

**AMENDMENT NO. 2
TO
POWER PURCHASE AGREEMENT**

THIS AMENDMENT NO. 2 TO POWER PURCHASE AGREEMENT, dated as of this ___ day of _____, 2024 (this “**Amendment**”), is being entered into by and among the SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY, a public entity and joint powers authority formed and organized pursuant to the California Joint Exercise of Powers Act (California Government Code Section 6500, et seq.) (“**Buyer**”), and 69SV 8me LLC, a limited liability company organized and existing under the laws of the State of Delaware (“**Seller**”). Each Buyer and Seller is referred to individually in this Amendment as a “**Party**” and together as the “**Parties**.” Capitalized terms used but not defined herein shall have the meanings set forth in the Amended and Restated Power Purchase Agreement by and among the Parties, dated as of July 21, 2020, as amended from time to time in accordance with its terms (the “**Agreement**”).

RECITAL

WHEREAS, the Parties wish to amend the provisions of the Agreement with respect to the matters set forth in this Amendment in order to correct certain mathematical and computational errors.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing Recital, which is incorporated herein, the mutual covenants and agreements herein set forth, and other good and valuable consideration, the sufficiency of which is hereby acknowledged, the Parties agree as follows:

**ARTICLE I
AMENDMENTS**

Section 1.1 Section 1.1 to the Agreement shall be amended to delete the following defined terms: “Actual RTE Recovery Factor”; “Frequency Response Power”; “Recovery Ramp Rate”; “Response Period”; and “Rolling Average Period”.

Section 1.2 Section 11.1(b)(xxi) to the Agreement shall be amended and restated in its entirety as follows:

(xxi) The amount of the RTE Underperformance Deduct, if any.

Section 1.3 Section 5 of Appendix S to the Agreement shall be amended and restated in its entirety as follows:

5. Control Modes

The general purpose of the BESS is to provide the BESS Products, which consist of different control modes listed and outlined in the following Table 1 of this Appendix S (“**Control Modes**”). Control Modes consist of settable functional parameters that trigger responses that the BESS can

provide. The operation of any Control Mode or simultaneous Control Modes are subject to the BESS Operating Limitations, Control Mode setpoints and priorities as specified and scheduled by the Buyer, and the BESS conditions (e.g., state-of-charge, temperature, etc.) at the time of operation of such Control Mode(s). Buyer shall have the ability to provide Control Mode set points for charge and discharge of the BESS as well as the ability to set specific MW charge/discharge values and priorities, subject to those limitations and conditions.

Table 1

The following Control Modes are from the MESA-ESS Specification, and reference should be made to either the MESA-ESS Specification or IEC 61850-90-7, (or the applicable IEC 61850-90-7 replacement), or standard mutually agreed upon by the Buyer and Seller for further details with respect to each Control Mode.

Control Mode Category	Control Mode
Emergency Modes	1. Voltage Ride-Through
	2. Frequency Ride-Through
	3. Dynamic Reactive Current
	4. Dynamic Volt-Watt
	5. Frequency-Watt (implement NERC Inverter-Based Resource Performance Guideline) ¹
Active Power Modes	6. Charge-Discharge Storage
	7. Coordinated Charge-Discharge
	8. Active Power Limit
	9. Active Power Response (configurable as Peak Power Limiting, Load Following, or Generation Following modes)
	10. Automatic Generation Control
	11. Active Power Smoothing
	12. Volt-Watt
	13. Frequency-Watt Curve
	14. Pricing Signal
Reactive Power Modes	15. Fixed Power Factor
	16. Volt-VAR Control
	17. Watt-VAR
	18. Power Factor Correction

The Parties acknowledge their understanding that the functionality set forth in Tables 2-6 below are covered in the various DNP 3.0 Control Modes in Table 1 above and will be implemented by such Control Modes. Setpoints to some Control Modes are included below to establish a common understanding of expected operations but Buyer shall have the right to direct changes to these setpoints at any time during the Agreement Term. In addition to the MESA Control Modes, the Parties agree that

¹ A frequency function/set point is needed to facilitate LADWP's compliance to NERC Reliability Standard BAL-003-1.1, requirement R1 or its successor. That would be a temporary MW output or input triggered by a configured change in frequency.

the BESS shall implement the Frequency Watt Curve as described below in Table 2 and shall not implement a “Frequency Rate of Change Response.”

Table 2 – AUTONOMOUS FUNCTIONS

AUTONOMOUS FUNCTIONS
<p><i>Certain functions shall be available to be simultaneously armed and actively operated. Initial priorities of such functionality shall be further specified by BESS Administrative Matters Protocol and further specified and prioritized through BESS Instructions.</i></p>
Frequency Watt Curve
<p>Monitor grid frequency on the BESS side of the Point of Delivery. Continuously compute rate of frequency change.</p>
<p>The BESS plant controller shall alternately have setpoints for positive or negative rate of change of frequency below or above which the BESS will respond.</p> <p>The Frequency-Watt Curve shall allow for a two-level response characteristic. The first level will activate when the frequency moves past a dead-band and will respond at some specified droop percent or MW/Hz. Then, at some higher frequency excursion, the first level characteristic would shut off and the response would follow a different droop percent or MW/Hz.</p> <p>The following is an example (Actual frequency and droop numbers to be programmable by LADWP): Level one activates at +/- 0.036 Hz and responds at a 5% droop. Level two activates at +/- 0.072 Hz and responds at a 2.5% droop.</p>
<p>The graph illustrates the Frequency-Watt Curve. The horizontal axis represents Frequency, and the vertical axis represents power. The curve shows a two-level response characteristic. For frequency excursions below -0.072 Hz and above +0.072 Hz, the response follows a 2.5% droop. Between -0.072 Hz and +0.072 Hz, the response is flat, labeled as a Deadband +/- 0.036 Hz. Within this deadband, a smaller flat region is indicated for a 5% droop.</p>

Response time to the event shall comply with Table 2.1 in the NERC Inverter-Based Resource Performance Guideline.

Table 2.1: Dynamic Active Power-Frequency Performance

Parameter	Description	Performance Target
For a step change in frequency at the POM of the inverter-based resource...		
Reaction Time	Time between the step change in frequency and the time when the resource active power output begins responding to the change ³¹	< 500 ms
Rise Time	Time in which the resource has reached 90 percent of the new steady-state (target) active power output command	< 4 seconds
Settling Time	Time in which the resource has entered into, and remains within, the settling band of the new steady-state active power output command	< 10 seconds
Overshoot	Percentage of rated active power output that the resource can exceed while reaching the settling band	< 5 percent**
Settling Band	Percentage of rated active power output that the resource should settle to within the settling time	< 2.5 percent**

** Percentage based on final (expected) settling value

Dynamic Reactive Current Support Mode Requirements

Monitor voltage at Point of Delivery

Default hold time (HoldTmms) for Dynamic Reactive Current Support Mode after voltage returns to inside the deadband is five (5) seconds.

Default to Frequency Response and Frequency-Watt Curve are higher priority than Dynamic Reactive Current Support.

Ability to respond in a minimum of 1-3 Cycles from detecting and to provide reactive power in response to Point of Delivery voltage falling below 0.8 pu.

Reactive Power Control Modes Requirements

Monitor voltage on BESS side at Point of Delivery.

While voltage remains between 1.1 and 0.8 pu respond to deviations in voltage outside a defined deadband with proportional reactive power.

Ramp rate (MVAR / Sec) for adjustment of reactive power.

Scheduled (day/night) fixed power factor setting for reactive power support.

<u>State of Charge Management (Coordinate Charge/Discharge Control Mode) Requirements</u>
Monitor BESS SOC and provide a mechanism to regulate SOC, principally to recover SOC after discharge events (both manual and automatic).

Table 3 – EXTERNAL OVERRIDE CONTROLS

Provide functionality to trigger manual discharge, using the following parameters:
Continuous discharge power
Operator set point discharge time
Operator set point “On” ramp rate (MW / min or immediate)
Operator set point “Off” ramp rate (MW / min or immediate)
Reactive power set point (MVAR)
Reactive power set point timer (Hours)
Power factor set point
In addition to the MESA-ESS specification of Charge/Discharge Storage Control Mode, provide the following functionality when the BESS is in Charge/Discharge Control Mode:
10 seconds maximum response time after receiving external command to execute manual discharge or apply reactive power
If present conditions do not permit requested discharge (e.g., SOC is too low), BESS shall report the maximally conforming parameters which are available over DNP 3.0.
During manual discharge or manual reactive control, BESS shall indicate which, if any, autonomous functions are disabled or degraded.
After manual discharge cycle is complete, BESS shall resume autonomous functions including automatic SOC management.

Table 4 – CONNECTION AND DISCONNECTION FROM LADWP GRID

CONNECTION AND DISCONNECTION FROM LADWP GRID
While voltage and frequency remain within the specified voltage and frequency windows, the BESS shall remain connected to the LADWP grid unless instructed otherwise by disconnection signal or otherwise unavailable. System will stay connected and operational pursuant of <u>Section 9.5</u> (Guaranteed Availability) of the Agreement.
Provide function for commanded disconnection from LADWP grid both remotely and via local HMI. This is to be used for routine disconnection when sufficient warning is available to permit normal standard disconnect procedures by the BESS.
Provide functionality to accept an emergency disconnect input in the form of a dry contact. If instructed to open the BESS must immediately cease operation.
Startup and connection time from an “Off” or “Disconnected” state to “Connected and Idle” shall be no more than 300 seconds if the battery and inverter thermal management loads are energized and the inverters are not set to “Sleep Mode”. If the BESS is “Disconnected” but the main breaker is still closed, the BESS shall provide Buyer a timeout setpoint that causes the BESS to transition to a “Disconnected” state with the breaker closed but the inverters set to “Sleep Mode” after a Buyer setpoint number of minutes. The time to return from “Disconnected” and “Sleep Mode” to “Connected and Idle” shall be no more than 600 seconds if the BESS main breaker is closed and thermal management loads are energized. If a “Disconnected” or “Off” state opens the BESS main breaker, which removes battery and inverter thermal management power, then startup and connection time will be dependent on local temperature conditions and may exceed 600 seconds. The BESS shall report estimated time to “Connected and Generating” at all times. Inverters in “Sleep Mode” represents state where inverters are not switching and not synchronized to the grid.
4 seconds maximum time for BESS Point of Delivery disconnection after receiving emergency stop signal.
Behavior of BESS while the control systems are powered by a UPS, or an alternative auxiliary power supply, when the mains power line is shorted or opened shall be to disconnect until normal operations are restored.
Behavior of BESS when the mains power returns while the control systems are still powered by the UPS or an alternative power source shall be to reconnect as directed by Buyer.
The BESS shall have a microprocessor-based relay protection system (such as SEL 351) with CTs and PTs to detect overcurrents and to disconnect the AC breaker.

Table 5 – REMOTE MONITORING AND CONTROL

REMOTE MONITORING AND CONTROL Requirements
1 second sampling time for BESS-LADWP communication mechanism for data transfer during faults/triggered actions.
Connection to external communications systems via one console for LADWP EMS and one console for local control
Heartbeat timer to ensure communication path is online and processor is functioning
<u>Minimum available metrics via both data transfer and operator control updated by event driven data or buffers.</u>
Current operational status

REMOTE MONITORING AND CONTROL Requirements
Total real power (MW)
Total reactive power (MVAR)
Total complex power (MVA)
SOC (expressed as percent) SOC = State of Energy / Actual BESS Energy Amount (MWh)
State of Energy (Expressed as MWh of real power (alternating current)) State of Energy = MWh ready to discharge (under real time conditions)
Current power capabilities in all quadrants
Voltage and frequency as measured at Point of Delivery
Operation mode
Fault codes / description
Contractor to supply points list and sampling frequency
2 seconds maximum response time for implementing changes to set points

Table 6 – PERFORMANCE VALIDATION

PERFORMANCE VALIDATION
BESS SCADA must compute and deliver in accordance with Section 7.3 and store in accordance with Section 11.5 of the Agreement. Buyer and Seller shall agree on form of monthly performance report.
Audit data must be accessible via an onsite HMI. Seller may select appropriate methods to supply this function.
Audit data must be accessible to LADWP's emergency management system. Seller may recommend appropriate methods to supply this function.

Section 1.4 Section 6 of Appendix U to the Agreement shall be amended and restated in its entirety as follows:

6. RTE Performance Test.

The “*RTE Performance Test*” shall calculate the Actual Round-Trip Efficiency, where:

“*Actual Round Trip Efficiency*” = 100% * (Total Dischargeable Energy/Total Chargeable Energy), terms which are calculated as described in the BESS Performance Test(s) in this Appendix U.

Following the Commercial Operation Date, if the results of an RTE Performance Test demonstrate that the Actual Round Trip Efficiency is less than the Guaranteed Round Trip Efficiency, then, until such time as a subsequent RTE Performance Test is performed that demonstrates that the

Actual Round Trip Efficiency is equal to or greater than the Guaranteed Round Trip Efficiency, Seller shall incur an “**RTE Underperformance Deduct**”, which shall be calculated as follows:

$$\text{RTE Underperformance Deduct} = \text{MWhLOST} * \text{Full Contract Price}$$

Where,

MWhLOST = (Guaranteed Round Trip Efficiency - Actual Round Trip Efficiency) * (the sum of the Charging Energy (measured in MWhs) for each day of underperformance starting from the day following a RTE Performance Test where the Actual Round Trip Efficiency is less than the Guaranteed Round Trip Efficiency and ending on the day following a subsequent RTE Performance Test where the Actual Round Trip Efficiency is equal to or greater than the Guaranteed Round Trip Efficiency)

The RTE Underperformance Deduct shall be applied in the manner set forth in Appendix A.

For example:

If, during a BESS Performance Test:

Total Dischargeable Energy = 400 MWh

Total Chargeable Energy = 500 MWh

Then,

Actual Round Trip Efficiency = 80%

And,

Guaranteed Round Trip Efficiency = 85%

∑ Charging Energy for each day of the month during the period of underperformance = 10,000 MWh

Full Contract Price = \$50.20/MWh²

Then,

MWhLOST = (85% - 80%) * 10,000 = 500MWh

And,

RTE Underperformance Deduct = 500 * 50.20 = \$25,100

ARTICLE II

² The use of a Full Contract Price of \$50.20/MWh is contingent on approval and execution of Amendment 1 to the Agreement.

MISCELLANEOUS

Section 2.1 Representation and Warranty. Each Party represents and warrants that as of the date of execution by such Party, it is authorized to enter into this Amendment, that this Amendment does not conflict with any contract, lease, instrument, or other obligation to which it is a party or by which it is bound, which conflict could reasonably be expected to have a material adverse effect on the ability of such party to perform its obligations hereunder, and this Amendment represents its valid and binding obligation, enforceable against it in accordance with its terms.

Section 2.2 Incorporations by Reference. Section 14.3, Section 14.4, and Sections 14.7 through 14.16 of the Agreement are incorporated by reference into this Amendment, *mutatis mutandis*.

Section 2.3 No Other Amendments. Except as specifically provided in this Amendment, no amendments, revisions or changes are made or have been made to the Agreement. All other terms and conditions of the Agreement remain in full force and effect.

Section 2.4 Effective Date. This Amendment shall become effective on the date (the “*Amendment Effective Date*”) that it is duly executed and delivered by all Parties.

[Signature page follows]

IN WITNESS WHEREOF, the Parties hereto have executed this Amendment as of Amendment Effective Date.

BUYER:

SOUTHERN CALIFORNIA PUBLIC
POWER AUTHORITY

By: _____

Its: _____

Date: _____

SELLER:

69SV 8ME LLC

By: _____

Its: _____

Date: _____

By: _____

Its: _____

Date: _____