

**WESTERN SYSTEMS POWER POOL AGREEMENT  
TRANSACTION CONFIRMATION  
BETWEEN  
NORTHERN CALIFORNIA POWER AGENCY  
AND  
GEYSERS POWER COMPANY, LLC**

This transaction confirmation ("**Confirmation**") sets forth the terms and conditions of the transaction between Northern California Power Agency, a public joint powers entity organized under the Joint Exercise of Powers Act (California Government Code Section 6500 *et seq.*) ("**Buyer**" or "**Purchaser**") and Geysers Power Company, LLC., a Delaware limited partnership ("**Seller**"), each individually a "**Party**" and together the "**Parties**", dated as of [\_\_\_\_\_] (the "**Confirmation Effective Date**"), in which Seller agrees to provide to Buyer the Product, as such term is defined in Article 3 of this Confirmation (the "**Transaction**"). This Transaction is governed by the Western Systems Power Pool ("**WSPP**") Agreement (Effective Version: August 12, 2021) (the "**Master Agreement**"). The Master Agreement and this Confirmation are collectively referred to herein as the "**Agreement**". Capitalized terms used but not otherwise defined in this Confirmation are defined in the Master Agreement or the Tariff (as defined herein). To the extent that this Confirmation is inconsistent with any provision of the Master Agreement, this Confirmation shall control and shall govern the rights and obligations of the Parties in connection with this Transaction. Except as otherwise specified, references to an "**Article**" or a "**Section**" mean an Article or Section of this Confirmation, as applicable.

**ARTICLE 1  
DEFINITIONS**

- 1.1 "**Agreement**" has the meaning specified in the introductory paragraph hereof.
- 1.2 "**Alternate Capacity**" is defined in Section 4.5.
- 1.3 "**Applicable Laws**" means any law, rule, regulation, order, decision, judgment, or other legal or regulatory determination by any Governmental Body having jurisdiction over one or both Parties or this Transaction, including without limitation, the Tariff.
- 1.4 "**Availability Incentive Payments**" is defined in the Tariff.
- 1.5 "**Availability Standards**" is defined in the Tariff.
- 1.6 "**Buyer**" is defined in the introductory paragraph hereof.
- 1.7 "**CAISO**" means the California Independent System Operator Corporation or its successor.
- 1.8 "**Capacity Replacement Price**" means (a) the price actually paid for any Replacement Capacity purchased by Buyer pursuant to Section 4.7 hereof, plus costs reasonably incurred by Buyer in purchasing such Replacement Capacity, or (b) absent a purchase of any Replacement Capacity, the market price for such Designated RA Capacity not provided at the Delivery Point. The Buyer shall determine such market prices in a commercially reasonable manner. For purposes of Section Four of the Master Agreement, "Capacity Replacement Price" shall be deemed to be the "Replacement Price."
- 1.9 "**CIRA Tool**" means the CAISO Customer Interface for Resource Adequacy application, or its successor platform.
- 1.10 "**Compliance Showing**" means the applicable LSE compliance with the RAR, FCR and LAR of its applicable regulatory authority for an applicable Showing Month.
- 1.11 "**Confirmation**" is defined in the introductory paragraph hereof.
- 1.12 "**Confirmation Effective Date**" is defined in the introductory paragraph hereof.
- 1.13 "**Contingent Firm RA Product**" is defined in Section 3.4.
- 1.14 "**Contract Price**" means, for any Monthly Delivery Period, the price specified under the RA Capacity Price Table in Section 4.9.

- 1.15 **"Contract Quantity"** means, with respect to any particular Showing Month of the Delivery Period, the amount of Product (in MWs) set forth in the table in Appendix B which Seller has agreed to provide to Buyer from the Unit(s) for such Showing Month (as such amount may be adjusted pursuant to Section 4.4).
- 1.16 **"Control Area"** is defined in the Tariff.
- 1.17 **"CAISO Controlled Grid"** is defined in the Tariff.
- 1.18 **"CPUC Decisions"** means CPUC Decisions 04-01-050, 04-10-035, 05-10-042, 06-06-064, 06-07-031, 07-06-029, 08-06-031, 09-06-028, 10-06-036, 11-06-022, 12-06-025, 13-06-024, 14-06-050, 15-06-063, 16-06-045, 17-06-027, 18-06-030, 18-06-031, 19-02-022, 19-06-026, 20-06-002, 20-06-028, D.20-06-031, D.20-12-006, D.21-06-035, and any other existing or subsequent decisions related to resource adequacy issued from time to time by the CPUC, as amended from time to time.
- 1.19 **"CPUC Filing Guide"** means the annual document issued by the CPUC which sets forth the guidelines, requirements and instructions for LSEs to demonstrate compliance with the CPUC's resource adequacy program.
- 1.20 **"Delivery Period"** is defined in Section 4.1.
- 1.21 **"Delivery Point"** is defined in Section 4.2.
- 1.22 **"Designated RA Capacity"** shall be equal to, with respect to any particular Showing Month of the Delivery Period, the Contract Quantity of Product for such Showing Month including the amount of Contract Quantity that Seller has elected to provide Alternate Capacity, minus any reductions to Contract Quantity specified in Section 4.4 with respect to which Seller has not elected to provide Alternate Capacity.
- 1.23 **"Effective Flexible Capacity"** or **"EFC"** means the FCR Attributes of a resource that can be counted towards an LSE's FCR, as identified from time to time by the Tariff, the CPUC Decisions, LRA, or other Governmental Body having jurisdiction. To the extent the CPUC Decisions, CAISO, LRA or other Governmental Body having jurisdiction creates a new category or classification of FCR Attributes during the term of this Transaction, and a Unit can count toward such new categories or classifications of FCR Attributes while operating consistent with the operational limitations and physical characteristics of such Unit, any and all such new categories or classifications of FCR Attributes shall be deemed to be part of the EFC and FCR Attributes of a Unit for the purpose of this Agreement. The above notwithstanding, to the extent the CPUC Decisions, CAISO, LRA or other Governmental Body having jurisdiction reduces the applicable EFC of a Unit, the EFC of a Unit may be reduced pursuant to Section 4.4 of this Confirmation.
- 1.24 **"Emission Performance Standard"** or **"EPS"** means the requirement set-forth in California Code of Regulations (CCR) Title 20, Chapter 11, Article 1. Section 2900 et seq.
- 1.25 **"FCR Attributes"** means, with respect to a Unit, any and all flexible resource adequacy attributes, consistent with the operational limitations and physical characteristics of such Unit, that can be counted toward an LSE's FCR, as may be identified at any time during the Delivery Period that can be counted toward an LSE's FCR, exclusive of any RAR Attributes and LAR Attributes.
- 1.26 **"FCR Showings"** means the FCR Compliance Showings (or similar or successor showings) an LSE is required to make to the CPUC (and, to the extent authorized by the CPUC, to the CAISO) pursuant to the CPUC Decisions and the Tariff, or to an LRA having jurisdiction over the LSE (and, to the extent authorized by the LRA, to the CAISO) pursuant to the Tariff.
- 1.27 **"Firm RA Product"** is defined in the Section 3.3.
- 1.28 **"Flexible Capacity Requirements"** or **"FCR"** means the flexible capacity requirements established for LSEs by the CPUC pursuant to the CPUC Decisions, or by an LRA or other Governmental Body having jurisdiction.
- 1.29 **"Flexible RA Product"** is defined in the Section 3.2.
- 1.30 **"Force Majeure"** has the same meaning as "Uncontrollable Forces" under the Master Agreement.

- 1.31 **"Governmental Body"** means (i) any federal, state, local, municipal or other government; (ii) any governmental, regulatory or administrative agency, commission or other authority lawfully exercising or entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power; and (iii) any court or governmental tribunal.
- 1.32 **"Investment Grade Rating"** means a rating of BBB- or better from S&P, Fitch or Kroll, or a rating of Baa3 or better from Moody's.
- 1.33 **"Local Area Requirements"** or **"LAR"** means local area reliability, including any program of localized resource adequacy requirements established for an LSE by the CPUC Decisions, CAISO, LRA, or other Governmental Body having jurisdiction. LAR may also be known as local resource adequacy, local RAR, "PG&E Other", "Greater Bay Area RA", or local capacity requirements in other regulatory proceedings or legislative actions.
- 1.34 **"LAR Attributes"** means, with respect to a Unit, any and all RA Capacity and other resource adequacy attributes (or other locational attributes related to system reliability), consistent with the operational limitations and physical characteristics of a Unit, as they are identified as of the Confirmation Effective Date by the CPUC Decisions, CAISO, LRA, or other Governmental Body having jurisdiction, associated with the physical location or point of electrical interconnection of the Unit within the CAISO Control Area, that can be counted toward an LSE's LAR, but exclusive of any RAR Attributes which are not associated with where in the CAISO Control Area the Unit is physically located or electrically interconnected. To the extent the CPUC Decisions, CAISO, LRA or other Governmental Body having jurisdiction creates a new category or classification of LAR Attributes during the term of this Transaction, and a Unit can count toward such new categories or classifications of LAR Attributes while operating consistent with the operational limitations and physical characteristics of such unit, including where the Unit is physically located or electrically interconnected, any and all such new categories or classifications of LAR Attributes shall be deemed to be part of the LAR Attributes of a Unit for the purpose of this Agreement. If the CPUC Decisions, CAISO, LRA or other Governmental Body having jurisdiction redefines LAR whereby a Unit no longer counts toward an LSE's LAR due to where the Unit is physically located or electrically interconnected, then such change will not change the obligations of payments hereunder.
- 1.35 **"LAR Showings"** means the LAR Compliance Showings (or similar or successor showings) an LSE is required to make to the CPUC (and, to the extent authorized by the CPUC, to the CAISO) pursuant to the CPUC Decisions and the Tariff, or to an LRA having jurisdiction over the LSE (and, to the extent authorized by the LRA, to the CAISO) pursuant to the Tariff.
- 1.36 **"LRA"** is defined in the Tariff.
- 1.37 **"LSE"** is defined in the Tariff.
- 1.38 **"Master Agreement"** is defined in the introductory paragraph hereof.
- 1.39 **"Monthly Delivery Period"** means each calendar month during the Delivery Period and shall correspond to each Showing Month.
- 1.40 **"Monthly RA Capacity Payment"** is defined in Section 4.9.
- 1.41 **"Net Qualifying Capacity"** or **"NQC"** is defined in the Tariff, and is inclusive of RAR Attributes and, if applicable, LAR Attributes, if LAR Attributes is specified in Section 3.1.
- 1.42 **"Non-Availability Charge"** is defined in the Tariff.
- 1.43 **"Notification Deadline"** in respect to a Showing Month shall be ten (10) Business Days before the relevant Compliance Showing deadlines for the corresponding RAR Showings, LAR Showings, and FCR Showings for such Showing Month.
- 1.44 **"Outage"** means disconnection, separation, or reduction in the capacity of any Unit that relieves such Unit from all or part of the offer obligations of the Unit consistent with the Tariff. Outage includes Planned Outage.
- 1.45 **"Participating Member"** means a member of Buyer that is signatory to the Third Phase Agreement.

- 1.46 **"Party"** and **"Parties"** have the meanings specified in the introductory paragraph hereof.
- 1.47 **"Planned Outage"** means, subject to and as further described in the CPUC Decisions and the Tariff, an "Approved Maintenance Outage" under the Tariff, a CAISO-approved planned or scheduled disconnection, separation or reduction in capacity of the Unit that is conducted for the purposes of carrying out routine repair or maintenance of such Unit.
- 1.48 **"Product"** is defined in Article 3.
- 1.49 **"RA Capacity"** means the qualifying and deliverable capacity of a Unit for RAR, LAR, and FCR purposes for the Delivery Period, as determined by the CAISO, LRA or other Governmental Body authorized to make such determination under Applicable Laws. RA Capacity encompasses the RAR Attributes, LAR Attributes and FCR Attributes of the capacity provided by a Unit, as applicable pursuant to this Confirmation.
- 1.50 **"RA Capacity Price"** means the price specified in the RA Capacity Price Table in Section 4.9 hereof.
- 1.51 **"RAR"** means the resource adequacy requirements, exclusive of LAR and FCR, established for LSEs by the CPUC pursuant to the CPUC Decisions, or by an LRA or other Governmental Body having jurisdiction.
- 1.52 **"RAR Attributes"** means, with respect to a Unit, any and all RA Capacity and other resource adequacy attributes consistent with the operational limitations and physical characteristics of such Unit, exclusive of any LAR Attributes and FCR Attributes. To the extent the CPUC Decisions, CAISO, LRA or other Governmental Body having jurisdiction creates a new category or classification of RAR Attributes during the term of this Transaction, and a Unit can count toward such new category or classification of RA Attributes while operating consistent with the operational and physical characteristics of such Unit, any and all such new categories or classifications of RA Attributes shall be deemed to be part of the RAR Attributes of a Unit for the purpose of this Agreement. The above notwithstanding, to the extent the CPUC Decisions, CAISO, LRA or other Governmental Body having jurisdiction reduces the applicable NQC of a Unit, the NQC of a Unit may be reduced pursuant to Section 4.4 of this Confirmation.
- 1.53 **"RAR Showings"** means the RAR Compliance Showings (or similar or successor showings) an LSE is required to make to the CPUC (and, to the extent authorized by the CPUC, to the CAISO), pursuant to the CPUC Decisions and the Tariff, or to an LRA having jurisdiction over the LSE (and, to the extent authorized by the LRA, to the CAISO) pursuant to the Tariff.
- 1.54 **"Replacement Capacity"** is defined in Section 4.7.
- 1.55 **"Replacement Unit"** is defined in Section 4.5.
- 1.56 **"Resource Category"** shall be as described in the CPUC Filing Guide, as such may be modified, amended, supplemented or updated from time to time.
- 1.57 **"Resource Adequacy Plan"** is defined in the Tariff.
- 1.58 **"RPS Agreement"** is defined in Article 6.
- 1.59 **"Scheduling Coordinator"** or **"SC"** is defined in the Tariff.
- 1.60 **"Seller"** is defined in the introductory paragraph hereof.
- 1.61 **"Showing Month"** shall be the calendar month during the Delivery Period that is the subject of the RAR Showing, LAR Showing, and/or FCR Showing, as applicable, as set forth in the CPUC Decisions or the Tariff. For illustrative purposes only, pursuant to the CPUC Decisions and the Tariff in effect as of the Confirmation Effective Date, the monthly RAR Showing made in June is for the Showing Month of August.
- 1.62 **"Subsequent Buyer"** means the purchaser of Product from Buyer in a re-sale of Product by Buyer.
- 1.63 **"Supply Plan"** means the annual and monthly supply plans, or similar or successor filings, that each Scheduling Coordinator representing RA Capacity submits to the CAISO, LRA, or other

Governmental Body, pursuant to Applicable Laws and the Tariff, in order for that RA Capacity to count for its RAR Attributes, LAR Attributes, and/or FCR Attributes.

- 1.64 **"CAISO Tariff"** or **"Tariff"** means the tariff and protocol provisions of the CAISO, including the rules, protocols, procedures and standards attached thereto, as it may be amended, modified, supplemented or replaced (in whole or in part) from time to time.
- 1.65 **"Third Phase Agreement"** means the agreement between Buyer and the Participating Members that sets forth the terms and conditions under which Buyer is authorized to enter into this Agreement on behalf of the Participating Members.
- 1.66 **"Transaction"** is defined in the introductory paragraph hereof.
- 1.67 **"Unit"** or **"Units"** means a resource from which Product will be provided by Seller to Buyer, including any Replacement Unit.
- 1.68 **"Unit EFC"** means the Effective Flexible Capacity set by the CAISO for the applicable Unit.
- 1.69 **"Unit NQC"** means the Net Qualifying Capacity set by the CAISO for the applicable Unit.

## **ARTICLE 2 DESIGNATED UNIT(S)**

### **2.1 Seller to Annually Designate Unit(s)**

- (a) On an annual basis during the Delivery Period of this Transaction, Seller shall designate the Unit(s) from which Product will be provided from Seller to Buyer for each Showing Month of the following calendar year, by providing written notice to Buyer with the specific Unit(s) information contained in Appendix A-1, and the Contract Quantity that will be supplied from specific Unit(s) listed in Appendix A-2, by no later than the earlier of (i) October 1, or (ii) thirty (30) calendar days before the annual deadline for the year-ahead Compliance Showing.
- (b) The Unit(s) designated by Seller shall meet the Product characteristics and Contract Quantity specified in Article 3, Article 4, the Resource Category requirements set forth in Section 2.1(c), and as described in Appendix A.
- (c) The Unit(s) designated by Seller shall (i) qualify as a Maximum Cumulative Capacity (**"MCC"**) Resource Category 4 resource, and (ii) be able to Bid, run and operate in all hours of the month on a 7x24 basis (planned availability is unrestricted).
- (d) Nothing in this Section 2.1 shall be construed to limit the applicability of Sections 4.4 (Adjustment to Contract Quantity) or 4.5 (Alternate Capacity) of this Confirmation.
- (e) Seller designation of the Unit(s) each year shall not in any way (i) convert the Contingent Firm RA Product being sold under this Confirmation into Firm RA Product, or (ii) cause any change to the Monthly RA Capacity Payment.

## **ARTICLE 3 RESOURCE ADEQUACY CAPACITY PRODUCT**

During the Delivery Period, Seller shall provide to Buyer, pursuant to the terms of this Confirmation, RA Capacity as Designated RA Capacity in the amount of the Contract Quantity of (i) RAR Attributes and, if applicable, LAR Attributes if LAR Attributes is specified in Section 3.1, and (ii) FCR Attributes, if Flexible RA Product is specified in Section 3.2, and the Contract Quantity shall be either a Firm RA Product or a Contingent Firm RA Product, as specified in either Section 3.3 or Section 3.4 (the **"Product"**). The Product

does not confer to Buyer any right to the electrical output from a Unit, other than the right to include the Designated RA Capacity associated with the Contract Quantity in RAR Showings, LAR Showings, and FCR Showings, as applicable, and any other capacity or resource adequacy requirements, markets or proceedings as specified in this Confirmation. Specifically, no energy or ancillary services associated with any Unit is required to be made available to Buyer as part of this Transaction, and Buyer shall not be responsible for compensating Seller for Seller's commitments of a Unit to the CAISO required by this Confirmation. Seller retains the right to sell pursuant to the Tariff any RA Capacity from a Unit that is in excess of that Unit's Contract Quantity and any RAR Attributes, LAR Attributes or FCR Attributes not otherwise transferred, conveyed, or sold from Seller to Buyer under this Confirmation. Unless otherwise set forth herein, Seller shall also retain any and all revenues received from the CAISO with respect to the Transaction contemplated by this Confirmation.

### **3.1 RAR and LAR Attributes**

Seller shall provide Buyer with the Designated RA Capacity of RAR Attributes and, if applicable, LAR Attributes, if LAR Attributes is specified in Section 3.1, from each Unit, as measured in MWs, in accordance with the terms and conditions of this Agreement:

☒ LAR Attributes Included

If selected, LAR Attributes to be provided from Local Capacity Area: North Coast / North Bay

☐ LAR Attributes Not Included

### **3.2 ☐ Flexible RA Product**

Seller shall provide Buyer with Designated RA Capacity of FCR Attributes from the Unit(s) in an amount calculated for each Monthly Delivery Period as follows: (Contract Quantity / Unit NQC) x Unit EFC.

### **3.3 ☐ Firm RA Product**

Seller shall provide Buyer with Designated RA Capacity from the Unit(s) in the amount of the Contract Quantity. If the Unit(s) are not available to provide the full amount of the Contract Quantity for any reason other than Force Majeure, including without limitation any Outage or any adjustment of the RA Capacity of any Unit, pursuant to Section 4.4, then, Seller shall provide Buyer with Designated RA Capacity from one or more Replacement Units. If Seller fails to provide Buyer with replacement Designated RA Capacity from Replacement Units, then Seller shall be liable for damages and/or required to indemnify Buyer for penalties or fines pursuant to the terms of Sections 4.7 and Section 4.8 hereof.

### **3.4 ☒ Contingent Firm RA Product**

Seller shall provide Buyer with Designated RA Capacity from the Unit(s) in the amount of the Contract Quantity; provided, however, that if (i) the Unit(s) are not available to provide the full amount of the Contract Quantity due to Force Majeure, a Planned Outage, or a reduction of the Contract Quantity determined pursuant to Section 4.4, and (ii) Seller has provided Buyer written notice no later than the Notification Deadline that the full amount of Contract Quantity is not available, then Seller may either reduce the Contract Quantity or provide Buyer with Designated RA Capacity from one or more Replacement Units pursuant to Section 4.5 hereof for the applicable Showing Month. If Seller fails to provide Buyer with Designated RA Capacity in the amount of the Contract Quantity (x) for any reason other than Force Majeure, a Planned Outage, or reduction of the Contract Quantity determined pursuant to Section 4.4, or (y) Seller failed to provide Buyer timely notice pursuant to this Section 3.4, then Seller shall be liable for damages and/or be required to reimburse and indemnify Buyer for penalties or fines pursuant to the terms of Sections 4.7 and Section 4.8 hereof.

## **ARTICLE 4 DELIVERY AND PAYMENT**

### **4.1 Delivery Period**

The Delivery Period shall be January 1, 2025 through December 31, 2036, inclusive. For the avoidance of doubt, nothing in this Agreement shall obligate Seller to provide any Product to Buyer for any period after the end of the Delivery Period.

### **4.2 Delivery Point**

The Delivery Point for each Unit shall be the CAISO Control Area, and if applicable, the LAR region in which the Unit is electrically interconnected.

### **4.3 Contract Quantity**

The Contract Quantity of the Unit(s) for each Monthly Delivery Period is set forth in Appendix B.

### **4.4 Adjustments to Contract Quantity**

- (a) Planned Outages: If Seller is unable to provide any portion of the Contract Quantity for any Showing Month due to a Planned Outage of a Unit, then Seller shall have the option, but not the obligation, upon written notice to Buyer by the Notification Deadline, to either (i) reduce the Contract Quantity for the applicable Showing Month in accordance with the Planned Outage, or (ii) provide Alternate Capacity in accordance with Section 4.5 up to the Contract Quantity for the applicable Showing Month.
- (b) Reductions in Unit NQC: If the Product is Contingent Firm RA Product, as specified in Section 3.4, then Seller's obligation to provide the Contract Quantity for any Showing Month may be reduced if (i) a Unit experiences a reduction in Unit NQC as determined by the CAISO, and (ii) Seller provides written notice of the reduction in Contract Quantity to Buyer by the Notification Deadline for the applicable Showing Month. Seller's potential reduction in Contract Quantity for each remaining Showing Month shall equal the product of (a) the applicable Showing Month Contract Quantity and (b) the total amount (in MW) that a Unit NQC was reduced since the Confirmation Effective Date, divided by (c) a Unit NQC as of the Confirmation Effective Date. If a Unit experiences a reduction in Unit NQC, then Seller has the option, but not the obligation, to provide the applicable Contract Quantity for such Showing Month from (i) the same Unit, provided the Unit has sufficient remaining and available Product and/or (ii) to provide Alternate Capacity, provided, that in each case Seller shall provide written notice of such Replacement Units by the Notification Deadline for the applicable Showing Month.
- (c) Reductions in Unit EFC: If the Product is Contingent Firm RA Product that includes FCR Attributes, as specified in Section 3.2, then Seller's obligation to provide FCR Attributes for a Unit in any Showing Month may be reduced by Seller if a Unit experiences a reduction in Unit EFC as determined by the CAISO. To the extent any such FCR Attributes reduction occur during the Delivery Period, Seller may reduce the amount of FCR Attributes provided to Buyer from a Unit on a pro rata basis based on the overall size (in MWs) of a Unit. For example, if Seller provides FCR Attributes from a Unit that has an Unit NQC of 100 MW and an Unit EFC of 100 MW, Seller's allocation of FCR Attributes to Buyer associated with 50 MW of Contract Quantity would be 50% of the Unit EFC, or 50 MW of Unit EFC. If a Unit EFC reduction causes a Unit with a 100 MW Unit NQC to then be eligible for only 50 MW of Unit EFC, then Seller's allocation of FCR Attributes to Buyer would be reduced on a pro rata basis to 25 MW (i.e. 50% of a Unit's 50 MW of Unit EFC). The Parties acknowledge and agree that any such change to the FCR Attributes shall not (i) entitle Buyer to a change in the Contract Price or a change in the amounts payable under Section 4.9, (ii) result in any change to Seller's obligation to provide the Contract Quantity of RAR Attributes and, if applicable, LAR Attributes, to Buyer (iii) give either Party the right to terminate this

Agreement, or (iv) allow for the severability of any provisions of this Confirmation pursuant to the Master Agreement.

- (d) UCAP: If during the Delivery Period the CAISO, the CPUC, or the applicable Governmental Body either replaces Unit NQC as the value utilized to measure the RA Capacity of a Unit, with a successor value such as unforced capacity (UCAP), or utilizes such successor value as a supplemental means of measuring the RA Capacity of a Unit together with Unit NQC, then from and after such replacement Seller shall provide written notice and convey to Buyer an amount of RA Capacity of a Unit of (i) no less than the amount obtained by calculating the Buyer's share of such qualifying capacity on a pro rata basis, but (ii) no more than the Contract Quantity (i.e. following such replacement, Seller's delivery obligation will be obtained by calculating the product of (A) the Contract Quantity divided by a Unit NQC, multiplied by (B) a Unit's overall qualifying capacity (in MW) as measured by such new method of measuring a Unit's qualifying capacity). There will be no change in payments owed by Buyer to the extent any such change in Contract Quantity is solely as result of the UCAP calculation methodology being applied equally to similar geothermal generator resources interconnected to the CAISO Balancing Authority Area; provided that, to the extent a UCAP adjustment factor is applied to Seller's Unit(s) that results in a Unit's overall qualifying capacity being less than the standard UCAP adjustment factor applied to the overall qualifying capacity for other similar geothermal generator resources interconnected to the CAISO Balancing Authority Area, then the Contract Quantity for purposes of payment shall be reduced by the difference (rounded to the nearest MW) between a Unit's UCAP adjustment factor and the standard UCAP adjustment factor for other similar geothermal generator resources interconnected to the CAISO Balancing Authority Area. Notwithstanding the foregoing, if a Unit's UCAP adjustment factor changes after the Effective Date of this Confirmation due to a Unit's qualifying capacity being reduce due to an ambient de-rate caused by a reduction in the availability of steam or steam field pressure supplying a Unit, then the Contract Quantity for purposes of payment shall be reduced by the amount of Contract Quantity that is not supplied from Seller to Buyer (rounded to the nearest MW) due to a reduction in the availability of steam or steam field pressure supplying a Unit.
- (e) Force Majeure: Seller's obligation to provide the Contract Quantity for any Showing Month may be reduced at Seller's option if (i) a Unit, or the transmission system used to deliver the Product from a Unit to the Delivery Point, is affected by Force Majeure, so that Seller is unable to delivery Product to Buyer for an applicable Showing Month, and (ii) Seller provides written notice to Buyer of such reduction in Contract Quantity by the Notification Deadline for the applicable Showing Month. If Seller is unable to provide the Contract Quantity to Buyer for a Showing Month due to the transmission system used to deliver the Product from a Unit to the Delivery Point being affected by Force Majeure, Seller has the option, but not the obligation, to provide Alternate Capacity.
- (f) Invoice Adjustment: In the event that the Contract Quantity is reduced due to an adjustment to Contract Quantity pursuant to Section 4.4, and Seller does not elect to provide Alternate Capacity pursuant to Section 4.4 and Section 4.5, then the invoice for the applicable Showing Month, calculated pursuant to Section 4.9, shall be adjusted to reflect the reduced amount of Contract Quantity provided from Seller to Buyer in the applicable Showing Month.

#### 4.5 Alternate Capacity

- a) If Seller desires to provide the Contract Quantity of Product to Buyer for any Showing Month from a resource other than a Unit previously designated pursuant to Article 2 ("**Alternate Capacity**"), then Seller may, at no additional cost to Buyer, provide Buyer with Alternate Capacity from one or more replacement units (a "**Replacement Unit**"), with the total amount of Product provided to Buyer from Designated RA Capacity up to an amount equal to the Contract Quantity for an applicable Showing Month; provided that in each case, (i) Seller shall provide written notice to Buyer of its intent to provide Alternative Capacity no later than the Notification Deadline for an applicable Showing Month, and (ii) the Replacement Unit(s)



meet the requirements of the Product described in Article 2 and Article 3. If Seller notifies Buyer in writing of its intent to provide Alternate Capacity no later than the Notification Deadline for an applicable Showing Month, and the Replacement Unit(s) provided as Alternative Capacity meet the requirements of the Product as described in Article 2 and Article 3, then such Alternate Capacity shall be automatically deemed a Unit for purposes of this Confirmation for that Showing Month.

#### **4.6 Delivery of Product**

Subject to Seller's rights under Article 3, Section 4.4 and Section 4.5, Seller shall provide Buyer with the Designated RA Capacity of Product for each Showing Month consistent with the following:

- a) Seller shall provide Buyer with the Designated RA Capacity of Product for each day of each Showing Month.
- b) Seller shall, on a timely basis, submit, or cause a Unit's SC to submit, by the Notification Deadline (i) monthly Supply Plans, and (ii) annual Supply Plans if the Confirmation Effective Date is prior to the year-ahead Compliance Showing deadline applicable for the Delivery Period, to the CAISO, LRA, or other applicable Governmental Body in accordance with the applicable rules and requirements (including the CAISO Tariff), identifying and confirming the transfer of the Designated RA Capacity from Seller to Buyer for each Showing Month, unless Buyer specifically requests in writing that Seller not do so (it being understood that any Designated RA Capacity subject to such a request from Buyer will be deemed to have been provided to Buyer for all purposes under this Confirmation.
- c) The Product is delivered and received when the CIRA Tool shows the Supply Plan accepted for the Product from the Unit by CAISO or Seller complies with Buyer's instruction to withhold all or part of the Contract Quantity from Seller's Supply Plan for any Showing Month during the Delivery Period. Seller has failed to deliver the Product if (i) Buyer has elected to submit the Product from the Unit in its Resource Adequacy Plan and such submission is accepted by the CPUC and the CAISO but the Supply Plan and Resource Adequacy Plan are not matched in the CIRA Tool due solely to a Seller error, and are rejected by CAISO, or (ii) Seller fails to submit the volume of Designated RA Capacity for any Showing Month pursuant to this Confirmation. Buyer will have received the Contract Quantity if (x) Seller's Supply Plan is accepted by the CAISO for the applicable Showing Month, (y) Seller correctly submits the Supply Plan and the Supply Plan and/or Resource Adequacy Plan are not matched in the CIRA Tool due solely to a Buyer error or (z) Seller complies with Buyer's instruction to withhold all or part of the Contract Quantity from Seller's Supply Plan for the applicable Showing Month. Seller will not have failed to deliver the Contract Quantity if Buyer fails or chooses not to submit the Unit(s) and the Product in its Resource Adequacy Plan with the CPUC or CAISO.

#### **4.7 Damages for Failure to Provide Designated RA Capacity**

If Seller fails to provide Buyer with the Designated RA Capacity of Product for any Showing Month, and such failure is not excused under the terms of the Agreement, then the following shall apply:

- (a) Buyer may, but shall not be required to, replace any portion of the Designated RA Capacity not provided by Seller with capacity having equivalent RAR Attributes, and if applicable, LAR Attributes and/or FCR Attributes as the Designated RA Capacity not provided by Seller, provided, that, if any portion of the Designated RA Capacity that Buyer is seeking to replace is Designated RA Capacity having RAR Attributes and no LAR Attributes (such capacity shall also include FCR Attributes if specified in Section 3.2) and no such RAR capacity is available, then Buyer may replace such portion of the Designated RA Capacity with capacity having RAR Attributes and LAR Attributes (as well as FCR Attributes if specified in Section 3.2) ("**Replacement Capacity**"). Such Replacement Capacity may also be provided by CAISO to Buyer pursuant to the Tariff. Buyer may enter into purchase transactions with one or more parties to replace any portion of Designated RA Capacity not provided by Seller.

Additionally, Buyer may enter into one or more arrangements to repurchase its obligation to sell and deliver capacity to another party and, to the extent such transactions are done at prevailing market prices, such arrangements shall be considered equivalent to the procurement of Replacement Capacity. Buyer shall use commercially reasonable efforts to minimize damages when procuring any Replacement Capacity. Unless otherwise set forth herein, there shall be no change to the payments owed by Buyer for any reductions to the Product attributes solely as the result of the implementation of Effective Load Carrying Capability (ELCC), UCAP, or any similar regulatory adjustments.

- (b) Seller shall pay to Buyer at the time set forth in Section 21 of the Master Agreement, the following damages in lieu of damages specified in Section 21 of the Master Agreement: an amount equal to the positive difference, if any, between (i) the sum of (A) the actual cost paid by Buyer for any Replacement Capacity, plus (B) each Capacity Replacement Price times the amount of the Designated RA Capacity neither provided by Seller nor purchased by Buyer pursuant to Section 4.7(a), and (ii) the Designated RA Capacity not provided for the applicable Showing Month times the Contract Price for that month. If Seller fails to pay these damages, then Buyer may, without limiting its other remedies, offset those damages owed it against any future amounts it may owe to Seller under this Confirmation pursuant to Section 28 of the Master Agreement.

#### **4.8 Reimbursement for Failure to Deliver Contract Quantity**

Subject to Seller's rights under Article 3, Section 4.4 and Section 4.5, to the extent Seller is required, and fails, to provide the Designated RA Capacity hereunder, Seller agrees to reimburse, indemnify, defend and hold harmless Buyer from any penalties, fines or costs assessed against Buyer by the CPUC, the CAISO, or any other Governmental Body to the extent not otherwise paid by Seller to Buyer under Section 4.7(b), resulting from any of the following:

- (a) Seller's failure to provide any portion of the Designated RA Capacity for any portion of the Delivery Period, and such failure is not excused under the terms of the Agreement;
- (b) Seller's failure to provide notice of the non-availability of any portion of Designated RA Capacity as required under Article 3, Section 4.5 and Section 4.6; or
- (c) The Unit Scheduling Coordinator's failure to timely submit Supply Plans that identify Buyer's right to the Designated RA Capacity purchased hereunder for an applicable Showing Month.

With respect to the foregoing, the Parties shall use commercially reasonable efforts to minimize such penalties, fines and costs; provided, that in no event shall Buyer be required to use or change its utilization of its owned or controlled assets or market positions to minimize these penalties, fines and costs. Seller will have no obligation to Buyer under this Section 4.8 in respect of the portion of Contract Quantity for which Seller has paid damages for Replacement Capacity pursuant to Section 4.7. If Seller fails to pay the foregoing penalties, fines or costs, or fails to reimburse Buyer for those penalties, fines or costs, then Buyer may offset those penalties, fines or costs against any future amounts it may owe to Seller under this Confirmation pursuant to Section 28 of the Master Agreement.

#### **4.9 Monthly RA Capacity Payment**

In accordance with the terms of Section 9 of the Master Agreement, with respect to each Showing Month, Buyer shall make a Monthly RA Capacity Payment to Seller for each Unit in arrears, after the applicable Showing Month. Each Unit's Monthly RA Capacity Payment shall be equal to the product of (a) the applicable Contract Price for that Monthly Delivery Period, (b) the Designated RA Capacity for the Monthly Delivery Period, and (c) 1,000; provided, however, that the Monthly RA Capacity Payment shall be prorated to reflect any portion of Designated RA Capacity that was not delivered pursuant to Section 4.4 at the time of the CAISO filing for the respective Showing Month. The final product of this Monthly RA Capacity Payment calculation shall be rounded to the nearest penny (i.e., two decimal places).

#### **RA CAPACITY PRICE TABLE**

<b>Contract Year/Month</b>	<b>RA Capacity Flat Price (\$/kW-month)</b>
2025-2036	\$7.00

#### **4.10 Allocation of Other Payments and Costs**

Seller may retain any revenues it may receive from the CAISO or any other third party with respect to any Unit for (a) start-up, shut-down, and minimum load costs, (b) capacity revenue for ancillary services, (c) energy sales, (d) any revenues for black start or reactive power services, or (e) the sale of the unit-contingent call rights on the generation capacity of the Unit to provide energy to a third party, so long as such rights do not confer to such third party the right to claim any portion of the RA Capacity sold hereunder in order to make an RAR Showing, LAR Showing, FCR Showing, or any similar capacity or resource adequacy showing with the CAISO, CPUC or other Governmental Body. Buyer acknowledges and agrees that all Availability Incentive Payments are for the benefit of Seller and for Seller's account, and that Seller shall receive, retain, or be entitled to receive all credits, payments, and revenues, if any, resulting from Seller achieving or exceeding Availability Standards. Any Non-Availability Charges are the responsibility of Seller, and for Seller's account, and Seller shall be responsible for all fees, charges, or penalties, if any, resulting from Seller failing to achieve Availability Standards. If a centralized capacity market develops within CAISO, Buyer will have exclusive rights to offer, bid, or otherwise submit Designated RA Capacity provided to Buyer pursuant to this Confirmation for re-sale in such market, and retain and receive any and all related revenues; provided that any such contracting shall not require Seller to incur any additional out of pocket expense or limit or otherwise affect Seller's rights under this Transaction. However, Buyer shall be entitled to receive and retain all revenues associated with the Designated RA Capacity of any Unit during the Delivery Period (including any capacity or availability revenues from RMR Agreements for any Unit, Reliability Compensation Services Tariff, and Residual Unit Commitment capacity payments, but excluding payments described in clauses (a) through (c) above). In accordance with Section 4.9 of this Confirmation, all such revenues received by Seller, or a Unit's SC, owner, or operator shall be remitted to Buyer, and Seller shall indemnify Buyer for any such revenues that Buyer does not receive, and Seller shall pay such revenues to Buyer if the Unit's SC, owner, or operator fails to remit those revenues to Buyer. If Seller fails to pay such revenues to Buyer, Buyer may offset any amounts owing to it for such revenues against any future amounts it may owe to Seller under this Confirmation pursuant to Section 28 of the Master Agreement.

### **ARTICLE 5 CAISO OFFER REQUIREMENTS**

During the Delivery Period, except to the extent any Unit is in an Outage, or is affected (or its transmission path is affected) by an event of Force Majeure that results in a partial or full Outage of that Unit, or as otherwise provided in Section 4.4, Seller shall either schedule or cause the Unit's Scheduling Coordinator to schedule with, or make available to, the CAISO each Unit's Designated RA Capacity in compliance with the Tariff, and shall perform all, or cause the Unit's Scheduling Coordinator, owner, or operator, as applicable, to perform all obligations under the Tariff that are associated with the sale of Designated RA Capacity hereunder. Buyer shall have no liability for the failure of Seller or the failure of any Unit's Scheduling Coordinator, owner, or operator to comply with such Tariff provisions, including any penalties or fines imposed on Seller or the Unit's Scheduling Coordinator, owner, or operator for such noncompliance.

### **ARTICLE 6 EARLY TERMINATION**

The Parties have entered into a separate agreement for the purchase and sale of renewable energy, which is dated concurrently with the Confirmation Effective Date (herein after referred to as the "**RPS Agreement**"). The Parties agree that in the event the RPS Agreement is terminated pursuant to the Master Agreement, Seller and Buyer shall have the right, but not the obligation, to provide written notice to the other Party that

it is terminating this Transaction prior to the Notification Deadline for the next applicable Showing Month, and where such termination will become effective after the next applicable Showing Month. Termination pursuant to this Article 6 will not be deemed a Seller Event of Default nor a Buyer Event of Default, and Seller and Buyer shall not be subject to damages or ongoing obligations as a result of such termination.

## **ARTICLE 7 GENERAL REPRESENTATIONS AND WARRANTIES**

In addition to the representations and warranties contained in Section 37 of the Master Agreement, each of Buyer and Seller represents and warrants to the other party that, as of the Effective Date:

- (a) it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;
- (b) it has all contractual, governmental, regulatory and legal authorizations necessary for it to legally perform its obligations under this Confirmation;
- (c) the execution, delivery and performance of this Confirmation are within its powers, have been duly authorized by all necessary action;
- (d) this Confirmation and each other document executed and delivered in accordance with this Confirmation constitutes its legally valid and binding obligation enforceable against it in accordance with its terms, subject to any bankruptcy, insolvency, reorganization and other laws affecting creditors' rights generally, and with regard to equitable remedies, the discretion of the court before which proceedings to obtain same may be pending; and
- (e) it is acting for its own account, has made its own independent decision to enter into this Confirmation and as to whether this Confirmation is appropriate or proper for it based upon its own judgment, is not relying upon the advice or recommendations of the other Party in doing so, and is capable of assessing the merits of and understanding, and understands and accepts, the terms and conditions and risks of this Confirmation; and
- (f) with respect to the Master Agreement and this Confirmation, the obligations to make payments hereunder do not constitute or create any kind of lien on, or security interest in, any property or revenues of Buyer.

## **ARTICLE 8 OTHER BUYER AND SELLER COVENANTS**

Buyer and Seller shall, throughout the Delivery Period, take all commercially reasonable actions and execute any and all documents or instruments reasonably necessary to ensure Buyer's right to the use of the Contract Quantity for the sole benefit of Buyer's RAR, LAR and/or FCR, as applicable. Such commercially reasonable actions shall include, without limitation:

- (a) Cooperating with and providing, and in the case of Seller causing each Unit's Scheduling Coordinator, owner, or operator to cooperate with and provide requested supporting documentation to the CAISO, the CPUC, or any other Governmental Body responsible for administering RAR, LAR and/or FCR under Applicable Laws, to certify or qualify the Contract Quantity as RA Capacity and Designated RA Capacity. Such actions shall include, without limitation, providing information requested by the CAISO, the CPUC, or by an LRA having jurisdiction, to demonstrate for each Showing Month of the Delivery Period the ability to deliver the Contract Quantity from each Unit to the CAISO Controlled Grid consistent with the Product attributes described in Article 2 and Article 3 for the , and providing information requested by the CPUC, the CAISO or other Governmental Body having jurisdiction to administer RAR, LAR or FCR to demonstrate that the Contract Quantity can be delivered to

the CAISO Controlled Grid, pursuant to "deliverability" standards established by the CAISO, or other Governmental Body having jurisdiction to administer RAR, LAR and/or FCR; and

- (b) Negotiating in good faith to make necessary amendments, if any, to this Confirmation, which are subject to agreement of the Parties, in each Party's sole discretion, to conform this Transaction to subsequent clarifications, revisions, or decisions rendered by the CPUC, CAISO, FERC, or other Governmental Body having jurisdiction to administer RAR, LAR and FCR, so as to maintain the benefits of the bargain struck by the Parties on the Confirmation Effective Date.
- (c) If a change in Applicable Laws or in the Tariff render this Agreement or any provision hereof incapable of being performed or administered, then either Party may request that Buyer or Seller enter into negotiations to make the minimum changes to this Agreement necessary to make this Agreement capable of being performed and administered, while attempting to preserve to the maximum extent possible the benefits, burdens, and obligations set forth in this Agreement as of the Confirmation Effective Date. Upon delivery of such a request, Buyer and Seller shall engage in such negotiations in good faith. If Buyer and Seller are unable, within sixty (60) days after delivery of such request, to agree upon changes to this Agreement or to resolve issues relating to changes to this Agreement, then either Party may submit issues pertaining to changes to this Agreement to the Dispute Resolution process set forth in Section 34 of the Master Agreement. Notwithstanding the foregoing, a change in cost shall not in and of itself be deemed to render this Agreement or any of the provisions hereof incapable of being performed or administered, or constitute, or form the basis of, a Force Majeure.

Seller represents, warrants and covenants to Buyer that, throughout the Delivery Period:

- (d) Seller owns or has the exclusive right to the RA Capacity sold under this Confirmation from each Unit, and shall furnish Buyer, CAISO, CPUC or other jurisdictional LRA, or other Governmental Body with such evidence as may reasonably be requested to demonstrate such ownership or exclusive right;
- (e) No portion of the Contract Quantity has been committed by Seller to any third party in order to satisfy RAR, LAR, FCR or such analogous capacity obligations in any non-CAISO or CAISO markets, other than pursuant to an RMR Agreement between the CAISO and either Seller or the Unit's owner or operator;
- (f) Each Unit is connected to the CAISO Controlled Grid, is within the CAISO Control Area, or is under the control of CAISO;
- (g) The owner or operator of each Unit is obligated to comply with Applicable Laws, including the Tariff, relating to RA Capacity and, as applicable, RAR, LAR and/or FCR;
- (h) If Seller is the owner of any Unit, the respective cumulative sums of LAR Attributes, RAR Attributes, and FCR Attributes that Seller has sold, assigned or transferred for any Unit does not exceed that Unit's RA Capacity, including Unit NQC and Unit EFC, as applicable;
- (i) With respect to the RA Capacity provided under this Confirmation, Seller shall, and each Unit's Scheduling Coordinator is obligated to, comply with Applicable Laws, including the Tariff, relating to RA Capacity, and RAR, LAR and FCR;
- (j) Seller has notified the Scheduling Coordinator of each Unit that Seller has transferred the Designated RA Capacity to Buyer, and the Scheduling Coordinator is obligated to deliver the Supply Plans in accordance with the Tariff and this Agreement;
- (j) Seller has notified the Scheduling Coordinator of each Unit that Seller is obligated to cause each Unit's Scheduling Coordinator to provide to the Buyer, by the Notification Deadline for each RAR Showing, LAR Showing, and/or FCR Showing, as applicable, the Designated RA Capacity of each Unit that is to be submitted in the Supply Plan associated with this Agreement for the applicable period; and

- (k) Seller has notified each Unit's SC that Buyer is entitled to the revenues set forth in Section 4.10 of this Confirmation, and such SC is obligated to promptly deliver those revenues to Buyer, along with appropriate documentation supporting the amount of those revenues.

## **ARTICLE 9 CONFIDENTIALITY**

Notwithstanding Section 30.1 of the Master Agreement, Buyer may disclose information regarding this Transaction to any Governmental Body, the CPUC, the CAISO or any LRA having jurisdiction in order to support its RAR Showings, LAR Showings and/or FCR Showings, as applicable, and Seller may disclose the information regarding this Transaction to the Scheduling Coordinator of each Unit in order for such Scheduling Coordinator to timely submit Supply Plans. Buyer may disclose information related to this Transaction to a Subsequent Buyer; provided that any Subsequent Buyer agrees in writing to maintain the confidentiality of such information consistent with this Section 9. Notwithstanding anything to the contrary, Seller acknowledges that Buyer is a public agency subject to the requirements of the California Public Records Act (Cal. Gov. Code section 6250 et seq.); therefore, this Agreement and any related documents will be subject to disclosure unless otherwise protected by the act or applicable law.

## **ARTICLE 10 BUYER'S RE-SALE OF PRODUCT**

- (a) Buyer may re-sell all or a portion of the Contract Quantity of Product hereunder; provided, however, that any such re-sale does not increase Seller's obligations, costs or liabilities hereunder. Seller will, or will cause the Unit's SC, to follow Buyer's instructions with respect to providing such resold Product to Subsequent Buyers, to the extent such instructions are consistent with Seller's obligations under this Confirmation. Seller will, and will cause the Unit's SC, to take all commercially reasonable actions and execute all documents or instruments reasonably necessary to allow such Subsequent Buyers to use such resold Product in a manner consistent with Buyer's rights under this Confirmation. If Buyer incurs any liability to a Subsequent Buyer due to the failure of Seller or the Unit's SC to comply with this Confirmation, Seller will be liable to Buyer for the same amounts Seller would have owed Buyer under this Confirmation if Buyer had not resold the Product.
- (b) Buyer will notify Seller in writing of any resale of Product and the Subsequent Buyer no later than five Business Days before the Compliance Showing deadline for the applicable Showing Month. Buyer will notify Seller of any subsequent changes or further resales no later than five Business Days before the Compliance Showing deadline for the applicable Showing Month.
- (c) If CAISO or CPUC develops a centralized capacity market, Buyer will have exclusive rights to offer, bid, or otherwise submit the applicable Contract Quantity of Product for each day during the Delivery Period provided to Buyer pursuant to this Confirmation for re-sale in such market, and retain and receive all revenues from such re-sale. Seller agrees to take all commercially reasonable actions to assist Buyer with such re-sale, provided that Seller's obligation to assist shall not require modification of any of the commercial terms of this Confirmation.

## **ARTICLE 11 MARKET BASED RATE AUTHORITY**

Seller agrees, in accordance with Federal Energy Regulatory Commission (FERC) Order No. 697, to, upon reasonable request of Buyer, submit a letter of concurrence in support of any affirmative statement by Buyer that this contractual arrangement does not transfer "ownership or control of generation capacity" from Seller to Buyer as the term "ownership or control of generation capacity" is used in 18 CFR Section 35.42. Seller

also agrees that it will not, in filings, if any, made subject to Order Nos. 652 and 697, claim that this contractual arrangement conveys ownership or control of generation capacity from Seller to Buyer.

## **ARTICLE 12 CREDIT REQUIREMENTS**

Seller and Buyer are entering into the RPS Agreement concurrently with the execution of this Confirmation. The credit requirements for Seller and Buyer under this Confirmation are set forth in the RPS Agreement. The provisions of the RPS Agreement shall govern the posting, maintenance and release of any security requirements. However, if the RPS Agreement is terminated for any reason, but this Confirmation continues in force, the Parties will amend this Confirmation within thirty (30) days after such termination to include the relevant portions of the RPS Agreement relating to credit requirements (with such changes as may be necessary to reflect the differences between the two confirmations) and **Schedule 1** to the RPS Agreement, except that the amounts on **Schedule 1** to the RPS Agreement will be reduced to reflect the proportionate reduction in Buyer's and Seller's overall exposure as a result of the termination of the RPS Agreement, as determined by Buyer and Seller in a commercially reasonable manner.

## **ARTICLE 13 MASTER AGREEMENT AMENDMENTS**

For this Transaction, the Master Agreement shall be amended as follows:

- (a) Section 14 of the Master Agreement is amended by inserting the following new text at the end thereof:

“Notwithstanding the above, for purposes of Buyer effecting a prepay transaction, Buyer may from time to time assign the right to receive all or a portion of the Product that would otherwise be delivered to Buyer hereunder. In connection with any such assignment to effect a prepay transaction, Buyer and Seller agree to execute a commercially reasonable form of assignment agreement to be agreed to by the Parties. For the avoidance of doubt, Buyer will remain responsible for all its obligations under this Agreement related to such assigned Product, including (i) the obligation to pay for such Product to the extent the assignee thereof does not do so, and (ii) any damages associated with such assignee's failure to take any such Product.

Buyer may also from time to time and at any time assign any or all of its rights, and delegate any or all of its obligations under this Agreement, in whole or in part without the consent of Seller to one or more Participating Members. Notwithstanding the foregoing, in connection with any such assignment to one or more Participating Members, such Participating Members shall (i) have an Investment Grade Rating at the time of the assignment, and (ii) execute a written assumption agreement in favor of Seller pursuant to which any such Participating Member shall assume all the obligations of Buyer under this Agreement, thereby relieving the assignor Buyer from its duties and obligations hereunder and thereunder.”

- (b) Section 21.1 of the Master Agreement is amended by deleting “direct” in the ninth line thereof. The Parties also agree that the waiver on the fifth line of that section does not apply to any damages or other remedies expressly provided for in this Confirmation.
- (c) Section 22.1 of the Master Agreement is modified by deleting subsection (d) and replacing it with “[intentionally omitted]” and by inserting the following new text at the end thereof:

“(f) the failure of the Defaulting Party to perform any material covenant or obligation set forth in this Agreement (except to the extent constituting a separate Event of Default, and except for such Party's obligations to deliver or receive the quantities of Product due under this Agreement, the exclusive remedy for which is provided in this Confirmation and in

Section 21.3) if such failure is not remedied within ten (10) Business Days after written notice;

(g) the failure of the Defaulting Party to pay its debts generally as they become due or the Defaulting Party's admission in a writing that it is unable to generally pay its debts as they become due;

(h) the institution, by the Defaulting Party, of a general assignment for the benefit of its creditors; or

(i) the application for, consent to, or acquiescence to, by the Defaulting Party, the appointment of a receiver, custodian, trustee, liquidator, or similar official for all or a substantial portion of its assets."

(d) Section 22.2(b) of the Master Agreement is amended by inserting in Section 22.2, "and is continuing" after "Event of Default occurs" in the first line thereof and deleting the second sentence therein.

(e) Section 22.3 of the Master Agreement is amended by:

1. In Section 22.3(b), replacing the second sentence thereof with "The "Present Value Rate" shall mean an annual rate equal to the "prime rate" as published in the Wall Street Journal from to time plus 2%.;"

2. In Section 22.3(c), deleting the third sentence thereof and replacing it with the following: "If the Non-Defaulting Party's aggregate Gains exceed its aggregate Losses and Costs, if any, resulting from the termination of this Agreement or a Confirmation, the Termination Payment for all such Terminated Transactions shall be zero, notwithstanding any provision in this Section or Agreement to the contrary."

3. In Section 22.3(e), delete the entire provision (including subsections) and replace it with the following: "[Intentionally omitted]"

4. In Section 22.3(f), delete the entire provision and replace it with the following:

"If the Defaulting Party disagrees with the calculation of the Termination Payment and the Parties cannot otherwise resolve their differences, and provided that Defaulting Party has paid the undisputed part of the Termination Payment to the Non-Defaulting Party as provided under Section 22.3(c), and that any amounts disputed by the Defaulting Party are disputed in good faith, then the Defaulting Party may submit the calculation issue to Dispute Resolution pursuant to Section 34."

(f) In Section 24, delete the first sentence and replace it with the following:

"This Agreement and any Confirmation shall be governed by and construed in accordance with the laws of the State of California, without regard to the conflicts of laws rules thereof.

(g) The netting provisions of Section 28, NETTING, of the Master Agreement shall apply to the transaction covered by this Confirmation and the RPS Agreement as if Buyer and Seller had both executed Exhibit A, NETTING, to the Master Agreement. Both Parties intend for the netting provisions of Exhibit A to the Master Agreement to be effective on the Confirmation Effective Date.

(h) Section 30.1 of the Master Agreement is amended by inserting "or requested" after the word "required" in Section 30.1(4), by deleting "or" immediately before clause (7), and by adding



the following at the end of the first sentence: “; or (8) to the Party’s and such Party’s affiliates’ lenders and potential lenders, investors or potential investors, counsel, accountants, advisors and agents who have a need to know such information and have agreed to keep such terms confidential”.

- (i) Section 31 of the Master Agreement is amended by deleting the second sentence thereof.
- (j) Subsections 34.1 and 34.2 of the Master Agreement are hereby deleted and replaced with the following:

“34.1 INFORMAL DISPUTE RESOLUTION

IN THE EVENT OF ANY DISPUTE ARISING UNDER THIS TRANSACTION, WITHIN TEN (10) DAYS FOLLOWING THE RECEIPT OF A WRITTEN NOTICE FROM EITHER PARTY IDENTIFYING SUCH DISPUTE, THE PARTIES SHALL MEET, NEGOTIATE AND ATTEMPT, IN GOOD FAITH, TO RESOLVE THE DISPUTE QUICKLY, INFORMALLY AND INEXPENSIVELY. IF THE PARTIES ARE UNABLE TO RESOLVE A DISPUTE ARISING HEREUNDER WITHIN THIRTY (30) DAYS AFTER RECEIPT OF SUCH NOTICE, THEN EITHER PARTY MAY SEEK ANY AND ALL REMEDIES AVAILABLE TO IT AT LAW OR IN EQUITY, SUBJECT TO THE LIMITATIONS SET FORTH IN THIS TRANSACTION.”

“34.2 EXCLUSIVE JURISDICTION

EACH PARTY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE OR FEDERAL COURTS LOCATED IN SAN FRANCISCO, CALIFORNIA, FOR ANY ACTION OR PROCEEDING RELATING TO THIS AGREEMENT OR ANY TRANSACTION, AND EXPRESSLY WAIVES ANY OBJECTION IT MAY HAVE TO SUCH JURISDICTION OR THE CONVENIENCE OF SUCH FORUM.”

- (k) The phrase “arbitration or” is hereby deleted from the first line of Section 34.4.
- (l) The following shall be inserted as a new Section 34.5; PROVIDED HOWEVER, THAT THE FOLLOWING NEW SECTION 34.5 SHALL NOT LIMIT BUYER’S RIGHT TO RECOVER FROM SELLER, OR SELLER’S OBLIGATION TO PAY BUYER, ANY AND ALL AMOUNTS OWED UNDER SECTION 4.7 AND SECTION 4.8 OF THIS CONFIRMATION, INCLUDING PENALTIES AS SPECIFIED THEREIN:

“34.5 LIMITATION OF DAMAGES. FOR BREACH OF ANY PROVISION OF THIS CONFIRMATION AGREEMENT FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED, THE EXPRESS REMEDY OR MEASURE OF DAMAGES PROVIDED IS THE SOLE AND EXCLUSIVE REMEDY UNDER THIS AGREEMENT AND ALL OTHER REMEDIES FOR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. IF NO EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED IN THIS AGREEMENT FOR A PARTICULAR BREACH, LIABILITY FOR THE BREACH IS LIMITED TO DIRECT DAMAGES ONLY, WHICH SHALL BE THE SOLE AND EXCLUSIVE REMEDY UNDER THIS AGREEMENT FOR SUCH BREACH, AND ALL OTHER REMEDIES FOR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. NEITHER PARTY IS LIABLE FOR ANY OTHER TYPE OF DAMAGE, INCLUDING INCIDENTAL, PUNITIVE, EXEMPLARY, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES OF ANY NATURE (INCLUDING DAMAGES ASSOCIATED WITH LOST PROFITS, BUSINESS INTERRUPTION AND LOSS OF GOODWILL) ARISING AT ANY TIME, WHETHER IN TORT (INCLUDING THE SOLE OR CONTRIBUTORY NEGLIGENCE OF EITHER PARTY OR ANY RELATED PERSON), WARRANTY, STRICT LIABILITY, CONTRACT OR STATUTE, UNDER ANY INDEMNITY PROVISION, OR OTHERWISE; PROVIDED, HOWEVER, THAT THE

FOREGOING SHALL NOT LIMIT EITHER PARTY'S RIGHT TO RECOVER DAMAGES UNDER EXPRESS INDEMNITY PROVISIONS SET FORTH IN THE CONFIRMATION." THE FOREGOING PROVISIONS DO NOT APPLY TO THE FOLLOWING: (A) CLAIMS ARISING OUT OF SELLER'S OBLIGATIONS UNDER THIS AGREEMENT TO INDEMNIFY AND HOLD HARMLESS BUYER FOR DEATH, BODILY INJURY, OR PERSONAL INJURY TO ANY PERSON OR DAMAGE OR DESTRUCTION TO ANY PROPERTY, OR (B) COVERED BY SELLER'S INSURANCE POLICY OR SHOULD HAVE BEEN COVERED BY SELLER'S INSURANCE POLICY HAD SELLER OBTAINED AND MAINTAINED INSURANCE OF THE TYPES AND IN THE AMOUNTS REQUIRED BY THIS AGREEMENT.'"

- (m) Section 41 "Witness" of the Master Agreement shall become Section 42 and the following "Standard of Review" Section shall be substituted in its place:

"The Parties agree as follows:

1. Absent the agreement of all Parties to the proposed change, the standard of review for changes to any section of this Agreement (including all Transactions and/or Confirmations) specifying the rate(s) or other material economic terms and conditions agreed to by the Parties herein, whether proposed by a Party, a non-party or FERC acting sua sponte, shall be the "public interest" standard of review set forth in *United Gas Pipe Line Co. v. Mobile Gas Service Corp.*, 350 U.S. 332 (1956) and *Federal Power Commission v. Sierra Pacific Power Co.*, 350 U.S. 348 (1956)( the "Mobile-Sierra" doctrine) and clarified in *Morgan Stanley Capital Group, Inc. v. Public Util. Dist. No. 1 of Snohomish* 554 U.S. 527 (2008) and *NRG Power Marketing LLC v. Maine Pub. Util. Comm'n*, 558 U.S. 165 (2010).
2. The Parties, for themselves and their successors and assigns, (i) agree that this "public interest" standard shall apply to any proposed changes in any other documents, instruments or other agreements executed or entered into by the Parties in connection with this Agreement and (ii) hereby expressly and irrevocably waive any rights they can or may have to the application of any other standard of review, including the "just and reasonable" standard."

## **ARTICLE 15 COUNTERPARTS**

This Confirmation may be signed in any number of counterparts with the same effect as if the signature to counterparty were upon a single instrument. The Parties may rely on electric, or scanned signatures as originals under this Confirmation. Delivery of an executed signature page of this Confirmation by facsimile or electronic mail transmission (including PDF) shall be the same as delivery of a manually executed signature page.

## **ARTICLE 16 ENTIRE AGREEMENT, NO ORAL AGREEMENTS OR MODIFICATIONS**

This Confirmation sets forth the terms of the Transaction into which the Parties have entered into and (together with the Master Agreement, as revised by this Confirmation) shall constitute the entire agreement between the Parties relating to the purchase and sale of the Product. Notwithstanding any other provisions of the Agreement, this Transaction may be confirmed only through a Documentary Writing executed by both Parties, and this Transaction may only be amended or modified by a Documentary Writing executed by both Parties.

## **ARTICLE 17 EMISSION PERFORMANCE STANDARD**

This Agreement is a “covered procurement” under the CEC’s EPS and Buyer shall make the required compliance filing with the CEC within 10 Business Days of the Effective Date. The Parties agree that this Agreement shall be void and all pending Product deliveries terminated no later than the effective date of any final decision by the CEC pursuant to the California Code of Regulations, Title 20, Section 2910 that the covered procurement fails to comply with EPS, without penalty to Buyer or Seller. The Parties acknowledge that the Project is “determined to be compliant” pursuant to 20 CCR §§ 2903(b)(1) or (2).

*[SIGNATURE PAGE FOLLOWS]*

**ACKNOWLEDGED AND AGREED TO AS OF THE CONFIRMATION EFFECTIVE DATE**

**Geysers Power Company, LLC**

**Northern California Power Authority**

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

**Appendix A - 1**

**Designated Unit Information**

Name:	To be provided by Seller
Location:	To be provided by Seller
CAISO Resource ID:	To be provided by Seller
Unit NQC:	To be provided by Seller
Unit EFC:	To be provided by Seller
Resource Type:	Geothermal
Resource Category (MCC 1, 2, 3 or 4):	4 (7x24 Availability)
FCR Category (1, 2 or 3):	To be provided by Seller
Path 26 (North or South):	North
Local Capacity Area (if any, as of Confirmation Effective Date):	NCNB
Deliverability restrictions, if any, as described in most recent CAISO deliverability assessment:	None
Run Hour Restrictions:	None

**Appendix A -2**  
**Units Comprising the Geysers geothermal power plants:**

<b>Name of Facility</b>	<b>Single Line Facility Name</b>	<b>CAISO Resource ID</b>	<b>CEC RPS ID</b>	<b>WREGIS GU ID</b>
Aidlin Power Plant	AIDLIN P.P. (CPN-1)	ADLIN_1_UNITS	60115A	W484
Sonoma Power Plant	SONOMA P.P. (CPN-3)	SMUDGO_7_UNIT 1	60010A	W127
Geysers Unit 5&6	MC CABE P.P. (CPN 5&6)	GYS5X6_7_UNITS	60002A	W117
Geysers Unit 7&8	RIDGE LINE P.P. (CPN 7&8)	GYS7X8_7_UNITS	60003A	W118
Geysers Unit 11	EAGLE ROCK P.P. (CPN-11)	GEYS11_7_UNIT11	60025A	W119
Geysers Unit 12	COBB CREEK PP (CPN-12)	GEYS12_7_UNIT12	60004A	W120
Geysers Unit 13	BIG GEYSERS PP (CPN-13)	GEYS13_7_UNIT13	60005A	W121
Geysers Unit 14	SULPHUR SPRINGS PP (CPN-14)	GEYS14_7_UNIT14	60026A	W122
Geysers Unit 16	QUICKSILVER PP (CPN-16)	GEYS16_7_UNIT16	60006A	W123
Geysers Unit 17	LAKE VIEW P.P. (CPN-17)	GEYS17_7_UNIT17	60007A	W124
Geysers Unit 18	SOCRATES P.P. (CPN-18)	GEYS18_7_UNIT18	60008A	W125
Calistoga Power Plant	COLISTOGA P.P. (CPN-19)	SANTFG_7_UNITS	60117A	W486
Geysers Unit 20	GRANT P.P. (CPN-20)	GEYS20_7_UNIT20	60009A	W126

## **Appendix B**

### **Contract Quantity (MWs)**

<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2025	50 MW
February 2025	50 MW
March 2025	50 MW
April 2025	50 MW
May 2025	50 MW
June 2025	50 MW
July 2025	50 MW
August 2025	50 MW
September 2025	50 MW
October 2025	50 MW
November 2025	50 MW
December 2025	50 MW

<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2026	50 MW
February 2026	50 MW
March 2026	50 MW
April 2026	50 MW
May 2026	50 MW
June 2026	50 MW
July 2026	50 MW
August 2026	50 MW
September 2026	50 MW
October 2026	50 MW
November 2026	50 MW
December 2026	50 MW

<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2027	100 MW
February 2027	100 MW
March 2027	100 MW
April 2027	100 MW
May 2027	100 MW
June 2027	100 MW
July 2027	100 MW
August 2027	100 MW
September 2027	100 MW
October 2027	100 MW
November 2027	100 MW
December 2027	100 MW

<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2028	100 MW
February 2028	100 MW
March 2028	100 MW
April 2028	100 MW
May 2028	100 MW
June 2028	100 MW
July 2028	100 MW
August 2028	100 MW
September 2028	100 MW
October 2028	100 MW
November 2028	100 MW
December 2028	100 MW

<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2029	100 MW
February 2029	100 MW
March 2029	100 MW
April 2029	100 MW
May 2029	100 MW
June 2029	100 MW
July 2029	100 MW
August 2029	100 MW
September 2029	100 MW
October 2029	100 MW
November 2029	100 MW
December 2029	100 MW

<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2030	100 MW
February 2030	100 MW
March 2030	100 MW
April 2030	100 MW
May 2030	100 MW
June 2030	100 MW
July 2030	100 MW
August 2030	100 MW
September 2030	100 MW
October 2030	100 MW
November 2030	100 MW
December 2030	100 MW

<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2031	100 MW
February 2031	100 MW
March 2031	100 MW
April 2031	100 MW
May 2031	100 MW
June 2031	100 MW
July 2031	100 MW
August 2031	100 MW
September 2031	100 MW
October 2031	100 MW
November 2031	100 MW
December 2031	100 MW

<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2032	100 MW
February 2032	100 MW
March 2032	100 MW
April 2032	100 MW
May 2032	100 MW
June 2032	100 MW
July 2032	100 MW
August 2032	100 MW
September 2032	100 MW
October 2032	100 MW
November 2032	100 MW
December 2032	100 MW



<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2033	100 MW
February 2033	100 MW
March 2033	100 MW
April 2033	100 MW
May 2033	100 MW
June 2033	100 MW
July 2033	100 MW
August 2033	100 MW
September 2033	100 MW
October 2033	100 MW
November 2033	100 MW
December 2033	100 MW

<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2034	100 MW
February 2034	100 MW
March 2034	100 MW
April 2034	100 MW
May 2034	100 MW
June 2034	100 MW
July 2034	100 MW
August 2034	100 MW
September 2034	100 MW
October 2034	100 MW
November 2034	100 MW
December 2034	100 MW

<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2035	100 MW
February 2035	100 MW
March 2035	100 MW
April 2035	100 MW
May 2035	100 MW
June 2035	100 MW
July 2035	100 MW
August 2035	100 MW
September 2035	100 MW
October 2035	100 MW
November 2035	100 MW
December 2035	100 MW

<b>Contract Year/Month</b>	<b>Contract Quantity (MWs)</b>
January 2036	100 MW
February 2036	100 MW
March 2036	100 MW
April 2036	100 MW
May 2036	100 MW
June 2036	100 MW
July 2036	100 MW
August 2036	100 MW
September 2036	100 MW
October 2036	100 MW
November 2036	100 MW
December 2036	100 MW

**WESTERN SYSTEMS POWER POOL AGREEMENT  
TRANSACTION CONFIRMATION  
BETWEEN GEYSERS POWER COMPANY, LLC  
AND  
NORTHERN CALIFORNIA POWER AGENCY**

This transaction confirmation ("**Confirmation**") sets forth the terms and conditions of the transaction between Buyer and Seller, each individually a "**Party**" and together the "**Parties**," as of the Effective Date specified below, in which Seller agrees to sell and deliver, and Buyer agrees to purchase and receive, the Product, as such term is defined herein (the "**Transaction**"). This Transaction is governed by the Western Systems Power Pool ("**WSPP**") Agreement (Effective Version: August 12, 2021), together with any and all exhibits, schedules or supplements thereto or incorporated therein by reference, as amended or modified, each in force and effect from time to time between the Parties (collectively, the "**Master Agreement**"), as amended and supplemented by this Confirmation. The Master Agreement and this Confirmation are collectively referred to herein as the "**Agreement**". Capitalized terms used but not otherwise defined in this Confirmation are defined in the Master Agreement or the Tariff (as defined below). To the extent that this Confirmation is inconsistent with any provision of the Master Agreement, this Confirmation shall control and shall govern the rights and obligation of the Parties in connection with this Transaction. Except as otherwise specified, references to an "**Article**" or a "**Section**" mean an Article or Section of this Confirmation, as applicable. This Confirmation supersedes and replaces any prior oral or written confirmation or agreement, including broker confirmations, regarding this Transaction.

**We confirm the following terms of our Transaction:**

**Buyer:** Northern California Power Agency

**Seller:** Geysers Power Company, LLC

**Transaction:** This Transaction is for Seller to sell and Buyer to purchase Resource Contingent Bundled RECs, all in accordance with the terms and conditions of this Agreement.

**Effective Date:** \_\_\_\_\_, 20\_\_

**Delivery Term:** The "**Delivery Term**" shall be from January 1, 2025 to December 31, 2036, inclusive. Notwithstanding the foregoing, for the sole purpose of matching delivery of RECs with Delivered Energy from the Project, such period will extend through the date that all RECs associated with such Delivered Energy have been delivered from Seller to Buyer in accordance with this Confirmation.

**Product:** "**Product**" or "**Resource Contingent Bundled REC**" means Delivered Energy which meets the criteria for Section 399.16(b)(1)(A) of the California Public Utilities Code, comprised of: (1) renewable energy delivered in accordance with the terms and conditions of WSPP Service Schedule B, (2) Renewable Energy Credits generated by the Project and transferred by Seller through a WREGIS Certificate to Buyer under this Confirmation, and (3) all Green Attributes associated with the renewable energy delivered to Buyer as part of this Confirmation. To the extent not inconsistent with the

foregoing, the Product is a Resource Contingent Bundled REC as such is described under Section R-2.3.4 of WSPP Service Schedule R. The Product does not include any other non-renewable and environmental attributes (e.g., ancillary services or resource adequacy capacity).

- Project:** The term “**Project**” means one or more of the geothermal power plants owned or controlled by Seller and located in Lake and Sonoma Counties, California that will be used to provide the Contract Quantity. Due to the portfolio nature of the Geysers, Buyer acknowledges that Seller is making sales and deliveries from the Project to other purchasers; provided, however, Seller shall be contractually entitled to all or a portion of the Resource Contingent Bundled RECs and associated Green Attributes generated by the facilities listed in **Exhibit A** during the Delivery Term (or portion thereof in which the Product is generated by or attributed to such facility) as set forth in this Agreement. **Exhibit A** identifies each of the geothermal power plants from any of which the Product will be produced and delivered as of the Effective Date. Following the Effective Date, Seller may add or remove geothermal power plants to **Exhibit A** with prior written notice to Buyer. Each Project must (i) be certified by the CEC as an eligible renewable energy resource for the California RPS Program and (ii) satisfy the requirements of Section 399.16(b)(1)(A) of the California Public Utilities Code by having a first point of interconnection with the CAISO Balancing Authority.
- Delivery:** The Parties agree that a schedule of energy to the CAISO Balancing Authority is a delivery to the CAISO and therefore Buyer. Scheduling Delivered Energy to the CAISO Balancing Authority will constitute delivery of Resource Contingent Bundled RECs to Buyer, provided the WREGIS Certificates evidencing the Green Attributes comprised in the Resource Contingent Bundled RECs are delivered to Buyer as provided in this Agreement.
- Delivery Point:** The Delivery Point for each Project shall be the Point of Interconnection with the CAISO Balancing Authority.
- Financial Settlement Point:** The Financial Settlement Point shall be the NP15 EZ Gen Hub.
- Meter Data:** To provide evidence of Product, in connection with submission of its monthly invoice and upon the request of Buyer, Seller shall provide to Buyer records of settlement quality metered data, including CAISO metering and transaction data sufficient to document and verify the generation and delivery of the Product to Buyer by the Project to the Delivery Point (and upon Buyer’s reasonable request access to any records, including invoices or settlement data from the CAISO, necessary to verify the invoice).

**Contract Price:** For each MWh of Product scheduled and delivered in accordance with this Confirmation, not to exceed the Contract Quantity, Buyer shall pay Seller the Contract Price.

**“Contract Price”** is as follows:

Contract Years	Price (\$/MWh)
2025 - 2036	\$69.41 per MWh of Product

**Contract Quantity:**

Contract Years	Contract Quantity
2025 - 2026	50 MW of the Product delivered on a 7x24 schedule
2027 - 2036	100 MW of the Product delivered on a 7x24 schedule

**Renewable Energy  
Credit Certificates  
and Transfer of  
RECs:**

Seller, or Seller’s QRE, shall record MWh of renewable energy produced and delivered for this Confirmation into WREGIS for each calendar month of the Delivery Term, and Seller shall cause the RECs created from this renewable energy to be transferred to Buyer in accordance with the terms and conditions of the WREGIS and WREGIS Operating Rules on a schedule that accommodates WREGIS reporting.

Seller shall be responsible, at its sole expense, for validating, adjusting, and disputing data with WREGIS so that the data from the Project settlement quality meter data corresponds with the quantity of RECs conveyed to Buyer hereunder. Upon request Seller shall provide Buyer with copies of all material correspondence or documentation to or from WREGIS with respect to any such validation, adjustment, or dispute. Without limiting Seller’s obligations, if a WREGIS Certificate deficit is caused solely by an error or omission of WREGIS or the CAISO, the Parties shall cooperate in good faith to cause WREGIS to correct its error or omission.

Seller shall, at its sole cost and expense, take all actions and execute all documents or instruments necessary to ensure that the RECs sold hereunder can be transferred to Buyer utilizing WREGIS. Seller shall comply with all laws, including, without limitation, the WREGIS Operating Rules regarding the certification and transfer of RECs sold hereunder to Buyer. During the Delivery Term, Seller shall have in-place, or shall submit

documentation to establish, an account with WREGIS. Seller shall transfer RECs to Buyer in accordance with WREGIS reporting protocols and WREGIS Operating Rules. Seller shall be responsible for all customary expenses associated with WREGIS Certificate issuance fees and utilizing WREGIS to transfer the RECs to Buyer, or its designee, except for any costs incurred by Buyer with respect to Buyer's registration with WREGIS and Buyer's WREGIS account.

To provide evidence of Green Attributes associated with the Product, Seller shall transfer to Buyer the RECs to Buyer's WREGIS account(s) within fifteen (15) Business Days after WREGIS creates certificates from each month's settlement quality meter data in accordance with the WREGIS Timelines (e.g., approximately four months after renewable energy production and delivery under current WREGIS operating conditions and WREGIS Timelines). If Buyer's WREGIS account ID is not available as of the start of the Delivery Term, Buyer will provide it to Seller promptly once Buyer receives the WREGIS account ID. Seller shall make REC deliveries associated with the Product by transfer of WREGIS Certificates to Buyer's WREGIS account pursuant to WREGIS Operating Rules. Seller shall, at its option, transfer the WREGIS Certificate using forward certificate transfer or any other transfer permitted under the WREGIS Operating Rules. With respect to REC deliveries, Product flow shall be considered the month in which the WREGIS Certificates are created by WREGIS under current operating conditions.

Because WREGIS Certificates will only be created for whole MWh amounts of renewable energy generated, any fractional MWh amounts will be carried forward during the Delivery Term until sufficient renewable generation is accumulated for the creation of a WREGIS Certificate to be transferred to Buyer.

In the event WREGIS changes the WREGIS Operating Rules, or applies the WREGIS Operating Rules in a manner inconsistent with this Confirmation, the Parties will negotiate in good faith using commercially reasonable efforts to revise or amend this Confirmation to the extent possible to preserve the intended economic benefits of this Transaction for both Parties, and so cause and enable Seller to transfer to Buyer's WREGIS account the RECs sold to Buyer hereunder.

Buyer and Seller acknowledge and agree that the consideration for and transfer of the Green Attributes is contained within the Contract Price.

**Scheduling and Settlement:**

Seller shall provide (or cause to be provided) all Scheduling Coordinator services at Seller's expense for the Project (and all units constituting the Project) and for delivery of Product to the Delivery Point, and for scheduling the Inter-SC Trade to deliver the value of the Delivered Energy to Buyer as set forth herein. Buyer shall provide (or cause to be provided) all Scheduling Coordinator services at Buyer's expense to receive Product from Buyer, and for scheduling the Inter-SC Trade to receive the value of the Delivered Energy as further set forth herein.

Seller will schedule or cause to be scheduled, at its sole discretion, Product to the CAISO Balancing Authority on a day-ahead, hour-ahead, sub-hourly and/or real-time basis. All Product will be scheduled in accordance with Generally Accepted Utility Practice and the Tariff.

Based on the CAISO market scheduling and settlement protocols in place as of the Effective Date, CAISO will pay or charge Seller the CAISO Credit for the energy value of Delivered Energy produced and delivered from the Project to the Delivery Point on behalf of the Buyer. To transfer the energy value of the Delivered Energy produced and delivered from the Project from Seller to Buyer, Seller will schedule Inter-SC Trades on a Day-Ahead basis at the Financial Settlement Point in an amount equal to the Contract Quantity to effectuate the transfer of the energy value of Delivered Energy from Seller to Buyer, and Buyer will schedule Inter-SC Trades on a Day-Ahead basis at the Financial Settlement Point in an amount equal to the Contract Quantity to effectuate the receipt of the energy value of Delivered Energy from Seller to Buyer. Consequently, and consistent with applicable netting provisions of the Master Agreement, Seller and Buyer hereby agree that the energy value of Delivered Energy will be transferred from Seller to Buyer by scheduling Inter-SC Trades on a Day-Ahead basis at the Financial Settlement Point between Seller and Buyer, and Seller shall be responsible for all CAISO costs (including penalties, costs associated with scheduling and settling Inter-SC Trades on a day-ahead basis at the Financial Settlement Point, and other charges) and shall be entitled to all CAISO credits (including CAISO Credits and payments) associated with the Project and the delivery of energy to the Delivery Point, and Buyer shall be responsible for all CAISO costs and shall be entitled to all CAISO credits associated with scheduling Inter-SC Trades on a Day-Ahead basis at the Financial Settlement Point to effectuate the receipt of the energy value of Delivered Energy from Seller to Buyer.

In the event the amount of Delivered Energy produced and delivered from the Project is less than the Contract Quantity in any monthly period, the payment from Buyer to Seller for Delivered Energy for that monthly period will be adjusted to account for the MWh difference between the Contract Quantity scheduled from Seller to Buyer as an Inter-SC Trade at the Financial Settlement Point, and the actual amount of Delivered Energy produced and delivered from the Project at the Delivery Point, as follows:

$$\text{Payment Due} = (\text{Contract Quantity} * \text{Contract Price}) + ((\text{Delivered Energy} - \text{Contract Quantity}) * \text{Green Attribute Price})$$

In the event Seller forecasts that the amount of Delivered Energy to be produced and delivered from the Project during a period of time will be less than the Contract Quantity due to an excused event as set forth in Section R-2.3.4 of WSPP Service Schedule R or WSPP Service Schedule B, Seller will promptly notify Buyer of the reduced amount of Delivered Energy that is forecasted to be produced and delivered during a period of time, and the Parties will timely coordinate in a commercially reasonable manner to make adjustments to the MWh quantity of Inter-SC Trades that are to be scheduled at the Financial Settlement Point by Seller and Buyer during the

specified period of time to match the amount of Delivered Energy that is forecasted to be produced and delivered from the Project

**Invoicing and  
Payment:**

For the purposes of this Transaction, invoicing and payment for the Product and Green Attributes delivered to Buyer, as further set forth in this Confirmation, will be in accordance with Section 9 of the Master Agreement.

**Eligibility:**

Seller, and, if applicable, its successors, represents and warrants that throughout the Delivery Term of this Agreement that: (i) the Project qualifies and is certified by the CEC as an Eligible Renewable Energy Resource (“**ERR**”) as such term is defined in Public Utilities Code Section 399.12 or Section 399.16; and (ii) the Project’s output delivered to Buyer qualifies under the requirements of the California Renewables Portfolio Standard. To the extent a Change in Law occurs after execution of this Agreement that causes this representation and warranty to be materially false or misleading, it shall not be an Event of Default if Seller has used commercially reasonable efforts to comply with such Change in Law. [STC 6, Non-Modifiable. (Source: D.07-11-025, Attachment A) D.08-04-009] Commercially reasonable efforts shall be those efforts described in the Change in Law provision of this Confirmation.

Seller will be responsible for ensuring that (i) each Project is certified as an eligible renewable energy resource for the California RPS Program prior to delivery of Resource Contingent Bundled RECs hereunder from such Project; and (ii) the Green Attributes have been or will be transferred to Seller and will be transferrable to Buyer through or using WREGIS, or such similar generation information or attributes tracking system as may be approved by or other method of transfer acceptable to the Energy Commission.

**Vintage:**

Calendar Year 2025 through Calendar Year 2036, inclusive.

**Environmental  
Attributes:**

All Attributes. The Product is a Resource Contingent Bundled REC sourced from the Projects. The Parties agree that the Product will be sourced only from the Projects identified in the Confirmation with no substitutions.

**Applicable  
Program:**

State of California Renewable Portfolio Standard Program (hereinafter referred to as “**California Renewables Portfolio Standard**” or “**California RPS Program**” or “**RPS**”, as codified at California Public Utilities Code Section 399.11 et seq., and jointly administered by the CEC and the CPUC, including without limitation all applicable eligibility criteria and requirements thereof, and implemented in a manner consistent with the Enforcement Procedures for the Renewables Portfolio Standard for Local Publicly Owned Electric Utilities, as adopted by the California Energy Commission on December 22, 2020, and requiring that a specified percentage of a load-serving entity’s retail sales should be supplied with electricity generated by eligible renewable resources.

**WSPP Service  
Schedule R:**

This Confirmation incorporates Service Schedule R of the Master Agreement, which shall govern this Transaction except as modified in this Confirmation. References herein to sections in Schedule R shall appear, for example, as "Section R-2.3.4".

**Representations  
And Warranties:**

As of the Effective Date, each Party represents and warrants to the other Party that: (i) it is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation; (ii) it has authority and ability to enter into this Agreement and perform its obligations hereunder; (iii) it is acting for its own account and is not relying upon any representation of the other Party other than those expressly set forth herein; and (iv) it has entered into this Agreement in connection with the conduct of its business and it has the capacity or ability to produce and deliver or take delivery of all Product referred to in the Agreement to which it is a Party.

Seller further represents and warrants to Buyer that:

- i. Seller hereby provides and conveys all Green Attributes associated with the electricity generation from the Project to Buyer as part of the Product being delivered. Seller represents and warrants that Seller holds the rights to all such Green Attributes from the Project, and Seller agrees to convey and hereby conveys all such Green Attributes to Buyer as included in the delivery of the Product from the Project.
- ii. Seller and, if applicable, its successors, represents and warrants that throughout the Delivery Term of this Agreement the Renewable Energy Credits transferred to Buyer conform to the definition and attributes required for compliance with the California Renewables Portfolio Standard, as set forth in California Public Utilities Commission Decision 08-08-028, and as may be modified by subsequent decision of the California Public Utilities Commission or by subsequent legislation. To the extent a Change in Law occurs after execution of this Agreement that causes this representation and warranty to be materially false or misleading, it shall not be an Event of Default if Seller has used commercially reasonable efforts to comply with such Change in Law. [STC REC-1, Non-modifiable. D.11-01-025] Commercially reasonable efforts shall be those efforts described in the Change in Law provision of this Confirmation.
- iii. Tracking of RECs in WREGIS. Seller warrants that all necessary steps to allow the Renewable Energy Credits transferred to Buyer to be tracked in the Western Renewable Energy Generation Information System will be taken prior to the first delivery under the contract. [STC REC-2, Non-modifiable. D.11-01-025]
- iv. Seller has not sold the Product or any Green Attribute of the Product to be transferred to Buyer to any other person or entity.



- v. The Product produced and delivered from Seller to Buyer is from the electric energy generated by the Project.
- vi. Each Project has a first point of interconnection with the CAISO Balancing Authority.
- vii. Delivered Energy and Green Attributes to be purchased and sold pursuant to this Confirmation are not committed to another party.
- viii. All rights, title and interest in and to the Product are free and clear of any taxes or security interests.
- ix. Seller agrees it will cooperate and work with Buyer, the CEC, and/or the CPUC to provide any documentation required by the CPUC or CEC to support the Product's classification as a Portfolio Content Category 1 Product as set forth in California Public Utilities Code Section 399.16(b)(1)(A).

**Change in Law Provisions:**

- a) The Product shall be Regulatorily Continuing requiring that Seller make commercially reasonable efforts to obtain compliance with Changes in Law in the California RPS Program, provided that such costs should not be greater than fifteen thousand dollars (\$15,000) per MW of Contract Quantity (the "**Capped Amount**"). This provision shall not apply to any Product that was delivered and accepted prior to any Change in Law if such Product complies with the California RPS Program that existed when it was delivered and accepted.
- b) This Confirmation is executed for the express purpose of complying with the California RPS Program and Section 399.16(b)(1)(A) of the California Public Utilities Code. Notwithstanding subsection (a), and subject to subsection (c), (i) if a Change in Law occurs after the Effective Date that causes the Product to cease to be compliant with the California RPS Program, Seller shall comply with such Change in Law and, subject to the Capped Amount, cause the Product to be compliant with the California RPS Program and continue to maintain compliance with the California RPS Program after having brought the Product back into compliance for the remainder of the Delivery Term; and (ii) if the California RPS Program is replaced or superseded with any successor renewable portfolio standard or similar program or any Governmental Body implements a regulation of any environmental attribute associated with the Product, including the limitation of greenhouse gases, then (A) the Parties shall in good faith amend the terms of this Agreement to comply with the requirements of such successor standard or new environmental attribute law or regulation in order to effect the original intent of this Agreement; provided that neither such amendment nor the Parties' failure to enter into such amendment shall (1) relieve Seller of its obligations for the cost of Compliance Actions up to the Capped Amount, (2) diminish Buyer's rights or benefits hereunder, or (3) increase or decrease Buyer's obligations or liabilities hereunder, including payment obligations, unless otherwise set forth herein and (B) Seller shall comply with the requirements of such successor renewable portfolio standard, similar program or regulation of any environmental attribute associated with the Product, including the limitation of greenhouse gases, in accordance with the amended version of this Agreement. Seller shall be responsible for all costs and expenses incurred by

either Party in the performance of the Parties' obligations under the forgoing clauses (i) and (ii)(B) (collectively, the "**Compliance Actions**") up to the Capped Amount.

- c) If Seller reasonably expects that the costs necessary to cause the Product to be compliant with the California RPS Program, or to cause the Product to comply with any successor RPS law or new environmental attribute law or regulation, will exceed the Capped Amount even after Seller's future efforts to comply with such Change in Law, including Seller's expenditure in an amount equal to or greater than Capped Amount, then, in either case, Seller shall promptly provide notice to Buyer of the foregoing. Within thirty (30) Business Days after such notice, Seller shall, at its sole expense, deliver to Buyer a reasonably detailed report (the "**Compliance Action Plan**") consisting of (A) the Compliance Actions that Seller has performed and an itemized list of costs of such Compliance Actions, (B) Seller's proposed additional Compliance Actions and a good faith itemized estimate of the applicable costs, and (C) a good faith estimate of the date that the Product will again be compliant with the California RPS Program or Product will be in compliance with the successor RPS law or new environmental attribute law or regulation, as applicable, (the aggregate estimated costs of all performed and proposed Compliance Actions, "**Compliance Action Plan Estimate**").
- d) If Buyer approves of the Compliance Action Plan, then either Party may elect to pay costs in excess of the Capped Amount ("**Excess Compliance Costs**"). If a Party does elect to pay Excess Compliance Costs, then Seller shall be responsible for all Compliance Action costs up to the Capped Amount, and the electing Party shall be responsible for costs in excess thereof. If, after 60 days of the date that Buyer approves the Compliance Action Plan ("**Compliance Plan Consideration Period**"), neither Party has provided notice to the other Party in writing of its election to pay the Excess Compliance Costs, then, upon notice to be delivered to the other Party within ten (10) Business Days of the end of the Compliance Plan Consideration Period, (1) Buyer may, in its sole discretion and without penalty to Buyer, terminate this Agreement with respect to some or all of the Contract Quantity, effective upon notice to Seller, or (2) Seller may, in its sole discretion and without penalty to Seller, terminate this Agreement with respect to all of the Contract Quantity effective upon notice to Buyer.
- e) If Seller reasonably determines that its preparation and delivery of a Compliance Action Plan would be futile because it is clear that, even if Seller takes Compliance Actions and incurs cost equal to the Capped Amount, the Product cannot be made compliant with the California RPS Program following a Change in Law or the Product cannot comply with a successor RPS law or a new environmental attribute law or regulation, then Seller shall promptly provide a notice to Buyer of the foregoing (such notice, an "**Infeasibility Notice**"). If it is possible to amend this Agreement to (a) make the Product compliant with the California RPS Program, (b) ensure that Buyer will bear no additional costs, obligations, or risks hereunder, and (c) ensure that Buyer's rights and benefits hereunder will not be diminished, then the Parties shall negotiate in good faith to amend the terms of the Agreement. If such an amendment is not possible, then within ten (10) Business Days of delivery of such notice, (1) Buyer may, in its sole discretion and without penalty to Buyer, terminate this Agreement with respect to some or all of the Contract Quantity, effective upon notice to Seller, or (2) Seller may, in its sole discretion and without penalty to Seller, terminate this Agreement with respect to all of the Contract Quantity effective upon notice to Buyer.

- f) If Buyer and Seller disagree with the contents of the Compliance Action Plan or the Infeasibility Notice, then the Parties shall engage in Dispute Resolution pursuant to Section 34.
- g) Except after a Change in Law or if the California RPS Program or any portion thereof is repealed or ceases to be in effect and is not replaced with a comparable law, from time to time and at any time requested by Buyer, Seller shall furnish to Buyer, Governmental Authorities, or other Persons designated by Buyer, all certificates and other documentation reasonably requested by Buyer in order to demonstrate that the Product is compliant with the California RPS Program.

**Reporting  
Obligation:**

Buyer shall have no responsibility (whether regulatory or financial) for greenhouse gas emissions associated with the Product (if any), and any such obligation shall be fulfilled by or at the direction of Seller at its own cost.

**Review:**

To monitor compliance with this Confirmation, each Party reserves the right to review during normal business hours and at its own expense, for up to two (2) years following delivery of the Product under this Confirmation, and with reasonable advance notice to the other Party, and to the extent that such other Party is in possession of such information, information required to verify that the Product sold under this Confirmation was not otherwise sold by Seller to a third party.

**Confidentiality:**

Except as provided in this Confidentiality section and the California Public Records Act, and subject to and without limiting Section R-7, neither Party shall publish, disclose, or otherwise divulge Confidential Information to any person at any time during or after the term of this Agreement, without the other Party's prior express written consent; provided, however, Seller acknowledges that Buyer is a public agency subject to the requirement of the California Public Records Act (Cal. Gov. Code section 6250 et seq.), and therefore this Agreement and any related documents will be subject to disclosure unless otherwise protected by the act or applicable law. Each Party shall permit knowledge of and access to Confidential Information only to those of its affiliates and to persons investing in, providing funding to or acquiring it or its affiliates, and to its and the foregoing persons' respective attorneys, accountants, representatives, agents and employees who have a need to know such Confidential Information related to this Agreement.

If required by any law, statute, ordinance, decision, order or regulation passed, adopted, issued or promulgated by a court, Governmental Authority or agency having jurisdiction over a Party, including the California Public Records Act, that Party may release Confidential Information, or a portion thereof, as required by the Applicable Law, statute, ordinance, decision, order or regulation. A Party may disclose Confidential Information to accountants in connection with audits. In the event a Party is required to release Confidential Information, such Party shall notify the other Party of the required disclosure, such that the other Party may attempt (if such Party so chooses), at its sole cost, to cause the recipient of the Confidential Information to treat such information in a confidential manner, and to prevent such information from being disclosed or otherwise becoming part

of the public domain. Parties acknowledge that Buyer is obligated to provide Confidential Information to the CPUC and CEC for regulatory compliance purposes for the California RPS Program, and Seller waives the prior notice requirement and authorizes such disclosures to the CPUC and CEC.

**Applicable Law/  
Governing Law:**

This Agreement and the rights and duties of the Parties hereunder shall be governed by and construed, enforced and performed in accordance with the laws of the state of California, without regard to principles of conflicts of Law. To the extent enforceable at such time, each Party waives its respective right to any jury trial with respect to any litigation arising under or in connection with this Agreement. [STC 17, Applicable Law, Non-modifiable. (Source: D.07-11-025, Attachment A) D.08-04-009]

**Additional  
Terms:**

- a) Seller shall agree to reasonably assist Buyer with Buyer's California Renewables Portfolio Standard Program compliance filings as reasonably requested by Buyer. In connection with the foregoing, neither Seller nor its affiliates shall be required to (i) expend or incur any legal costs (either internal or external) in providing such assistance or (ii) prepare or defend a filing or otherwise advocate on behalf of Buyer, except to the extent caused by Seller or affiliate's acts or omissions.
- b) Notwithstanding anything else in this Confirmation, and subject to Seller's obligations under this Confirmation, Buyer acknowledges and agrees that the sale of renewable energy and RECs by Seller from the Project is nonexclusive.
- c) **Seller Credit Requirements:** Seller and Buyer are entering into the RA Agreement concurrently with the execution of this Confirmation. Seller shall post and maintain from time to time security in the amount and for the periods set forth on **Schedule 1** to secure its obligations under both this Confirmation and the RA Agreement; provided that Buyer may only draw on such security pursuant to this Confirmation to recover damages payable under this Confirmation and the RA Agreement. If the RA Agreement is terminated for any reason, but this Confirmation continues in force, the amounts on **Schedule 1** will be reduced to reflect the proportionate reduction in Buyer's overall exposure as a result of the termination of the RA Agreement, as determined by Buyer in a commercially reasonable manner, and the Parties will amend and replace **Schedule 1** to reflect this reduction within thirty (30) days after termination of the RA Agreement. Such security may be provided in cash or by a letter of credit substantially in the form attached hereto and incorporated herein as Exhibit B. The security shall be posted with Buyer as soon as possible, but in no event later than ten (10) Business Days after the Effective Date. On the dates when the required amount of such security is reduced as set forth on **Schedule 1**, if the security has been provided in cash, Buyer shall return any cash security that it holds in excess of the required amount, and if the security has been provided in the form of a letter of credit, Buyer will cooperate with Seller in substituting a revised letter of credit in the appropriate amount for the one held by Buyer. Once Seller has achieved an Investment Grade Rating, Seller shall no longer be required to post security under this Confirmation or the RA Agreement; provided, however, in the event Seller does not maintain an Investment Grade Rating the security posting requirements set forth in the

Confirmation shall continue to apply. Buyer shall return any cash or letters of credit held as security hereunder to Seller within thirty (30) days after written notice from Seller that it has achieved an Investment Grade Rating.

If Seller provides security in the form of a letter of credit, Seller will provide and maintain a letter of credit to the benefit of Buyer substantially in the form attached hereto and incorporated herein as Exhibit B (attached hereto and incorporated herein by reference) from a United States bank or a bank that maintains a United States domestic branch with a long-term debt rating from at least two rating agencies of at least "A-" or equivalent from Moody's, Standard & Poor's ("S&P"), or Fitch Ratings ("Fitch") (or if only one rating is available, a rating of at least "AA-" or equivalent).

- d) Buyer Credit Requirements: Seller and Buyer are entering into the RA Agreement concurrently with the execution of this Confirmation. Only in the event of a Buyer Downgrade Event will Buyer be required to post and maintain security in the amount and for the periods set forth on **Schedule 1** to secure its obligations under both this Confirmation and the RA Agreement; provided that Seller may only draw on such security pursuant to this Confirmation to recover damages payable under this Confirmation and the RA Agreement. If the RA Agreement is terminated for any reason, but this Confirmation continues in force, the amounts on **Schedule 1** will be reduced to reflect the proportionate reduction in Seller's overall exposure as a result of the termination of the RA Agreement, as determined by Seller in a commercially reasonable manner, and the Parties will amend and replace **Schedule 1** to reflect this reduction within thirty (30) days after termination of the RA Agreement. Such security may be provided in cash or by a letter of credit substantially in the form attached hereto and incorporated herein as Exhibit B. The security shall be posted with Seller as soon as possible, but in no event later than ten (10) Business Days after the occurrence of a Buyer Downgrade Event. On the dates when the required amount of such security is reduced as set forth on **Schedule 1**, if the security has been provided in cash, Seller shall return any cash security that it holds in excess of the required amount, and if the security has been provided in the form of a letter of credit, Seller will cooperate with Buyer in substituting a revised letter of credit in the appropriate amount for the one held by Seller. Once Buyer has resolved the Downgrade Event by achieving an Investment Grade Rating or by satisfying such other requirements as are set forth herein, the Downgrade Event shall be deemed resolved and Buyer shall no longer be required to post security under this Confirmation or the RA Agreement; provided, however, in the event of a subsequent Buyer Downgrade Event, the security posting requirements set forth in the Confirmation shall continue to apply until the Buyer Downgrade Event has been resolved. Seller shall return any cash or letters of credit held as security hereunder to Buyer within thirty (30) days after written notice from Buyer that the Buyer Downgrade Event has been resolved by Buyer achieving an Investment Grade Rating or satisfying such other requirements as are set forth herein.

If Buyer provides security in the form of a letter of credit, Buyer will provide and maintain a letter of credit to the benefit of Seller substantially in the form attached hereto and incorporated herein as Exhibit B (attached hereto and incorporated herein by reference) from a United States bank or a bank that maintains a United States domestic branch with a long-term debt rating from at least two rating agencies of at least "A-" or equivalent from Moody's, Standard & Poor's ("S&P"), or Fitch Ratings ("Fitch") (or if only one rating is available, a rating of at least "AA-" or equivalent).

- e) Early Termination: The Parties have entered into a separate agreement for the purchase and sale of resource adequacy products, as further set forth therein, which is dated concurrently with the Effective Date (herein after referred to as the “**RA Agreement**”). The Parties agree that in the event the RA Agreement is terminated pursuant to the Master Agreement, Seller or Buyer shall have the right, but not the obligation, to provide thirty (30) days prior written notice to the other Party that it is terminating this Transaction, effective as of the last date of the calendar month in which such notice is received by the other Party. Early Termination pursuant to this Section of the Confirmation will not be deemed a Seller Event of Default nor a Buyer Event of Default, and Seller and Buyer shall not be subject to damages or ongoing obligations as a result of such termination.
- f) Counterparts: This Confirmation may be signed in any number of counterparts with the same effect as if the signature to the counterparts were upon a single instrument. The Parties may rely on electronic, or scanned signatures as originals under this Confirmation. Delivery of an executed signature page of this Confirmation by facsimile or electronic mail transmission (including PDF) shall be the same as delivery of a manually executed signature page.
- g) Entire Agreement, No Oral Agreements or Modifications. This Confirmation sets forth the terms of the Transaction into which the Parties have entered into and (together with the Master Agreement, as revised by this Confirmation) shall constitute the entire agreement between the Parties relating to the purchase and sale of the Product. Notwithstanding any other provisions of the Agreement, this Transaction may be confirmed only through a Documentary Writing executed by both Parties, and this Transaction may only be amended or modified by a Documentary Writing executed by both Parties.
- h) Buyer's Re-Sale of Product. Buyer may re-sell all or a portion of the Contract Quantity of Product hereunder; provided, however, that any such re-sale does not increase Seller's obligations, costs or liabilities hereunder. Seller will, or will cause the Scheduling Coordinator for the Project, to follow Buyer's instructions with respect to providing such resold Product to a subsequent buyer, to the extent such instructions are consistent with Seller's obligations under this Confirmation. Seller will, and will cause the Project Scheduling Coordinator, to take all commercially reasonable actions and execute all documents or instruments reasonably necessary to allow such subsequent buyer to use such resold Product in a manner consistent with Buyer's rights under this Confirmation. If Buyer incurs any liability to a subsequent buyer due to the failure of Seller to comply with this Confirmation, Seller will be liable to Buyer for the same amounts Seller would have owed Buyer under this Confirmation if Buyer had not resold the Product.
- i) Failure to Deliver/Receive. For purpose of this Transaction, the determination of the Replacement Price will be based on the energy and Green Attributes components of the Product and damages will be calculated in a commercially reasonable manner consistent with the Master Agreement, unless otherwise set forth herein.
- j) Forward Contract. This Confirmation constitutes a sale of a nonfinancial commodity for deferred shipment or delivery that the Parties intend to be physically settled and is excluded from the term “swap” as defined in the Commodity Exchange Act under 7 U.S.C. § 1a(47) and the regulations of the Commodity Future Trading Commission

and Securities and Exchange Commission, with further reference to 77 Fed. Reg. 48233-35.

k) Emission Performance Standard. This Agreement is a “covered procurement” under the CEC’s EPS and Buyer shall make the required compliance filing with the CEC within 10 Business Days of the Effective Date. The Parties agree that this Agreement shall be void and all pending Product deliveries terminated no later than the effective date of any final decision by the CEC pursuant to the California Code of Regulations, Title 20, Section 2910 that the covered procurement fails to comply with EPS, without penalty to Buyer or Seller. [The Parties acknowledge that the Project is “determined to be compliant” pursuant to 20 CCR §§ 2903(b)(1) or (2).]

l) Master Agreement Amendments. For this Transaction, the Master Agreement shall be amended as follows:

(i) Section 14 of the Master Agreement is amended by inserting the following new text at the end thereof:

“Notwithstanding the above, for purposes of Buyer effecting a prepay transaction, Buyer may from time to time assign the right to receive all or a portion of the Product that would otherwise be delivered to Buyer hereunder. In connection with any such assignment to effect a prepay transaction, Seller and Buyer agree to execute a commercially reasonable form of assignment agreement to be agreed to by the Parties. For the avoidance of doubt, Buyer will remain responsible for all its obligations under this Agreement related to such assigned Product, including (i) the obligation to pay for such Product to the extent the assignee thereof does not do so, and (ii) any damages associated with such assignee’s failure to take any such Product.

Buyer may also from time to time and at any time assign any or all of its rights, and delegate any or all of its obligations under this Agreement, in whole or in part without the consent of Seller to one or more Participating Members. Notwithstanding the foregoing, in connection with any such assignment to one or more Participating Members, such Participating Members shall (i) have an Investment Grade Rating at the time of the assignment, and (ii) execute a written assumption agreement in favor of Seller pursuant to which any such Participating Member shall assume all the obligations of Buyer under this Agreement, thereby relieving the assignor Buyer from its duties and obligations hereunder and thereunder.”

(ii) Section 21.1 of the Master Agreement is amended by deleting “direct” in the ninth line thereof. The Parties also agree that the waiver on the fifth line of that section does not apply to any damages or other remedies expressly provided for in this Confirmation.

(iii) Section 22.1 of the Master Agreement is modified by deleting subsection (d) and replacing it with “[intentionally omitted]” and by inserting the following new text at the end thereof:

“(f) the failure of the Defaulting Party to perform any material covenant or obligation set forth in this Agreement (except to the extent constituting a separate Event of Default, and except for such Party’s obligations to deliver or receive the

quantities of Product due under this Agreement, the exclusive remedy for which is provided in this Confirmation and in Section 21.3) if such failure is not remedied within ten (10) Business Days after written notice;

(g) the failure of the Defaulting Party to pay its debts generally as they become due or the Defaulting Party's admission in a writing that it is unable to generally pay its debts as they become due;

(h) the institution, by the Defaulting Party, of a general assignment for the benefit of its creditors; or

(i) the application for, consent to, or acquiescence to, by the Defaulting Party, the appointment of a receiver, custodian, trustee, liquidator, or similar official for all or a substantial portion of its assets."

(iv) Section 22.2(b) of the Master Agreement is amended by inserting in Section 22.2, "and is continuing" after "Event of Default occurs" in the first line thereof and deleting the second sentence therein.

(v) Section 22.3 of the Master Agreement is amended by:

1. In Section 22.3(b), replacing the second sentence thereof with "The "Present Value Rate" shall mean an annual rate equal to the "prime rate" as published in the Wall Street Journal from to time plus 2%.,";
2. In Section 22.3(c), deleting the third sentence thereof and replacing it with the following: "If the Non-Defaulting Party's aggregate Gains exceed its aggregate Losses and Costs, if any, resulting from the termination of this Agreement or a Confirmation, the Termination Payment for all such Terminated Transactions shall be zero, notwithstanding any provision in this Section or Agreement to the contrary."
3. In Section 22.3(e), delete the entire provision (including subsections) and replace it with the following: "[Intentionally omitted]"
4. In Section 22.3(f), delete the entire provision and replace it with the following:

"If the Defaulting Party disagrees with the calculation of the Termination Payment and the Parties cannot otherwise resolve their differences, and provided that Defaulting Party has paid the undisputed part of the Termination Payment to the Non-Defaulting Party as provided under Section 22.3(c), and that any amounts disputed by the Defaulting Party are disputed in good faith, then the Defaulting Party may submit the calculation issue to Dispute Resolution pursuant to Section 34."

(vi) In Section 24, delete the first sentence and replace it with the following:

"This Agreement and any Confirmation shall be governed by and construed in accordance with the laws of the State of California, without regard to the conflicts of laws rules thereof."



- (vii) The netting provisions of Section 28, NETTING, of the Master Agreement shall apply to the transaction covered by this Confirmation and the RA Agreement as if Buyer and Seller had both executed Exhibit A, NETTING, to the Master Agreement. Both Parties intend for the netting provisions of Exhibit A to the Master Agreement to be effective on the Effective Date.
- (viii) Section 30.1 of the Master Agreement is amended by inserting “or requested” after the word “required” in Section 30.1(4), by deleting “or” immediately before clause (7), and by adding the following at the end of the first sentence: “; or (8) to the Party’s and such Party’s affiliates’ lenders and potential lenders, investors or potential investors, counsel, accountants, advisors and agents who have a need to know such information and have agreed to keep such terms confidential”.
- (ix) Section 31 of the Master Agreement is amended by deleting the second sentence thereof.
- (x) Subsections 34.1 and 34.2 of the Master Agreement are hereby deleted and replaced with the following:

“34.1 INFORMAL DISPUTE RESOLUTION

IN THE EVENT OF ANY DISPUTE ARISING UNDER THIS TRANSACTION, WITHIN TEN (10) DAYS FOLLOWING THE RECEIPT OF A WRITTEN NOTICE FROM EITHER PARTY IDENTIFYING SUCH DISPUTE, THE PARTIES SHALL MEET, NEGOTIATE AND ATTEMPT, IN GOOD FAITH, TO RESOLVE THE DISPUTE QUICKLY, INFORMALLY AND INEXPENSIVELY. IF THE PARTIES ARE UNABLE TO RESOLVE A DISPUTE ARISING HEREUNDER WITHIN THIRTY (30) DAYS AFTER RECEIPT OF SUCH NOTICE, THEN EITHER PARTY MAY SEEK ANY AND ALL REMEDIES AVAILABLE TO IT AT LAW OR IN EQUITY, SUBJECT TO THE LIMITATIONS SET FORTH IN THIS TRANSACTION.”

“34.2 EXCLUSIVE JURISDICTION

EACH PARTY SUBMITS TO THE EXCLUSIVE JURISDICTION OF THE STATE OR FEDERAL COURTS LOCATED IN SAN FRANCISCO, CALIFORNIA, FOR ANY ACTION OR PROCEEDING RELATING TO THIS AGREEMENT OR ANY TRANSACTION, AND EXPRESSLY WAIVES ANY OBJECTION IT MAY HAVE TO SUCH JURISDICTION OR THE CONVENIENCE OF SUCH FORUM.”

- (xi) The phrase “arbitration or” is hereby deleted from the first line of Section 34.4.
- (xii) The following shall be inserted as a new Section 34.5; PROVIDED HOWEVER, THAT THE FOLLOWING NEW SECTION 34.5 SHALL NOT LIMIT BUYER’S RIGHT TO RECOVER FROM SELLER, OR SELLER’S OBLIGATION TO PAY BUYER, ANY AND ALL AMOUNTS OWED PURSUANT TO THIS CONFIRMATION, INCLUDING PENALTIES AS SPECIFIED THEREIN:

“34.5 LIMITATION OF DAMAGES. FOR BREACH OF ANY PROVISION OF THIS CONFIRMATION AGREEMENT FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED, THE EXPRESS REMEDY OR MEASURE OF DAMAGES PROVIDED IS THE SOLE AND EXCLUSIVE

REMEDY UNDER THIS AGREEMENT AND ALL OTHER REMEDIES FOR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. IF NO EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED IN THIS AGREEMENT FOR A PARTICULAR BREACH, LIABILITY FOR THE BREACH IS LIMITED TO DIRECT DAMAGES ONLY, WHICH SHALL BE THE SOLE AND EXCLUSIVE REMEDY UNDER THIS AGREEMENT FOR SUCH BREACH, AND ALL OTHER REMEDIES FOR DAMAGES AT LAW OR IN EQUITY ARE WAIVED. NEITHER PARTY IS LIABLE FOR ANY OTHER TYPE OF DAMAGE, INCLUDING INCIDENTAL, PUNITIVE, EXEMPLARY, CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES OF ANY NATURE (INCLUDING DAMAGES ASSOCIATED WITH LOST PROFITS, BUSINESS INTERRUPTION AND LOSS OF GOODWILL) ARISING AT ANY TIME, WHETHER IN TORT (INCLUDING THE SOLE OR CONTRIBUTORY NEGLIGENCE OF EITHER PARTY OR ANY RELATED PERSON), WARRANTY, STRICT LIABILITY, CONTRACT OR STATUTE, UNDER ANY INDEMNITY PROVISION, OR OTHERWISE; PROVIDED, HOWEVER, THAT THE FOREGOING SHALL NOT LIMIT EITHER PARTY'S RIGHT TO RECOVER DAMAGES UNDER EXPRESS INDEMNITY PROVISIONS SET FORTH IN THE CONFIRMATION. [THE FOREGOING PROVISIONS DO NOT APPLY TO THE FOLLOWING: (A) CLAIMS ARISING OUT OF SELLER'S OBLIGATIONS UNDER THIS AGREEMENT TO INDEMNIFY AND HOLD HARMLESS BUYER FOR DEATH, BODILY INJURY, OR PERSONAL INJURY TO ANY PERSON OR DAMAGE OR DESTRUCTION TO ANY PROPERTY, OR (B) COVERED BY SELLER'S INSURANCE POLICY OR SHOULD HAVE BEEN COVERED BY SELLER'S INSURANCE POLICY HAD SELLER OBTAINED AND MAINTAINED INSURANCE OF THE TYPES AND IN THE AMOUNTS REQUIRED BY THIS AGREEMENT."]

- (xiii) Section 41 "Witness" of the Master Agreement shall become Section 42 and the following "Standard of Review" Section shall be substituted in its place:

"The Parties agree as follows:

1. Absent the agreement of all Parties to the proposed change, the standard of review for changes to any section of this Agreement (including all Transactions and/or Confirmations) specifying the rate(s) or other material economic terms and conditions agreed to by the Parties herein, whether proposed by a Party, a non-party or FERC acting sua sponte, shall be the "public interest" standard of review set forth in *United Gas Pipe Line Co. v. Mobile Gas Service Corp.*, 350 U.S. 332 (1956) and *Federal Power Commission v. Sierra Pacific Power Co.*, 350 U.S. 348 (1956) (the "Mobile-Sierra" doctrine) and clarified in *Morgan Stanley Capital Group, Inc. v. Public Util. Dist. No. 1 of Snohomish* 554 U.S. 527 (2008) and *NRG Power Marketing LLC v. Maine Pub. Util. Comm'n*, 558 U.S. 165 (2010).
2. The Parties, for themselves and their successors and assigns, (i) agree that this "public interest" standard shall apply to any proposed changes in any other documents, instruments or other agreements executed or entered into by the Parties in connection with this Agreement and (ii) hereby expressly and irrevocably waive any rights they can or may have to the application of any other standard of review, including the "just and reasonable" standard."

- (xiv) Section B-5 of WSPP Service Schedule B is hereby deleted in its entirety and replaced with the following: “[Intentionally omitted]”

**Definitions/**

**Interpretations:** For purposes of the Confirmation, the following definitions and rules of interpretations shall apply:

**“Agreement”** has the meaning specified in the introductory paragraph hereof.

**“Confidential Information”** means all oral and written information exchanged between the Parties with respect to the subject matter of this Agreement. The following information does not constitute Confidential Information for the purposes of this Agreement: (a) information that is or becomes generally available to the public other than as a result of a disclosure by either Party in violation of this Agreement; (b) information that was already known by either Party on a non-confidential basis prior to this Agreement; and (c) information that becomes available to either Party on a non-confidential basis from a source other than the other Party if such source was not subject to any prohibition against disclosing the information to such Party.

**“CAISO”** means the California Independent System Operator Corporation or any successor entity performing similar functions.

**“CAISO Credit”** means the Energy Price paid or charged by the CAISO for the energy scheduled and delivered from the Project to the Delivery Point.

**“CAISO Tariff”** or **“Tariff”** means the tariff and protocol provisions of the CAISO, including the rules, protocols, procedures and standards attached thereto, as it may be amended, modified, supplemented or replaced (in whole or in part) from time to time.

**“CAISO Balancing Authority”** means, as the context requires, CAISO as “Balancing Authority” or “CAISO Balancing Authority Area”, as such terms are used in the CAISO Tariff.

**“California Renewables Portfolio Standard”** or **“California RPS Program”** or **“RPS”** means the “California Renewables Portfolio Standard” program as codified at California Public Utilities Code Section 399.11 et seq., as such provisions are amended or supplemented from time to time, and jointly administered by the CEC, the CPUC and the California Air Resources Board, including without limitation all applicable eligibility criteria and requirements thereof. [and implemented in a manner consistent with the Enforcement Procedures for the Renewables Portfolio Standard for Local Publicly Owned Electric Utilities, as adopted by the California Energy Commission on December 22, 2020.]

**“CEC”** or **“Energy Commission”** or **“California Energy Commission”** means the California Energy Commission, or any successor entity.

**“CPUC”** means the California Public Utilities Commission, or any successor entity.

**“Change in Law”** means any addition, amendment, decision, ruling, order, or binding interpretation by or of a governmental authority or other third party having jurisdiction or authority, to or regarding any laws, rules, regulations, orders, or judicial precedent, that applies to the California RPS Program, that is enacted, issued or becomes legally effective after the Effective Date and materially affects the California RPS Program or compliance of the Product with the California RPS Program.

**“Credit Rating”** means, with respect (i) to Seller, the current rating then assigned by Moody’s, S&P, Kroll, or Fitch, to Seller’s senior unsecured long-term debt obligations (not supported by insurance provider enhancements), or if Seller does not have a rating for its senior unsecured long-term debt, then the current general corporate credit rating or long-term issuer rating assigned by Moody’s, S&P, Kroll, or Fitch. In the event Seller has multiple ratings, the lower rating shall prevail, and (ii) to Buyer, the current lowest rating then assigned by Moody’s, S&P, Kroll, or Fitch, to Buyer’s Hydroelectric Project 1 Revenue Bonds (not supported by insurance provider enhancements), or if Buyer does not have a rating for its project bonds or revenue bonds, then the current general credit rating or long-term issuer rating assigned by Moody’s, S&P, Kroll, or Fitch. In the event Buyer has multiple ratings, the lower rating shall prevail.

**“Delivered Energy”** means renewable energy generated and metered from the Project with associated Green Attributes that is delivered to Buyer at the Delivery Point in accordance with this Confirmation.

**“Downgrade Event”** shall have the following meaning:

For Seller, it shall be a Downgrade Event for Seller only if the Credit Rating of Seller falls below BBB- from S&P, Fitch or Kroll, or Baa3 from Moody’s, or if Seller ceases to be rated by either S&P, Fitch, Moody’s or Kroll.

For Buyer, it shall be a Downgrade Event for Buyer only if (i) Buyer’s underlying Credit Rating, determined without reference to third party credit enhancement, on its utility revenue bond (**“Debt”**) by S&P, Moody’s, and Fitch is respectively below BBB- or Baa3, and Buyer fails to maintain Days of Cash on Hand. For the purposes of this Agreement, **“Days of Cash on Hand”** means, with respect to Buyer, the required security deposit under the Third Phase Agreement, and (ii) Buyer no longer has legal right to demand that its members adjust electric rates, or take other measures to increase revenues, as necessary to fully recover the total costs Buyer is obligated for hereunder.

**“Emission Performance Standard”** or **“EPS”** means the requirement set-forth in California Code of Regulations (CCR) Title 20, Chapter 11, Article 1. Section 2900 et seq.

**“Energy Price”** means, for each MWh of energy scheduled and delivered from the Project to the Delivery Point, the applicable Locational Marginal Price, as defined in the Tariff and published by the CAISO, at the Delivery Point where CAISO models the physical injection of such Project energy.

**“Generally Accepted Utility Practice”** means a practice established by the Western Electricity Coordinating Council (**“WECC”**) or any successor regional reliability council, as such practice may be revised from time to time, or if no practice is so established, means a practice otherwise generally accepted in the WECC region.

**“Green Attributes”** means any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, attributable to the generation from the Project, and its avoided emission of pollutants. Green Attributes include but are not limited to Renewable Energy Credits, as well as: (1) any avoided emission of pollutants to the air, soil or water such as sulfur oxides (Sox), nitrogen oxides (Nox), carbon monoxide (CO) and other pollutants; (2) any avoided emissions of carbon dioxide (CO2), methane (CH4), nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride and other greenhouse gases (GHGs) that have been determined by the United Nations Intergovernmental Panel on Climate Change, or otherwise by

law, to contribute to the actual or potential threat of altering the Earth's climate by trapping heat in the atmosphere; (3) the reporting rights to these avoided emissions, such as Green Tag Reporting Rights. Green Tag Reporting Rights are the right of a Green Tag Purchaser to report the ownership of accumulated Green Tags in compliance with federal or state law, if applicable, and to a federal or state agency or any other party at the Green Tag Purchaser's discretion, and include without limitation those Green Tag Reporting Rights accruing under Section 1605(b) of The Energy Policy Act of 1992 and any present or future federal, state, or local law, regulation or bill, and international or foreign emissions trading program. Green Tags are accumulated on a MWh basis and one Green Tag represents the Green Attributes associated with one (1) MWh of Energy. Green Attributes do not include (i) any energy, capacity, reliability or other power attributes from the Project, (ii) production tax credits associated with the construction or operation of the Project and other financial incentives in the form of credits, reductions, or allowances associated with the project that are applicable to a state or federal income taxation obligation, (iii) fuel-related subsidies or "tipping fees" that may be paid to Seller to accept certain fuels, or local subsidies received by the generator for the destruction of particular preexisting pollutants or the promotion of local environmental benefits, or (iv) emission reduction credits encumbered or used by the Project for compliance with local, state, or federal operating and/or air quality permits;

**"Green Attribute Price"** means: \$15.00/MWh for each MWh of Resource Contingent Bundled REC delivered to Buyer.

**"Green Tag"** and **"Green Tag Reporting Rights"** have the meanings set forth in the definition of "Green Attributes", and for the purposes of this Transaction.

**"Green Tag Purchaser"** means Buyer.

**"Governmental Body"** means (i) any federal, state, local, municipal or other government; (ii) any governmental, regulatory or administrative agency, commission or other authority lawfully exercising or entitled to exercise any administrative, executive, judicial, legislative, police, regulatory or taxing authority or power; and (iii) any court or governmental tribunal.

**"Inter-SC Trade"** is defined in the Tariff.

**"Investment Grade Rating"** means a rating of BBB- or better from S&P, Fitch or Kroll, or a rating of Baa3 or better from Moody's.

**"Locational Marginal Price"** is defined in the Tariff.

**"MW"** means megawatt in alternating current, or ac.

**"MWh"** mean megawatt-hours.

**"NERC"** means the North American Electric Reliability Corporation.

**"NP15 Existing Zone Generation Trading Hub"** or **"NP15 EZ Gen Hub"** is defined in the Tariff.

**"Participating Member"** means a member of Buyer that is signatory to the Third Phase Agreement.

**"Point of Interconnection"** is defined in the Tariff.

**“Performance Assurance”** means collateral in the form of either cash, Letter(s) of Credit, or other security acceptable to the requesting party.

**“Qualified Reporting Entity”** or **“QRE”** means an organization providing renewable energy data to WREGIS for registered generating units. QREs shall meet the Qualified Reporting Entity Guidelines established in the WREGIS Operating Rules.

**“RA Agreement”** is defined in subsection (e) of the Section labeled as “Additional Terms” in this Confirmation.

**“Renewable Energy Credit”** or **“REC”** means a renewable energy credit as defined by and in accordance with Section 399.12(h) of the California Public Utilities Code, including the right to claim title to Green Attributes attributable to the generation of electric energy from an Eligible Renewable Energy Resource.

**“RPS ID”** or **“CEC RPS ID”** means the “California Energy Commission RPS certification number”, the “identification number” and/or the “RPS ID”, as such terms are used by the CEC to describe the identification number for an eligible renewable energy resource that has been certified (or will be certified for the period of deliveries) as such by the CEC for the purposes of the California RPS Program. The RPS ID for each Project is set out beside the applicable facility under the column “CEC RPS ID” in the table attached hereto as Exhibit A.

**“Scheduling Coordinator”** is defined in the Tariff.

**“Third Phase Agreement”** means the agreement between buyer and the Participating Members that sets forth the terms and conditions under which Buyer is authorized to enter into this Agreement on behalf of the Participating Members.

**“WREGIS”** means Western Renewable Energy Generating Information System or any successor renewable energy tracking system or program.

**“WREGIS Certificate”** has the same meaning as “Certificate” as defined by WREGIS in the WREGIS Operating Rules and are designated by applicable law as eligible for complying with the California RPS Program and for evidencing the Green Attributes associated with the Product.

**“WREGIS Operating Rules”** means the operating rules and requirements adopted by WREGIS, as amended from time to time or successor rules and requirements.

**“WREGIS Timelines”** means the timeline for WREGIS Certificates creation by WREGIS in accordance with WREGIS Operating Rules as applied by WREGIS.

[SIGNATURE PAGE FOLLOWS]

**ACKNOWLEDGED AND AGREED TO AS OF THE EFFECTIVE DATE:**

**Geysers Power Company, LLC**

**Northern California Power Agency**

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

## SCHEDULE 1

### AMOUNT OF REQUIRED SECURITY

Period	Amount
1/1/2025 - 12/31/2025	\$3,460,200.00
1/1/2026 - 12/31/2026	\$3,460,200.00
1/1/2027 - 12/31/2027	\$6,920,400.00
1/1/2028 - 12/31/2028	\$6,920,400.00
1/1/2029 - 12/31/2029	\$6,920,400.00
1/1/2030 - 12/31/2030	\$6,920,400.00
1/1/2031 - 12/31/2031	\$6,920,400.00
1/1/2032 - 12/31/2032	\$6,920,400.00
1/1/2033 - 12/31/2033	\$6,920,400.00
1/1/2034 - 12/31/2034	\$6,920,400.00
1/1/2035 - 12/31/2035	\$6,920,400.00
1/1/2036 - 12/31/2036	\$6,920,400.00



## EXHIBIT A

### Project Information

Name of Facility	Single Line Facility Name	CAISO Resource ID	CEC RPS ID	WREGIS GU ID
Aidlin Power Plant	AIDLIN P.P. (CPN-1)	ADLIN_1_UNITS	60115A	W484
Sonoma Power Plant	SONOMA P.P. (CPN-3)	SMUDGO_7_UNIT 1	60010A	W127
Geysers Unit 5&6	MC CABE P.P. (CPN 5&6)	GYS5X6_7_UNITS	60002A	W117
Geysers Unit 7&8	RIDGE LINE P.P. (CPN 7&8)	GYS7X8_7_UNITS	60003A	W118
Geysers Unit 11	EAGLE ROCK P.P. (CPN-11)	GEYS11_7_UNIT11	60025A	W119
Geysers Unit 12	COBB CREEK PP (CPN-12)	GEYS12_7_UNIT12	60004A	W120
Geysers Unit 13	BIG GEYSERS PP (CPN-13)	GEYS13_7_UNIT13	60005A	W121
Geysers Unit 14	SULPHUR SPRINGS PP (CPN-14)	GEYS14_7_UNIT14	60026A	W122
Geysers Unit 16	QUICKSILVER PP (CPN-16)	GEYS16_7_UNIT16	60006A	W123
Geysers Unit 17	LAKE VIEW P.P. (CPN-17)	GEYS17_7_UNIT17	60007A	W124
Geysers Unit 18	SOCRATES P.P. (CPN-18)	GEYS18_7_UNIT18	60008A	W125
Calistoga Power Plant	COLISTOGA P.P. (CPN-19)	SANTFG_7_UNITS	60117A	W486
Geysers Unit 20	GRANT P.P. (CPN-20)	GEYS20_7_UNIT20	60009A	W126

## EXHIBIT B

[ISSUER LETTERHEAD]

DATE: [DATE]

WE HEREBY ISSUE OUR IRREVOCABLE NON-TRANSFERABLE STANDBY LETTER OF CREDIT NO. [NUMBER]

ISSUING BANK:  
[ISSUER]  
[ADDRESS]  
[PHONE NUMBER]  
[FAX NUMBER]

BENEFICIARY:  
NORTHERN CALIFORNIA POWER AGENCY  
[INSERT]  
ROSEVILLE, CA 95747  
ATTN: [INSERT]  
("BENEFICIARY")

APPLICANT:

[INSERT]

AMOUNT: USD \$[AMOUNT] (AMOUNT XX/100 UNITED STATES DOLLARS)

EXPIRATION DATE: [DATE]

WE HEREBY OPEN OUR IRREVOCABLE NON-TRANSFERABLE STANDBY LETTER OF CREDIT ("LETTER OF CREDIT") IN FAVOR OF THE NORTHERN CALIFORNIA POWER AGENCY AND FOR THE ACCOUNT OF THE ABOVE REFERENCED APPLICANT IN THE AGGREGATE AMOUNT OF USD [AMOUNT] (AMOUNT), WHICH IS AVAILABLE BY PAYMENT WITH US WHEN ACCOMPANIED BY THE FOLLOWING DOCUMENTS:

1. A DRAFT AT SIGHT DRAWN ON [ISSUER], DULY ENDORSED ON ITS REVERSE SIDE THEREOF BY THE BENEFICIARY, SPECIFICALLY REFERENCING THIS LETTER OF CREDIT NUMBER, AS EXEMPLIFIED BY ATTACHMENT A.
2. THE ORIGINAL LETTER OF CREDIT AND ANY AMENDMENTS ATTACHED THERETO,
3. A COPY OF THE INVOICE MARKED UNPAID; AND
4. A STATEMENT ISSUED ON THE LETTERHEAD OF AND SIGNED BY THE BENEFICIARY STATING THE FOLLOWING: "THE APPLICANT HAS NOT MADE PAYMENT ON INVOICE NUMBER (INSERT INVOICE NUMBER) PER THE RELEVANT CONTRACTS. WE THEREFORE DEMAND PAYMENT IN THE AMOUNT OF (INSERT DOLLAR AMOUNT) AS SAME IS DUE AND OWING."

(CONTINUED ON PAGE 2)

(PAGE 2 OF LETTER OF CREDIT NO: [INSERT NUMBER])

WE ARE ADVISED BY THE APPLICANT THAT THIS LETTER OF CREDIT IS ISSUED IN CONNECTION WITH THE TRANSACTION BETWEEN THE NORHTERN CALIFORNIA POWER AGENCY AND [INSERT] DATED [INSERT DATE] UNDER THE Master AGREEMENT AS AMENDED FROM TIME TO TIME DATED [INSERT MOST CURRENT Master AGREEMENT DATE] ("AGREEMENT").

INVOICE(S) IN EXCESS OF THE AMOUNT AVAILABLE UNDER THIS LETTER OF CREDIT ARE ACCEPTABLE; HOWEVER, DRAWINGS UNDER THIS LETTER OF CREDIT MAY NOT EXCEED AMOUNT AVAILABLE.

IF A COMPLYING PRESENTATION OF DRAW DOCUMENTS IS MADE PRIOR TO 11:00 AM (EASTERN STANDARD TIME) ON A BUSINESS DAY, THEN WE SHALL, PRIOR TO THE CLOSE OF BUSINESS ON THE FIRST FOLLOWING BUSINESS DAY, MAKE PAYMENT IN IMMEDIATELY AVAILABLE FUNDS. IF A COMPLYING PRESENTATION OF DRAW DOCUMENTS IS MADE AT OR AFTER 11:00 AM (EASTERN STANDARD TIME) ON A BUSINESS DAY, THEN WE SHALL, PRIOR TO THE CLOSE OF BUSINESS ON THE SECOND FOLLOWING BUSINESS DAY, MAKE PAYMENT IN IMMEDIATELY AVAILABLE FUNDS.

PARTIAL DRAWINGS AND MULTIPLE PRESENTATIONS ARE PERMITTED.

ALL CHARGES OF THE ISSUER ARE FOR THE ACCOUNT OF THE APPLICANT.

THIS LETTER OF CREDIT SETS FORTH IN FULL THE TERMS OF OUR UNDERTAKING. THIS UNDERTAKING SHALL NOT IN ANY WAY BE MODIFIED, AMENDED, AMPLIFIED, OR INCORPORATED BY REFERENCE TO ANY DOCUMENT, CONTRACT, OR AGREEMENT REFERENCED TO HEREIN.

WE HEREBY AGREE WITH YOU THAT DRAFT(S) DRAWN UNDER AND IN COMPLIANCE WITH THE TERMS AND CONDITIONS OF THIS CREDIT SHALL BE DULY HONORED IF PRESENTED TOGETHER WITH DOCUMENT(S) AS SPECIFIED AT OUR OFFICES AT [INSERT ISSUER NAME AND ADDRESS] ON OR BEFORE THE ABOVE STATED EXPIRY DATE, OR ANY EXTENDED EXPIRY DATE IF APPLICABLE. DRAFT(S) DRAWN UNDER THIS CREDIT MUST SPECIFICALLY REFERENCE OUR LETTER OF CREDIT NUMBER.

FACSIMILE OF THE DRAW DOCUMENTS IS ACCEPTABLE TO [INSERT FAX NUMBER]. IF PRESENTATION IS MADE BY FACSIMILE, PROMPT PHONE NOTIFICATION MUST BE GIVEN TO [INSERT PHONE NUMBER], PROVIDED THAT BENEFICIARY'S FAILURE TO MAKE SUCH FOLLOW UP TELEPHONE CALL SHALL NOT INVALIDATE THE FACSIMILE DRAWING. THE FACSIMILE PRESENTATION SHALL BE DEEMED THE ORIGINAL PRESENTATION. IN THE EVENT OF A FULL OR FINAL DRAWING, THE ORIGINAL STANDBY LETTER OF CREDIT MUST BE RETURNED TO THE ISSUER BY OVERNIGHT COURIER AT THE TIME OF THE FACSIMILE PRESENTATION.

THIS LETTER OF CREDIT IS SUBJECT OT THE INTERNATIONAL STANDBY PRACTICES 1998, INTERNATIONAL CHAMBER OF COMMERCE PUBLICATION NO. 590 ("ISP 98").

VERY TRULY YOURS,  
[ISSUER]

---

NAME  
TITLE  
AUTHORIZED SIGNATURE

**ATTACHMENT A**

*Drawing Certificate*

TO *[ISSUING BANK NAME]*

IRREVOCABLE NON-TRANSFERABLE STANDBY LETTER OF CREDIT

No. \_\_\_\_\_

DRAWING CERTIFICATE

Bank

Bank Address

Subject: Irrevocable Non-transferable Standby Letter of Credit

Reference Number: \_\_\_\_\_

The undersigned \_\_\_\_\_, an authorized representative of Northern California Power Agency (the "Beneficiary"), hereby certifies to *[Issuing Bank Name]* (the "Bank"), and \_\_\_\_\_ (the "Applicant"), with reference to Irrevocable Nontransferable Standby Letter of Credit No. \_\_\_\_\_, dated \_\_\_\_\_, (the "Letter of Credit"), issued by the Bank in favor of the Beneficiary, as follows as of the date hereof:

1. The Beneficiary is entitled to draw under the Letter of Credit an amount equal to \$\_\_\_\_\_, for the following reason(s) [check applicable provision]:
  - ☐ [A. An Event of Default, as defined in that certain Transaction between Applicant and Beneficiary, dated as of *[Date of Execution]* under the Confirmation Agreement between the Northern California Power Agency and *[INSERT]* dated *[INSERT DATE]* under the Master Agreement as amended from time to time dated *[August 12, 2021]* (the "Agreement"), with respect to the Applicant has occurred and is continuing.
  - ☐ [B. An Early Termination Date (as defined in the Agreement) has occurred or been designated as a result of an Event of Default (as defined in the Agreement) with respect to the Applicant for which there exist any unsatisfied payment obligations.
  - ☐ [C. The occurrence of an Event of Deficient Product Deliveries.
  - ☐ [D. The Bank has heretofore provided written notice to the Beneficiary of the Bank's intent not to renew the Letter of Credit following the present Expiration Date thereof ("Notice of Non-renewal"), and Applicant has failed to provide the Beneficiary with a replacement letter of credit satisfactory to Beneficiary in its sole discretion within thirty (30) days following the date of the Notice of Non-renewal.

[ ]E. The Beneficiary has not been paid any or all of the Applicant's payment obligations now due and payable under the Confirmation or Agreement.

2. Based upon the foregoing, the Beneficiary hereby makes demand under the Letter of Credit for payment of U.S. DOLLARS AND \_\_\_\_/100ths (U.S.\$\_\_\_\_), which amount does not exceed (i) the amount set forth in paragraph 1 above, and (ii) the Available Amount under the Letter of Credit as of the date hereof.
3. Funds paid pursuant to the provisions of the Letter of Credit shall be wire transferred to the Beneficiary in accordance with the following instructions:

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Unless otherwise provided herein, capitalized terms which are used and not defined herein shall have the meaning given each such term in the Letter of Credit.

IN WITNESS WHEREOF, this Certificate has been duly executed and delivered on behalf of the Beneficiary by its authorized representative as of this \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_.

Beneficiary: NORTHERN CALIFORNIA POWER  
AGENCY

By:

Name:

Title:

**DRAFT**

**THIRD PHASE AGREEMENT  
FOR  
POWER PURCHASE AGREEMENT  
WITH  
GEYSERS POWER COMPANY, LLC**

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This THIRD PHASE AGREEMENT ("this Agreement") is dated as of \_\_\_\_\_, 20\_\_ by and among the Northern California Power Agency, a joint powers agency of the State of California ("NCPA"), and the signatories to this Agreement other than NCPA ("Participants"). NCPA and the Participants are referred to herein individually as a "Party" and collectively as the "Parties".

## **RECITALS**

A. NCPA has heretofore been duly established as a public agency pursuant to the Joint Exercise of Powers Act of the Government Code of the State of California and, among other things, is authorized to acquire, construct, finance, and operate buildings, works, facilities, and improvements for the generation and transmission of electric capacity and energy for resale.

B. Each of the Participants is a signatory to the Joint Powers Agreement which created NCPA and therefore is a Member.

C. Each of the Participants to this Agreement have executed the Amended and Restated Facilities Agreement, dated October 1, 2014, which establishes the framework under which Project Agreements are created for the development, design, financing, construction, and operation of specific NCPA Projects.



D. The Participants desire NCPA to enter into a Power Purchase Agreement (“PPA”) with Geysers Power Company, LLC (“Seller”), to purchase electric capacity and energy produced by the Project for the benefit of the Participants’ customers.

E. Each Participant is authorized by its Constitutive Documents to obtain electric capacity and energy for its present or future requirements, through contracts with NCPA or otherwise.

F. To enable NCPA to enter into the PPA on behalf of the Participants, pursuant to the terms and conditions of the Amended and Restated Facilities Agreement, NCPA and the Participants wish to enter into this Agreement to provide all means necessary for NCPA to fulfill obligations incurred on behalf of NCPA and the Participants pursuant to the PPA, and to enable and obligate the Participants to take delivery of and pay for such electric capacity and energy and to pay NCPA for all costs it incurs for undertaking the foregoing activities.

G. Upon full execution of this Agreement, NCPA will enter into the PPA on behalf of the Participants, and such PPA shall be deemed a NCPA Project by the Commission.

H. Each of the Parties intends to observe the provisions of this Agreement in good faith and shall cooperate with all other Parties in order to achieve the full benefits of joint action.

I. The Parties desire to equitably allocate costs of NCPA's provision of services under this Agreement among the Participants.

J. The Participants further desire, insofar as possible, to insulate other Members who are not Participants, from risks inherent in the services and transactions undertaken on behalf of the Participants pursuant to this Agreement.

NOW, THEREFORE, the Parties agree as follows:

**Section 1. Definitions.**

1.1 Definitions. Whenever used in this Agreement (including the Recitals hereto), the following terms shall have the following respective meanings, provided, capitalized terms used in this Agreement (including the Recitals hereto) that are not defined in Section 1 of this Agreement shall have the meaning indicated in Section 1 of the Power Management and Administrative Services Agreement, dated October 1, 2014:

1.1.1 "Administrative Services Costs" means that portion of the NCPA administrative, general and occupancy costs and expenses, including those costs and expenses associated with the operations, direction and supervision of the general affairs and activities of NCPA, general management, treasury operations, accounting, budgeting, payroll, human resources, information technology, facilities management, salaries and wages (including retirement benefits) of employees, facility operation and maintenance costs, taxes and payments in lieu of taxes (if any), insurance premiums, fees for legal, engineering, financial and other services, power management services,

general settlement and billing services and general risk management costs, that are charged directly or apportioned to the provision of services under this Agreement.

Administrative Services Costs as separately defined herein and used in the context of this Agreement is different and distinct from the term Administrative Services Costs as defined in Section 1 of the Power Management and Administrative Services Agreement.

1.1.2 “Agreement” means this Third Phase Agreement, including all Exhibits attached hereto.

1.1.3 “CAISO” means the California Independent System Operator Corporation, or its functional successor.

1.1.4 “CAISO Tariff” means the duly authorized tariff, rules, protocols and other requirements of the ISO, as amended from time to time.

1.1.5 “Capacity Attributes” means any and all current or future defined characteristics consistent with the operational limitations of the Project, certificates, tags, credits, ancillary service attributes, or accounting constructs, howsoever entitled, including Resource Adequacy Benefits, Flexible Capacity Benefits, and any tracking or accounting associated with the foregoing, intended to value any aspect of the capacity of the Project to produce Energy or ancillary services, attributed to or associated with the Project.

1.1.6 “Constitutive Documents” means, with respect to NCPA, the Joint Powers Agreement and any resolutions or bylaws adopted thereunder with respect to the governance of NCPA, and with respect to each Participant, the California Government Code and other statutory provisions applicable to such Participant, any applicable agreements, charters, contracts, or other documents concerning the formation, operation or decision making of such Participant, including, if applicable, its city charter, and any codes, ordinances, bylaws, and resolutions adopted by such Participant’s governing body.

1.1.7 “Defaulting Participant” has the meaning set forth in Section 7.2.

1.1.8 “Energy” means electric energy expressed in units of kWh or MWh.

1.1.9 “Environmental Attributes” means any and all credits, benefits, emissions reductions, offsets, and allowances, howsoever entitled, attributable to the generation from the Project, as the case may be, and its displacement of conventional energy generation. Environmental Attributes include: (i) any avoided emissions of pollutants to the air, soil or water such as sulfur oxides (SOx), nitrogen oxides (NOx), carbon monoxide (CO) and other pollutants; (ii) any avoided emissions of carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and other greenhouse gases that have been determined by the United Nations Intergovernmental Panel on Climate Change to contribute to the actual or potential threat of altering the Earth’s climate by trapping heat in the

atmosphere; and (iii) the reporting rights to these avoided emissions such as, but not limited to, a REC.

Environmental Attributes do not include: (i) any Energy, capacity, reliability, or other power attributes from the Project; (ii) production tax credits associated with the construction or operation of the Project, and other financial incentives in the form of credits, reductions, or allowances associated with the Project that are applicable to a state or federal income taxation obligation (iii) fuel-related subsidies or “tipping fees” that may be paid to Seller to accept certain fuels, or local subsidies received by Seller or the owners of the site for the destruction of particular pre-existing pollutants or the promotion of local environmental benefits; or (iv) emission reduction credits encumbered or used by the Project for compliance with local, state, or federal operating and/or air quality permits.

1.1.10 “Event of Default” has the meaning set forth in Section 7.2.

1.1.11 “Flexible Capacity” has the meaning set forth in the CAISO Tariff.

1.1.12 “Flexible Capacity Benefits” means the rights and privileges attached to any generating resource that satisfy any entity’s Flexible Capacity requirement.

1.1.13 “General Operating Reserve” means the NCPA General Operating Reserve created through resolution of the Commission, as the same may be amended from time to time.

1.1.14 "KWh" means kilowatt hour.

1.1.15 "MW" means megawatt.

1.1.16 "MWh" means megawatt hour.

1.1.17 "NCPA" has the meaning set forth in the recitals hereto.

1.1.18 "Participant" has the meaning set forth in the recitals of this Agreement.

1.1.19 "Power Management and Administrative Services Agreement" means the NCPA Power Management and Administrative Services Agreement, dated as of October 1, 2014 between NCPA and the Members who are signatories to that agreement by which NCPA provides Power Management and Administrative Services.

1.1.20 "Product" means Energy, Capacity Attributes, Environmental Attributes and ancillary products, services or attributes similar to the foregoing that are delivered to the Participants pursuant to the PPA.

1.1.21 "Project" or "PPA" means the Power Purchase Agreement, dated as of \_\_\_\_\_, 20\_\_ between NCPA and Seller, under which NCPA, on behalf of the Participants, purchases Product from the Project, as such term is defined in the PPA, which includes one or more geothermal power plants located in Lake and Sonoma Counties, California. The PPA documents consists of the following: RPS Agreement, RA Agreement, and the Master Agreement, as such terms are defined in the PPA documents. Upon final execution of the PPA, the Project shall be deemed a

NCPA Project in accordance with the Amended and Restated Facilities Agreement.

The PPA has been attached to this Agreement as Exhibit B.

1.1.22 “Project Costs” means all costs charged to and paid by NCPA pursuant to the PPA.

1.1.23 “Party” or “Parties” has the meaning set forth in the preamble hereto; provided that “Third Parties” are entities that are not Party to this Agreement.

1.1.24 “REC” or “Renewable Energy Certificate” means a certificate of renewable energy generation from units that register in the WREGIS system, or other commonly accepted renewable energy generation tracking system or program, which can be used to verify compliance with state and provincial requirements such as RPS.

1.1.25 “Resource Adequacy” means the procurement obligation of load serving entities, including the Participants, as such obligations are described in CPUC Decisions D.04-10-035 and D.05-10-042, and subsequent CPUC decisions addressing Resource Adequacy issues, as those obligations may be altered from time to time in the CPUC Resource Adequacy Rulemakings (R.) 04-04-003 and (R.) 05-12-013 or by any successor proceeding, and all other Resource Adequacy obligations established by any other entity, including the CAISO.

1.1.26 “Resource Adequacy Benefits” means the rights and privileges attached to any generating resource that satisfy any entity’s Resource Adequacy obligations.

1.1.27 "Revenue" means , with respect to each Participant, all income, rents, rates, fees, charges, and other moneys derived by the Participant from the ownership or operation of its Electric System, including, without limiting the generality of the foregoing: (a) all income, rents, rates, fees, charges or other moneys derived from the sale, furnishing and supplying of electric capacity and energy and other services, facilities, and commodities sold, furnished, or supplied through the facilities of its Electric System; (b) the earnings on and income derived from the investment of such income, rents, rates, fees, charges or other moneys to the extent that the use of such earnings and income is limited by or pursuant to law to its Electric System; (c) the proceeds derived by the Participant directly or indirectly from the sale, lease or other disposition of all or a part of the Electric System; and (d) the proceeds derived by Participant directly or indirectly from the consignment and sale of freely allocated greenhouse gas compliance instruments into periodic auctions administered by the State of California under the California Cap-and-Trade Program, provided that such proceeds are a permitted use of auction proceeds, but the term Revenues shall not include (i) customers' deposits or any other deposits subject to refund until such deposits have become the property of the Participant or (ii) contributions from customers for the payment of costs of construction of facilities to serve them.



1.1.28 “RPS” or “Renewable Portfolio Standard Program” means the State of California Renewable Portfolio Standard Program, as codified at California Public Utilities Code Section 399.11, *et seq.*

1.1.29 “Scheduling Protocols” means the applicable provisions of the Amended and Restated Scheduling Coordination Program Agreement, and any other contractual or other arrangements between NCPA and the Participants concerning the scheduling, delivery and metering of the PPA.

1.1.30 “Security Deposit” means the account established by NCPA and funded by the Participants in accordance with Section 5, the funds of which are available for use by NCPA in accordance with the terms and conditions hereof.

1.1.31 “Seller” means Geysers Power Company, LLC, as set forth in recital D of this Agreement, or as otherwise set forth in the PPA.

1.1.32 “Term” has the meaning set forth in Section 10.

1.1.33 “Third Party” means an entity (including a Member) that is not Party to this Agreement

1.1.34 “WREGIS” means Western Renewable Energy Generation Information System, or its functional successor.

1.2 Rules of Interpretation. As used in this Agreement (including the Recitals hereto), unless in any such case the context requires otherwise: The terms “herein,” “hereto,” “herewith” and “hereof” are references to this Agreement taken as a whole and

not to any particular provision; the term “include,” “includes” or “including” shall mean “including, for example and without limitation;” and references to a “Section,” “subsection,” “clause,” “Appendix”, “Schedule”, or “Exhibit” shall mean a Section, subsection, clause, Appendix, Schedule or Exhibit of this Agreement, as the case may be. All references to a given agreement, instrument, tariff or other document, or law, regulation or ordinance shall be a reference to that agreement, instrument, tariff or other document, or law, regulation or ordinance as such now exists and as may be amended from time to time, or its successor. A reference to a “person” includes any individual, partnership, firm, company, corporation, joint venture, trust, association, organization or other entity, in each case whether or not having a separate legal personality and includes its successors and permitted assigns. A reference to a “day” shall mean a Calendar Day unless otherwise specified. The singular shall include the plural and the masculine shall include the feminine, and *vice versa*.

**Section 2. Purpose.** The purpose of this Agreement is to: (i) set forth the terms and conditions under which NCPA shall enter into the PPA on behalf of the Participants, (ii) authorize NCPA, acting on behalf of the Participants, to engage in all activities related to that basic purpose, and (iii) specify the rights and obligations of NCPA and the Participants with respect to the PPA.

**Section 3. Sale and Purchase of Product.** By executing this Agreement, each Participant acknowledges and agrees to be bound by the terms and conditions of the

Agreement, and that the Agreement is written as a “take-or-pay” agreement. Any Product delivered to NCPA under the PPA shall be delivered to each Participant in proportion to such Participant’s Project Participation Percentage as set forth in Exhibit A, and each Participant shall accept and pay for its respective percentage of such Product. To the extent a Participant is unable to accept such deliveries in full, NCPA shall dispose of such surplus in its sole discretion, in such a manner to attempt to maximize Participant value and that Participant shall reimburse to NCPA any costs incurred by NCPA in doing so. Notwithstanding the above, NCPA may allocate Product procured through the PPA among the Participants in such percentages as NCPA may, in its reasonable discretion, determine are necessary, desirable, or appropriate, in order to accommodate Participant transfer rights pursuant to Section 9.

3.1 Scheduling. Product delivered from Seller shall be scheduled for and to the Participants in accordance with Scheduling Protocols, and the terms and conditions of the PPA.

#### **Section 4. Billing and Payments**

4.1 Participant Payment Obligations. Each Participant agrees to pay to NCPA each month its respective portion of the Project Costs, Administrative Services Costs, scheduling coordination costs, and all other costs for services provided in accordance with this Agreement and the Amended and Restated Facilities Agreement. In addition to the aforementioned monthly payment obligations, each Participant is obligated to fund: (i)

any and all required Security Deposits calculated in accordance with Section 5, and (ii) any working capital requirements for the Project maintained by NCPA as determined, collected and set forth in the Annual Budget.

4.2 Invoices. NCPA will issue an invoice to each Participant for its share of Project Costs, Administrative Services Costs, scheduling coordination costs, and all other costs for services provided in accordance with this Agreement and the Amended and Restated Facilities Agreement. Such invoice may be either the All Resources Bill or separate special invoice, as determined by NCPA. At NCPA's discretion, invoices may be issued to Participants using electronic media or physical distribution.

4.3 Payment of Invoices. All invoices delivered by NCPA (including the All Resources Bill) are due and payable thirty (30) Calendar Days after the date thereof; provided, however, that any amount due on a day other than a Business Day may be paid on the following Business Day.

4.4 Late Payments. Any amount due and not paid by a Participant in accordance with Section 4.3 shall be considered late and bear interest computed on a daily basis until paid at the lesser of (i) the per annum prime rate (or reference rate) of the Bank of America NT&SA then in effect, plus two percent (2%) or (ii) the maximum rate permitted by law.

4.5 Billing Disputes. A Participant may dispute the accuracy of any invoice issued by NCPA under this Agreement by submitting a written dispute to NCPA, within thirty (30) Calendar Days after the date of such invoice; nonetheless the Participant shall

pay the full amount billed when due. If a Participant does not timely question or dispute the accuracy of any invoice in writing, then the invoice shall be deemed to be correct. Upon review of a submitted dispute, if an invoice is determined by NCPA to be incorrect, then NCPA shall issue a corrected invoice and refund any amounts that may be due to the Participant. If NCPA and the Participant fail to agree on the accuracy of an invoice within thirty (30) Calendar Days after the Participant has disputed it, then the General Manager shall promptly submit the dispute to the Commission for resolution. If the Commission and the Participant fail to agree on the accuracy of a disputed invoice within sixty (60) Calendar Days after its submission to the Commission, then the dispute may then be resolved under the mediation and arbitration procedures set forth in Section 12 of this Agreement; provided, however, that prior to resorting to either mediation or arbitration proceedings, the full amount of the disputed invoice must be paid by the Participant.

#### 4.6 Billing/Settlement Data and Examination of Books and Records.

4.6.1 Settlement Data. NCPA shall make billing and settlement data available to the Participants in the All Resources Bill, or other invoice, or upon request. NCPA may also, at its sole discretion, make billing and settlement support information available to Participants using electronic media (e.g. electronic data portal).

Procedures and formats for the provision of such electronic data submission may be established by the Commission from time to time. Without limiting the generality of the foregoing, NCPA may, in its reasonable discretion, require the Participants to

execute a non-disclosure agreement prior to providing access to the NCPA electronic data portal.

4.6.2 Examination of Books and Records. Any Participant to this Agreement shall have the right to examine the books and records created and maintained by NCPA pursuant to this Agreement at any reasonable, mutually agreed upon time.

## **Section 5. Security Deposit Administration**

5.1 Security Deposit Requirements. Each Participant agrees that any funds deposited at NCPA to satisfy Participant's Security Deposit requirements pursuant to this Agreement shall be irrevocably committed and held by NCPA in the General Operating Reserve, and that such funds may be used by NCPA in accordance with Section 5.1.3. Each Participant's Security Deposit will be accounted separately from and in addition to any other security accounts or deposits maintained pursuant to any other agreement between NCPA and the Participant, or any other such security account or deposits required of Members. In connection with fulfilling the Security Deposit requirements of this Agreement, Participant may elect to use its uncommitted funds held in the General Operating Reserve to satisfy in whole or in part its Security Deposit required under Section 5. If Participant chooses to satisfy in whole or in part its security requirements using its uncommitted funds held in the General Operating Reserve, then Participant is required to execute and deliver to NCPA an Irrevocable Letter of Direction, directing

NCPA to utilize Participant's uncommitted General Operating Reserve funds for such purposes, and the designated funds will thereafter be irrevocably committed and held by NCPA to satisfy the requirements of this Agreement.

5.1.1 Initial Amounts. Each Participant shall insure that sufficient Security Deposit funds have been deposited with and are held by NCPA equal to the highest three (3) months of estimated Project Costs, as estimated by NCPA. Such Security Deposit requirement may be satisfied by Participant in whole or part either in cash, through irrevocable commitment of its uncommitted funds held in the General Operating Reserve in accordance with Section 5.1, or through a clean, irrevocable letter of credit satisfactory to NCPA's General Manager.

5.1.2 Subsequent Deposits. Periodically, and at least quarterly, NCPA shall review and revise its estimate of Project Costs for which Participant shall be obligated to pay under this Agreement. Following such review, NCPA shall determine whether each Participant has a sufficient Security Deposit balance at NCPA. To the extent that any Participant's Security Deposit balance is greater than one hundred and ten percent (110%) of the amount required herein, NCPA shall credit such amount as soon as practicable to the Participant's next following All Resources Bill, or by separate special invoice. To the extent that any Participant's Security Deposit balance is less than ninety percent (90%) of the amount required herein, NCPA shall add such amount as soon as practicable to such Participant's next All Resources Bill, or as necessary, to a

special invoice to be paid by Participant upon receipt. Credits or additions shall not be made to Participants who satisfy these Security Deposit requirements in whole through the use of a letter of credit; provided, that the amount of the letter of credit shall be adjusted, as required from time to time, in a like manner to assure an amount equal to the highest three (3) months of estimated Project Costs is available to NCPA.

5.1.3 Use of Security Deposit Funds. NCPA may use any and all Security Deposit funds held by NCPA (or utilize a letter of credit provided in lieu thereof) to pay any costs it incurs hereunder, including making payments to Seller, without regard to any individual Participant's Security Deposit balance or proportionate share of Project Costs, and irrespective of whether NCPA has issued an All Resources Bill or special invoice for such costs to the Participants or whether a Participant has made timely payments of All Resources Bills or special invoices. Should Participant have satisfied its Security Deposit requirements in whole or part through a letter of credit, NCPA may draw on such letter of credit to satisfy Participant's obligations hereunder at NCPA's sole discretion. Notwithstanding the foregoing, if any Participant fails to pay any costs incurred by NCPA pursuant to this Agreement, NCPA shall first use that non-paying Participant's Security Deposit and shall not use any other Participants' Security Deposit until such non-paying Participant's Security Deposit has been exhausted.



5.1.4 Accounting. If Security Deposit funds or a letter of credit are used by NCPA to pay any costs it incurs hereunder as described in Section 5.1.3, then NCPA will maintain a detailed accounting of each Participant's shares of funds withdrawn, and upon the collection of all or a part of such withdrawn funds, NCPA will credit back to each non-defaulting Participant the funds collected in proportion to such non-defaulting Participant's share of funds initially withdrawn.

5.1.5 Emergency Additions. In the event that funds are withdrawn pursuant to Section 5.1.3, or if the Security Deposit held by NCPA is otherwise insufficient to allow for NCPA to pay any invoice, demand, request for further assurances by Seller, or claims, NCPA shall notify all Participants of the deficiency. In conjunction with such notice, NCPA shall send a special or emergency assessment invoice to the Participant or Participants that caused or are otherwise responsible for the deficiency. Each Participant of such an invoice shall pay to NCPA such assessment when and if assessed by NCPA within two (2) Business Days of the invoice date of the assessment, or shall consent to and direct NCPA to draw on any existing letter of credit Participant has established for such purposes. In the event that the Participant or Participants that caused or are otherwise responsible for the deficiency cannot, does not or will not pay to NCPA the special or emergency assessment within two (2) Business Days after the invoice date, NCPA shall immediately submit a special or emergency invoice to all remaining Participants, and such remaining Participants shall

pay to NCPA such assessment within two (2) Business Days after the invoice date of the assessment, or shall consent to and direct NCPA to draw on any existing letter of credit that Participant has established for such purposes.

5.1.6 Security Deposit Interest. NCPA shall maintain a detailed accounting of each Participant's Security Deposits, and withdrawals of such funds, held by NCPA. Security Deposits held by NCPA shall be invested by NCPA in accordance with the General Operating Reserve policies and investment policies adopted by the NCPA Commission. Interest earned on the Security Deposit funds shall be proportionately credited to the Participants in accordance with their weighted average balances held therein. Any Security Deposit losses caused by early termination of investments shall be allocated among the Participants in accordance with the General Operating Reserve provisions and guidelines approved by the Commission, as the same may be amended from time to time; provided, however, to the extent that either the General Operating Reserve provisions and guidelines do not apply or the Security Deposit is not adequate to cover the losses, then such losses shall be allocated among the Participants in accordance with their proportionate Security Deposit balances.

5.1.7 Return of Funds. Upon termination or a permitted withdrawal of a Participant in accordance with this Agreement, the affected Participant may apply to NCPA for the return of their share of Security Deposit funds ninety (90) days after the

effective date of such termination or withdrawal. However, NCPA shall, in its sole but reasonable discretion, as determined by the NCPA General Manager, estimate the then outstanding liabilities of the Participant, including any estimated contingent liabilities and shall retain all such funds, if any, until all such liabilities have been fully paid or otherwise satisfied in full. After all such liabilities have been satisfied in full, as determined by NCPA's General Manager, any remaining balance of the Participant's share of the Security Deposit will be refunded to the Participant within sixty (60) days thereafter.

**Section 6. Cooperation and Further Assurances.** Each of the Parties agree to provide such information, execute and deliver any instruments and documents and to take such other actions as may be necessary or reasonably requested by any other Party which are consistent with the provisions of this Agreement and which do not involve the assumption of obligations other than those provided for in this Agreement, in order to give full effect to this Agreement and to carry out the intent of this Agreement. The Parties agree to cooperate and act in good faith in connection with obtaining any credit support required in order to satisfy the requirements of this Agreement.

**Section 7. Participant Covenants and Defaults**

7.1 Each Participant covenants and agrees: (i) to make payments to NCPA, from its Electric System Revenues, of its obligations under this Agreement as an operating expense of its Electric System; (ii) to fix the rates and charges for services provided by its

Electric System, so that it will at all times have sufficient Revenues to meet the obligations of this Agreement, including the payment obligations; (iii) to make all such payments due NCPA under this Agreement whether or not there is an interruption in, interference with, or reduction or suspension of services provided under this Agreement, such payments not being subject to any reduction, whether by offset or otherwise, and regardless of whether any reasonable dispute exists; and (iv) to operate its Electric System, and the business in connection therewith, in accordance with Good Utility Practices.

7.2 Events of Default. An Event of Default under this Agreement shall exist upon the occurrence of any one or more of the following by a Participant (the “Defaulting Participant”):

- (i) the failure of any Participant to make any payment in full to NCPA when due;

- (ii) the failure of a Participant to perform any covenant or obligation of this Agreement where such failure is not cured within thirty (30) Calendar Days following receipt of a notice from NCPA demanding cure; provided, that this subsection shall not apply to any failure to make payments specified by subsection 7.2 (i));

- (iii) if any representation or warranty of a Participant material to the services provided hereunder shall prove to have been incorrect in any material respect when made and the Participant does not cure the facts underlying such incorrect representation or

warranty so that the representation or warranty becomes true and correct within thirty (30) Calendar Days after the date of receipt of notice from NCPA demanding cure; or

(iv) if a Participant is in default or in breach of any of its covenants or obligations under any other agreement with NCPA and such default or breach is not cured within the time periods specified in such agreement.

7.3 Uncontrollable Forces. A Party shall not be considered to be in default in respect of any obligation hereunder if prevented from fulfilling such obligation by reason of Uncontrollable Forces; provided, that in order to be relieved of an Event of Default due to Uncontrollable Forces, a Party affected by an Uncontrollable Force shall:

(i) first provide oral notice to the General Manager using telephone communication within two (2) Business Days after the onset of the Uncontrollable Force, and provide subsequent written notice to the General Manager and all other Parties within ten (10) Business Days after the onset of the Uncontrollable Force, describing its nature and extent, the obligations which the Party is unable to fulfill, the anticipated duration of the Uncontrollable Force, and the actions which the Party will undertake so as to remove such disability and be able to fulfill its obligations hereunder; and

(ii) use due diligence to place itself in a position to fulfill its obligations hereunder and if unable to fulfill any obligation by reason of an Uncontrollable Force such Party shall exercise due diligence to remove such disability with reasonable dispatch;

provided, that nothing in this subsection shall require a Party to settle or compromise a labor dispute.

7.4 Cure of an Event of Default. An Event of Default shall be deemed cured only if such default shall be remedied or cured within the time periods specified in Section 7.2 above, as may be applicable, provided, however, upon request of the Defaulting Participant the Commission may waive the default at its sole discretion, where such waiver shall not be unreasonably withheld.

7.5 Remedies in the Event of Uncured Default. Upon the occurrence of an Event of Default which is not cured within the time limits specified in Section 7.2, without limiting other rights or remedies available under this Agreement, at law or in equity, and without constituting or resulting in a waiver, release or estoppel of any right, action or cause of action NCPA may have against the Defaulting Participant, NCPA may take any or all of the following actions:

(i) suspend the provision of services under this Agreement to such Defaulting Participant; or

(ii) demand that the Defaulting Participant provide further assurances to guarantee the correction of the default, including the collection of a surcharge or increase in electric rates, or such other actions as may be necessary to produce necessary Revenues to correct the default.

7.6 Effect of Suspension.

7.6.1 Generally. The suspension of this Agreement will not terminate, waive, or otherwise discharge any ongoing or undischarged liabilities, credits or obligations arising from this Agreement until such liabilities, credits or obligations are satisfied in full.

7.6.2 Suspension. If performance of all or any portion of this Agreement is suspended by NCPA with respect to a Participant in accordance with subsection 7.5(i), then such Participant shall pay any and all costs incurred by NCPA as a result of such suspension including reasonable attorney's fees, the fees and expenses of other experts, including auditors and accountants, or other reasonable and necessary costs associated with such suspension and any portion of the Project Costs, scheduling and dispatch costs, and Administrative Services Costs that were not recovered from such Participant as a result of such suspension.

## **Section 8. Administration of Agreement**

8.1 Commission. The Commission is responsible for the administration of this Agreement. Each Participant shall be represented by its Commissioner or their designated alternate Commissioner ("Alternate") pursuant to the Joint Powers Agreement. Each Commissioner shall have authority to act for the Participant represented with respect to matters pertaining to this Agreement.

8.2 Forum. Whenever any action anticipated by this Agreement is required to be jointly taken by the Participants, such action shall be taken at regular or special meetings of the NCPA Commission.

8.3 Quorum. For purposes of acting upon matters that relate to administration of this Agreement, a quorum of the Participants shall consist of those Commissioners, or their designated Alternate, representing a numerical majority of the Participants.

8.4 Voting. Each Participant shall have the right to cast one vote with respect to matters pertaining to this Agreement. A unanimous vote of all Participants shall be required for action regarding: (i) any transfer of rights to a Third Party as described in Section 9 of this Agreement; and (ii) for matters related to any of the following actions as provided for in the PPA: (a) exercising any early termination provisions as set forth in the PPA, and (b) exercising any assignment rights as set forth in the PPA. For all other matters pertaining to this Agreement, a majority vote of the Participants shall be required for action.

## **Section 9. Transfer of Rights by Participants**

9.1 A Participant has the right to make transfers, sales, assignments and exchanges (collectively “transfers(s)”) of any portion of its Project Participation Percentage and rights thereto, subject to the approval provisions in Section 8.4 of this Agreement, provided that the transferee satisfies all applicable criterion in the PPA. If a Participant desires to transfer a portion or its entire share of the Project for a specific time interval, or



permanently, then NCPA will, if requested by such Participant, use its best efforts to transfer that portion of the Participant's share of the Project.

9.2 Unless otherwise set forth in this Agreement, before a Participant may transfer an excess Project share pursuant to Section 9.1 to any person or entity other than a Participant, it shall give all other Participants the right to purchase the share on the same terms and conditions. Before a Participant may transfer an excess Project share pursuant to section 9.1 to any person or entity other than a Member, it shall give all Members the right to purchase the share on the same terms and conditions. Such right shall be exercised within thirty (30) days of receipt of notice of said right.

No transfer shall relieve a Participant of any of its obligations under this Agreement except to the extent that NCPA receives payment of these obligations from a transferee.

**Section 10. Term and Termination.** This Agreement shall become effective when it has been duly executed by all Participants, and delivered to and executed by NCPA (the "Effective Date"). NCPA shall notify all Participants in writing of the Effective Date. The Term of this Agreement shall be coterminous with the PPA, and shall commence on the Effective Date, and shall continue through the term of the PPA.

**Section 11. Withdrawal of Participants.** No Participant may withdraw from this Agreement except as otherwise provided for herein.

**Section 12. Settlement of Disputes and Arbitration.** The Parties agree to make best efforts to settle all disputes among themselves connected with this Agreement as a matter of normal business under this Agreement. The procedures set forth in Section 10 of the Power Management and Administrative Services Agreement shall apply to all disputes that cannot be settled by the Participants themselves; provided, that the provisions of Section 4.5 shall first apply to all disputes involving invoices prepared by NCPA.

**Section 13. Miscellaneous**

13.1 Confidentiality. The Parties will keep confidential all confidential or trade secret information made available to them in connection with this Agreement, to the extent possible, consistent with applicable laws, including the California Public Records Act. Confidential or trade secret information shall be marked or expressly identified as such.

If a Party ("Receiving Party") receives a request from a Third Party for access to, or inspection, disclosure or copying of, any other Party's (the "Supplying Party") confidential data or information, which the Receiving Party has possession of ("Disclosure Request"), then the Receiving Party shall provide notice and a copy of the Disclosure Request to the Supplying Party within three (3) Business Days after receipt of the Disclosure Request. Within three (3) Business Days after receipt of such notice, the Supplying Party shall provide notice to the Receiving Party either:

(i) that the Supplying Party believes there are reasonable legal grounds for denying or objecting to the Disclosure Request, and the Supplying Party requests the

Receiving Party to deny or object to the Disclosure Request with respect to identified confidential information. In such case, the Receiving Party shall deny the Disclosure Request and the Supplying Party shall defend the denial of the Disclosure Request at its sole cost, and it shall indemnify the Receiving Party for all costs associated with denying or objecting to the Disclosure Request. Such indemnification by the Supplying Party of the Receiving Party shall include all of the Receiving Party's costs reasonably incurred with respect to denial of or objection to the Disclosure Request, including but not limited to costs, penalties, and the Receiving Party's attorney's fees; or

(ii) that the Receiving Party may grant the Disclosure Request without any liability by the Receiving Party to the Supplying Party.

13.2 Indemnification and Hold Harmless. Subject to the provisions of Section 13.4, each Participant agrees to indemnify, defend and hold harmless NCPA and its Members, including their respective governing boards, officials, officers, agents, and employees, from and against any and all claims, suits, losses, costs, damages, expenses and liability of any kind or nature, including reasonable attorneys' fees and the costs of litigation, including experts, to the extent caused by any acts, omissions, breach of contract, negligence (active or passive), gross negligence, recklessness, or willful misconduct of that Participant, its governing officials, officers, employees, subcontractors or agents, to the maximum extent permitted by law.

13.3 Several Liabilities. No Participant shall, in the first instance, be liable under this Agreement for the obligations of any other Participant or for the obligations of NCPA incurred on behalf of other Participants. Each Participant shall be solely responsible and liable for performance of its obligations under this Agreement, except as otherwise provided for herein. The obligation of each Participant under this Agreement is, in the first instance, a several obligation and not a joint obligation with those of the other Participants.

Notwithstanding the foregoing, the Participants acknowledge that any debts or obligations incurred by NCPA under this Agreement on behalf of any of them shall be borne solely by such Participants in proportion to their respective Project Participation Percentages, and not by non-Participant Members of NCPA, pursuant to Article IV, Section 3(b) of the Joint Powers Agreement.

In the event that a Participant should fail to pay its share of the debts or obligations incurred by NCPA as required by this Agreement, the remaining Participants shall, in proportion to their Project Participation Percentages, pay such unpaid amounts and shall be reimbursed by the Participant failing to make such payments.

13.4 No Consequential Damages. FOR ANY BREACH OF ANY PROVISION OF THIS AGREEMENT FOR WHICH AN EXPRESS REMEDY OR MEASURE OF DAMAGES IS PROVIDED IN THIS AGREEMENT, THE LIABILITY OF THE DEFAULTING PARTY SHALL BE LIMITED AS SET FORTH IN SUCH PROVISION, AND ALL OTHER

DAMAGES OR REMEDIES ARE HEREBY WAIVED. IF NO REMEDY OR MEASURE OF DAMAGE IS EXPRESSLY PROVIDED, THE LIABILITY OF THE DEFAULTING PARTY SHALL BE LIMITED TO ACTUAL DAMAGES ONLY AND ALL OTHER DAMAGES AND REMEDIES ARE HEREBY WAIVED. IN NO EVENT SHALL NCPA OR ANY PARTICIPANT OR THEIR RESPECTIVE SUCCESSORS, ASSIGNS, REPRESENTATIVES, DIRECTORS, OFFICERS, AGENTS, OR EMPLOYEES BE LIABLE FOR ANY LOST PROFITS, CONSEQUENTIAL, SPECIAL, EXEMPLARY, INDIRECT, PUNITIVE, OR INCIDENTAL LOSSES OR DAMAGES, INCLUDING LOSS OF USE, LOSS OF GOODWILL, LOST REVENUES, LOSS OF PROFIT OR LOSS OF CONTRACTS EVEN IF SUCH PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, AND NCPA AND EACH PARTICIPANT EACH HEREBY WAIVES SUCH CLAIMS AND RELEASES EACH OTHER AND EACH OF SUCH PERSONS FROM ANY SUCH LIABILITY.

The Parties acknowledge that California Civil Code section 1542 provides that: "A general release does not extend to claims which the creditor does not know or suspect to exist in his or her favor at the time of executing the release, which if known by him or her must have materially affected his or her settlement with the debtor." The Parties waive the provisions of section 1542, or other similar provisions of law, and intend that the waiver and release provided by this Section of this Agreement shall be fully enforceable despite its reference to future or unknown claims.

13.5 Waiver. No waiver of the performance by a Party of any obligation under this Agreement with respect to any default or any other matter arising in connection with this Agreement shall be effective unless given by the Commission or the governing body of a Participant, as applicable. Any such waiver by the Commission in any particular instance shall not be deemed a waiver with respect to any subsequent performance, default or matter.

13.6 Amendments. Except where this Agreement specifically provides otherwise, this Agreement may be amended only by written instrument executed by the Parties with the same formality as this Agreement.

13.7 Assignment of Agreement.

13.7.1 Binding Upon Successors. This Agreement shall inure to the benefit of and shall be binding upon the respective successors and assignees of the Parties to this Agreement.

13.7.2 No Assignment. Neither this Agreement, nor any interest herein, shall be transferred or assigned by a Party hereto except with the consent in writing of the other Parties hereto, which consent shall not be unreasonably withheld.

13.8 Severability. In the event that any of the terms, covenants or conditions of this Agreement or the application of any such term, covenant or condition, shall be held invalid as to any person or circumstance by any court having jurisdiction, all other terms, covenants or conditions of this Agreement and their application shall not be affected

thereby, but shall remain in force and effect unless the court holds that such provisions are not severable from all other provisions of this Agreement.

13.9 Governing Law. This Agreement shall be interpreted, governed by, and construed under the laws of the State of California.

13.10 Headings. All indices, titles, subject headings, section titles and similar items are provided for the purpose of convenience and are not intended to be inclusive, definitive, or affect the meaning of the contents of this Agreement or the scope thereof.

13.11 Notices. Any notice, demand or request required or authorized by this Agreement to be given to any Party shall be in writing, and shall either be personally delivered to a Participant's Commissioner or Alternate, and to the General Manager, or shall be transmitted to the Participant and the General Manager at the addresses shown on the signature pages hereof. The designation of such addresses may be changed at any time by written notice given to the General Manager who shall thereupon give written notice of such change to each Participant. All such notices shall be deemed delivered when personally delivered, two (2) Business Days after deposit in the United States mail first class postage prepaid, or on the first Business Day following delivery through electronic communication.

13.12 Warranty of Authority. Each Party represents and warrants that it has been duly authorized by all requisite approval and action to execute and deliver this Agreement and that this Agreement is a binding, legal, and valid agreement enforceable in accordance

with its terms. Upon execution of this Agreement, each Participant shall deliver to NCPA a resolution of the governing body of such Participant evidencing approval of and authority to enter into this Agreement.

13.13 Counterparts. This Agreement may be executed in any number of counterparts, and each executed counterpart shall have the same force and effect as an original instrument and as if all the signatories to all of the counterparts had signed the same instrument. Any signature page of this Agreement may be detached from any counterpart of this Agreement without impairing the legal effect of any signatures thereon, and may be attached to another counterpart of this Agreement identical in form hereto but having attached to it one or more signature pages.

13.14 Venue. In the event that a Party brings any action under this Agreement, the Parties agree that trial of such action shall be vested exclusively in the state courts of California in the County of Placer or in the United States District Court for the Eastern District of California.

13.15 Attorneys' Fees. If a Party to this Agreement brings any action, including an action for declaratory relief, to enforce or interpret the provisions of this Agreement, then each Party shall bear its own fees and costs, including attorneys' fees, associated with the action.

13.16 Counsel Representation. Pursuant to the provisions of California Civil Code Section 1717 (a), each of the Parties were represented by counsel in the negotiation and



execution of this Agreement and no one Party is the author of this Agreement or any of its subparts. Those terms of this Agreement which dictate the responsibility for bearing any attorney's fees incurred in arbitration, litigation or settlement in a manner inconsistent with the provisions of Section 13.2 were intentionally so drafted by the Parties, and any ambiguities in this Agreement shall not be interpreted for or against a Party by reason of that Party being the author of the provision.

13.17 No Third Party Beneficiaries. Nothing contained in this Agreement is intended by the Parties, nor shall any provision of this Agreement be deemed or construed by the Parties, by any third person or any Third Parties, to be for the benefit of any Third Party, nor shall any Third Party have any right to enforce any provision of this Agreement or be entitled to damages for any breach by the Parties of any of the provisions of this Agreement.

IN WITNESS WHEREOF, NCPA and each Participant have, by the signature of its duly authorized representative shown below, executed and delivered a counterpart of this Agreement.

NORTHERN CALIFORNIA  
POWER AGENCY  
651 Commerce Drive  
Roseville, CA 95678

CITY OF ALAMEDA  
2000 Grand Street  
Alameda, CA 94501

\_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

Approved as to form:

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: General Counsel  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: City Attorney  
Date: \_\_\_\_\_

Attestation (if applicable):

Attestation (if applicable):

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

CITY OF BIGGS  
465 C Street  
Biggs, CA 95917

CITY OF GRIDLEY  
685 Kentucky Street  
Gridley, CA 95948

\_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

Approved as to form:

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: City Attorney  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: City Attorney  
Date: \_\_\_\_\_

Attestation (if applicable)

Attestation (if applicable)

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

CITY OF LODI  
221 W. Pine Street  
Lodi, CA 95240

CITY OF LOMPOC  
100 Civic Center Plaza  
Lompoc, CA 93436

\_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

Approved as to form:

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: City Attorney  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: City Attorney  
Date: \_\_\_\_\_

Attestation (if applicable)

Attestation (if applicable)

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

CITY OF PALO ALTO  
160 Palo Alto Avenue  
Palo Alto, CA 94301

CITY OF OAKLAND, acting  
by and through its  
Board of Port Commissioners  
530 Water Street  
Oakland, CA 94607

\_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

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By: \_\_\_\_\_  
Title: \_\_\_\_\_  
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Its: City Attorney  
Date: \_\_\_\_\_

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By: \_\_\_\_\_  
Its: City Attorney  
Date: \_\_\_\_\_

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Its: \_\_\_\_\_  
Date: \_\_\_\_\_

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By: \_\_\_\_\_  
Its: \_\_\_\_\_  
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CITY OF SANTA CLARA  
1500 Warburton Avenue  
Santa Clara, CA 95050

\_\_\_\_\_  
By: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

Approved as to form:

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: City Attorney  
Date: \_\_\_\_\_

Attestation (if applicable)

\_\_\_\_\_  
By: \_\_\_\_\_  
Its: \_\_\_\_\_  
Date: \_\_\_\_\_

## EXHIBIT A

### PROJECT PARTICIPATION PERCENTAGES

On the Effective Date of the Agreement the initial Participant who is signatory to this Agreement, and its respective Project Participation Percentage share of the Project is set forth in Table 1 of this Exhibit A.

<b>Table 1</b>			
<b>Initial Project Participation Percentages</b>			
	<b>Project Participation Percentages</b>	<b>Project Participation MW</b>	<b>Project Participation MW</b>
		<b>(2025 - 2026)</b>	<b>(2027 - 2037)</b>
<b>Member</b>			
City of Santa Clara	100.0%	50.00	100.00
<b>Total:</b>	<b>100.0%</b>	<b>50.00</b>	<b>100.00</b>

After the Effective Date of this Agreement, the Participant listed in Table 1 of this Exhibit A (“Transferor”) intends to transfer by assignment a portion of its Project Participation Percentage share of the Project, and the rights and obligations thereto, to other Members who are not Participants on the Effective Date of the Agreement (“Transferee”). All intended transfers by assignment described in this Exhibit A shall be completed no later than one (1) calendar year after the Effective Date of this Agreement (the “Transfer Completion Deadline”). Notwithstanding the foregoing, the Transfer Completion Deadline applies only to the intended transfers described in this Exhibit A, and shall not limit or reduce a Participant’s rights set forth in Section 9 of this Agreement. On or prior to the Transfer Completion Deadline, the Transferor will transfer by assignment a portion of its Project Participation Percentage share of the Project to the Transferee, and such

transfer will become effective when the Transferee becomes a Participant to this Agreement by signature. Upon the completion of a transfer by assignment from Transferor to Transferee, the Transferee will assume all rights and obligations set forth in this Agreement for the portion of the Project Participation Percentage share of the Project that is transferred and assigned from Transferor to Transferee. On or prior to the Transfer Completion Deadline, the Participant intends that after all transfers by assignment described in this Exhibit A have been completed, the resulting Participant Project Participation Percentage shares of the Project will be as listed in Table 2 of this Exhibit A; provided, however, concurrent with the Transfer Completion Deadline NCPA shall notify all Participants of the final Project Participation Percentage shares of the Project in writing based on the completed transfers by assignment, and if necessary NCPA shall update Table 2 of this Exhibit A to list the final Participant Project Participation Percentage shares of the Project.

**Table 2**  
**Draft Final Project Participation Percentages**

<b>Member</b>	<b>Project Participation Percentages</b>	<b>Project Participation</b>	<b>Project Participation</b>
		<b>MW (2025 - 2026)</b>	<b>MW (2027 - 2037)</b>
City of Alameda	5.0%	2.50	5.00
City of Biggs	0.4%	0.20	0.40
City of Gridley	0.6%	0.30	0.60
City of Lodi	10.0%	5.00	10.00
City of Lompoc	1.7%	0.85	1.70
City of Palo Alto	10.0%	5.00	10.00
Port of Oakland	2.3%	1.15	2.30
City of Santa Clara	70.0%	35.00	70.00
<b>Total:</b>	<b>100.0%</b>	<b>50.00</b>	<b>100.00</b>



## **EXHIBIT B**

### **PPA**

The Power Purchase Agreement between Geysers Power Company, LLC and Northern California Power Agency has been attached to this Agreement as Exhibit B.



# Commission Staff Report – *DRAFT*

**COMMISSION MEETING DATE:** December 1, 2022

**SUBJECT:** PG&E Negotiated Gas Transmission Rate Agreement Extension

**AGENDA CATEGORY:** Discussion/Action

<b>FROM:</b>	Michael DeBortoli	<b>METHOD OF SELECTION:</b>
	Assistant General Manager	N/A
<b>Division:</b>	Generation Services	<i>If other, please describe:</i>
<b>Department:</b>	Generation Services	

<b>IMPACTED MEMBERS:</b>					
All Members	<input type="checkbox"/>	City of Lodi	<input checked="" type="checkbox"/>	City of Shasta Lake	<input type="checkbox"/>
Alameda Municipal Power	<input checked="" type="checkbox"/>	City of Lompoc	<input checked="" type="checkbox"/>	City of Ukiah	<input checked="" type="checkbox"/>
San Francisco Bay Area Rapid Transit	<input checked="" type="checkbox"/>	City of Palo Alto	<input type="checkbox"/>	Plumas-Sierra REC	<input checked="" type="checkbox"/>
City of Biggs	<input checked="" type="checkbox"/>	City of Redding	<input type="checkbox"/>	Port of Oakland	<input type="checkbox"/>
City of Gridley	<input checked="" type="checkbox"/>	City of Roseville	<input type="checkbox"/>	Truckee Donner PUD	<input type="checkbox"/>
City of Healdsburg	<input checked="" type="checkbox"/>	City of Santa Clara	<input checked="" type="checkbox"/>	Other	<input checked="" type="checkbox"/>
			<i>If other, please specify</i>	Azusa, CDWR, Modesto,	
				<u>PWRPA</u>	

## **RECOMMENDATION:**

Approve Resolution 22-XX authorizing the General Manager or his designee to negotiate and execute an extension of the Negotiated Gas Transmission Rate Agreement executed in 2019 between NCPA and PG&E, not to exceed the proposed 2023 volumetric rate.

## **BACKGROUND:**

In July 2016, PG&E implemented a local gas transmission rate increase of 212% which resulted in a 76% decrease in generation at NCPA's Lodi Energy Center ("LEC"), while competing market generators on the Back-Bone increased only by 6%.

NCPA, working through the Northern California Gas Coalition ("NCGC"), participated in negotiating a revised rates structure with PG&E. These negotiations resulted in a reduced variable rate and a new fixed monthly rate, allowing NCPA's Combustion Turbines to bid competitively against generators on the back-bone. The capacity factor resumed to normal by the end of 2017. Since that time, NCPA has been successful in maintaining the negotiated rate structure.

The current negotiated rates are set to terminate on December 31, 2022. The California Public Utilities Commission ("CPUC") is expected to have a hearing on the Proposed Decision in the third quarter of 2023 (per PG&E's new proposal) for the new rate case. If approved, PG&E is expected to file and implement new rates in the third quarter of 2023. Unless there is an agreement for a negotiated rate between January 1, 2023 and the implementation of the new rate, NCPA's Combustion Turbines will resume the uncompetitive default rate structure last approved by the CPUC.

NCPA and NCGC have been working with PG&E to extend the current negotiated rates as is. Due to retirements and replacements at PG&E, they have been slow to act and commit to anything. It is not clear if PG&E will agree to a clean extension of the expiration date or negotiate any modified terms. As a result of PG&E's delays, the looming expiration date, and the dates of the NCPA committee meetings, staff is recommending that the General Manager be delegated the authority to negotiate and execute terms for this gap period.

## **FISCAL IMPACT:**

The negotiated rate structure will allow NCPA's Combustion Turbines (LEC, CT2, and CT1) to be more competitive in the market, which will allow for a higher capacity factor and increased margins.

## **SELECTION PROCESS:**

PG&E is the only provider for natural gas delivery in Lodi.

## **ENVIRONMENTAL ANALYSIS:**

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 of the California Environmental Quality Act. No environmental review is necessary.

**COMMITTEE REVIEW:**

Pending Committee review and approval.

AFTER FACILITIES APPROVAL: On November 15, 2022, the Facilities Committee reviewed and endorsed the recommendation above for Commission approval.

AFTER LEC PPC APPROVAL: On November 7, 2022 the Lodi Energy Center Project Participant Committee reviewed and approved the recommendation above for Commission approval.

Respectfully submitted,

RANDY S. HOWARD  
General Manager

Attachments (1):

- Resolution 22-XX

RESOLUTION 22-XX

RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY  
APPROVING THE PG&E NEGOTIATED GAS TRANSMISSION RATE AGREEMENT EXTENSION

(reference Staff Report #XXX:22)

WHEREAS, NCPA operates Combustion Turbine units on behalf of its Members and/or Project Participants, which are dependent upon the gas transmission rates set by PG&E; and

WHEREAS, in July 2016, PG&E implemented a local gas transmission rate increase of 212% which resulted in a 76% decrease in generation at NCPA's Lodi Energy Center ("LEC"), while competing market generators on the Back-Bone increased only by 6%; and

WHEREAS, NCPA and the Northern California Gas Coalition ("NCGC") participated in negotiating a revised rates structure with PG&E. These negotiated rates allow NCPA's combustion turbines to bid competitively against other generators; and

WHEREAS, the CPUC is expected to hold a hearing on the Proposed Decision for PG&E's new rate case in the third quarter of 2023. If approved, it is expected that PG&E will file and implement the new rates in the third quarter of 2023; and

WHEREAS, the current negotiated rates are set to terminate on December 31, 2022. Unless there is an agreement for a negotiated rate between January 1, 2023 and the implementation of the new rates, NCPA's combustion turbines will resume the uncompetitive default rate structure last approved by the CPUC; and

WHEREAS, NCPA and NCGC are working with PG&E to extend the current negotiated rates; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore not a "project" for purposes of Section 21065 of the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, that the Commission of the Northern California Power Agency authorizes the General Manager or his designee to negotiate and execute an extension of the Negotiated Gas Transmission Rate Agreement executed in 2019 between NCPA and PG&E, not to exceed the proposed 2023 volumetric rate.

PASSED, ADOPTED and APPROVED this \_\_\_\_ day of \_\_\_\_\_, 2022 by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
Alameda	_____	_____	_____
San Francisco BART	_____	_____	_____
Biggs	_____	_____	_____
Gridley	_____	_____	_____
Healdsburg	_____	_____	_____
Lodi	_____	_____	_____
Lompoc	_____	_____	_____
Palo Alto	_____	_____	_____
Port of Oakland	_____	_____	_____
Redding	_____	_____	_____
Roseville	_____	_____	_____
Santa Clara	_____	_____	_____
Shasta Lake	_____	_____	_____
Truckee Donner	_____	_____	_____
Ukiah	_____	_____	_____
Plumas-Sierra	_____	_____	_____

\_\_\_\_\_  
DAVID HAGELE  
CHAIR

ATTEST:

\_\_\_\_\_  
CARY A. PADGETT  
ASSISTANT SECRETARY



# Commission Staff Report

**COMMISSION MEETING DATE:** December 1, 2022

**SUBJECT:** Authorize Northern California Power Agency General Manager to Execute Confirmation Number 0282 for Ascend Analytics, LLC Services to the City of Vernon/Vernon Public Utilities and Issue a Corresponding Purchase Order Under the Shared Services Agreement

**AGENDA CATEGORY:** Consent

<b>FROM:</b>	Monty Hanks Chief Financial Officer/Assistant General Manager	<b>METHOD OF SELECTION:</b>	<i>Other</i>
Division:	Administrative Services	<i>Vernon Acknowledged Satisfaction of City's Purchasing Policies</i>	
Department:	Accounting & Finance		

<b>IMPACTED MEMBERS:</b>					
All Members	<input type="checkbox"/>	City of Lodi	<input type="checkbox"/>	City of Shasta Lake	<input type="checkbox"/>
Alameda Municipal Power	<input type="checkbox"/>	City of Lompoc	<input type="checkbox"/>	City of Ukiah	<input type="checkbox"/>
San Francisco Bay Area Rapid Transit	<input type="checkbox"/>	City of Palo Alto	<input type="checkbox"/>	Plumas-Sierra REC	<input type="checkbox"/>
City of Biggs	<input type="checkbox"/>	City of Redding	<input type="checkbox"/>	Port of Oakland	<input type="checkbox"/>
City of Gridley	<input type="checkbox"/>	City of Roseville	<input type="checkbox"/>	Truckee Donner PUD	<input type="checkbox"/>
City of Healdsburg	<input type="checkbox"/>	City of Santa Clara	<input type="checkbox"/>	Other	<input checked="" type="checkbox"/>
<i>If other, please specify</i>				SCPPA Member through Shared Services	
				<hr/>	
				<hr/>	

## **RECOMMENDATION:**

Approval of Resolution 22-121 authorizing the NCPA General Manager or his designee to execute Confirmation Number 0282, with any non-substantive changes as approved by the NCPA General Counsel and SCPPA General Counsel, and issue a corresponding Purchase Order to Ascend Analytics, LLC for Integrated Resource Plan services to the City of Vernon/Vernon Public Utilities.

## **BACKGROUND:**

The Northern California Power Agency ("NCPA") and Southern California Public Power Authority ("SCPPA") executed a Shared Services Agreement effective August 1, 2015, authorizing among other things, the purchase or acquisition of goods and services by each Party or a Party's Members where provision has been provided in contracts for the other Party and its Members to avail themselves of goods and services offered under the contract or where either Party's bidder or Consultant is willing to extend prices to the other Party and its Members.

On October 25, 2022, the City of Vernon/Vernon Public Utilities (Vernon) submitted a SPPA Member Task Request under the Shared Services Agreement for Ascend Analytics, LLC to provide services for the development of an Integrated Resource Plan. Pursuant to the proposal, the cost for the services is \$338,850.00. In addition, Vernon staff has requested the addition of a ten percent contingency of \$33,885.00 to allow for additional services as may be requested.

If approved, Confirmation Number 0282 states that NCPA agrees to provide the requested services through its contract with Ascend Analytics, LLC in the amount of not-to-exceed \$372,735.00. There is no guarantee that the full amount of possible services will be paid to Ascend Analytics, LLC but is merely a limit of potential expenditures for services under Confirmation Number 0282. With the addition of NCPA's administrative fees which will be billed out as actually incurred, the total amount expended under the Confirmation will not exceed \$374,245.00.

## **FISCAL IMPACT:**

There is no fiscal impact to NCPA. The services provided by Ascend Analytics, LLC to Vernon will be billed to and paid by Vernon pursuant to the terms of the Confirmation under the Shared Services Agreement. NCPA's administrative costs will be reimbursed by Vernon.

## **SELECTION PROCESS:**

Vernon will utilize Ascend Analytics, LLC services through NCPA's Shared Services Agreement and has confirmed through submission of its SCPPA Member Task Request that it is responsible for satisfying the City of Vernon's Purchasing Policies.

**ENVIRONMENTAL ANALYSIS:**

This activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore, not a “project” for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary.

**COMMITTEE REVIEW:**

This item will be reviewed by the Facilities Committee at its November 15, 2022 special meeting.

Respectfully submitted,

RANDY S. HOWARD  
General Manager

Attachments:

- Resolution 22-121
- Proposed Confirmation Number 0282



## **RESOLUTION 22-121**

### **RESOLUTION OF THE NORTHERN CALIFORNIA POWER AGENCY AUTHORIZING THE GENERAL MANAGER TO EXECUTE CONFIRMATION NUMBER 0282 FOR ASCEND ANALYTICS, LCC SERVICES TO THE CITY OF VERNON/VERNON PUBLIC UTILITIES AND ISSUE A CORRESPONDING PURCHASE ORDER UNDER THE SHARED SERVICES AGREEMENT**

**(reference Staff Report #252:22)**

WHEREAS, The Northern California Power Agency ("NCPA") and Southern California Public Power Authority ("SCPPA") executed a Shared Services Agreement effective August 1, 2015, authorizing among other things, the purchase or acquisition of goods and services by each Party or a Party's Members where provision has been provided in contracts for the other Party and its Members to avail themselves of goods and services offered under the contract or where either Party's bidder or Consultant is willing to extend prices to the other Party and its Members; and

WHEREAS, the City of Vernon/Vernon Public Utilities (Vernon) submitted a SPPA Member Task Request under the Shared Services Agreement for Ascend Analytics, LLC to provide services for the development of an Integrated Resource Plan. Pursuant to the proposal, the cost for the services is \$338,850.00. In addition, Vernon staff has requested the addition of a ten percent contingency of \$33,885.00 to allow for additional services as may be requested; and

WHEREAS, Confirmation Number 0282 states that NCPA agrees to provide the requested services through its contract with Ascend Analytics, LLC in the amount of not-to-exceed \$372,735.00. There is no guarantee that the full amount of possible services will be paid to Ascend Analytics, LLC but is merely a limit of potential expenditures for services under Confirmation No. 0282. With the addition of NCPA's administrative fees which will be billed out as actually incurred, the total amount expended under the Confirmation will not exceed \$374,245.00; and

WHEREAS, this activity would not result in a direct or reasonably foreseeable indirect change in the physical environment and is therefore, not a "project" for purposes of Section 21065 the California Environmental Quality Act. No environmental review is necessary; and

NOW, THEREFORE BE IT RESOLVED, the Commission of the Northern California Power Agency authorizes the NCPA General Manager or his designee to execute Confirmation Number 0282, with any non-substantive changes as approved by the NCPA General Counsel and SCPPA General Counsel, and issue a Purchase Order to Ascend Analytics, LLC for Integrated Resource Plan services for the City of Vernon/Vernon Public Utilities.

PASSED, ADOPTED and APPROVED this \_\_\_\_ day of \_\_\_\_\_, 2022, by the following vote on roll call:

	<u>Vote</u>	<u>Abstained</u>	<u>Absent</u>
Alameda			
San Francisco BART			
Biggs			
Gridley			
Healdsburg			
Lodi			
Lompoc			
Palo Alto			
Port of Oakland			
Redding			
Roseville			
Santa Clara			
Shasta Lake			
Truckee Donner			
Ukiah			
Plumas-Sierra			

\_\_\_\_\_  
JERRY SERVENTI  
CHAIR

ATTEST:

\_\_\_\_\_  
CARY A. PADGETT  
ASSISTANT SECRETARY

## **CONFIRMATION UNDER THE NCPA SHARED SERVICES PROGRAM**

**Effective Date:** December \_\_, 2022

**Project Description:** Development of Integrated Resource Plan

**Sponsor:** Southern California Public Power Authority (“SCPPA”)

**Participating SCPPA Member:** City of Vernon/Vernon Public Utilities (“Participating Member” or “Vernon”)

**Consultant:** Ascend Analytics, LLC (“Ascend” or “Consultant”)

1. The Northern California Power Agency (“NCPA”) and SCPPA executed a Shared Services Agreement effective August 1, 2015, authorizing among other things, the purchase or acquisition of goods and services by each Party or a Party’s Members where provision has been provided in contracts for the other Party and its Members to avail themselves of goods and services offered under the contract or where either Party’s bidder or Consultant is willing to extend prices to the other Party and its Members.

2. This is a Confirmation pursuant to the Shared Services Agreement and subject to the terms and conditions of that agreement, except as expressly provided herein.

3. Consultant, SCPPA, NCPA, and Participating SCPPA Member (“Participating Member”) identified above, agree that Consultant shall provide the Services specified herein pursuant to the terms and conditions of the Multi-Task Consulting Services Agreement between the Northern California Power Agency and Ascend Analytics, LLC (“Agreement”) dated August 31, 2022.

4. The Participating Member for this Confirmation is the City of Vernon/Vernon Public Utilities (“Vernon”) in the total amount of not-to-exceed \$372,735.00 to be paid on a task completed basis, which shall include all fees, costs, reimbursables, and expenses, for the services from Ascend Analytics, LLC, described in paragraph 5. The amount includes a ten percent (10%) contingency. This dollar amount is not a guarantee that the full amount will be paid to Consultant, but is merely a limit of potential expenditures under this Confirmation.

5. The Participating SCPPA Member requests the following described Shared Services in the dollar amount specified. NCPA agrees to contract with Ascend Analytics, LLC to provide the following Shared Services to the Participating SCPPA Member:

Ascend Analytics, LLC shall provide services for the development of an Integrated Resource Plan as specifically outlined in Ascend’s Proposal dated September 30, 2022, prepared for Vernon Public Utilities – Electric Enterprise, a copy of which is attached as Exhibit “A” and incorporated herein by reference. The services are expected to begin in December 2022, or as soon thereafter as possible, and continue through March 2023.

6. The Participating Member agrees to pay for the services in the amount set forth in paragraph 4 above; plus, the administrative fees in the amount not-to-exceed \$1,510.00 (calculated at \$685.00 for development of the Confirmation and first month’s processing, plus \$165.00 per month for 5 possible additional months, billed as administrative costs are actually incurred). The Participating Member agrees to make monthly payments to NCPA, based on invoices received, for services satisfactorily performed and for

authorized reimbursable costs incurred. Invoices are due and payable from Participating Member to NCPA upon receipt. **The total amount expended under this Confirmation will not exceed \$374,245.00.**

7. Consultant acknowledges and agrees that Participating Member through this Confirmation obtains the benefits of the Agreement including the indemnities described in Section 5.2 wherein "Agency" is replaced by "Agency and City of Vernon/Vernon Public Utilities" throughout Section 5.2.

8. A Security Account deposit is not required for this Confirmation.

9. The representatives of Sponsor and Participating Member are as follows:

Sponsor Representative:

Michael S. Webster  
Executive Director  
Southern California Public Power Authority  
1160 Nicole Court  
Glendora, CA 91740

Participating Member Representative:

Todd Dusenberry, General Manager  
Vernon Public Utilities  
4305 Santa Fe Avenue  
Vernon, CA 90058

IN WITNESS WHEREOF, the parties have signed this Confirmation effective as of the date first written above.

**NORTHERN CALIFORNIA POWER AGENCY**

By: \_\_\_\_\_

RANDY S. HOWARD  
General Manager

Approved as to form:

\_\_\_\_\_  
JANE E. LUCKHARDT  
General Counsel

**ASCEND ANALYTICS, LLC**

By: \_\_\_\_\_

BRANDON K. MAUCH  
Manager of Resource Planning Analytics

Confirmation No. 0282

## Sponsor's Acknowledgement and Agreement

By signing this Task Order, SCPPA agrees that it is responsible for payment to Consultant for all fees and expenses invoiced by Consultant in accordance with Section 5, above, and will be responsible for all payment obligations incurred in connection with the work performed at the direction of or on behalf of Participating SCPPA Member, City of Vernon/Vernon Public Utilities. SCPPA agrees to indemnify, defend, and hold NCPA and all NCPA members harmless for payment for work performed at the direction of, and for the exclusive benefit of Participating SCPPA Member.

### SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY

By: \_\_\_\_\_  
Michael E. Webster, Executive Director

Approved as to form:

\_\_\_\_\_  
Armando Arballo, Assistant General Counsel

## Participating SCPPA Member's Acknowledgement and Agreement

Participating SCPPA Member, City of Vernon/Vernon Public Utilities, agrees to indemnify, defend and hold harmless NCPA, and all other members and their respective directors, officers, agents, representatives, employees, successors and assigns from and against any and all losses, injuries, costs and expenses, damages, liens, claims, or liabilities, including reasonable attorneys' fees, incurred by NCPA in connection with the work performed for the benefit of, or on behalf of, Participating Member pursuant to the Agreement, except for the gross negligence or willful misconduct of NCPA or such other NCPA members, and their officers, agents, representatives or employees.

### CITY OF VERNON/VERNON PUBLIC UTILITIES

\_\_\_\_\_  
Authorized Signatory

And

\_\_\_\_\_  
City Attorney



EXHIBIT "A"



Better models. Better decisions.

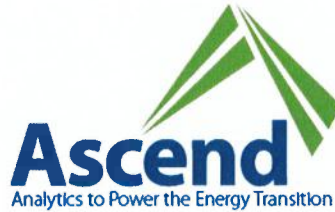
**Proposal**

**Development of an Integrated Resource Plan**

*Prepared for:*  
Vernon Public Utilities – Electric Enterprise

September 30, 2022

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Ascend Analytics (Ascend) is pleased to submit this proposal to support Vernon Public Utilities (VPU) to develop their 2024 Integrated Resource Plan (IRP). Ascend is a nationally recognized leader in power system resource planning, bringing advanced risk-based analytics to capture the changing market dynamics that are emerging during this time of energy transition. Ascend is an 100-person analytics software and advisory services firm based in Boulder Colorado. We are 100% focused on the electric power industry, providing analytical solutions and consulting support for resource planning, power system operations, and portfolio risk management. Ascend brings an advanced approach to resource planning that bridges common gaps in traditional planning, including:

- A widely respected Market Intelligence practice to guide resource retirement and acquisition strategy for a highly uncertain future. Our experts provide real-time monitoring of California policy and regulatory changes as well as power price dynamics based on market data and long-run power system fundamentals.
- Deep expertise in California policy and regulations on the electricity sector, including SB 350 IRPs with the California Energy Commission.
- Advanced capacity expansion and production cost modeling capabilities with PowerSIMM.
- An extensive database of operational and capital costs for both traditional thermal assets as well as renewables and storage based on running Request for Offer/Proposal processes throughout the US.

Ascend has a long track record supporting utility resource plans for a rapidly changing energy future, including:

- The 2019 IRPs for Burbank Water and Power, Glendale Water and Power, and Redding Electric. We are currently working with NCPA, IID, LADWP, and Glendale Water and Power on their 2024 IRPs using our PowerSimm software.
- CPUC regulated IRPs for San Jose Clean Energy, East Bay Clean Energy, and Silicon Valley Clean Energy and seven request for offer processes since 2019 on behalf of CCAs.

We thank you for this opportunity and are excited about the possibility of partnering with VPU to support this important planning process!

David Millar  
Managing Director, Resource Planning and Procurement  
[dmillar@ascendanalytics.com](mailto:dmillar@ascendanalytics.com)  
1877 Broadway, Suite 706 Boulder, Colorado 80302  
Work phone: +1 970 986 6662



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## 1. About Ascend's Resource Planning Practice

Ascend has deep experience performing complex resource planning studies for a variety of utilities in the Western United States and California. Please see our detailed project qualifications listed in section 1.1, demonstrating that we have successfully conducted complex resource planning studies for a wide range of utilities with diverse needs. Of course you know us from developing Burbank's 2019 IRP. We have added significant new capabilities and experience since the last round of CEC IRPs. The most notable addition is the creation of Ascend Market Intelligence (Ascend MI). Ascend MI provides long-term fundamental gas, carbon, and power price curves now widely used by developers, banks, and utilities to inform their long-term planning and valuation activities. They also provide clients across the US with policy and market information geared towards their business needs. This includes tracking federal, regional, and state regulations such as effective load carrying capability (ELCC) values, changing RA requirements, market rules, new market products, and so on.

Ascend's Market Intelligence platform helps utilities and developers find the optimal locations for siting renewable energy and storage projects. We can value any type of project relative to market prices and demonstrate the value relative to VPU's load.

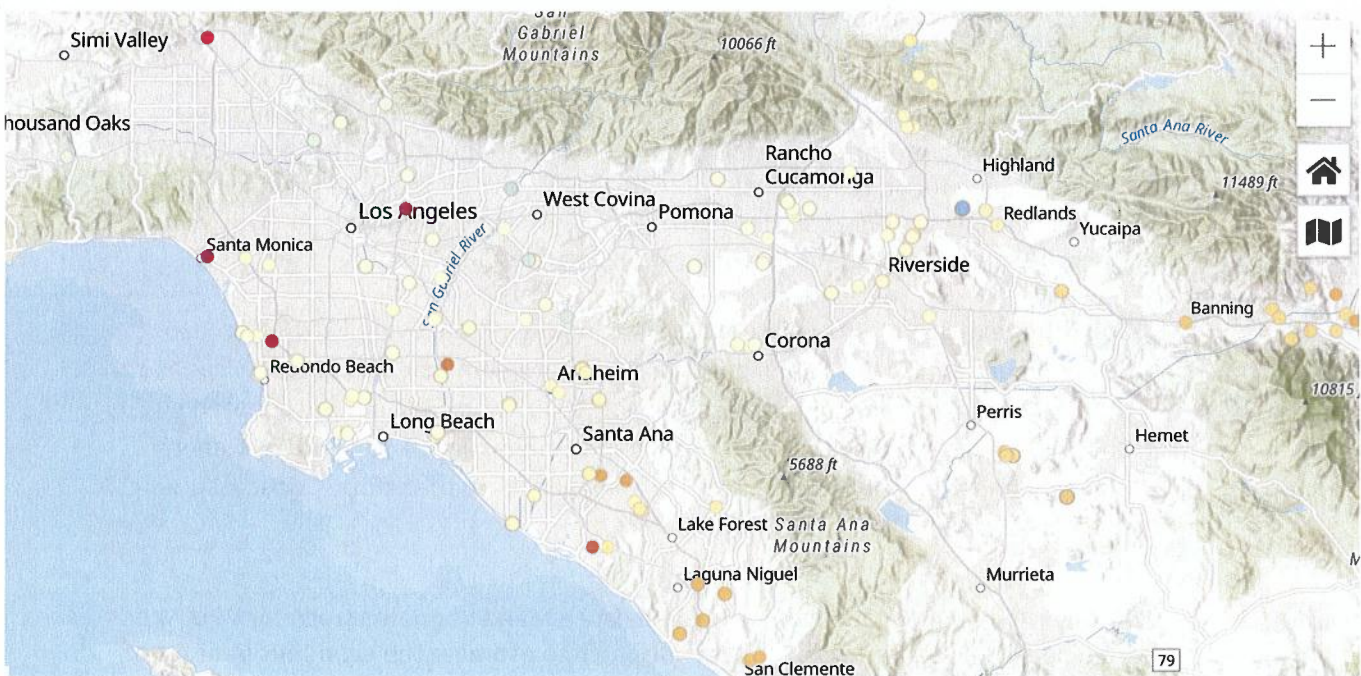


Figure 1: A screenshot of Ascend's Market Intelligence Platform showing nodal value in the LA Basin for renewable and storage projects.

Ascend has also added RFO/RFP administration and valuation to its business offerings. We run several RFO and RFPs every year in California, providing us with up-to-date information on technology costs and PPA prices for use in VPU's planning. Ascend helps CCAs in California procure PPAs for renewables and storage, including project financial analysis, risk assessment, and ESG scoring. **Since 2019 Ascend has helped CCAs and utilities procure over 2 GW of renewable energy and 1.5 GW of battery storage.**

In this proposal we provide a detailed description of our capacity expansion and production cost modeling software, PowerSIMM. PowerSIMM uses state-of-the-art modeling to simulate load, renewables, and market prices while maintaining key structural relationships between variables. PowerSIMM's automatic resource selection (ARS) tool finds the least cost/least risk resource plan across the entire set of simulated future states, a major benefit over traditional models that simply optimize over a "typical day" each month. PowerSIMM can model the full range of resources from



the traditional fossil fuels to energy storage (batteries, CAES, pumped hydro) to distributed resources (customer solar, EE, DR) and even more experimental solutions such as green hydrogen or carbon capture and storage to achieve California's 2045 net zero carbon target.

Ascend already has Burbank's system modeled (from our previous engagements in the IRP and the EIM study) so we understand and accurately capture your generation resources and your unique transmission topology. **Burbank realizes a major savings in staff time and money by going with the Ascend team who is ready to model your system right away!**

### 1.1. General List of Previous Relevant Projects

The following table provides relevant project descriptions and references.

Integrated Resource Planning Project Qualifications	
<p><b>Burbank Water and Power (VPU)</b></p> <p>SB 350 Integrated Resource Plan 2018 – 2019</p> <p>EIM Benefits Study 2020</p>	<p>Ascend developed Burbank's 2019 IRP consistent with the requirements of SB 350. Ascend designed and evaluated 16 resource mix scenarios representing unique combinations of renewables, storage, demand response, energy efficiency, and thermal resources. Ascend evaluated the scenarios for a range of critical metrics including cost, GHG reduction, loss-of-load probability, coincidence with load, and impact from projected market fluctuations during extreme weather events. Ascend and VPU recommended a preferred portfolio and two alternate portfolios that met SB100's 60% RPS requirement and greenhouse gas (GHG)-reduction targets. The preferred portfolio replaced a large coal-fired facility with solar, wind, and compressed air energy storage. The other portfolios had more emphasis on batteries and ICEs.</p> <p>Bob Schulte of Schulte Associates LLC (SA) coordinated the overall 2019 IRP development for VPU. Bob will perform similar program management services as part of the Ascend Team for this proposal. The 2019 IRP was unanimously adopted by City Council and accepted by the California Energy Commission. A former VPU General Manager and then-current Burbank City Manager called the effort: "Most assuredly, VPU's all-time best IRP."</p> <p>In 2020 Ascend developed an Energy Imbalance Market benefits study for VPU. We modeled VPU's system with 5-minute dispatch to estimate the economic benefits of joining the EIM.</p> <p>Contributors: Millar (PM, Lead), Katz (modeling)</p> <p>Reference: Scott Mellon, Power Resources Manager. <a href="mailto:smellon@burbankca.gov">smellon@burbankca.gov</a> 818 238-3659</p>
<p><b>Grant County PUD</b></p> <p>Integrated Resource Plan (2022 Ongoing but nearing completion)</p>	<p>Grant County Public Utility District (Grant Co PUD) is a municipal utility based in Moses Lake, Washington. Grant hired Ascend to develop their 2022 IRP in response to a Washington state requirement to meet clean energy targets (Clean Energy Transformation Act). Grant is a largely hydro utility with growing load and declining hydro resource. Ascend used its PowerSIMM capacity expansion and production cost model to chose three candidate portfolios, including evaluation of a small modular nuclear option. Once the candidate portfolios were developed the Ascend team ran each portfolio through PowerSIMM's production cost model to determine the cost to serve load, GHG emissions, RPS compliance, resource adequacy and market risk. Ascend</p>



## Integrated Resource Planning Project Qualifications

	<p>is assisting Grant to write their IRP for submission to the State of Washington this fall. Grant County PUD is also evaluating PowerSIMM to use as their own in-house production cost and planning model.</p> <p>Contributors: Millar (Engagement Director), Mauch (Analytics lead), Boukarim (PM and lead analyst), Katz (Modeling)</p> <p>Client Reference: Lisa Stites, Lead Financial Analyst. 785.230.6163. <a href="mailto:lstites@gcpud.org">lstites@gcpud.org</a></p>
<p><b>San Jose Clean Energy</b></p> <p>2022 Integrated Resource Plan</p> <p>(2021 – Current)</p>	<p>Ascend is completing the 2022 Integrated Resource Plan for San Jose Clean Energy (SJCE). SJCE is a community choice aggregator (CCA) serving the energy needs of the City of San Jose, including over 1 million people. Ascend performed a planning exercise to guide internal goal setting and resource procurement strategy as well as a compliance focused IRP for submission to the California Public Utility Commission (CPUC). Ascend used PowerSIMM to model SJCE's current resources as well as optimize future resource procurement using the automated resource selection (ARS) tool. Ascend developed a robust balanced resource plan that incorporates rapidly changing CAISO market dynamics and uncertain regulatory frameworks.</p> <p>Contributors: Millar (Engagement Director), Boukarim (PM and lead analyst), Katz (Modeling)</p> <p>Client Reference: Jeanne M. Solé</p> <p>Deputy Director of Power Resources, 200 E. Santa Clara St., 14th Floor San José, CA 95113, 408.535.4867, <a href="mailto:Jeanne.Sole@sanjoseca.gov">Jeanne.Sole@sanjoseca.gov</a></p>
<p><b>Los Angeles Department of Water and Power</b></p> <p>Integrated Resource Planning, Clean Grid LA, Once-through-Cooling replacement with storage</p> <p>2017 – Ongoing</p>	<p>Ascend works with Los Angeles Department of Water and Power (LADWP), a licensed PowerSIMM client, to support their resource planning efforts to achieve SB 100 goals and the Clean Grid LA initiative. Ascend developed a model of LADWP's load, resources, and a transmission model of the LADWP system, including linkages to markets in Utah, Arizona, and Oregon. Ascend performs resource selection and system reliability (LOLE) analysis for LADWP's portfolio including future portfolios with primarily renewables and storage. Ascend also performs capacity expansion analyses using Automated Resource Selection and sub-hourly valuations of battery storage. Ascend is supporting LADWP's 2022 IRP effort with software and consulting services.</p> <p>Contributors: Mauch (PM), Brode (Analyst), Gudladona (Modeler)</p> <p>Client Reference: Jay Lim Director Resource Planning. <a href="mailto:Jayl.lim@ladwp.com">Jayl.lim@ladwp.com</a>. 111 N. Hope Street, Room 940, Los Angeles, CA 90012</p>
<p><b>Glendale Water and Power (GWP)</b></p> <p>2018-2019</p> <p>Clean Energy RFP</p> <p>2019 SB 350 Integrated Resources Plan</p>	<p>GWP, a municipal electric utility in the heart of the Los Angeles basin serving 88,000 customer accounts, had planned for many years to repower the aging Grayson Power Plant. The first proposed repower plan, a 262 MW combined cycle natural gas power plant, was rejected by the Glendale City Council under pressure from local environmental groups. Ascend was asked to help Glendale construct a new zero/low-carbon energy supply portfolio and administer and evaluate a Clean Energy Request for Proposals (RFP) of new capacity resource options to enter service by 2021 as well as prepare GWP's IRP. California law required the IRP to show at least 60% renewable by 2030, tracking towards 100% carbon-free retail sales by 2045. Ascend's analysis included:</p>



## Integrated Resource Planning Project Qualifications

	<ul style="list-style-type: none"> <li>Valuation of both demand-side and supply side resources, including renewable energy, load reduction, energy storage, and thermal generation.</li> <li>Valuation of both individual resources and portfolio combinations designed to meet the specific economic and reliability needs of GWP and its customer base</li> </ul> <p>Ascend developed an optimized resource plan that included a combination of DERs, utility-scale battery storage, and reciprocating engines for reliability services. Ascend performed LOLP for reliability analysis including planning for N-1-1 events such as a wildfire across transmission lines. By including emissions offsets from the transportation sector, GWP could balance out their emissions by as early as 2030. The plan was widely hailed by stakeholders and passed City Council with a unanimous 5-0 vote. Steve Zurn, General Manager of GWP said, "we could not have accomplished these ambitious goals to decarbonize our power supply portfolio without Ascend. From start to finish, Ascend navigated a very challenging environment with great skill supported by outstanding analytic insight."</p> <p>Contributors: Dorris (Engagement Director), Millar (PM), Mauch (Analytics Lead), Katz (Modeling)</p> <p>Client Reference: Chie Valdez, Power Resources Director. cvaldez@glendaleca.gov 141 N. Glendale Ave, Level 4 Glendale CA 91206</p>
<b>Turlock Irrigation District</b> (2016 – Current) EIM Study	<p>TID has been a PowerSIMM licensed customer since 2016. TID uses PowerSIMM for portfolio risk management and hedging activities. In 2018 Ascend performed a cost-benefit analysis using PowerSIMM for Turlock's entry into the Western Energy Imbalance Market. Ascend performed a multi-stage simulation from Day ahead -&gt; hour ahead -&gt; 15 minute -&gt; 5 minute market of Turlock's power resources. We compared with this a business-as-usual case to show the benefits of EIM participation. The study showed considerable economic benefits, which led to TID joining the EIM in 2020.</p> <p>Contributor: Dorris (Engagement Director), Millar (lead analyst)</p> <p>Reference: Jim Farrar. Director Power Resources. jmfarrar@TID.ORG</p>
<b>Silicon Valley Clean Energy (SVCE)</b> Integrated Resource Plan (IRP-LTPP Proceeding) (2020)	<p>Ascend worked with SVCE to develop their 2020 Integrated Resource Plan, investigating a number of potential resource portfolios and legislative scenarios, including optimizing the portfolio resource mix of long-term contracted resources versus market purchases to maximize hourly clean energy supply while minimizing risk and cost to ratepayers. SVCE maintains a 100% clean energy portfolio on an annual basis and are exploring ways to deliver clean and renewable resources around the clock. Monica Padilla, Director of Resource Planning said, "I credit the team and Ascend for helping us model and synthesize the 24x7 carbon-free analysis along with the other important metrics." A review of our work for SVCE by the California Public Utility Commission rated our quantification and management of both cost and risk as 'best-in-class' among all Community Choice Aggregators.</p> <p><b>Contributors:</b> Millar (Lead), Katz (Modeling)</p> <p><b>Client Reference:</b> Monica Padilla, Director Resources Planning.            Monica.padilla@svcleanenergy.org. 408-721-5301x1009. 333 W El Camino Real #330, Sunnyvale, CA 94087</p>
<b>East Bay Community Energy (EBCE)</b>	<p>Ascend partnered with EBCE to provide the analytics backbone of the 2020 IRP filing with the CPUC. Ascend worked with EBCE to develop conforming portfolios and</p>



## Integrated Resource Planning Project Qualifications

<p>Integrated Resource Planning (2020)</p>	<p>evaluate the portfolios with respect to GHG, RPS, cost, and reliability metrics, all using Ascend's PowerSIMM software. Ascend also worked with EBCE to develop internal procurement strategy using PowerSIMM's Automated Resource Selection (ARS) module, an optimization tool for building portfolios that meet constraints such as GHG, RPS, and market exposure. Ascend is developing portfolios that meet decreasing targets for GHG, including a 100% GHG free portfolio.</p> <p>Contributors: Millar (PM and Lead), Nelson (Analyst), Katz (Modeling)</p> <p>Reference: Marie Fontenot, Senior Director Power Resources. Marie Fontenot@ebce.org</p>
<p><b>Nebraska Public Power District</b> Decarbonization Pathways Study (2020 – March 2021)</p>	<p>Ascend worked with NPPD to develop several potential pathways to achieve increasingly stringent CO2 reduction targets, including zero emissions by 2030. Ascend developed fundamental price forecasts for each scenario and found least-cost/least-risk expansion plans using PowerSIMM's Automated Resource Selection algorithm. Ascend found cost-effective pathways to achieve at least 80% reduction in greenhouse gas emissions and highlighted potential options for reducing the last 20% of emissions. Ascend presented the results to NPPD management and stakeholders and held extensive discussions on the potential and challenges of power system decarbonization.</p> <p>Contributors: Millar(PM), Mauch (Analytics lead), Nelson (fundamentals), Gudladona (modeling)</p> <p>Client Reference: James Fehr. jrfehr@nppd.org. 1414 15th Street PO Box 499 Columbus, NE 68602</p>
<p><b>Lansing Board of Water &amp; Light (LBWL)</b> Integrated Resource Planning and Avoided Cost Calculations  2019-Present</p>	<p>Ascend supported LBWL's 2019 Integrated Resource Plan using our suite of analytic tools. This analysis involved modeling LBWL's current resource portfolio and leveraging our capacity expansion tools to develop a 20-year resource plan based on least-cost and lowest-risk that met the utility's capacity requirements and clean energy goals. Key resource decisions revolved around optimizing the retirement date of LBWL's coal unit, as well as optimally selecting resources to replace that unit and additional natural gas units set to retire in future years. Candidate resources included thermals, batteries, wind, solar, energy efficiency, and demand response resources.</p> <p>Contributors: Millar(ED), Katz (PM and Modeling)</p> <p>Client Reference: Paul Eory, Manager Resource Planning. Paul.eory@lbwl.com. 517-702-6845. Finance &amp; Planning Department P.O. Box 13007, Lansing, MI 48901</p>
<p><b>Arizona Corporation Commission (ACC)</b> IRP Critical Review and Energy Rules Analysis  2021</p>	<p>Ascend was retained by the Arizona Corporation Commission (ACC) to critical review the Integrated Resource Plans submitted by the three investor-owned utilities in Arizona, Arizona Public Service, Tucson Electric Power, and UNS Electric, as well as analyze potential costs of the proposed Energy Rules which would target 80% reduction in carbon emissions by 2050 and 100% reduction by 2070. Ascend worked with each utility to create portfolios that would meet the targets and estimated cost impacts versus a "least-cost" pathway that included additional natural gas generation. The analysis found low to moderate impacts on costs and rates through at least 2035, and more significant cost impacts to mitigate the final 20 percent of emissions reductions, given what is known about costs of technologies such as green hydrogen and ultra-long duration storage. Ascend presented the results to a special Open Meeting with all five Commissioners as well as stakeholders. This analysis will support the ACC's final decision on whether to adopt the proposed energy rules.</p>



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	<p>Contributors: Millar (lead), Mauch (analysis), Brode (analysis), Nelson (analysis), Boukarim (analysis)</p> <p>Reference: Zach Branum <a href="mailto:zbranum@azcc.gov">zbranum@azcc.gov</a> 602-542-0755</p>
<p><b>Public Service New Mexico</b></p> <p>Portfolio Decision Analysis for San Juan Abandonment and Replacement Proceeding (2019 – January 2020)</p>	<p>Ascend conducted a resource selection analysis to choose a portfolio of resources to replace the retiring coal-fired San Juan generating station. Ascend performed a thorough evaluation of procured vs. utility-owned renewable and battery storage assets under a range of cost assumptions, contract terms, market conditions and the opportunity of monetizing very low and very high real-time price fluctuations.</p> <p>The Ascend-evaluated portfolio was designed to provide PNM system operators improved flexibility to integrate the increasing amount of renewable energy envisaged by the New Mexico Energy Transition Act (ETA). Like SB350 and SB100, the ETA seeks to transform the electricity portfolio supplying the state to 100% clean energy.</p> <p>PNM and Ascend developed a portfolio that utilizes wind and solar projects to provide low-cost energy with physical firming of these renewable resources through a diverse and distributed battery and flexible thermal portfolio. Two and four-hour duration batteries were selected to provide a range of important services for PNM, including maximizing the use of renewable resources, managing resource intermittency by providing frequency regulation services, grid-hardening benefits for the transmission and distribution system, and providing a physical hedge to protect the rate payer from real-time price spikes associated with operations in the highly volatile Western Energy Imbalance Market (EIM).</p> <p>Dr. Gary Dorris served as a witness in the SJGS Abandonment and Replacement proceeding, providing specific insight into the value of storage and flexible thermal resources in the CA EIM.</p> <p>Contributors: Dorris (Expert witness), Millar (Analysis and PM), Nelson (analysis)</p> <p>Client References:</p> <p>Tom Fallgren, VP PNM Generation. <a href="mailto:Thomas.fallgren@pnm.com">Thomas.fallgren@pnm.com</a>. 505-241-4148. 2401 Aztec Rd, NE. Albuquerque, NM 87107.</p> <p>Pat O’Connell (former Director, Integrated Resource Planning, now with WRA). Senior Policy Analyst Western Resource Advocates. 505-919-7741</p>
<p><b>NorthWestern Energy</b></p> <p>2014 – 2022 IRP, RFOs, and Avoided Cost</p>	<p>Since 2014, Ascend has worked with NWE to develop their state mandated IRPs in Montana and South Dakota (SPP). In 2014, Ascend develop an innovative power supply IRP that resulted in a \$1 billion acquisition of 11 hydro facilities representing 633 MW of capacity and multiple storage reservoirs for NWE. Ascend conducts detailed sub-hourly analyses to determine the best combination of renewable and non-renewable resources and the amount of contingency and regulation reserves required to balance realistic changes in load and generation given historic weather variability across the NWE service territory and supply geography. Ascend also calculated reserve margins and LOLP as a function of capacity additions.</p> <p>The Montana public service commission retained Evergreen Economics to critically review NWE’s application of Ascend’s models. Evergreen concluded that, “In Evergreen’s opinion, NWE’s efforts are fully consistent with industry best</p>

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practices.” The analysis for this IRP explicitly captures the impact of load, hydro, renewables, and market prices on portfolio-level costs.

Ascend also supports RFPs for capacity resources in SD and MT, as well as provides analysis and expert testimony on Avoided Cost for PURPA filings in Montana.

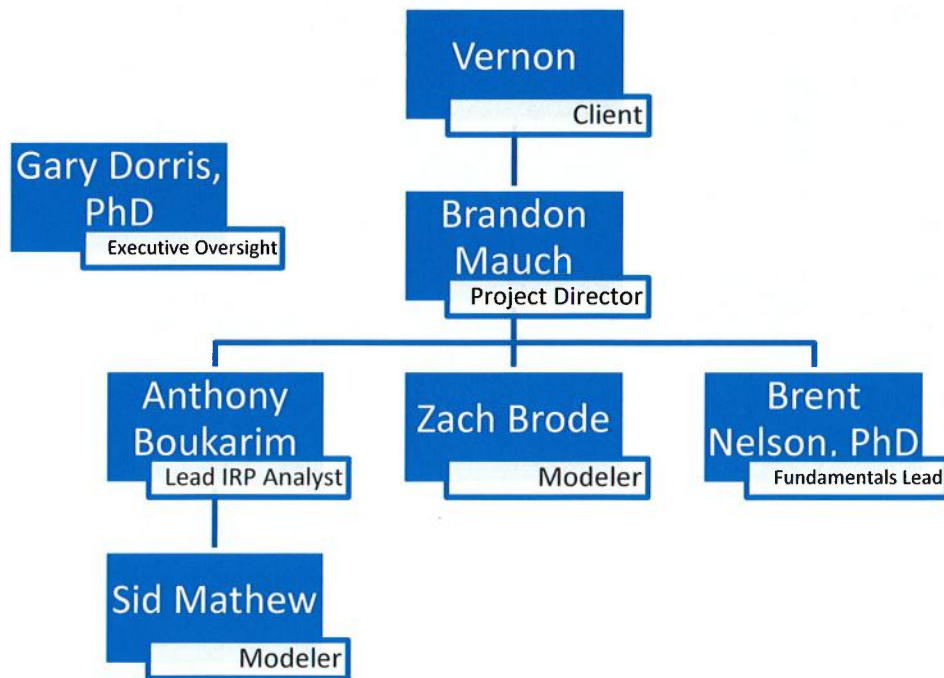
Ascend is currently developing the 2022 IRP in Montana. Mr. Millar is leading the stakeholder engagement activities and overall modeling strategy.

Contributors: Dorris (ED), Mauch (analytics lead), Millar (stakeholder engagement), Brode (analysis)

Client Reference: Bleau LaFave. Director Long-term Resources.  
Bleau.LaFave@northwestern.com



## 1.2.Organization chart



Ascend brings a wealth of resource planning experience, especially within the California market and policy context. The project will be led by Brandon Mauch, Director of Resource Planning. Dr. Gary Dorris provides project oversight and can help with any issue resolution. Anthony Boukarim will play the role of overall project coordinator with VPU, review deliverables, and provide expertise. Mr. Mauch is supported by a team with broad experience including Dr. Brent Nelson, fundamentals lead; and resource planning modelers Sid Mathew and Zach Brode. The team's planning experience is shown in the following table. Resumes are available upon request.

Name	Role	IRP Experience at a Glance
<b>Gary Dorris, PhD</b> CEO	Executive Oversight	<ul style="list-style-type: none"> <li>• Salt River Project <i>EIM Study and Renewable Portfolio Valuation and Analysis</i> (2019 – 2021)</li> <li>• Los Angeles Department of Water and Power <i>Clean Grid LA Plan Analysis</i> 2020 - 2021</li> <li>• Public Service New Mexico, <i>San Juan Abandonment Replacement Analysis</i> (2019 – 2020)</li> <li>• NorthWestern Energy <i>IRP</i> (2020, 2019, 2014)</li> <li>• Burbank Water and Power <i>IRP</i> (2018 - 2019)</li> <li>• Glendale Water and Power <i>Clean Energy RFP and IRP</i> (2018 - 2019)</li> <li>• Hawaii Electric <i>Power Service Improvement Plan</i> (2015 – 2016)</li> </ul>
<b>Brandon Mauch, PhD</b> Senior Manager	Project Modeling Manager	<ul style="list-style-type: none"> <li>• Los Angeles Department of Water and Power <i>Clean Grid LA Plan Analysis</i> 2020 - 2021</li> <li>• Glendale Water and Power <i>100% Clean Energy by 2030 Feasibility Analysis</i></li> <li>• Nebraska Public Power District <i>Decarbonization Plan</i>. (2020 – 2021)</li> <li>• Indianapolis Power and Light <i>IRP</i> (2019)</li> <li>• NorthWestern Energy <i>Montana and South Dakota IRPs</i> 2019</li> <li>• NorthWestern Energy <i>Montana IRP</i> 2020</li> <li>• NorthWestern Energy <i>PURPA avoided costs analysis</i> (2018 – 2021)</li> </ul>
<b>Brent Nelson, PhD</b> Director, Market Intelligence	Fundamentals Lead	<ul style="list-style-type: none"> <li>• Nebraska Public Power District <i>Decarbonization Plan</i>. (2020 – 2021)</li> <li>• East Bay Clean Energy <i>IRP</i> (2020)</li> <li>• CPS Energy – Spruce Economic Evaluation (2020)</li> <li>• Public Service New Mexico, <i>San Juan Abandonment Replacement Analysis</i> 2019 – 2020)</li> </ul>
<b>Anthony Boukarim</b> Senior Consultant	Lead Analyst	<ul style="list-style-type: none"> <li>• Grant Co PUD <i>IRP</i> (2022)</li> <li>• San Jose Clean Energy <i>Integrated Resource Plan</i> (2021 – 2022)</li> <li>• Clean Power Alliance <i>2020, 2021, and 2022 Clean Energy RFOs</i></li> <li>• Salt River Project <i>Renewable Portfolio Valuation and Analysis</i> (2020 – 2021)</li> <li>• Nebraska Public Power District <i>Decarbonization Plan</i>. (2020 – 2021)</li> </ul>
<b>Zach Brode</b> Senior Energy Analyst	Modeler	<ul style="list-style-type: none"> <li>• NorthWestern Energy <i>IRP</i> (2022)</li> <li>• Salt River Project <i>Renewable Portfolio Valuation and Analysis</i> (2020 – 2021)</li> <li>• Los Angeles Department of Water and Power <i>Clean Grid LA Plan Analysis</i> 2020 - 2021</li> <li>• Nebraska Public Power District <i>Decarbonization Plan</i>. (2020 – 2021)</li> <li>• Indianapolis Power and Light <i>IRP</i> (2019)</li> <li>• NorthWestern Energy <i>Montana and South Dakota IRPs</i> 2019</li> <li>• NorthWestern Energy <i>Montana IRP</i> 2020</li> <li>• NorthWestern Energy <i>PURPA avoided costs analysis</i> (2018 – 2021)</li> </ul>

Name	Role	IRP Experience at a Glance
<b>Sid Mathew</b> Energy Analyst	Modeler	<ul style="list-style-type: none"> <li>Imperial Irrigation District <i>Integrated Resource Plan</i> 2022</li> </ul>



## 2. Proposed Method to Accomplish the Work

The Ascend team proposes using our resource planning expertise and analytic software tools to create VPU's IRP.

Ascend proposes to execute the following tasks to complete the scope of work:

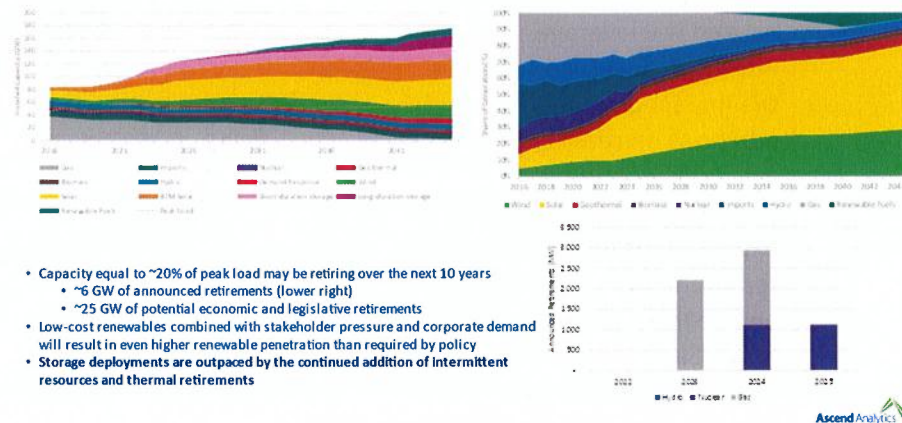
#	Task Name	Approach
1	Project Initiation	<ul style="list-style-type: none"><li>• Sign contract</li><li>• Kickoff meeting via MS Teams</li><li>• Discussion of current situation and document desired outcomes of IRP effort</li><li>• Create work plan and modeling plan</li><li>• Collect initial data needed for modeling, including physical and financial parameters on loads and current resources.</li><li>• Schedule regular project management meetings</li></ul>
2	Review Demand Forecast and EE Programs	<p>Ascend will work with VPU to develop a load forecast. We recommend using the CEC's mid demand mid-AAEE forecast or High demand, mid-AAEE forecast. High demand may be more in line with actual VPU load, a warming climate and higher peaks. Next we review increased electrification load including expected new industrial load, electric vehicles (including electric trucking), and building electrification (heat pumps, induction stoves, etc.) and develop an appropriate forecast for VPU's service territory. We will also incorporate the potential of smart charging and V2G to make load more flexible during periods of grid stress. In the previous IRP for Glendale, we developed an EV charging profile that started as "naive" when most EV drivers plug in and charge as soon as they get home and overnight, to a more "optimized" profile which leverages workplace charging during the day and avoidance of peak hours (5 – 10 PM). The Ascend team will leverage existing research on energy efficiency and demand response, including TOU pricing, on load shapes. We will review your existing program costs and evaluated savings and make recommendations on potential EE programs for inclusion in the capacity expansion plans of the IRP.</p> <p>Ascend can provide technical expertise in evaluating DER scenarios and strategies. We have experience evaluating DER scenarios for many utility clients with diverse portfolios and potential for DER implementation. Ascend is well positioned to assist VPU with the technical and economic potential of DERs. We will provide analysis on DER cost-effectiveness and the portfolio impacts attributed to DERs such as RPS position, carbon emissions, and RA requirements.</p>
3	Review City's Existing and Proposed Energy Resources and Programs	<p>Using the CEC IRP guidelines as a framework, Ascend will work with Vernon to identify environmentally friendly energy portfolio opportunities and discuss the full life-cycle environmental impacts. These include technologies such as</p> <ul style="list-style-type: none"><li>• Renewables (wind, solar, geothermal, biomass, etc.)</li><li>• Storage</li><li>• Thermal generation with renewable fuel capability</li><li>• Small modular nuclear</li><li>• Demand side options<ul style="list-style-type: none"><li>○ Virtual power plant</li><li>○ Energy efficiency</li><li>○ Demand response</li><li>○ Electric vehicle (V2G)</li></ul></li><li>• Hydrogen production and consumption</li></ul>

		<p>These options will be characterized as “candidate resources” for use in the capacity expansion modeling. We may also choose to create specific resource scenarios to evaluate options that are not picked economically.</p> <p>Ascend maintains an up-to-date database of technology costs and their forecasts based on reputable forecasts and data from the half dozen RFOs run by Ascend each year. Ascend also maintains forecasts of the ELCC of renewables, storage, and hybrid resources as a function of their expected penetration in the California market. We can model specific options already under consideration or generic options.</p> <p>Through the modeling, we capture:</p> <ul style="list-style-type: none"> <li>• Cost to serve load</li> <li>• Portfolio risks (risk premium)</li> <li>• Resource adequacy</li> <li>• GHG emissions</li> <li>• Renewable portfolio position</li> </ul> <p>The end result is several portfolio options to meet future GHG, RPS, and resource adequacy requirements. We will characterize the costs and the average impact on rates.</p>
4	Review the City’s Interconnections and Distribution Facilities	<p>Ascend will review the Distributed Generation Impact Study as it pertains to an energy supply plan and the required tables for submission to the CEC. This is primarily used as a way to understand the total technically feasible adoption of DERs on VPU’s system without substantial upgrades. If upgrades are needed, then we would include those costs in the costs of the next tranche of DERs.</p>
5	Assess Renewable Energy and RPS Compliance	<p>The RPS requirement is input as a constraint in our capacity expansion algorithm embedded in the PowerSIMM model. The model picks the portfolio of resources that meets the RPS requirements at least cost. We typically put limits on the amounts of specific resources the model can select. For example we may put a limit on “Wyoming wind” because of the limited amount of transmission available to bring it to the CAISO market. We can also create specific scenarios as well such as “wind-heavy” or “solar-heavy.” The modeling will reveal the least-cost least-risk pathway to meeting future RPS compliance requirements.</p>
6	Develop Market Scenarios	<p>Ascend maintains a unique fundamental modeling framework to capture the changing price dynamics in the southern California power market called <b>Ascend Market Intelligence</b>. We incorporate expected changes in regional load and resource stack to generate hourly and sub-hourly power prices throughout the forecast horizon. Ascend will present our core SP-15 power price forecast that we intend to use in the IRP. We also develop nodal forecasts for candidate resources that includes expected basis changes over time. The slide below shows an example from one of our Market Intelligence reports.</p>



Figure 2: Market Intelligence Slide showing Ascend's expectation for future CAISO Supply Stack

**CAISO is gaining large quantities of intermittent resources while losing baseload and flexible capacity**



- Capacity equal to ~20% of peak load may be retiring over the next 10 years
  - ~6 GW of announced retirements (lower right)
  - ~25 GW of potential economic and legislative retirements
- Low-cost renewables combined with stakeholder pressure and corporate demand will result in even higher renewable penetration than required by policy
- Storage deployments are outpaced by the continued addition of intermittent resources and thermal retirements

Ascend's Market Intelligence also closely follows and analyzes carbon prices in California. Our market projection for power prices in CAISO include impacts from current carbon prices along with our projections for future carbon prices. Ascend's price forecasts for CAISO nodes are driven in part by our carbon price projections and our supply forecasts due to GHG reduction targets in California and the WECC.

Ascend will present our core SP-15 fundamental forecast to VPU. This plus the stochastic nature of our simulation approach should cover the major potential risks to VPU's portfolio. Custom fundamental forecasts cost extra, as outlined in our pricing. We recommend simply using our core forecast unless there is a specific uncertainty or change desired in our supply stack assumptions for CAISO.

7 Developing or Recommending Analytical Tools

Ascend will use its planning model PowerSIMM for this project. See appendix A for more about PowerSIMM.

Ascend will execute the modeling plan, including capacity expansion runs with each candidate resource to fill VPU's energy, capacity, RPS, and GHG planning targets. Ascend recommends using a capacity expansion algorithm endogenous to the PowerSIMM model, which we call automated resource selection or ARS. ARS chooses the least-cost/least-risk expansion plan across hundreds of simulated future states and can optimize expansion plans with constraints such as SB100 requirements, zero carbon by 2030, and more all while maintaining adequate reserve margin. Results will be shown in annual and 25-year NPV of revenue requirements (inclusive of capital, O&M, fuel costs, PPA cost, etc.). The results will provide insight into the least-cost least-risk resource procurement strategy to meet VPU objectives, including sustainability, reliability, risk management, compliance, equity, and keeping rates affordable.

PowerSIMM is unique in its ability to simulate power system operations with weather as a fundamental driver. First PowerSIMM simulates temperature using 30 years of data as a training set. PowerSIMM builds models time-series models to simulate weather's impact on loads, renewable generation, outages, and power prices.

After completing the capacity expansion models, Ascend runs the expansion outputs in production cost models to get detailed results for portfolio costs, carbon emissions, RPS positions, and other relevant outputs. Note that VPU may opt not to use capacity expansion

		<p>algorithms, but instead “hand design” scenarios, but typically we use ARS as as starting point and may adjust the resulting portfolios as decided by the modeling team.</p> <p><i>Retail Rate Impact Analysis</i>  Ascend will leverage PowerSIMM results to assess the impact of portfolio additions on retail rates. We will work with VPU’s rate department to develop rough expectations for revenue requirements for transmission and distribution, which PowerSimm outputs the generation cost revenue requirement. If we identify a major transmission need in the generation planning that is feasible to plan on, we would include the cost of that transmission upgrade in the revenue requirements. Note that Ascend does not perform rate class impacts (changes to specific residential, commercial, industrial, ag, etc. rates), but rather can assess overall average bundled rate impacts.</p>	<p>Average Wholesale Rates Versus CFC Metric: Scenarios A &amp; B</p> <p>The chart displays the average wholesale rates (CFC Metric) over time (2021 to 2046) for five scenarios: A1 (yellow dotted line), B1a (orange solid line), B1b (grey solid line), B2 (blue solid line), and the CFC Metric Trajectory (red dashed line). The y-axis represents the rate in dollars, ranging from \$0.02 to \$0.07. The x-axis represents the year, with markers at 2021, 2026, 2031, 2036, 2041, and 2046. The CFC Metric Trajectory starts at approximately \$0.065 in 2021 and decreases steadily to about \$0.045 in 2046. Scenario B2 starts at approximately \$0.065 in 2021, drops sharply to about \$0.05 in 2026, and then fluctuates between \$0.045 and \$0.055 until 2046. Scenarios A1, B1a, and B1b start at approximately \$0.06 in 2021, drop to about \$0.05 in 2026, and then fluctuate between \$0.04 and \$0.05 until 2046.</p> <p>Figure 3: An example of a rate impact analysis for a different planning project</p>
8	Write IRP Report	Following IRP guidelines, write comprehensive IRP report, including standardized tables. Coordinate with Vernon staff to draft sections regarding VPU policies and programs, such as disadvantaged communities programs, etc. See below for more details.	
9	Customer Engagement Meetings	Ascend will prepare materials and present at engagement meetings. Ascend has budgeted for 6 meetings.	

## IRP Report

The following table is a suggested division of responsibilities for the IRP report content. Some content such as disadvantaged communities or local distribution system impacts are better drafted by VPU staff with the specific expertise in those topics. This table can be reviewed together to update as necessary.

*Table 1: Division of Responsibilities for IRP Report Content*

Chapter	Lead – Notes	Support - Notes
A. Planning Horizon	<b>Ascend</b> – We recommend ending at 2045 to show “100% retail sales” from clean energy generation.	
B. Scenarios and Sensitivity Analysis	<b>Ascend</b> – Ascend will develop scenarios and sensitivities with VPU to answer key resource questions facing the organization.	<b>VPU</b> - Work with Ascend team to design modeling approach and make adjustments as warranted.
C. Standardized Tables	<b>Ascend</b> – Draft tables from modeling results	<b>VPU</b> – Review tables



D. Supporting Information	<b>Ascend</b> – We will include the latest version of our California Market Report, describing our fundamental price forecast.	<b>VPU</b> – Any DSM studies, engineering studies or other information that may be useful to CEC.
E. Demand forecast	<b>Ascend</b> – Stack up load forecasts, including baseload (from CEC), electrification load, and new C&I load.	<b>VPU</b> – <b>Provide expectations of new load and load shape or at least the average load and peak load. Work with Ascend to develop EV load forecast.</b>
F. Resource Procurement Plan	<b>Ascend</b> – This is primarily supported by the required tables, with explanation in narrative form.	<b>VPU</b> – Provide existing RPS contracts and/or owned RPS resources and volumes.
G. Energy Efficiency and Demand Response Resources	<b>Ascend</b> – Ascend will work with VPU to identify new energy efficiency and DR resource program options. Any options that are selected in the resource modeling process will be included. Ascend shall include EE and DR impacts in the standardized tables.	<b>VPU</b> - VPU shall include information on their existing EE and DR Resources.
H. Energy Storage	<b>Ascend</b> - Ascend will write the section on energy storage resource options, including their value and use in ensuring system reliability. We shall include info on diurnal storage (Li-Ion batteries) and potential long-duration storage options (hydrogen, iron-air, gravity, etc.)	
I. Transportation Electrification	<b>Ascend</b> – Ascend will incorporate electric vehicles as a load in PowerSIMM and can change the charging profiles over time to move from a naïve charging profile to one more optimized with system energy needs. Ascend will also help VPU forecast the amount of electric vehicle load in the service territory. We will take the lead on reporting transportation impacts in the standardized tables.	<b>VPU</b> – Provide load data on EVs in service territory. Provide data on charging infrastructure, other transportation electrification, and other information.
J. System and Local Reliability	<b>Ascend</b> - We will cover everything on resource adequacy and resiliency of the bulk energy requirements.	<b>VPU</b> – VPU will take the lead on the local reliability area section.
K. Greenhouse Gas Emissions	<b>Ascend</b> – We will report these emissions projections in the report and the standardized tables.	
L. Retail Rates	<b>Ascend</b> – We would work with VPU to develop a high level revenue requirements and rate impacts assessment.	<b>VPU</b> – If VPU’s wishes to do a more detailed class level rate impact analysis, this would have to happen from within VPU’s rate team.
M. Transmission and Distribution Systems	<b>VPU</b> – VPU would include any information on expected transmission or	



	distribution upgrades over the planning horizon.	
N. Localized Air Pollutants and Disadvantaged Communities	<b>VPU</b> – VPU would take the lead on describing its disadvantaged community strategy. This typically includes investments in clean energy technologies such as EE program or charging stations in areas marked as “disadvantaged” in the CalEnviro Screening Tool.	<b>Ascend</b> – We will calculate the air pollutants from VPU power plants from our dispatch studies and note how much is emitted in disadvantaged communities.

### 3. High Level Schedule

The following table shows a high level proposed schedule. Upon contract execution, we shall create a detailed project plan to further flesh this out.

Task	Sub-task	Start	End
1. Project Initiation	Kick off	11/14	11/14
	Collect data for modeling	11/14	1/13/2023
	Data entry, simulation validation	11/14	1/31/2023
2. Review Demand Forecast and DSM program		11/21	12/31
3. Review City’s Existing and Proposed Energy Resources and Programs		11/21	12/31
4. Review the City’s Interconnections and Distribution Facilities		1/13	3/31
5. Assess Renewable Energy and RPS Compliance		1/13	2/24
6. Develop Market Scenarios	Core Ascend forecast for SP 15	Available immediately	
	Optional custom forecasts	December	Late January
7. Developing or Recommending Analytical Tools	Resource planning analysis modeling	January 2023	August 2023
8. Write IRP Report including CEC submission and interactions.		Q3 2023	Q1 2024
9. Customer Engagement Meetings		January or February 2023	End of year 2023

## 4. Cost Estimate

The following table shows the summarized estimated labor costs and fees for this project. Detailed calculations are submitted via a separate spreadsheet.

Task	Hours	Cost	Note
1. Project Initiation	310	\$79,250	
2. Review Demand Forecast and DSM program	60	\$16,500	
3. Review City's Existing and Proposed Energy Resources and Programs	90	\$23,500	
4. Review the City's Interconnections and Distribution Facilities	30	\$7,750	
5. Assess Renewable Energy and RPS Compliance	110	\$28,000	
6. Develop Market Scenarios - Ascend Core Market Intelligence Forecast	N/A	N/A	Included in Market Intelligence Fee
7. Capacity Expansion and Production Cost Analyses	160	\$40,500	
8. Write IRP Report, including CEC submission and interactions.	175	\$47,750	
Total Labor Before Customer Engagement Meetings	935	\$293,250	
9. Customer Engagement Meetings (6)	168	\$45,600	
<b>Total Labor</b>	<b>1103</b>	<b>\$288,850</b>	
<b>Other Fees</b>			
Ascend Core Market Intelligence Forecast for SP-15		\$15,000	Billed upon contract execution
PowerSIMM SaaS License fee		\$35,000	Billed after successful delivery of project.
<b>Total Fees</b>		<b>\$50,000</b>	
<b>Grand Total</b>		<b>\$338,850</b>	
<b>Optional</b>			
Custom SP 15 Market Forecast		\$25,000	Price per forecast
Travel		\$5,000	



## Appendix A: About PowerSIMM and Market Intelligence

Ascend prides itself in being a market leader in analytical rigor and forward thinking in a rapidly changing energy landscape. We leverage the power of modern computing to solve power system optimization problems using Monte Carlo simulation techniques, stochastic optimization, and artificial intelligence. The task of planning for systems where renewables are increasing their share of system energy is a paradigm in which our PowerSIMM software excels and provides critical insight needed to make decisions that yield value for VPU customers and avoid stranded asset risks. PowerSIMM is a commercial software solution for planning and portfolio management used by utilities like NorthWestern Energy, Duke, AEP, LADWP, City of Austin, Ameren, New York Power Authority, Indianapolis Power and Light, and many others.

The following table summarizes our modeling philosophy and how it relates to modern resources planning for a low carbon power system.

The Approach	Why we do it
<b>Simulate renewable generation, loads, and market prices as a function of weather</b>	Weather is a fundamental driver of uncertainty, especially with renewables where “weather is the new fuel.” Our unique simulation approach generates “meaningful uncertainty” which enables insight into resource value in real-world conditions, not idealized average conditions that in reality do not exist.
<b>Sub-hourly dispatch down to 5 minutes</b>	Modern flexible resources like batteries provide opportunities to generate additional revenue in the 15- and 5-minute real-time market and reduce curtailment of renewables. Increased renewable generation has the effect of increasing spot market price volatility due to the intermittent nature of its output. This is especially true in the real-time market given the increase in forecast error caused by renewables. Volatility is manifest as short duration real-time price spikes of over \$100/MWh. When models only dispatch against day-ahead hourly level prices, they miss a major value stream for flexible resources in the sub-hourly dimension. Failing to dispatch down to the sub-hourly level will unfairly bias the results against the flexible resources demanded by the new market dynamic of high renewables. Further this follows the NARUC guidance <sup>1</sup> that “planning frameworks and modeling tools...should model the full spectrum of services that energy storage and flexible resources are capable of providing, including sub-hourly services.”
<b>Identify risk using a risk-premium calculation</b>	Not all least-cost portfolios in traditional modeling are truly least cost in real life. That is because legacy models rely on the average or typical week approach due to computing limitations. However, the grid with high renewables is unlikely to ever have a typical week. By simulating and probabilistically enveloping future states, including unlikely but high-impact tail events (i.e. Black Swans), we can quantify the risk profile of different portfolios and use that information in decision analysis. We assess a portfolio’s risk exposure to volatility in power prices, fuel cost, carbon prices, etc. Portfolios that balance these risks while also keeping portfolio cost low become the most “all-weather” plan going forward into an increasingly uncertain world.
<b>Understand reliability and resilience implications of renewables and storage using Loss of Load Probability and Effective Load Carrying Capability (ELCC) analyses</b>	Back when all power resources were dispatchable, there was little need to simulate loss of load probability. A standard reserve margin calculation was enough. Now and into the foreseeable future we must maintain reliability with resources of uncertain output and batteries with state of charge constraints, alongside traditional resources with forced outage rates. Reliability in a low carbon/high renewable portfolio should be viewed through the lens of loss of load probability analysis. Through simulation of weather, load, renewables, and forced outages, Ascend can determine the reliability impacts of different portfolios and the true capacity contribution of renewables and batteries through the PowerSIMM framework.

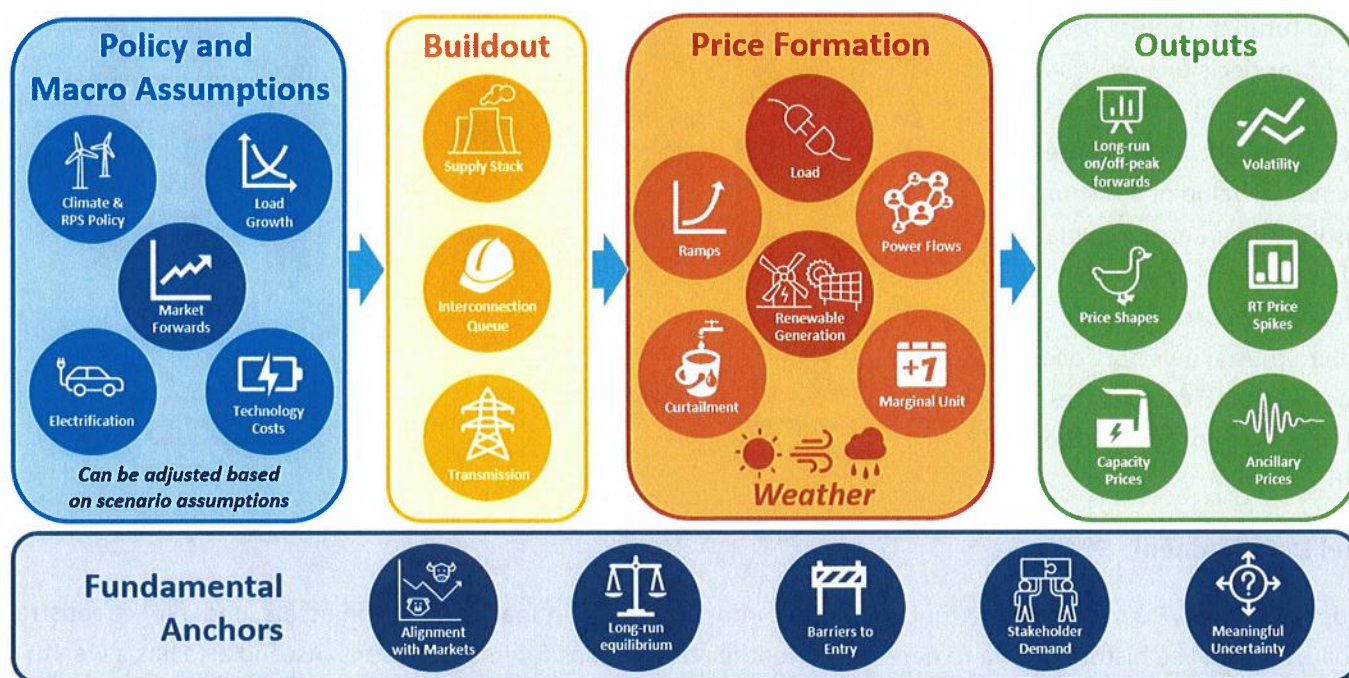
<sup>1</sup> <https://pubs.naruc.org/pub/2BC7B6ED-C11C-31C9-21FC-EAF8B38A6EBF>



## Ascend Market Intelligence

Energy markets are rapidly changing. Renewables and storage deployment across the US are disrupting traditional approaches to fundamental price forecasting, driving the need for new approaches and fresh insights. **Ascend Market Intelligence** provides expert analysis and 20+ year fundamental price forecasts to support modern resource planning and procurement decision making in a dynamic and uncertain environment. Ascend maintains a unique fundamental modeling framework to support resource planning and valuation activities, purposefully designed to capture the dynamics of structural change in the electricity sector, including price depression, curtailment and negative price formation, Figure 1 shows the general schematic of Ascend's approach.

Figure 4 - ASCEND'S FUNDAMENTAL MODELING FRAMEWORK



By focusing on these key policy, economic, and physical constraints that govern resource buildout and dispatch, Ascend's forecasts focus on the most important drivers of uncertainty and risk in long-term planning and valuation. Ascend's forecasting is anchored to several fundamental drivers, principally near-term market expectations paired with long-term expectations of load growth and supply changes driven by policy and economics. All forecasts align to market forwards in the near-term, which reflect the consensus market expectation of all macro level assumptions, including greenhouse gas (GHG) and renewable portfolio standard (RPS) policy, economic growth, electrification, and technology costs. For pricing after the end of the liquid forward curves, forecasts are firmly anchored to "long-run equilibrium" conditions, in which markets prices for energy, ancillaries, and capacity sum up to allow new resources to earn no more than normal returns.

Ascend also forecasts price conditions at the nodal level for valuation of existing and candidate resources. Geographic barriers, such as dense populations, bodies of water, mountains, interconnect boundaries, and variation in renewable resource potential, all lead to geographic variation in returns that can persist in the long-run with limited mitigation potential. Nodal prices are simulated as a basis from the hub, with a modeled evolution in basis and volatility driven by expectations of local fundamental conditions.



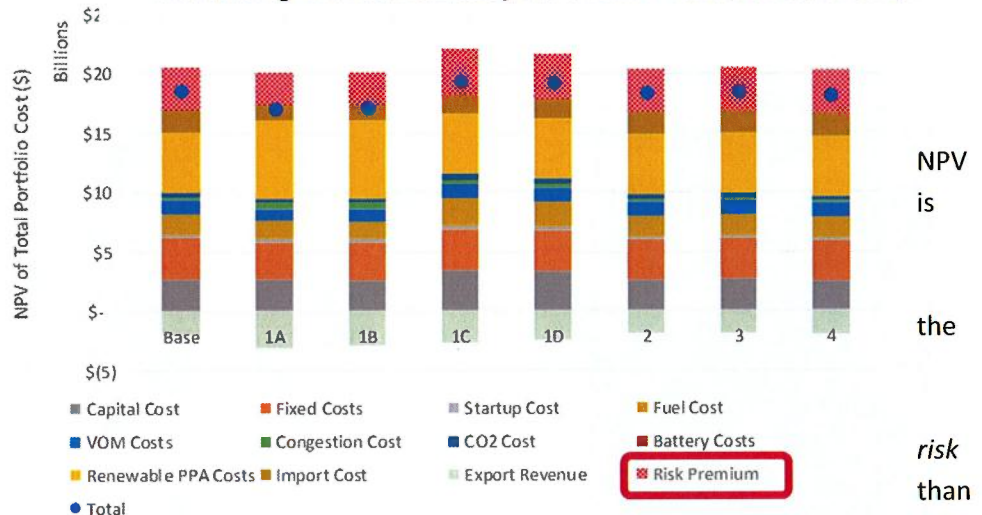
## PowerSIMM Capabilities for Resource Planning

Ascend will use its proprietary software, PowerSIMM, to perform production cost modeling and capacity expansion modeling for VPU's resource portfolio. PowerSIMM offers a suite of tools, including stochastic simulations, portfolio modeling with market interactions, automated resource selection for optimal capacity expansion, and reliability analysis.

### Stochastic Simulations and Risk

The ability to perform hundreds of stochastic simulations with uncertainty and volatility parameters results in a *distribution* of portfolio costs across a *range* of possible futures. The risk premium concept for decision analysis was shown above and is included in the chart to the right. The risk premium is the actuarial value of a resource's exposure to market price volatility, which is included as an adder to portfolio NPV costs. The risk premium thus allows portfolio comparison that incorporates the *and uncertainty* of costs rather than just the mean.

*Risk premium allows comparing portfolios with different risk profiles, considering the distribution of costs rather than just the average*

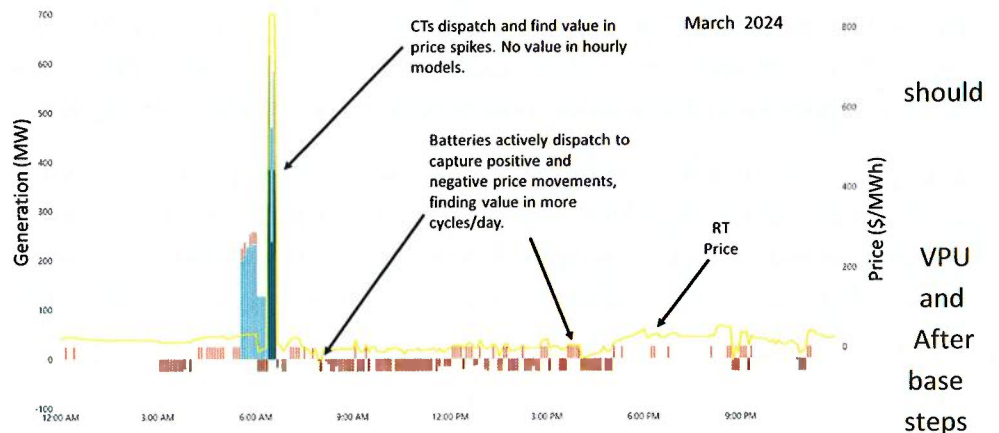


### Model Development

In order to model VPU's portfolio, Ascend will collect information about load, generation assets, and market constraints. For load, Ascend use historical data to determine weather correlations for its simulations. Ascend also has a wealth of experience working with utilities throughout the US on altering forecasted load shapes to reflect growth in electric vehicles, behind-the-meter solar, and energy efficiency measures.

For generation assets, Ascend will work with VPU to collect the physical and financial parameters of all VPU generation resources, including all owned assets and all contractual resources. Ideally, renewables be modeled using actual historic output data or at least through simulated NREL data. For market interactions, Ascend will work with to define agreed-upon constraints implement them in the model. model configuration, Ascend runs a case with a series of validation to assure the simulation engine is matching observed weather patterns, renewable output, load response to weather,

*Example sub-hourly dispatch enables deep insight into the behavior and value of flexible resources in the portfolio*



and individual unit capacity factors. Dispatching against sub-hourly prices provides additional insight into the value of flexible resources in responding to short duration, high-value price spikes as shown in the example above.

### **Capacity Expansion Planning**

Ascend uses PowerSIMM's Automated Resource Selection (ARS) to provide a least-cost least-risk portfolio expansion plan for serving load over the planning horizon, including both supply-side and demand-side resources. Within the ARS framework, Ascend specifies the physical and financial aspects of all candidate resources for meeting load. We also create appropriate constraints such as meeting the carbon targets specified in each of the cases, maintaining reliability, meeting an RPS goal, and maintaining energy load balance.

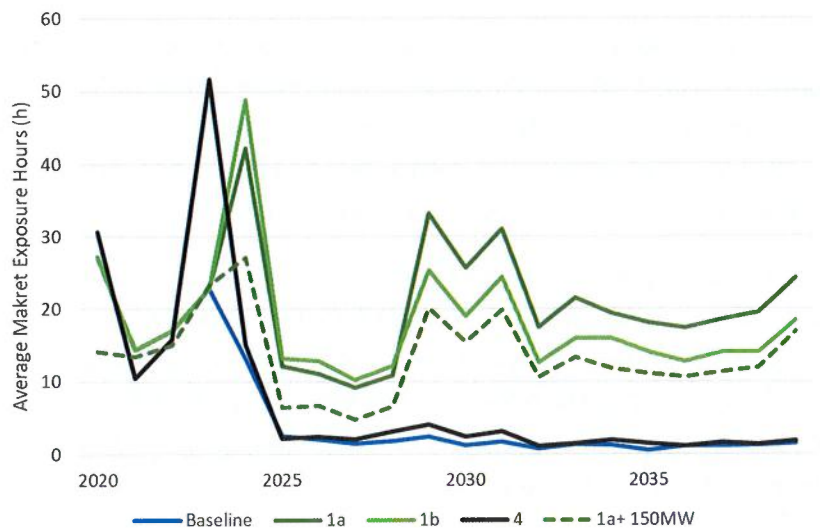
Ascend's ARS optimizes resource additions and can also indicate economic retirement dates for existing resources. Because the model optimizes over all simulated future states, the resulting portfolio represents the best resource mix across both cost and risk. Ascend can also perform several ARS runs with varying inputs for macro level uncertainties, according to each of the different cases to be considered. For example, runs can be performed with and without carbon costs or according to different RPS or carbon targets. The final results include one or several portfolio expansion plans to choose from as "preferred portfolios".



## Reliability and Capacity Analysis

Ascend's reliability analysis is trusted by clients across the US. Our Resource Adequacy model is a probabilistic tool to analyze the risk of VPU not having adequate resources to meet load. A key feature of the PowerSIMM Resource Adequacy module is the use of weather, load and renewable energy simulations that maintain the relationships between these variables to properly account for reliability risk from intermittent resources. Ascend will evaluate this risk with hourly simulations using the standard loss of load metrics; Loss of Load Probability, Loss of Load Expectation, and Expected Unserved Energy. Additionally, Ascend can perform effective load carrying capacity (ELCC) analysis to estimate the capacity contribution of renewables and storage for planning purposes.

*LOLH reliability analysis combines the effects of variability in load, renewable generation, and thermal generation forced outages*



## Generator Inputs

Ascend will rely on our extensive database of cost and performance data. Ascend has deep experience with modeling a variety of power system assets for utilities and developers, including traditional assets such as thermal generation and hydro as well as renewables and storage. Ascend's experience working with utilities on high renewables portfolios also has given us experience with assumptions around a variety of future technologies for low- and zero-carbon pathways, including long-duration storage (compressed air, flow batteries, etc.) and power-to-X renewable fuel options (hydrogen, methane, ammonia). For example, we have advised LADWP on repowering the Intermountain Power Project with electrolyzed hydrogen from renewables as part of their 100% clean plan.<sup>2</sup> Ascend has also managed and performed economic valuation for numerous requests-for-offers, including receiving over 100 offers for a renewables and storage RFO in Southern California and evaluating offers for capacity (batteries, frames, aeros, RICE, combined cycle, etc.) for RFPs in South Dakota and Montana. This depth of experience gives Ascend well-informed knowledge of representative capital and operating costs of all these resource types. Ascend also calibrates its own assumptions against publicly available information, such as that produced by the national laboratories, presented in IRPs, and otherwise made available.

<sup>2</sup> <https://amer.mhps.com/intermountain-power-agency-orders-mhps-jac-gas-turbine-technology-for-renewable-hydrogen-energy-hub.html>

## Appendix B: Selected Resumes

# GARY DORRIS, PhD

### CEO & PRESIDENT

#### CONTACT

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phone: (303) 415-0311

1877 Broadway, Suite 706

Boulder, Colorado 80302

#### EDUCATION

**Cornell University**

**Ph.D., Applied Economics and Finance**

1996

**B.S., Mechanical Engineering**

1988

**B.A., Economics**

***Magna cum Laude***

#### SUMMARY

- Developed an industry-leading consulting and software company that supports resource planning, portfolio management, and risk. Has grown Ascend to a 50-person company with a reputation as an industry leader for renewable integration, resource planning, and portfolio management analytics. Previously, led e-Acumen to be an industry star with 60 people before sale of company to ABB.
- Chief model architect and engagement director to implement solutions for resource planning and portfolio management analytics at AES, ACES Power Marketing, American Electric Power, BC Hydro, Dayton Power and Light, Duke, Hawaii Electric Companies, Indianapolis Power and Light, Entergy Solutions, Essent, Exelon, InterGen, LADWP, PG&E, Puget Sound Energy, Pennsylvania Power & Light, Riverside Public Utilities, The Energy Authority, Tri-State G&T, NRG, Tennessee Valley Authority, and Turlock Irrigation District.
  - Developed and deployed resource planning software solutions and supported resource plans that systematically integrated uncertainty into capacity expansion planning and resource selection.
  - Developed and deployed solutions to capture the financial and physical dynamics of energy markets and operations including: 1) derivative instrument valuation, 2) asset valuation, 3) risk management and portfolio optimization, 3) forward and spot prices, 4) transmission/transportation, 5) load, 6) gas storage, and 7) credit risk.
- Performed numerous independent market assessments for valuation of electric generating assets:
  - Assessments for financing of over \$5 billion in generating and gas storage assets.
  - Valuations performed for leading energy developers, banks, and S&P and Moody's.
- Presented to boards of directors and provided expert testimony.

#### PROFESSIONAL EXPERIENCE

Ascend Analytics - Boulder, CO

March 2002 – Present

##### ***President & Founder***

Founded and organically grew Ascend to be a leading analytics software and consulting provider for the energy industry with 50+ employees providing innovative solutions focused on decision analysis for portfolio management, resource planning, and risk analytics. Provided the analytic vision to bridge the physical models for production costing with the financial models of risk management of Wall Street. The resulting software solutions provide the energy industry with the actionable intelligence to manage energy supply portfolios with an understanding of physical and financial



opportunities and risk from the next hour, to intermediate term portfolio management and hedging, to long-term resource planning and asset valuation.

**e-Acumen** (Acquired from Stratus) - Boulder, CO

2000-2001

***CEO and Chief Model Architect***

Grew e-Acumen from an immature start-up with an undefined market position and very limited products to an analytics power house with 25 active customers and a spate of industry leading products and revenues of \$10 million.

- Grew staff from a half a dozen to over 50 people.
- Provided product visions, developed business processes and functional team roles to realize functional corporate dynamics.
- Raised over \$5 million in venture funding from GE, and several Silicon Valley backers. The company was sold to Global Energy Decisions (Ventyx) and Risk Capital Management.

**Stratus Consulting** (Hagler Bailly spinoff) - Boulder, CO (1998-1999)

***Director of Energy Practice***

Lead development of risk and portfolio management infrastructure for launching of electric trading floors.

Performed asset valuation for over \$5 billion of generation asset transactions.

**Hagler Bailly** - Boulder, CO

1997-1998

***Manager and Senior Associate***

Launched electricity trading floors. Leader of a team building processes and solutions for portfolio risk management and strategy.

**Cornell University** - Ithaca, NY

1996

***Faculty***

**Citizens Power & Light** - Boston, MA

1990-1991

***Power Marketing Manager***

**UNITIL Power Corp** - Exeter, NH

1988-1990

***Power Supply Supervisor***

Power supply portfolio manager. Evaluated and negotiated power purchase agreements. Performed short-term power supply transactions.

**Electric Power Research Inst.** - Barker, NY

1987

***Project Engineer: CO-OP***

# BRANDON MAUCH, PhD

## MANAGER OF RESOURCE PLANNING ANALYTICS

### CONTACT

email: bmauch@ascendanalytics.com

phone: (720) 307-8189

1877 Broadway, Suite 706

Boulder, Colorado 80302

### EDUCATION

Carnegie Mellon University

Ph.D., Engineering and Public Policy 2012

University of Wisconsin

M.S., Mechanical Engineering 1998

University of Kansas

B.S., Mechanical Engineering 1996

### PROFESSIONAL EXPERIENCE

Ascend Analytics

2018 – Present

*Manager of Resource Planning Analytics*

- Manage team of energy analyst who bring deep expertise in energy modeling to clients
- Provide project management of activities for multiple resource planning clients
- Oversee energy storage analysis for Los Angeles Department of Water & Power to optimize energy storage planning based on loss of load expectation
- Provide oversight in the development of Ascend's tools and methods for capacity expansion modeling, avoided energy cost calculations and loss of load probability
- Lead projects to evaluate paths to 100 % carbon free portfolios for multiple clients
- Acted as an expert witness on PURPA avoided cost calculations in five dockets before the Montana Public Service Commission

CLEAResult Consulting

*Senior Program Manager*

2014 – 2018

- Leveraged technical experience and industry knowledge to provide demand side management program design and operations support
- Directed a team of energy specialist in implementing utility energy efficiency programs for commercial customers
- Provided analytical oversight used for tracking performance and driving decision making

Iowa Utilities Board

*Utility Regulation Engineer*

2012 – 2014

- Produced statistical and economic analysis for decision makers in various regulatory proceedings (rate cases, resource planning, outage reports, requests for information)
- Represented Iowa interests in regional energy policy issues through MISO including transmission planning, reliability assessments and electric markets
- Reviewed utility resource plans and financial analysis

Carnegie Mellon Electricity Industry Center

*Research Assistant*

2008 – 2012

- Research focused on the integration of large-scale wind energy in electric grids
- Created statistical models to analyze wind and electric load data
- Presented results at conferences and in peer-reviewed journals
- Taught an undergraduate course on engineering and public policy analysis

# ANTHONY BOUKARIM

SENIOR CONSULTANT

## CONTACT

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phone: 720-642-9459

1877 Broadway, Suite 706  
Boulder, CO 80301

## EDUCATION

**Stanford University**  
MS, Energy Resources Engineering 2020

**American University of Beirut**  
BS, Mechanical Engineering 2015

## PROFESSIONAL EXPERIENCE

**Ascend Analytics (Boulder, CO)** 2020 – Present  
*Senior Energy Analyst*

- Evaluate renewables and storage RFO for utilities and CCAs in California and the broader west. California experience includes IRP and procurement projects for Peninsula Clean Energy, San Jose Clean Energy, and Clean Power Alliance.
- Develop integrated resource plans for utilities, evaluate renewable assets, conduct risk management studies, and produce energy forecasts
- Provide technical and subject matter expertise to clients, perform quality assurance activities, leverage energy analysis/ forecasting software, and manage internal teams to ensure timely delivery of projects

**Arthur D. Little/ McKinsey & Co (Dubai, UAE)** 2015 – 2018  
*Management Consultant – Energy & Utilities practice*

- Detailed national-wide initiatives such as reforming the energy prices, fostering net metering through incentives, unbundling of the electricity market, and development of a national renewable energy program
- Developed an investment strategy for a leading electric utility and designed its venture capital arm to diversify the revenue streams – including an assessment framework for different investment types
- Designed and executed a ‘private sector development lab’ that involved 24 government entities and over 700 CEOs from the private sector – including workshop designs, facilitation, and stakeholder engagement
- Designed the strategy and organization structure of an EPC spin-off for one of the largest utilities in the world – including a business case on lending the fiber optics network
- Developed a turn-around strategy for a Lebanese SME by conducting a market assessment, reshaping the company’s vision, and creating a new marketing strategy

**Arthur D. Little (Dubai, UAE)** 2014 – 2015  
*Business Analyst – Oil & Gas*

- Conducted a technical and financial due diligence for a private equity to acquire an Oil & Gas complex. The project included a market analysis for different petrochemicals and feedstock as well as an assessment of the technology used by a hybrid petrochemical plant in the GCC. The study concluded with manpower assessment and extensive negotiations with the clients



# BRENT NELSON, PhD

DIRECTOR MARKET INTELLIGENCE

## CONTACT

email: bnelson@ascendanalytics.com

phone: 720-388-1380

1877 Broadway, Suite 706  
Boulder, Colorado 80302

## EDUCATION

Georgia Institute of Technology

Ph.D., Mechanical Engineering 2007

MS, Mechanical Engineering 2004

University of California - Berkeley

BS, Mechanical Engineering 2002

## PROFESSIONAL EXPERIENCE

Ascend Analytics, Boulder, CO

2019 – Present

*Director Market Intelligence*

- Lead's Ascend's fundamental market intelligence and forecasting group.
- Led project to perform economic and reliability analysis for replacement of a coal generation asset with renewable and storage replacement portfolios in ERCOT
- Led the development of a renewable/storage integrated resource plan for East Bay Community Energy
- Led the valuation of renewable and storage projects for Peninsula Clean Energy, San Jose Clean Energy, and Clean Power Alliance
- Led the preparation of interrogatory responses and analysis for replacement of the Public Service Company of New Mexico (PNM) San Juan Generating Station with renewables, storage, and thermal generation.
- Led the economic assessment of virtual power plant assets for Silicon Valley Clean Energy (SVCE)

Northern Arizona University, Flagstaff, AZ

2008 – 2019

*Associate Professor of Mechanical Engineering*

- Led a research program focused on supply-side and demand-side energy systems analysis
- Taught courses on energy analysis, energy economics, and energy technologies
- Performed technoeconomic analysis for campus energy efficiency and renewable energy programs and strategy
- Performed additional research activities in bioengineering and engineering education

National Renewable Energy Laboratory, Golden, CO

2017 – 2019

*Collaborative Appointment*

- Performed research on demand flexibility models and future electrification scenarios, coauthoring 3 technical reports.
- Developed a framework and report on energy efficiency policy strategy in developing countries

US Department of Energy, Office of Energy Efficiency and Renewable Energy, Washington, DC

2014 – 2016

*Program Manager and Energy Advisor*

- Provided strategic guidance on research and development strategy for the Building Technologies Office
- Performed technoeconomic analysis and market assessment of energy efficiency, storage, & demand-side management technologies
- Program manager for international collaborative research programs with India and China (>\$50m), including managing project strategy and negotiations for the second phase of the US-China collaboration.
- Provided strategic guidance to the Caribbean international body (CARICOM) in Guyana on energy efficiency policy

Georgia Institute of Technology, Atlanta, GA

2007 – 2008

*Design and Innovation Methodologies Postdoctoral Scholar*

- Developed new, extensively adopted metrics for design methodology evaluation

# ZACH BRODE

SENIOR ENERGY ANALYST

## CONTACT

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## EDUCATION

University of British Columbia  
MA, Economics 2018

Wheaton College (Norton, MA)  
BA, Economics and Mathematics 2017

## PROFESSIONAL EXPERIENCE

Ascend Analytics (Boulder, CO) 2018 – Present  
*Senior Energy Analyst*

- Lead efforts to incorporate new features into Ascend software
- Oversee testing and validation of models for multiple clients
- Working with utility clients to model energy systems in support of capacity planning and resource assessment and valuation
- Developed long-term fundamental forecasts for prices in multiple ISO regions for battery valuations and resource planning
- Provided analysis and modeling support to IPL for their 2019 IRP and 2020 RFP
- Worked on avoided cost and IRP modeling as well as evaluation of new resource acquisitions for NorthWestern
- Evaluated the economics of owned vs PPA batteries for Anaheim
- Worked with LADWP on planning for Clean Grid LA and meeting CA state requirements on carbon reduction