Exhibit A-3

Capacity Grid Service
Description and Requirements

1. Additional Definitions.
   A. Non-Event Days – Any day in which Participant Facility demand is not manipulated by a Grid Service Event.
   B. Similar Usage Days – Days that have the same usage characteristics, i.e., weekdays with other weekdays, non-holidays with other non-holidays, and Non-Event Days with other Non-Event Days.

2. Grid Service Description: Capacity Resources can be derived from generation resources, energy storage, or controlled load. Capacity for dispatchable generation is defined as the power (MW) rating of the unit. Capacity for variable generation is defined as the amount of capacity (MW) that can be assured in the next four (4) hours of the resource. Capacity of controlled load is defined as the minimum of load under control during the dispatch time window for Reduction Capacity, and maximum of load control during the dispatch time window for Build Capacity.

   A. Resource. A Resource enrolled by Supplier offering Capacity Service must have the following operating characteristics and technical capabilities:
      (1) Build: Provide Build service for a four (4) hour block during the system mid-day renewable generation peak, as specified under Section E. Availability Requirement, below.
      (2) Reduction: Provide Reduction service for a four (4) hour block during evening peaking periods, as specified under Section E. Availability Requirement, below.
      (3) Supplier must ensure that its control and monitoring or related SCADA equipment for its enrolled Resources are operational throughout the time period during which Capacity service is required to be provided. The polling rate of monitored equipment may not exceed the rate specified in Section 8.A. Communications and Control, below.
      (4) Hawai‘i Electric Light Company Specific Requirements
         1. Build: All resources must have the capability to increase load or reduce export for a minimum of 30 minutes to a maximum of 1 hour typically during transition periods surrounding day and evening peaks, may also occur at day minimum.
         2. Reduction: The Company requires that all resources must have the capability to reduce load or increase export typically during morning and evening ramping and peaking periods.
B. Resource Ramp Rate. Preceding a Capacity event, Supplier’s enrolled Resource must ramp to its forecasted capability at the ramp rate (increase and decrease in MW/minute) specified below. Immediately following a Capacity event, the Supplier’s Resource must return to its normal operating state at the ramp rate specified below.

(1) Hawaiian Electric Company Requirement:

1. The Resource must ramp to its forecasted Capability at a rate not to exceed ten percent (10%) of Supplier’s total forecasted capability per minute until an aggregate of 50 MW or more is enrolled in the Capacity grid service across all Supplier Resources. When 50 MW of Capacity is available, the Companies will assign a ramp rate to a Supplier’s resource such that the maximum ramp rate across all Supplier Resources does not exceed five (5) MW per minute.

2. The Resource must return to its normal operating state at a rate not to exceed ten percent (10%) of Supplier’s total forecasted capability per minute until an aggregate of 50 MW or more is enrolled in the Capacity grid service across all Supplier Resources. When 50 MW or more of Capacity is available, Company will assign a ramp rate to Supplier’s resource such that the maximum ramp rate across all Supplier Resources does not exceed five (5) MW per minute.

(2) Maui Electric Company Requirement:

1. The Resource must ramp to its forecasted Capability at a rate not to exceed ten percent (10%) of Supplier’s total forecasted capability per minute until an aggregate of 20 MW or more is enrolled in the Capacity grid service across all Supplier Resources. When 20 MW or more of Capacity is available, Company will assign a ramp rate to Supplier’s resource such that the maximum ramp rate across all Supplier Resources does not exceed two (2) MW per minute.

2. The Resource must return to its normal operating state at a rate not to exceed ten percent (10%) of Supplier’s forecasted capability per minute until an aggregate of 20 MW or more is enrolled in the Capacity grid service across all Supplier Resources. When 20 MW or more of Capacity is available, Company will assign a ramp rate to Supplier’s resource such that the maximum ramp rate across all Supplier Resources does not exceed two (2) MW per minute.

(3) Hawai‘i Electric Light Company Requirement:

1. Preceding and immediately following a Capacity event, the Supplier’s resource must meet its forecasted capability and return to its original state at a Ramp Rate (increase and decrease in MW/minute) of 2MW/minute.

C. Response Timeline: Supplier’s enrolled Resources must take action in response to a dispatch command sent by Company as specified below.

(1) Build: Company will dispatch a build command at least eight (8) hours, but no longer than 24 hours prior to the build event. Supplier’s Resource
portfolio shall ramp up to its Forecasted Build Capability in the thirty (30) minutes preceding the event at the Ramp Rate specified in Section 3.B Resource Ramp Rate, and must achieve the Capacity Capability provided in the Operational Forecast by the start of the build event. Following the Event, Supplier may return to its normal operating state in the thirty (30) minutes after the end of the build event at the Ramp Rate specified in Section 3.B Resource Ramp Rate, or after receiving a command from Company’s system operations department at the Ramp Rate specified in Section 3.B Resource Ramp Rate.

(2) Reduction: Company will dispatch a Reduction command at least ten (10) minutes but no longer than 24 hours prior to the Reduction event. Supplier’s Resource portfolio must meet its Forecasted Reduction Capability within two (2) minutes from the event start time. Following the Event, Supplier may return to its normal operating state in the thirty (30) minutes after the end of the build event at the Ramp Rate specified in Section 3.B Resource Ramp Rate, or after receiving a command from Company’s system operations department at the Ramp Rate specified in Section 3.B Resource Ramp Rate.

(3) Hawai‘i Electric Light Company Specific Requirements

1. Supplier Resources must respond to a dispatch command immediately upon receipt of the dispatch command sent by the Company.

D. Event Duration.

(1) Build: Supplier shall provide service for four (4) hours during specified timeframes.

(2) Reduction: Supplier shall provide service for up to four (4) hours for Reduction during specified timeframes. Event duration will be at the discretion of Company’s system operations department at the time of event trigger.

(3) Hawai‘i Electric Light Company Specific Requirements

1. Build: All resources must have the capability to increase load or reduce export for a minimum of 30 minutes to a maximum of 1 hour.

2. Reduction: All resources must have the capability to reduce load or increase export for a minimum of 30 minutes to a maximum of 1 hour.

E. Availability Requirement: Supplier’s Resource portfolio must be available to provide Capacity service for specified build and reduction periods. These periods should be reflected in the Supplier’s operational forecast.

(1) Build: 10:00AM – 2:00PM

(2) Reduction: 5:00PM – 9:00PM

(3) Hawai‘i Electric Light Company Specific Requirements

1. Build: 12:00AM – 4:00AM & 8:00AM – 5:00PM

2. Reduction: 6:00AM – 9:00AM & 4:00PM – 8:00PM
F. Periods of no Availability: If Supplier is temporarily unable to provide Capacity
service, Supplier shall update its Operational Forecast to identify the period(s)
during which Capacity service will be unavailable.

G. Non-export provision: Supplier shall not be allowed to export energy into the
Company System (i.e., no backfeed capability), unless otherwise permitted under
an interconnection agreement, permitted under DER participation requirement, or
supplemental screening and review for each specific Resource.

H. Operational Requirements: If there is an interruption due to a system contingency
event, for up to one (1) hour duration of interruption, Supplier’s Resources will be
allowed to provide Capacity (Load Build and Load Reduction) service after the
contingency event for the same amount of time as the interruption event beyond
the Build period specified in 3.E Availability Requirement.

4. Dispatch/Control Requirements.
   A. Trigger. Supplier shall receive a signal from the DERMS

5. Forecasting Requirements. Reserved.
   A. A separate forecast file will be required for Capacity Build and Capacity
      Reduction.
   B. Refer to Exhibit F (Operational Forecast), for information regarding forecasting
      requirements.

   A. Estimated Baseline Calculation. The Estimated Baseline calculation shall take the
      average demand of the ten (10) previous Similar Usage Days, using five (5)
      minute interval data for the same period as the Event. This establishes the
      average normal demand for the Participating Facility during the Event period
      based on the corresponding interval points from the previous ten (10) Similar
      Usage Days.

7. Performance Factor Calculation.
   A. The Performance Factor for each event will be the percentage of delivered
      capability compared to the forecasted capability.
   B. The data used for delivered capability and forecasted capability for the purpose of
      establishing the performance factor will be averaged over one hour.
   C. The ramp-in and ramp-out periods of any event will not affect the Performance
      Factor calculation of the event.
   D. Performance Factor Calculation:

      \[ PF_e = \frac{\sum_{i=1}^{n} \left( 1 - \left| 1 - \frac{D_{interval_i}}{F_{interval_i}} \right| \right)^2}{n} \]

     - \( PF_e \) = Performance Factor during Build/Reduction period
     - \( D_{interval_i} \) = Delivered capability (kW) during interval \( i \)
     - \( F_{interval_i} \) = Forecasted capability (kW) for time of interval \( i \)
     - \( i = 1 \) hour interval
     - \( n = \) number of 1 hour intervals in an event

8. Communications and Control. Reserved
A. Protocol/Specification. Supplier GSDS shall use OpenADR 2.0b to communicate with the DERMS. One OpenADR 2.0b certified Virtual End Node (VEN) will be required for Capacity Build communications and control and Capacity Reduction communications and control. Data and Signal requirements apply to each VEN.

B. Data. Capability in kW shall be made available for polling by the DERMS every five (5) minutes using the OpenADR 2.0b Data Reports TELEMETRY USAGE. Company may require the TELEMETRY STATUS report. During a GS Event, TELEMETRY USAGE shall reflect Capability.

C. Signal. Signal may be a direct control signal activating Capacity Grid Services or may be a request to reserve Capacity Grid Services. Specific OpenADR signal level will depend on the finalization of the design and implementation of the DERMS.

   A. Annual Testing. Refer to Exhibit I (GSDS Service Level Agreement), for information regarding testing requirements.

10. Maximum events called per year:

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In the event that Supplier’s Contract Start Date does not allow participation for a full calendar year, the maximum events called per year for affected year(s) may be prorated based on Contract Start Date, at the discretion of Company.