will require the Companies to stagger Contract negotiations. The Companies previously proposed that all applications for Contract approval would be filed with the Commission by the end of 2020. However, depending on the number of projects selected to the Final Award Group based on the increased scope, the Companies will need to prioritize which projects to negotiate with first. As noted in the Proposed Final Renewable RFP, the Companies will first prioritize projects intending to meet the needs for the replacement of AES and KPP and the contingency storage need on Hawai'i Island. Further prioritization will take into consideration the GCOD of the project, the benefits to and the needs of the Companies' systems, and extensiveness of the exceptions to the model Contracts. While negotiations will occur on a rolling basis, the Companies will endeavor to complete negotiations for the first set of prioritized projects within six months of notification of intent to enter contract negotiations.

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<sup>14</sup> Hawaiian Electric Companies' Motion for Clarification of Order No. 36356, Docket No. 2017-0352, filed June 20, 2019, 8-9.

<sup>15</sup> Order 36356 at 21.

### **Self-Build Option and Affiliate Participation**

The Companies reiterate their commitment to conduct the competitive bidding process in a fair and unbiased manner. The Companies received comments from stakeholders that reflect a sentiment of concern regarding the participation and treatment of the self-build team. The Companies also acknowledge Order 36356 noting that “the [C]ommission is inclined to prohibit any [self-build option] proposals until the Companies can detail their processes and methodology to evaluate these bids on a fair basis.” The Companies believe that a robust and competitive RFP process that allows the broadest participation across qualified developers, affiliates and Company self-build teams competing in a comprehensive evaluation would result in the selection of projects that provide the greatest overall benefits to customers. As detailed in the Companies’ June 10, 2019 filing in this docket (“June 10<sup>th</sup> Filing”), the Companies have collaborated with the IOs to create a process that ensures that all parties, including any self-build and/or affiliate options, are treated fairly and compete on a level playing field, while also maintaining compliance with the Framework.<sup>16</sup>

As stated in the May 20<sup>th</sup> Filing, the Framework does allow for the Companies to submit self-build proposals, and the Companies plan to submit self-build proposals for the Proposed Final Renewable RFPs. The Companies’ intent is to evaluate all self-build, affiliate, and independent power producer (“IPP”) proposals as equally as possible on an “apples to apples” basis through comparative analysis. A Self-Build Option (“SBO”) cannot be evaluated in exactly the same way as an IPP proposal because cost recovery methods between a regulated utility SBO proposal and IPP proposals are fundamentally different due to the business environments they operate in. However, the Companies worked closely with the IOs to develop an evaluation process that is fair to all parties and customers, including procedures for evaluating the SBO with regards to eligibility, threshold, price, and non-price criteria.

As noted above, the Companies worked with the IOs to formalize the self-build evaluation process in the Renewable Evaluation Protocol. The Renewable Evaluation Protocol details the revenue requirement calculation, which in turn will be calculated into a levelized energy price using the SBO’s net energy potential in the evaluation process that can be compared to IPP proposals. The Renewable Evaluation Protocol document carefully and thoroughly lays out each component for the revenue requirement calculation to ensure that similar costs that are incurred by an IPP and included in an IPP proposal are also captured in the evaluation of the cost of a self-build proposal. The Renewable Evaluation Protocol also specifies that the evaluation of any affiliate proposals will be treated exactly the same as any evaluation of an IPP proposal. Most of the SBO requirements set forth in the Renewable Evaluation Protocol have been

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<sup>16</sup> The term “Framework” refers to the Framework for Competitive Bidding, adopted by the Commission in Decision and Order No. 23121, issued December 8, 2006 in Docket No. 03-0372.

incorporated in Attachment G of the Proposed Final Renewable RFPs, with a few provisions also being captured in the body of the Proposed Final Renewable RFPs.

In addition to working with the IOs to establish a detailed and fair evaluation process for SBO proposals in the Renewable Evaluation Protocol, in their May 20<sup>th</sup> Filing, the Companies also assured the Commission that several requirements would be imposed on SBO proposals. These include requiring an SBO team to certify, among other things, that it will cap the Companies' recovery for project capital costs and O&M costs at the amount included in the proposal. Furthermore, if actual project capital costs are less than the costs included in the proposal, the Company will only recover actual project capital costs. If selected out of the RFP, an SBO proposal will not be executing a PPA, as the Companies cannot be both counterparties to a contract. Therefore, the Companies' May 20<sup>th</sup> filing required the SBO team to certify that its proposal will adhere to performance requirements and development milestones in the PPA, excluding inapplicable terms related to commercial and legal interactions between an IPP and the Companies. The Companies' May 20<sup>th</sup> Filing noted:

For example, the Self Build Team will be required to certify that it will meet the performance metrics in Article 2 of the PPA. An SBO will also be held to Guaranteed Project Milestones (as defined in the PPA), including a GCOD. Similar to selected IPP proposals, these dates will be set after completion of the IRS, with oversight of the Independent Observer. In the May 2<sup>nd</sup> status conference, the Companies committed to paying liquidated damages if such Guaranteed Project Milestones are missed or if the SBO fails to meet the performance metrics as set forth in Article 2 of the PPA. These liquidated damages would be paid from shareholder funds and similar to liquidated damages received from IPPs, would be passed to customers through the Companies' Power Purchase Adjustment Clause.<sup>17</sup>

In addition, pursuant to the Framework, the Companies will be requiring both SBO proposals and affiliate proposals to be submitted not only through the electronic procurement platform utilized by the Companies, but also through hard copies submitted to the Commission a day in advance of IPP proposals.

The Companies have detailed all provisions related to SBO proposals in the revised Appendix G to the Proposed Final Renewable RFPs. In this way, both the evaluation requirements and Contract-type requirements are set forth in one appendix, making clear and transparent the requirements for an SBO proposal.

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<sup>17</sup> May 20<sup>th</sup> Filing at 16.

Further, in response to comments from the Consumer Advocate, stakeholders and the IOs, the Companies agree that clarity and transparency is necessary to build trust in the process to reach a true and fair outcome. To accomplish this, the Companies have made numerous revisions to the proposed Code of Conduct and the accompanying Code of Conduct Procedures Manual to correct oversights in the documentation of the intended process, provide more clarity to interested parties, and facilitate additional oversight by the IOs in the evaluation process. These changes, detailed below, provide a rigorous system of safeguards to fairly allow for consideration of self-build and/or affiliate options in Stage 2.

Strict rules described in the Code of Conduct have been developed to govern the Proposed Final Renewable RFP process. The specific details regarding the implementation of these rules are contained within the Code of Conduct Procedures Manual, as well as the rules that govern the communication between parties involved in the RFP. The Code and Procedures Manual effectively create a wall of separation between the Self-Build, affiliate and RFP teams such that they are prohibited from communicating with each other about RFP-related matters.

The Companies believe that allowing the SBO, affiliates and IPPs to compete (within the requirements of the Code and the Procedures Manual) not only represents the most accurate market test, but also provides the largest opportunity to maximize customer benefits.

### **Company-Owned Sites**

The Companies had previously offered three Company-owned sites located at their greenfield site in central Maui (the “Waena Site”), a portion of land within the Kahe Generation Station on O‘ahu (“Kahe Site”) and a portion of the Keahole Generating Station on Hawai‘i Island (“Keahole Site”). In response to Order 36356 requiring the Companies to make available to all other potential bidders any site that the Self-Build Option may plan to utilize, in an effort to offer as many options for bidders as feasible, the Companies are now offering a fourth site at the Companies’ Puna Generation Station (“Puna Site”). These sites, by the nature of their size and interconnection location will be only offered for siting standalone storage. To allow for the potential of lower cost resources, by eliminating high land costs, the Companies will not require rent for the use of these sites and Proposers who propose projects located at the identified Company-owned properties will have their proposal fee waived. The Companies are in the process of arranging site visits for the properties for each of the four sites during the week of August 5, 2019. Further information regarding these site visits will be posted to the Companies’ website during the week of July 15, 2019. Maps, written descriptions and details of these sites can be found in Appendix F to the Proposed Final Renewable RFPs.

The Companies have also provided a new Attachment X, Company-Owned Site, to the ESPPA, attached as Appendix K to Exhibits 9, 10, and 11 of this filing. This document details the terms and conditions of use for the Company-owned sites should a Proposer elect to propose a project at such site. This Attachment X would be included only as an attachment to the ESPPA

and would act in lieu of a lease or other granting instrument for projects located at one of the Company-owned sites. As Attachment X governs the use of land located on Company-owned property, three of which sites would be co-located with the Companies' critical infrastructure generating equipment, certain aspects of this document, relating to use restrictions, security and infrastructure requirements, compliance with laws, lien restrictions and end-of-term obligations, are non-negotiable.

### **Grid Services Code of Conduct**

Order 36356 directed the Companies to finalize a code of conduct for the Proposed Final Grid Services RFP. The Companies filed the proposed final Code of Conduct Pertaining to the Implementation of a Competitive Bidding Process for the Aggregation and Delivery of Grid Services ("Grid Services Code of Conduct") on June 10, 2019. As the Companies will not participate in the Proposed Final Grid Services RFP with a self-delivery option (a similar mechanism to the self-build option in the Draft Renewable RFP), the Companies have not included provisions in the Grid Services Code of Conduct at this time regarding the possibility for self-dealing or unfair competition regarding self-delivery. Participation in the Grid Services RFP by affiliates is addressed in the Grid Services Code of Conduct and the Procedures Manual to the Grid Services Code of Conduct. In the event that an affiliate option is presented, the Companies will proceed as provided under the Grid Services Code of Conduct and the Procedures Manual to the Grid Services Code of Conduct, and specifically paragraphs 2 and 3 of the Grid Services Code of Conduct General Rules. The Companies have not made any revisions to the June 10, 2019 version of the Grid Services Code of Conduct. The Companies have reproduced the Grid Services Code of Conduct as Exhibit 3 to this filing. The Companies have updated the Code of Conduct Procedures Manual, attached to this filing as Appendix C to Exhibit 8, the Proposed Final Grid Services RFP. These revisions were made to conform the Procedures Manual to the Grid Services Code of Conduct.

### **Specific Proposed Final Renewable RFP Requirements**

As noted above, one of the Companies' Guiding Principles is that coordination and collaboration of all parties is necessary for a successful and timely procurement. With that in mind, the Companies worked with the IOs to fairly and reasonably address many of the points raised by the Commission, Consumer Advocate and stakeholders in this docket. The Companies sought to revise the RFPs for transparency and to streamline the RFP process by enabling proposers to understand in clear terms what the Companies are seeking in the Proposed Final RFPs. The Companies' changes to the Proposed Final Renewable RFPs include, but are not limited to: allowance for a pass-through provision for the state tax credit, removal of the pro forma requirements, including provisions to address bid transparency, further refining requirements for providing models for the interconnection requirements study, including provisions related to the help needed from selected Proposers to ensure a successful procurement, further revising and limiting prohibitions for shared representatives, and adding a

provision to address any required greenhouse gas analysis as part of the Commission approval process for any selected project.

*State Tax Credit*

In Order 36356, the Commission directed the Companies to work with the IOs to remove the State tax credit risk while allowing for a transparent, actual and verifiable adjustment mechanism should the State tax law change.<sup>18</sup>

The Companies worked with the IOs to consider two approaches. The first approach would direct Proposers to bid pricing which assumes maximizing the State tax credit in its current form. Proposals would be evaluated based on that price. The Proposers would also be asked to provide information with its Proposal on the amount of the State tax credit assumed, and its impact on pricing (i.e., the lump sum payment). The Proposed Final Renewable RFPs and RDG PPAs would specify that if there is a material change in the State tax credit law, a project’s pricing would be adjusted based on the impact of the change in law relative to the State tax credit pricing impact the Proposer initially provided with its Proposal. One benefit of this approach would be that proposals would all be evaluated assuming receipt of the State tax credit, and Proposers would presumably be incentivized to maximize the State tax credit to arrive at its proposed pricing. Another benefit was that this pricing adjustment mechanism would apply in both directions, i.e., if a change in the State tax credit law resulted in greater tax credits, customers would receive the benefit through a downward adjustment in pricing. There was also a potential issue with this approach that is best described with an example. Assume there are two projects with the following pricing:

Project	Pricing With State Tax Credit	Pricing Without State Tax Credit
A	\$100	\$150
B	\$110	\$125

For this example, assume project A is selected based on its with State tax credit price. However, if a change in law eliminates the tax credit, then project A’s pricing would increase to \$150. Here, project B would have provided more benefits to customers (assuming all else is equal), but project A would have been selected. Another complication with this approach is that if there is a change in tax law during the RFP process, depending on the timing, the Companies would need to seek refreshed pricing proposals, which may add time to an already expedited process.

The second approach considered was to require in the RFPs that Proposers’ pricing should not include the State tax credit, and proposals would be evaluated on that price. The

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<sup>18</sup> Order 363566 at 24-25.

RDG PPAs would be modified to provide that following a project being placed into service, the developer would have a contractual obligation to apply for the maximum available State tax credit and remit to the Companies for the benefit of their customers, 100% of the proceeds received after deducting financial, legal and administrative costs in applying for the tax credit. Proceeds received by the Companies would be returned through an existing rate adjustment mechanism. The RDG PPAs would also require the developer to certify that it has used commercially reasonable efforts to apply for and obtain the maximum available State tax credit. In addition, the RDG PPAs would provide that if the developer failed to apply for and obtain the maximum available State tax credit, the developer would be required to pay the Companies liquidated damages, which would be passed on to customers. These State tax credit pass through provisions were included in varying forms in existing PPAs (e.g., for the Waianae Solar project, and Clearway's Lanikuhana Solar, Waipio PV, and Kawaihoa Solar projects). One downside to this approach is that these tax credit pass through provisions are relatively complicated. However, this approach had the benefit of removing the risk of a change in the State tax credit law from developers, while also ensuring that customers receive any State tax credit benefit. This approach, similar to the first approach considered, could result in selecting a project with higher pricing than another project, if a non-selected project would have been able to obtain a larger State tax credit assuming all else was equal. However, unlike the first approach, this approach allows the Companies to know the ceiling of the price when making a selection. In addition, the Companies believe that because these provisions were included in a number of approved PPAs, that the Commission, Consumer Advocate and some developers would be comfortable with the approach.

Through discussions with the IOs, the Companies opted for the second approach, which is reflected in the Proposed Final Renewable RFPs and RDG PPAs.

#### *Pro Forma Submittal Requirement*

The Companies' Draft Renewable RFPs had requested developers to provide pro formas. This request was made so that the Companies would have information to complete their evaluation under the non-price criteria, State of Project Development and Schedule. These criteria included an evaluation to ensure that project costs appeared reasonable for a project of the size proposed and that the cost information was realistic based on the Companies' prior experience in the market. The intent of this evaluation was to evaluate prior to selection the likelihood a project could be built on time and for the price proposed. This requirement was also added to address the Consumer Advocate's request for such information in the PPA approval dockets for the selected projects from the Companies' Stage 1 procurement. Based on Order 36356, the Companies have removed the requirement for Proposers to submit a detailed pro forma. Instead, the Companies have replaced this requirement with the provision from the Stage 1 RFPs requiring developers to only provide high level cost information for equipment, construction, engineering, Seller-Owned Interconnection Facilities, Company-Owned

Interconnection Facilities, Land, and Annual O&M. The Companies still intend to evaluate such information to determine whether or not such costs appear reasonable.

#### *Bid Transparency*

Order 36536 “directs the Companies to work with the IOs to increase bid transparency within the RFP Process, while maintaining an appropriate level of confidentiality regarding bids and bidders.” As noted above, one of the Companies’ guiding principles is transparency, predictability and streamlining lowers costs to customers and fosters trust in the process. The Companies agree that it is desirable for the RFP process to be as transparent as possible while maintaining the confidentiality of Proposers and proposal information. The type and quantity of information that can be disclosed will not be known until the Companies and the IOs have a better sense of the number and types of proposals received and whether such information can be easily anonymized. The Companies will work with the IOs to determine an appropriate level of disclosure after proposals are received with a goal of disclosing more than was disclosed in Stage 1. A statement to this effect has been added to the Proposed Final Renewable RFPs.

#### *Interconnection Requirements Process*

With the Stage 2 process beginning before Stage 1 is completed, it is not possible to fully compile lessons learned for the Interconnection Requirements Study (“IRS”) process. However, at the May 2<sup>nd</sup> status conference, the Companies described some ideas already being contemplated to improve the IRS process based on the Stage 1 experience to date.

The Companies recognize that keeping the interconnection processes on schedule for the large number of projects anticipated in Stage 2 is critical to successfully placing these projects into commercial operations. Therefore, in an effort to help both the Companies and the developers manage the IRS process and keep it on schedule, the Companies have further broken down the process and provided additional detailed requirements in Section 5.1 of the Proposed Final Renewable RFPs. This section details timelines for developers to provide models for the IRS, as well as timelines for such models to be updated if they do not pass review by the Companies and/or the Companies’ consultants. Having working models provided on a timely basis will ensure the IRS can be completed in a timely manner. The Companies have also provided procedures to remove projects from selection if the IRS models are not provided timely. This will ensure that failure of one Proposer to provide working models does not hold up the IRS for other selected projects.

#### *Help Needed from Developers*

As mentioned in the Companies’ May 20<sup>th</sup> Filing, and noted in Guiding Principle No. 4 set forth above, the Companies cannot meet the aggressive procurement targets in the Proposed Final RFPs alone. Based on the Stage 1 experience, the Companies anticipate selecting a large number of projects to fulfill the Stage 2 procurement targets. The Companies have set forth

several changes to improve the process for construction of the Company-Owned Interconnection Facilities. The Companies will now require selected Proposers to build the Company-Owned Interconnection Facilities, with the exception of the final tap and work in energized areas. This will provide selected Proposers with increased flexibility to allow such Proposers to take greater control of overall project schedule coordination. To facilitate an efficient interconnection process and carefully coordinate specialized resources required to test and commission such facilities, the Companies will require that developers submit relay and protective device settings and the protection coordination study for review and approval in a timely manner, taking into consideration that modifications and corrections may be required. Furthermore, communication infrastructure and equipment must be operational and ready for testing. If these requirements are not met, or if the facility cannot pass the tests within the allotted scheduled time, the developer will have to reschedule the required tests, and will be placed at the end of the queue for such rescheduled work. Developers may cure any deficiencies within their originally scheduled time, but no extension of time will be given, and liquidated damages will be assessed per the terms of the Contracts for missed milestones if the facility cannot pass the required tests and be placed into service on time. Such requirements will prevent delays from one project causing cascading delays throughout the other selected projects' schedules.

In addition, several stakeholder comments suggested that the Companies provide more detailed information such as cost estimates, scope of work, unit costs, Company-required oversight for design, engineering, construction and commissioning. The Companies have updated the interconnection cost information provided in Appendix H to reflect the requirements for the Proposed Final Renewable RFPs. However, due to the complexity of the Proposed Final Renewable RFPs created by the combination of increased, accelerated targets being sought and flexibility of the Proposer to select technology, site, size, term, and option to pair storage, it would not be possible for the Companies to anticipate the types of interconnection schemes that may be required by the projects that might be proposed and accurately provide useful information to Proposers. To provide such information for each shortlisted project, as one stakeholder comment suggests, in a timely manner for Proposers to presumably then incorporate into their BAFO, is not possible given the Companies' limited resources.

#### *Shared Representatives*

The Companies are fully committed to conduct the competitive bidding process in a fair and unbiased manner and, as noted in the April 1<sup>st</sup> Filing, the Companies are expecting developers to follow the requirements of the RFPs, including the requirements to submit proposals in good faith and without fraud or collusion. To this end, the Companies included language in the Proposed Final Renewable RFPs limiting the use of shared representatives. However, both the Commission and various stakeholders voiced concern with the provision as proposed as it could potentially negatively impact participation due to the limited pool of qualified representatives. Order 36356 states:

To avoid unnecessarily constraining the number of bidders able to develop bids, the commission directs the Companies to work with the IOs to revise this provision to ensure adequate protections exist against the improper disclosure of confidential and/or proprietary information across bidders, without stifling bidders' ability to choose their own representation.<sup>19</sup>

In response to this statement, the Companies worked with the IOs to further refine the shared representative requirements, limiting such restrictions to legal representation during Proposal development and negotiation of Contracts. The provision notes that different lawyers within the same firm may represent different Proposers, but that proper protocols must be in place to prevent sharing of confidential information between such lawyers and Proposers.

### *Greenhouse Gas*

On May 10, 2019, the Supreme Court of the State of Hawai'i filed its decision in SCOT-17-0000630 relating the Commission's obligation to consider greenhouse gas ("GHG") emissions in making determinations of the reasonableness of the costs associated with, among other things, PPAs. In light of the Supreme Court's decision in SCOT-17-0000630, the Companies anticipate that the Commission will establish, as an issue in the review and approval of any Contract resulting from the Proposed Final RFPs, whether the GHG emissions that would result from approval of the Contract and subsequent addition of the project to the Companies' systems are greater than the GHG emissions that would result from the operation of the Companies' systems without the addition of the project, whether the cost of energy under the Contract is reasonable in light of the potential for GHG emissions, and whether the terms of the Contract are prudent and in the public interest, in light of its potential hidden and long-term consequences. Accordingly, the Companies have included a provision in the Proposed Final Renewable RFP that requires all Proposers whose Proposal(s) are selected for the Final Award Group to cooperate with the Companies and/or Companies' consultant in order to prepare a GHG emissions analysis and report in support of an application for Commission approval of the Contract for the project (the "GHG Review"). Similar to the costs associated with an Interconnection Requirements Study, Proposers will be responsible for the cost of the GHG Review associated with their project under a separate agreement between the Proposer and the Companies.

### **Shared Savings Mechanism**

The Companies filed their proposed Shared Savings Mechanisms for the Proposed Final Renewable RFP and Proposed Final Grid Services RFP with the Companies' April 1<sup>st</sup> Filing.

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<sup>19</sup> Order 36356 at 22.

The Companies provided further information regarding their proposed Shared Savings Mechanisms in response to CA/HECO-IR-10 and CA/HECO-IR-11 filed on May 15, 2019 in the instant docket. In the May 20<sup>th</sup> Filing, and in response to CA/HECO-IR-10, the Companies proposed a revised approach to the Shared Savings Mechanism for the Proposed Final Grid Services RFP. On May 31, 2019, the Companies filed a revised Proposed Shared Savings Mechanism for the Proposed Final Grid Services RFP, as well as comments in response to the Consumer Advocate's comments regarding the Companies' Proposed Shared Savings Mechanisms. Because the Companies do not have updates to the Shared Savings Mechanism for the Proposed Final Grid Service RFP filed on May 31, 2019 or the Companies' comments made in its May 31, 2019 filing, and only the comment below regarding the Shared Savings Mechanism for the Proposed Final Renewable RFP filed on April 1, 2019, at this time, those documents are not being re-filed here. With regards to the Shared Savings Mechanism for the Proposed Final Renewable RFP, the Companies note that the change in pricing evaluation to consider only a Lump Sum price without the benefit of State tax credits may result in an increase in the levelized price results. Therefore, the Companies propose that the pricing benchmark for such Shared Savings Mechanism be adjusted to account for a without State tax credit price.

#### **Regarding the RDG PPAs, ESPPA, and GSPA**

The Companies have been working diligently to further refine and clarify the Contracts. As noted in the Companies' transmittal letter, redline versions of the RDG PPAs and ESPPA which detail all revisions that were made from the initially filed model RDG PPAs and ESPPA, will be made available on the Companies' website. The largest change made with respect to the Contracts is that with the exception of the Performance Standards set forth in Exhibit B, Section 3 to the RDG PPAs and ESPPA, the exhibits to the GSPA, and certain terms of use for siting storage facilities at one of the Company-owned sites set forth in Attachment X to the ESPPA, the Contracts have been made fully negotiable. Proposals are being evaluated on how well they can meet the Performance Standards. Therefore, allowing such Performance Standards to be negotiated after selection would potentially fundamentally alter project selection. As the Companies need to maintain certain security and reliability measures, certain provisions regarding the terms of use of the ESPPA sites (as detailed above) have been made non-negotiable.

In addition to the above, changes to the Contracts include, but are not limited to, providing a State tax credit pass through provision, adding provisions related to the selected Proposer's responsibility to build the Company-Owned Interconnection Facilities, allowing for paired energy plus storage projects to provide contingency storage on Hawai'i Island, adding requirements for round trip efficiency ("RTE") of storage, developing a ESPPA for Hawai'i Island specific to contingency storage, and providing a metric to measure FFR. The RTE metric has been added to each of the RDG PPAs and ESPPAs. The intent of the RTE is to evaluate how much energy is lost between when a storage system is charged and when it is discharged. As the

Companies are not requiring Proposers to pay for energy delivered to the storage from the Companies' systems, the Companies need to be able to carefully monitor the RTE and ensure that the project is giving back the amount of energy taken from the grid based on the assumed RTE percentage. Proposers are able to specify their RTE percentage at the Point of Interconnection. The FFR metric was added to ensure the Companies are getting the main service being procured through contingency storage.

### **Mokoka'i and Lana'i**

The Companies continue to refine and develop the RFPs for Moloka'i and Lana'i. The Companies have scheduled community meetings for both islands during the month of July and intend to file draft requests for proposals for each island by August 2019 as set forth in Order 36356.

### **Conclusion**

The Companies look forward to continuing to work with the Commission, Consumer Advocate, IOs, and stakeholders to finalize the Proposed Final RFPs and embarking on the State's largest ever renewable energy procurement.