



**REGULAR MEETING of the Board of Directors of the
Peninsula Clean Energy Authority (PCEA)
Thursday, June 25, 2020**

PLEASE NOTE: for Video conference: <https://meetings.ringcentral.com/j/1495607425>

for Audio conference: dial 1-623-404-9000, or 1-773-231-9226,
then enter the Meeting ID: 149 560 7425 followed by #

You will be instructed to enter your participant ID followed by #.

NOTE: Please see attached document for additional detailed teleconference instructions.

Supplemental Agenda Packet items. Please find attached:

- Contract for Item No. 8 Authorize Chief Executive Officer to execute a contract amendment to Agreement with TerraVerde Energy, LLC for Distributed Resource Adequacy Capacity Request for Proposals in an amount not to exceed \$220,000 and for a term through December 31, 2021 (Action)
- Contract for Item No. 15 Authorize Chief Executive Officer to execute an Agreement with Ascend Analytics for long-term renewable energy contract RFO development and evaluation services in an amount not to exceed \$145,000 for a term through December 31, 2020 (Action)
- Materials for Item No. 16 Approve a Contract Amendment to consultant contract with Siemens, Inc. in an amount not to exceed \$105,000 (Action)

Instructions for Joining a RingCentral Meeting via Computer or Phone

Best Practices:

- Please mute your microphone when you are not speaking to minimize audio feedback
- If possible, utilize headphones or ear buds to minimize audio feedback
- If participating via videoconference, audio quality is often better if you use the dial-in option (Option 1 below) rather than your computer audio

Options for Joining

- A. Videoconference with Phone Call Audio (*Recommended*) – see Option 1 below
- B. Videoconference with Computer Audio – see Option 2 below
- C. Calling in from iPhone using one-tap – see Option 3 below
- D. Calling in via Telephone/Landline – see Option 4 below

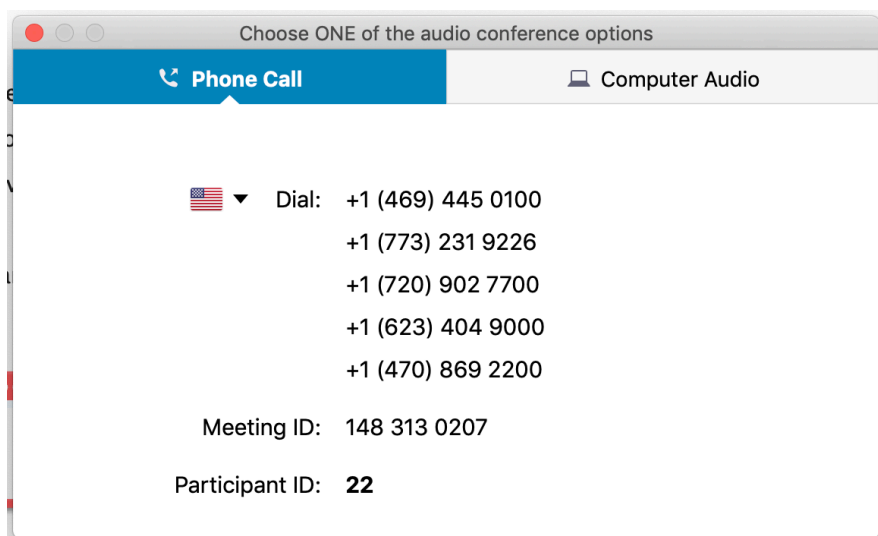
Videoconference Options:

Prior to the meeting, we recommend that you install the RingCentral Meetings application on your computer by clicking here: <https://www.ringcentral.com/apps/rc-meetings>

If you want full capabilities for videoconferencing (audio, video, screensharing) you must download the RingCentral application.

Option 1 Videoconference with Phone Call Audio (Recommended):

1. From your computer, click on the following link:
<https://meetings.ringcentral.com/j/1495607425>
2. The RingCentral Application will open on its own or you will be instructed to Open RingCentral Meetings.
3. After the application opens, the pop-up screen below will appear asking you to choose ONE of the audio conference options. Click on the Phone Call option at the top of the pop-up screen.

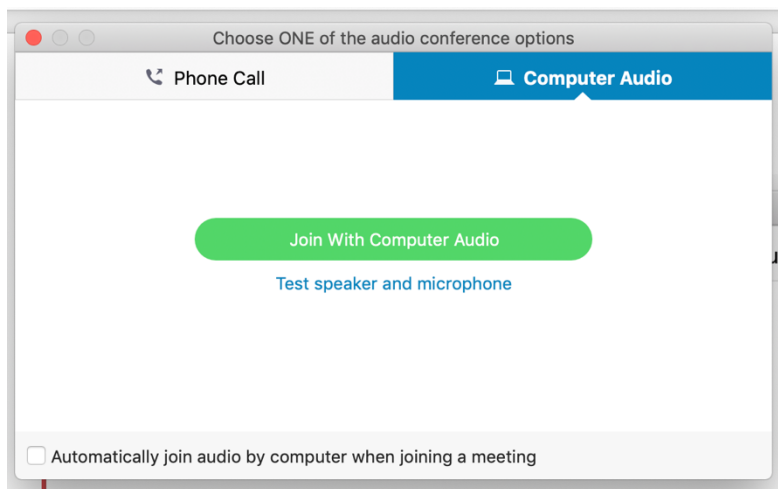


IMPORTANT: Please do not use the Participant ID that is in the picture to the left. Enter the Participant ID that appears on your own personal pop-up.

4. Please dial one of the phone numbers for the meeting (it does not matter which one):
 - +1 (623) 404 9000
 - +1 (469) 445 0100
 - +1 (773) 231 9226
 - +1 (720) 902 7700
 - +1 (470) 869 2200
5. You will be instructed to enter the meeting ID: **149 560 7425 followed by #**
6. You will be instructed to enter in your **Participant ID followed by #**. Your Participant ID is unique to you and is what connects your phone number to your RingCentral account.
7. After a few seconds, your phone audio should be connected to the RingCentral application on your computer.
8. In order to enable video, click on “Start Video” in the bottom left hand corner of the screen. This menu bar is also where you can mute/unmute your audio.

Option 2 Videoconference with Computer Audio:

1. From your computer, click on the following link:
2. <https://meetings.ringcentral.com/j/1495607425>
3. The RingCentral Application will open on its own or you will be instructed to Open RingCentral Meetings.
4. After the application opens, the pop-up screen below will appear asking you to choose ONE of the audio conference options. Click on the Computer Audio option at the top of the pop-up screen.



5. Click the green **Join With Computer Audio** button
6. In order to enable video, click on “Start Video” in the bottom left hand corner of the screen. This menu bar is also where you can mute/unmute your audio.

Audio Only Options:

Please note that if you call in/use the audio only option, you will not be able to see the speakers or any presentation materials in real time.

Option 3: Calling in from iPhone using one-tap

Click on one of the following “one-tap” numbers from your iPhone. Any number will work, but dial by your location for better audio quality:

+1(623)4049000,,1495607425# (US West)

+1(720)9027700,,1495607425# (US Central)

+1(773)2319226,,1495607425# (US North)

+1(469)4450100,,1495607425# (US South)

+1(470)8692200,,1495607425# (US East)

This is the call-in number followed by the meeting ID. Your iPhone will dial both numbers for you.

You will be instructed to **enter your participant ID followed by #**

If you do not have a participant ID or do not know it, you can stay on the line and you will automatically join the meeting

Option 4: Calling in via Telephone/Landline:

Dial a following number based off of your location:

+1(623)4049000 (US West)

+1(720)9027700 (US Central)

+1(773)2319226 (US North)

+1(469)4450100 (US South)

+1(470)8692200 (US East)

You will be instructed to enter the **meeting ID: 149 560 7425 followed by #**

You will be instructed to enter your **participant ID followed by #**.

If you do not have a participant ID or do not know it, you can stay on the line and you will automatically join the meeting.

AMENDMENT NO. 1 TO AGREEMENT BETWEEN PENINSULA CLEAN ENERGY AND
TERRAVERDE ENERGY

THIS AMENDMENT TO THE AGREEMENT, entered into this []th day of June, 2020
by and between PENINSULA CLEAN ENERGY, a California joint powers authority,
hereinafter called "PCE," and TerraVerde Energy, LLC, a Delaware limited liability company,
hereinafter called "Contractor";

W I T N E S S E T H:

WHEREAS, the parties entered into an Agreement on the 8th day of January, 2020 for the purpose of Contractor providing guidance to PCEA regarding proposal responses to the Distributed Resource Adequacy Capacity Request for Proposals, issued on November 5th, 2019 ("Agreement"); and

WHEREAS, the parties wish to amend the Agreement to increase the maximum amount by \$200,000 to a new total amount not to exceed \$220,000; and

WHEREAS, the parties wish to amend the Agreement to extend the term of the Agreement through December 31, 2021; and

WHEREAS, the parties wish to amend the Agreement to expand the definition of Services in Exhibit A.

NOW, THEREFORE, IT IS HEREBY AGREED BY THE PARTIES HERETO AS FOLLOWS:

1. The text of "Section 2 – Payments" shall be amended to replace "*In no event shall PCEA's total fiscal obligation under this Agreement exceed twenty thousand dollars (\$20,000).*" with the following:

*"In no event shall PCEA's total fiscal obligation under this Agreement exceed **two hundred and twenty thousand dollars (\$220,000).**"*

2. The text of "Section 3 – Term" shall be amended to replace "*Subject to compliance with all terms and conditions, the term of this Agreement shall be from January 7, 2020, through May 31, 2020.*" with the following:

*"Subject to compliance with all terms and conditions, the term of this Agreement shall be from January 7, 2020, through **December 31, 2021.** Upon mutual approval by both parties, the term may extend through December 31, 2022."*

3. Exhibit A is replaced in its entirety by the enclosed update.
4. Exhibit B is replaced in its entirety by the enclosed update.

5. Exhibit C is added to the Agreement.
6. Except as expressly amended herein, all other provisions of the Agreement shall remain in full force and effect.
7. This Amendment No. 1 shall take effect upon the date of execution by both parties.

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as set forth below.

Peninsula Clean Energy Authority

By: _____
Janis C. Pepper, CEO

Dated: _____

TerraVerde Energy

By: _____
Ali Chehrehsez, CEO

Dated: _____

Exhibit A

In consideration of the payments set forth in Exhibit B, Contractor shall provide the following services:

Task 1: Support Evaluation of Responses to Distributed Resource Adequacy Capacity Request for Proposals

1. Evaluate & provide guidance regarding each of the responses including:
 - a. Completeness & compliance with response requirements
 - b. Technical Review
 1. Technology comparison and suitability (e.g., lithium-ion vs. flow)
 2. Installation plans - with consideration for requirements related to stand-alone battery systems and adding battery systems to existing PV systems
 3. Interconnection plans - with considerations for BESS NEM Exports
 4. Operating plans & assumptions - especially with regards to how respondents plan to operate the batteries to provide RA benefits to PCE, while also providing value to the customers, and meeting other program [SGIP] operating requirements
 5. Maintenance plans – including services level agreements, and scheduled maintenance protocols
 6. Safety Plans and Project Execution Plans - with consideration for any potential risks
 - c. Go-to-Market & Customer Engagement Plans
 1. How the batteries will be operated to create value to the target customer categories
 2. How the financial benefits and financing options will be presented to target customer categories
 - d. Timeline & Pricing
 - e. Experience & Qualifications
2. Prepare a PowerPoint presentation with findings and present in a review meeting with PCE staff
3. Assist with respondent shortlisting and preparation of interview questions
4. Join PCE in person for shortlist interviews
5. Prepare a PowerPoint presentation with findings & recommendations from the interviews and presentation a review meeting with PCE staff
6. Assist PCE with contract negotiations
7. Assist PCE in presenting the outcomes of the response review process to the Board

Contractor shall adhere to the following milestones:

- Kickoff Meeting (week of January 8th)
- Proposal Review (week of January 8th)
- Presentation: Findings and Recommendations from Proposal Evaluations (delivered by January 17, 2020)
- Interviews (weeks of January 20, 2020, or January 27, 2020)
- Presentation: Findings and Recommendations from Interviews (delivered by January 31, 2020)
- Contract Negotiations (February-March 2020)

- Support PCE in Board Presentation (April 2020)

Task 2: Identify Target Customers to Increase Program Speed and Scale

Objective: Increase the speed and scale of this program by identifying ideal customers that could be targeted by selected vendors.

1. Collect and review additional customer data including the following and curate the data in a Meter Matrix format:

Customer Data	Source/Provider
PG&E Item 16 and Item 17 usage data,	PCE
Customer geographies related to high fire threat district areas,	TerraVerde
Medical baseline, CARE, and FERA indicators, Customer participation in other Demand Response programs	Item 16
Customer electric vehicle ownership	PCE
Rate tariff including an indicator for NEM rates	Item 17
Income eligibility for SGIP program participation	LI/DAC maps and database
PSPS event count	PSPS maps
Prioritized resiliency facility	Sites to be selected by PCE and TerraVerde
Usage and demand profiles	Item 17

2. Perform two customer clustering analyses to identify customer segments, and the individual customers that would be most suited for the Program. The first analysis will identify a subset of TOU A-10, E-19, and E-20 commercial customers, and the second analysis will scale this analysis to identify residential customers including multi-family entities.
3. Provide PCE with the target customer list to be included in the vendor contacts that would allow for more aggressive speed and scale for outreach to target customers.

Contractor shall provide the following deliverables and adhere to the following milestones in the performance of this Task 2:

#	<u>Deliverable</u>	<u>Timeline</u>	<u>Target Completion Date</u>
1	First Target Customer Clusters and Lists (Commercial)	30 days, beginning from receipt of data	July 31, 2020
2	Second Target Customer Clusters and Lists (Residential)	50 days, beginning from receipt of data	August 15, 2020

Task 3. Establish & Manage an Efficient Project Qualification & Program Oversight Model

Objectives: (1) Structure standardized template specifications for projects to ensure that Peninsula Clean Energy and its customers are well served and protected, while improving the scalability and efficiency of bringing projects into the program. (2) Establish the protocols necessary to validate vendors compliance with the project qualification models and program specifications

1. Establish and manage the following whereby the vendors will attest (and TerraVerde will validate) that the projects being enrolled comply with the program specifications (i.e., islanding capability, LI-DAC %, Peninsula Clean Energy customer %). This information will be hosted in Peninsula Clean Energy's cloud-based document storage system or TerraVerde and Peninsula Clean Energy will work together to ensure data is transferred to Peninsula Clean Energy's system on a regular (i.e., weekly) cadence. TerraVerde understands that final program specifications may change from the details outlined below depending on the final contract executed with vendors. TerraVerde will update the format and

information collected and verified to conform to the final executed contract. Categories of information collected may include but will not be limited to the following.

- a. Data Room where the vendors will upload the following documents and data for each project:
 1. Project Customer Agreement (between Seller and Customer)
 2. Project Safety Plan
 3. Project Drawings (permitted plan set including single line diagram and equipment specifications)
 4. Projected Customer Benefits (including a proposal and / or cash flow pro forma)
 5. SGIP Application and Award, if applicable
 6. Interconnection Application & Study / Studies
 7. Proof of Construction Commencement
 8. Commissioning Report
 9. Proof of Commencement of Operation
 10. Project Photos including installed equipment, point of interconnection, proof of islanding capability
 - b. Project Assessment Table, including the following details for each project:
 1. Customer Name
 2. Customer SAID
 3. Service Address
 4. Site Address
 5. PCE Customer (True or False)
 6. LI-DAC (True or False)
 7. Status of engagement (offered, enrolled, or declined)
 8. Date of Enrollment (customer agreement executed)
 9. Relationship Originator (Seller or Buyer)
 10. Project status (declined, pre-construction, construction, operational)
 11. Date Construction Commenced
 12. Date Operation Commenced (Commercial Operation Date)
 13. Documentation of material customer incidents, complains, or safety violations
 14. Solar PV Plan (existing or new install)
 15. Solar PV Modules OEM
 16. Solar PV Module panel wattage
 17. Solar PV Capacity (kWdc)
 18. Battery Power Capacity (kWac)
 19. Battery Energy Capacity (kWh)
 20. Battery OEM
 21. Battery Inverter OEM
 22. Battery Round Trip Efficiency (%)
 23. Project Provides Backup Power for Customer (True or False)
 24. Projected Customer Benefits
 25. Associated RA Capacity (kWac)
 26. Data related to existing installations (if available or provided by site host):
 - a. Date of solar PV installation
 - b. Name of installer organization
 - c. Ownership structure (PPA, lease, cash deal, PACE, other)
 - d. Term length of PPA or lease
2. As the vendors enroll projects into the program, TerraVerde will:
- a. Validate vendor and project compliance
 1. Review 5% of the residential projects to validate compliance
 2. Review 25% (with a minimum of 4) of the commercial projects to validate compliance
 - b. Solicit feedback from customers to holistically understand the customer experience

1. For commercial participants: interview three (3) commercial program participants
2. For residential participants:
 - a. Develop and manage a web-based survey for residential program participants
 - b. Hold one (1) virtual focus group meeting for residential customers
3. TerraVerde will facilitate a smooth integration between program status updates provided by vendors, and Peninsula Clean Energy's customer resource management database, PowerPath, a Salesforce instance. Peninsula Clean Energy and TerraVerde will collaborate on developing the data format required for integration, and TerraVerde will manage vendors' adherence to this format. TerraVerde will assist with the following:
 - a. Assist to develop requirements for Peninsula Clean Energy CRM platform ("PowerPath") integration
 - b. Facilitate required integrations on program vendors' CRMs; support PCE in validating information is integrated
 - c. Develop a written data transfer protocol that is designed to facilitate the transfer of data from program vendors' CRMs to Peninsula Clean Energy's CRM on a continuous basis, but not less than weekly as mutually determined, including:
 1. Customers approached, the outreach method, date of outreach, result of outreach,
 2. General customer site information (e.g., address, primary contacts, contact information),
 3. All information collected in any customer agreement between program vendors and customers,
 4. Project development information (e.g., permit information, interconnection information, incentive information, construction timeline, and any project or safety issues)
 5. Project outcomes including equipment deployed and new power capacity

Contractor shall provide the following deliverables and adhere to the following milestones in the performance of this Task 3:

#	<u>Deliverable</u>	<u>Timeline</u>	<u>Target Completion Date</u>
1	Draft Project Data Room Template	15 days after execution of agreement between TerraVerde & Peninsula Clean Energy	July 15, 2020
2	Draft Project Assessment Table Template	45 days after execution of agreement between TerraVerde & Peninsula Clean Energy	August 10, 2020
3	Final Project Data Room Template &	30 days after execution of agreement between TerraVerde & Peninsula Clean Energy	July 31, 2020
4	Final Project Assessment Table Template	30 days after review of draft by Peninsula Clean Energy	September 15, 2020

5	Results of Residential Compliance Validation	30 days after first installation, and monthly updates beginning December 2020 through December 2021, and then ongoing thereafter, no later than 30 days after relevant projects are installed	Targeting October 1, 2020, with monthly updates beginning December 2020
6	Results of Commercial Compliance Validation	30 days after first installation, and monthly updates beginning December 2020 through December 2021, and then ongoing thereafter, no later than 30 days after relevant projects are installed	Timeline TBD depending on commercial installation timelines; targeting June 30, 2021
7	Draft Commercial Interview Questions & Residential Survey	90 days after execution of agreement between TerraVerde & Peninsula Clean Energy	September 30, 2020
8	Final Commercial Interview Questions & Residential Survey	30 days after review of draft by Peninsula Clean Energy	November 15, 2020
9	Results of Commercial Interview Process	90 days after third commercial installation	March 31, 2021
10	Results of Residential Survey & Focus Group Meeting	180 days after first residential installation	March 31, 2021
11	Written Data Transfer Protocol	45 days after execution of agreement between TerraVerde & Peninsula Clean Energy	August 10, 2020

Task 4: Manage Vendor Performance & Provide Actionable Reporting to PCE

Objectives: (1) Manage vendors along KPIs toward program success, (2) provide transparency and actionable intelligence into the program as it is deployed, ensuring visibility to leading indicators, early detection and resolution of program challenges, leading ultimately to achieving the program goals.

1. TerraVerde will manage the performance of the selected vendors, including:
 - a. Weekly standing meetings with vendors (and Peninsula Clean Energy) organized and managed by TerraVerde to address progress, critical path issues, and other priority items
 1. TerraVerde will manage the vendors to ensure agendas are circulated at least 24 hours in advance of each meeting, and notes including action items are distributed by the vendors within 48 hours following each meeting

- b. Monthly standing meetings with vendors and Peninsula Clean Energy to review vendor progress reports, as identified in Exhibit C, as well as vendors' 90-day forecasts
 - 1. TerraVerde will manage the vendors to ensure agendas are circulated at least 24 hours in advance of each meeting, and notes including action items are distributed by the vendors within 48 hours following each meeting
- 2. TerraVerde will provide a monthly summary report to PCE staff within 20 calendar days of the end of the month.
 - a. This summary report will include a description of the key issues & updates from the vendor progress reports and identify risks to achieving timelines or volumes identified in each vendor's contract.
 - b. At the request of PCE, TerraVerde will also be available to meet monthly with PCE staff to review and discuss program status.
- 3. TerraVerde will co-create end-of-year Executive Program Status Update reports with Peninsula Clean Energy to be presented by Peninsula Clean Energy staff to Peninsula Clean Energy's Board of Directors to review program successes and challenges. As part of these reports, TerraVerde will recommend how Peninsula Clean Energy can create cost-effective and scalable programs by utilizing programmatic learnings to develop sequel efforts to spur clean energy solutions in San Mateo County through the purchase of distributed Resource Adequacy.
 - a. TerraVerde will circulate an agenda to discuss the formation of these reports 60 calendar days prior to the end of the calendar year.
 - b. The reports will then be formulated by TerraVerde and circulated to Peninsula Clean Energy 30 calendar days prior to the end of the calendar year.

Contractor shall provide the following deliverables and adhere to the following milestones in the performance of this Task 4:

#	<u>Deliverable</u>	<u>Timeline</u>	<u>Target Completion Date</u>
1	Organize, Prepare for, and Run Weekly Meetings with Vendors	Steward circulation of meeting agendas 24 hours ahead of each meeting and meeting notes including action items within 48 hours following each meeting.	Weekly Starting June 29, 2020 through contract term
2	Organize, prepare for and run monthly meetings with vendors to review Vendor Progress Reports	Steward circulation of meeting agendas 24 hours ahead of each meeting and meeting notes including action items within 48 hours following each meeting.	Monthly starting month following execution of agreement between PCE and Vendor through end of the contract term

3	Draft Template for Monthly Summary Reports to PCE	Within 30 days of execution of agreement between Peninsula Clean Energy and TerraVerde.	July 31, 2020
4	15 – Monthly Summary Reports to PCE	Monthly, within 20 days following the end of each calendar month, through the term of the contract	Monthly starting with reporting on July 2020 through the end of the contract term
5	Agenda & draft Presentation to discuss formation of Executive Program Status Updates	60 calendar days prior to the end of the calendar year	October 31, 2020 October 31, 2021
6	Final Executive Program Status Update Report	30 calendar days prior to the end of the calendar year	November 30, 2020 November 30, 2021

Summary of Task 2 - 4 Deliverables and Milestones

<u>Task</u>	<u>#</u>	<u>Deliverable</u>	<u>Timeline</u>	<u>Target Completion Date</u>
2	1	First Target Customer Clusters and Lists (Commercial)	30 days, beginning from receipt of data	July 31, 2020
2	2	Second Target Customer Clusters and Lists (Residential)	50 days, beginning from receipt of data	August 15, 2020
3	1	Draft Project Data Room Template	15 days after execution of agreement between TerraVerde & Peninsula Clean Energy	July 15, 2020
3	2	Draft Project Assessment Table Template	45 days after execution of agreement between TerraVerde & Peninsula Clean Energy	August 10, 2020
3	3	Final Project Data Room Template &	30 days after execution of agreement between TerraVerde & Peninsula Clean Energy	July 31, 2020

3	4	Final Project Assessment Table Template	30 days after review of draft by Peninsula Clean Energy	September 15, 2020
3	5	Results of Residential Compliance Validation	30 days after first installation, and monthly updates beginning December 2020 through December 2021, and then ongoing thereafter, no later than 30 days after relevant projects are installed	Targeting October 1, 2020, with monthly updates beginning December 2020
3	6	Results of Commercial Compliance Validation	30 days after first installation, and monthly updates beginning December 2020 through December 2021, and then ongoing thereafter, no later than 30 days after relevant projects are installed	Timeline TBD depending on commercial installation timelines; targeting June 30, 2021
3	7	Draft Commercial Interview Questions & Residential Survey	90 days after execution of agreement between TerraVerde & Peninsula Clean Energy	September 30, 2020
3	8	Final Commercial Interview Questions & Residential Survey	30 days after review of draft by Peninsula Clean Energy	November 15, 2020
3	9	Results of Commercial Interview Process	90 days after third commercial installation	March 31, 2021
3	10	Results of Residential Survey & Focus Group Meeting	180 days after first residential installation	March 31, 2021
3	11	Written Data Transfer Protocol	45 days after execution of agreement between TerraVerde & Peninsula Clean Energy	August 10, 2020

4	1	Organize, Prepare for, and Run Weekly Meetings with Vendors	Steward circulation of meeting agendas 24 hours ahead of each meeting and meeting notes including action items within 48 hours following each meeting.	Weekly Starting June 29, 2020 through contract term
4	2	Organize, prepare for and run monthly meetings with vendors to review Vendor Progress Reports	Steward circulation of meeting agendas 24 hours ahead of each meeting and meeting notes including action items within 48 hours following each meeting.	Monthly starting month following execution of agreement between PCE and Vendor through end of the contract term
4	3	Draft Template for Monthly Summary Reports to PCE	Within 30 days of execution of agreement between Peninsula Clean Energy and TerraVerde.	July 31, 2020
4	4	15 – Monthly Summary Reports to PCE	Monthly, within 20 days following the end of each calendar month, through the term of the contract	Monthly starting with reporting on July 2020 through the end of the contract term
4	5	Agenda & draft Presentation to discuss formation of Executive Program Status Updates	60 calendar days prior to the end of the calendar year	October 31, 2020 October 31, 2021
4	6	Final Executive Program Status Update Report	30 calendar days prior to the end of the calendar year	November 30, 2020 November 30, 2021

Exhibit B

In consideration of the services provided by Contractor described in Exhibit A and subject to the terms of the Agreement, PCEA shall pay Contractor based on the below fee schedule and terms. Contractor shall issue an invoice to PCEA upon completion of each milestone. Payment will be due 30 days after invoices are issued

Fee Total: \$220,000

Milestones:

- Mobilization: \$5,000 (complete after kickoff meeting)
- Board Presentation: \$15,000 (complete after Board Presentations)
- Target Customer List (Commercial): \$15,000 (complete upon delivery of list)
- Target Customer List (Residential): \$5,000 (complete upon delivery of list)
- Monthly Program Administration Fee: \$10,000 per month July 2020 through December 2021

Exhibit C

Example Vendor Monthly Progress Report

	Last Month's Progress	Cumulative Progress	Total Target	Cumulative / Total (%)
Customer Enrollment (All Customers)				
Number of Customers Enrolled				
Associated Battery Capacity (MW-AC)				
Associated RA Volume (MW-AC)				
Associated New PV (MW-DC)				
Customer Enrollment (LI-DAC Customers)				
Number of LI-DAC Customers Enrolled				
Associated Battery Capacity (MW-AC)				
Associated RA Volume (MW-AC)				
Milestone Progress				
Commenced Installation (Battery Capacity, MW-AC)				
Commenced Installation (RA Volume, MW-AC)				
Commenced Operation (Battery Capacity, MW-AC)				
Commenced Operation (RA Volume, MW-AC)				

AGREEMENT BETWEEN THE PENINSULA CLEAN ENERGY AUTHORITY AND ASCEND ANALYTICS, LLC

This Agreement is entered into this day of June, 2020, by and between the Peninsula Clean Energy Authority, a joint powers authority of the state of California, hereinafter called "PCEA," and Ascend Analytics, hereinafter called "Contractor."

* * *

Whereas, pursuant to Section 6508 of the Joint Exercise of Powers Act, PCEA may contract with independent contractors for the furnishing of services to or for PCEA; and

Whereas, it is necessary and desirable that Contractor be retained for the purpose of development and evaluation services for an RFO for long term renewable energy plus energy storage projects, provided in Exhibit A.

Now, therefore, it is agreed by the parties to this Agreement as follows:

1. Exhibits and Attachments

The following exhibits and attachments are attached to this Agreement and incorporated into this Agreement by this reference:

Exhibit A—Pilot Service License and Activities

Exhibit B—Payments and Rates

Services to be performed by Contractor

In consideration of the payments set forth in this Agreement and in Exhibit B, Contractor shall perform services for PCEA in accordance with the terms, conditions, and specifications set forth in this Agreement and in Exhibit A.

2. Payments

In consideration of the services provided by Contractor in accordance with all terms, conditions, and specifications set forth in this Agreement and in Exhibit A, PCEA shall make payment to Contractor based on the rates and in the manner specified in Exhibit B. PCEA reserves the right to withhold payment if the quantity or quality of the work performed materially fails to meet specifications. In no event shall PCEA's total fiscal obligation under this Agreement exceed one hundred forty-five thousand (\$145,000). In the event that PCEA makes any advance payments, Contractor agrees to refund any amounts in excess of the amount owed by PCEA at the time of contract termination or expiration.

3. Term

Subject to compliance with all terms and conditions, the term of this Agreement shall be from June 26, 2020 through December 31, 2020.

4. Contract Materials

At the end of this Agreement, or in the event of termination, all finished or unfinished documents, data, studies, maps, photographs, reports, and other written materials (collectively referred to as "contract materials") prepared by Contractor under this Agreement shall become the property of PCEA and shall be

promptly delivered to PCEA. Upon termination, Contractor may make and retain a copy of such contract materials if permitted by law.

5. Relationship of Parties

Contractor agrees and understands that the work/services performed under this Agreement are performed as an independent contractor and not as an employee of PCEA and that neither Contractor nor its employees acquire any of the rights, privileges, powers, or advantages of PCEA employees.

6. Hold Harmless

a. General Hold Harmless

Contractor shall indemnify and save harmless PCEA and its officers, agents, employees, and servants from all claims, suits, or actions of every name, kind, and description resulting from this Agreement, the performance of any work or services required of Contractor under this Agreement, or payments made pursuant to this Agreement brought for, or on account of, any of the following:

(A) injuries to or death of any person, including Contractor or its employees/officers/agents;

(B) damage to any property of any kind whatsoever and to whomsoever belonging;

(C) any sanctions, penalties, or claims of damages resulting from Contractor's failure to comply, if applicable, with the requirements set forth in the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and all Federal regulations promulgated thereunder, as amended; or

(D) any other loss or cost, including but not limited to that caused by the concurrent active or passive negligence of PCEA and/or its officers, agents, employees, or servants. However, Contractor's duty to indemnify and save harmless under this Section shall not apply to injuries or damage for which PCEA has been found in a court of competent jurisdiction to be solely liable by reason of its own negligence or willful misconduct.

The duty of Contractor to indemnify and save harmless as set forth by this Section shall include the duty to defend as set forth in Section 2778 of the California Civil Code.

7. Assignability and Subcontracting

Contractor shall not assign this Agreement or any portion of it to a third party or subcontract with a third party to provide services required by Contractor under this Agreement without the prior written consent of PCEA. Any such assignment or subcontract without PCEA's prior written consent shall give PCEA the right to automatically and immediately terminate this Agreement without penalty or advance notice.

8. Payment of Permits/Licenses

Contractor bears responsibility to obtain any license, permit, or approval required from any agency for work/services to be performed under this Agreement at Contractor's own expense prior to commencement of said work/services. Failure to do so will result in forfeit of any right to compensation under this Agreement.

9. Insurance

a. General Requirements

Contractor shall not commence work or be required to commence work under this Agreement unless and until all insurance required under this Section has been obtained and such insurance has been approved by PCEA, and Contractor shall use diligence to obtain such insurance and to obtain such approval. Contractor shall furnish PCEA with certificates of insurance evidencing the required coverage, and there shall be a specific contractual liability endorsement extending Contractor's coverage to include the contractual liability assumed by Contractor pursuant to this Agreement. These certificates shall specify or be endorsed to provide that thirty (30) days' notice must be given, in writing, to PCEA of any pending change in the limits of liability or of any cancellation or modification of the policy.

b. Workers' Compensation and Employer's Liability Insurance

Contractor shall have in effect during the entire term of this Agreement workers' compensation and employer's liability insurance providing full statutory coverage. In signing this Agreement, Contractor certifies, as required by Section 1861 of the California Labor Code, that (a) it is aware of the provisions of Section 3700 of the California Labor Code, which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of the Labor Code, and (b) it will comply with such provisions before commencing the performance of work under this Agreement.

c. Liability Insurance

Contractor shall take out and maintain during the term of this Agreement such bodily injury liability and property damage liability insurance as shall protect Contractor and all of its employees/officers/agents while performing work covered by this Agreement from any and all claims for damages for bodily injury, including accidental death, as well as any and all claims for property damage which may arise from Contractor's operations under this Agreement, whether such operations be by Contractor, any subcontractor, anyone directly or indirectly employed by either of them, or an agent of either of them. Such insurance shall be combined single limit bodily injury and property damage for each occurrence and shall not be less than the amounts specified below:

☒ Comprehensive General Liability... \$1,000,000

(Applies to all agreements)

☒ Motor Vehicle Liability Insurance... \$1,000,000

(To be checked if motor vehicle used in performing services)

☐ Professional Liability..... \$1,000,000

(To be checked if Contractor is a licensed professional)

PCEA and its officers, agents, employees, and servants shall be named as additional insured on any such policies of insurance, which shall also contain a provision that (a) the insurance afforded thereby to PCEA and its officers, agents, employees, and servants shall be primary insurance to the full limits of liability of the policy and (b) if the PCEA or its officers, agents, employees, and servants have other insurance against the loss covered by such a policy, such other insurance shall be excess insurance only.

In the event of the breach of any provision of this Section, or in the event any notice is received which indicates any required insurance coverage will be diminished or canceled, PCEA, at its option, may, notwithstanding any other provision of this Agreement to the contrary, immediately declare a material breach of this Agreement and suspend all further work and payment pursuant to this Agreement.

10. Compliance With Laws

All services to be performed by Contractor pursuant to this Agreement shall be performed in accordance with all applicable Federal, State, County, and municipal laws, ordinances, and regulations, including but not limited to the Health Insurance Portability and Accountability Act of 1996 (HIPAA) and the Federal Regulations promulgated thereunder, as amended (if applicable), the Business Associate requirements set forth in Attachment H (if attached), the Americans with Disabilities Act of 1990, as amended, and Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of disability in programs and activities receiving any Federal or County financial assistance. Such services shall also be performed in accordance with all applicable ordinances and regulations, including but not limited to appropriate licensure, certification regulations, provisions pertaining to confidentiality of records, and applicable quality assurance regulations. In the event of a conflict between the terms of this Agreement and any applicable State, Federal, County, or municipal law or regulation, the requirements of the applicable law or regulation will take precedence over the requirements set forth in this Agreement.

Contractor will timely and accurately complete, sign, and submit all necessary documentation of compliance.

11. Non-Discrimination and Other Requirements

a. General Non-discrimination

No person shall be denied any services provided pursuant to this Agreement (except as limited by the scope of services) on the grounds of race, color, national origin, ancestry, age, disability (physical or mental), sex, sexual orientation, gender identity, marital or domestic partner status, religion, political beliefs or affiliation, familial or parental status (including pregnancy), medical condition (cancer-related), military service, or genetic information.

b. Equal Employment Opportunity

Contractor shall ensure equal employment opportunity based on objective standards of recruitment, classification, selection, promotion, compensation, performance evaluation, and management relations for all employees under this Agreement. Contractor's equal employment policies shall be made available to PCEA upon request.

c. Section 504 of the Rehabilitation Act of 1973

Contractor shall comply with Section 504 of the Rehabilitation Act of 1973, as amended, which provides that no otherwise qualified individual with a disability shall, solely by reason of a disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination in the performance of any services this Agreement. This Section applies only to contractors who are providing services to members of the public under this Agreement.

d. Compliance with County's Equal Benefits Ordinance

With respect to the provision of benefits to its employees, Contractor shall comply with Chapter 2.84 of the County Ordinance Code, which prohibits contractors from discriminating in the provision of employee benefits between an employee with a domestic partner and an employee with a spouse. In order to meet the requirements of Chapter 2.84, Contractor must certify which of the following statements is/are accurate:

- ☒ Contractor complies with Chapter 2.84 by offering the same benefits to its employees with spouses and its employees with domestic partners.

- ☐ Contractor complies with Chapter 2.84 by offering, in the case where the same benefits are not offered to its employees with spouses and its employees with domestic partners, a cash payment to an employee with a domestic partner that is equal to Contractor's cost of providing the benefit to an employee with a spouse.
- ☐ Contractor is exempt from having to comply with Chapter 2.84 because it has no employees or does not provide benefits to employees' spouses.
- ☐ Contractor does not comply with Chapter 2.84, and a waiver must be sought.

e. Discrimination Against Individuals with Disabilities

The nondiscrimination requirements of 41 C.F.R. 60-741.5(a) are incorporated into this Agreement as if fully set forth here, and Contractor and any subcontractor shall abide by the requirements of 41 C.F.R. 60-741.5(a). This regulation prohibits discrimination against qualified individuals on the basis of disability and requires affirmative action by covered prime contractors and subcontractors to employ and advance in employment qualified individuals with disabilities.

f. History of Discrimination

Contractor must check one of the two following options, and by executing this Agreement, Contractor certifies that the option selected is accurate:

- ☒ No finding of discrimination has been issued in the past 365 days against Contractor by the Equal Employment Opportunity Commission, Fair Employment and Housing Commission, or any other investigative entity.
- ☐ Finding(s) of discrimination have been issued against Contractor within the past 365 days by the Equal Employment Opportunity Commission, Fair Employment and Housing Commission, or other investigative entity. If this box is checked, Contractor shall provide PCEA with a written explanation of the outcome(s) or remedy for the discrimination.

g. Reporting; Violation of Non-discrimination Provisions

Contractor shall report to the Chief Executive Officer of PCEA the filing in any court or with any administrative agency of any complaint or allegation of discrimination on any of the bases prohibited by this Section of the Agreement or Section 11, above. Such duty shall include reporting of the filing of any and all charges with the Equal Employment Opportunity Commission, the Fair Employment and Housing Commission, or any other entity charged with the investigation or adjudication of allegations covered by this subsection within 30 days of such filing, provided that within such 30 days such entity has not notified Contractor that such charges are dismissed or otherwise unfounded. Such notification shall include a general description of the circumstances involved and a general description of the kind of discrimination alleged (for example, gender-, sexual orientation-, religion-, or race-based discrimination).

Violation of the non-discrimination provisions of this Agreement shall be considered a breach of this Agreement and subject the Contractor to penalties, to be determined by the Chief Executive Officer, including but not limited to the following:

- i. termination of this Agreement;
- ii. disqualification of the Contractor from being considered for or being awarded a PCEA contract for a period of up to 3 years;

- iii. liquidated damages of \$2,500 per violation; and/or
- iv. imposition of other appropriate contractual and civil remedies and sanctions, as determined by the Chief Executive Officer.

To effectuate the provisions of this Section, the Chief Executive Officer shall have the authority to offset all or any portion of the amount described in this Section against amounts due to Contractor under this Agreement or any other agreement between Contractor and PCEA.

13. Compliance with County Employee Jury Service Ordinance

Contractor shall comply with Chapter 2.85 of the County's Ordinance Code, which states that Contractor shall have and adhere to a written policy providing that its employees, to the extent they are full-time employees and live in San Mateo County, shall receive from the Contractor, on an annual basis, no fewer than five days of regular pay for jury service in San Mateo County, with jury pay being provided only for each day of actual jury service. The policy may provide that such employees deposit any fees received for such jury service with Contractor or that the Contractor may deduct from an employee's regular pay the fees received for jury service in San Mateo County. By signing this Agreement, Contractor certifies that it has and adheres to a policy consistent with Chapter 2.85. For purposes of this Section, if Contractor has no employees in San Mateo County, it is sufficient for Contractor to provide the following written statement to County: "For purposes of San Mateo County's jury service ordinance, Contractor certifies that it has no full-time employees who live in San Mateo County. To the extent that it hires any such employees during the term of its Agreement with San Mateo County, Contractor shall adopt a policy that complies with Chapter 2.85 of the County's Ordinance Code." The requirements of Chapter 2.85 do not apply if this Agreement's total value listed Section 2, above, is less than one-hundred thousand dollars (\$100,000), but Contractor acknowledges that Chapter 2.85's requirements will apply if this Agreement is amended such that its total value meets or exceeds that threshold amount.

14. Retention of Records; Right to Monitor and Audit

(a) Contractor shall maintain all required records relating to services provided under this Agreement for three (3) months after PCEA makes final payment and all other pending matters are closed.

(b) Contractor shall comply with all program and fiscal reporting requirements set forth by applicable Federal, State, and local agencies and as expressly stated as required by PCEA in this Agreement.

(c) Contractor agrees upon reasonable notice to provide to PCEA, prior to termination or, if earlier, completion of Contractor's services hereunder, to any Federal or State department having monitoring or review authority, to PCEA's authorized representative, and/or to any of their respective audit agencies access to and the right to examine all records and documents necessary to determine compliance with relevant Federal, State, and local statutes, rules, and regulations, to determine compliance with this Agreement, and to evaluate the quality, appropriateness, and timeliness of services performed.

15. Merger Clause; Amendments

This Agreement, including the Exhibits and Attachments attached to this Agreement and incorporated by reference, constitutes the sole Agreement of the parties to this Agreement and correctly states the rights, duties, and obligations of each party as of this document's date. In the event that any term, condition, provision, requirement, or specification set forth in the body of this Agreement conflicts with or is inconsistent with any term, condition, provision, requirement, or specification in any Exhibit and/or Attachment to this Agreement, the provisions of the body of the Agreement shall prevail. Any prior agreement, promises, negotiations, or representations between the parties not expressly stated in this

document are not binding. All subsequent modifications or amendments shall be in writing and signed by the parties.

16. Controlling Law; Venue

The validity of this Agreement and of its terms, the rights and duties of the parties under this Agreement, the interpretation of this Agreement, the performance of this Agreement, and any other dispute of any nature arising out of this Agreement shall be governed by the laws of the State of California without regard to its choice of law or conflict of law rules. Any dispute arising out of this Agreement shall be venued either in the San Mateo County Superior Court or in the United States District Court for the Northern District of California.

17. Notices

Any notice, request, demand, or other communication required or permitted under this Agreement shall be deemed to be properly given when both: (1) transmitted via facsimile to the telephone number listed below or transmitted via email to the email address listed below; and (2) sent to the physical address listed below by either being deposited in the United States mail, postage prepaid, or deposited for overnight delivery, charges prepaid, with an established overnight courier that provides a tracking number showing confirmation of receipt.

In the case of PCEA, to:

Name/Title: Jan Pepper, Chief Executive Officer
Address: 2075 Woodside Road, Redwood City, CA 94061
Telephone: 650-260-0100
Email: jpepper@peninsulacleanenergy.com

In the case of Contractor, to:

Name/Title: Gary Dorris, President
Address: 1877 Broadway, Suite 706
Telephone: 303-415-1400
Email: gdorris@ascendanalytics.com

18. Electronic Signature

If both PCEA and Contractor wish to permit this Agreement and future documents relating to this Agreement to be digitally signed in accordance with California law, both boxes below must be checked. Any party that agrees to allow digital signature of this Agreement may revoke such agreement at any time in relation to all future documents by providing notice pursuant to this Agreement.

For PCEA: ☒ If this box is checked by PCEA, PCEA consents to the use of electronic signatures in relation to this Agreement.

For Contractor: ☒ If this box is checked by Contractor, Contractor consents to the use of electronic signatures in relation to this Agreement.

19. No Recourse Against PCEA's Member Agencies

Contractor acknowledges and agrees that PCEA is a Joint Powers Authority, which is a public agency separate and distinct from its member agencies. All debts, liabilities, or obligations undertaken by PCEA

in connection with this Agreement are undertaken solely by PCEA and are not debts, liabilities, or obligations of its member agencies. Contractor waives any recourse against PCEA's member agencies.

* * *

In witness of and in agreement with this Agreement's terms, the parties, by their duly authorized representatives, affix their respective signatures:

PENINSULA CLEAN ENERGY AUTHORITY

By:

Chief Executive Officer, Peninsula Clean Energy Authority

Date:

ASCEND ANALYTICS, LLC

Contractor's Signature


Date: June , 2020

Exhibit A

RFO Scope of Work

In consideration of the payments set forth in Exhibit B, Contractor shall provide the following services:

Ascend will provide RFO evaluation services to be shared between Peninsula Clean Energy and San Jose Community Energy. Each task is summarized in the following table:

Task #	Name	Expected Activities	Deliverables	Timeline
1	Preparation, Solicitation Design and Support	<ul style="list-style-type: none"> • Kickoff meeting with PCE and SJCE • Generate project plan and RFO valuation strategy <ul style="list-style-type: none"> ○ Define requirements including quantity of RECs, RA, time of delivery, diversity of resources, controllability of storage resources, local, environmental performance, etc. ○ Define timeline for bidder webinar, bidder question and answer period, submission, and evaluation schedule. ○ Define selection criteria, weighting, and how each category will be scored quantitatively. ○ Review and advise on proposed scoring schemes ○ Describe analytical methods and processes ○ Output spreadsheet ○ Mockup of final charts and tables ○ Price forecasts • Provide templates and review and advise on RFO valuation language to include in external facing materials • Provide PCE and SJCE with Ascend developer contact list • Participate in bidder webinar • Assist PCE and SJCE to answer bidder questions as needed 	<ul style="list-style-type: none"> • Kickoff meeting • Project plan • RFO valuation strategy (internal) • RFO Evaluation templates for bidders • RFO valuation description for bidders • Bidder contact list for marketing 	July
2	Set up SJCE portfolio and load in PowerSimm	<ul style="list-style-type: none"> • Request SJCE load and resource data • Upload data into PowerSimm • Test and validate portfolio 	<ul style="list-style-type: none"> • PowerSimm model of SJCE's load and resources 	July

3	RFO Evaluation	<ul style="list-style-type: none"> • Conduct QA/QC of offers and identify bidders with errors needing correction. PCE and SJCE may choose to interact with bidders to provide an opportunity to remediate errors. • Generate final “long-list” excluding non-conforming offers and bidders that fail to remediate deficiencies. • Valuation modeling <ul style="list-style-type: none"> ○ Simulate prices at relevant pNodes where projects interconnect. ○ Simulate ancillary services prices ○ Projects with batteries are dispatched relative to energy and ancillary prices ○ Projects without batteries are valued based on simulated output at the real-time price. ○ Calculate net energy market value and resource adequacy value ○ Run projects against PCE’s portfolio for evaluating 24/7 100% renewable goal • Ascend recommends most cost-effective projects to meet PCE and SJCE goals • Include quantitative evaluation within overall evaluation scoring criteria. • Show stochastic outputs such as mean, median, P95, P5 and risk premium • Portfolio level analysis, including different combinations of resources designed to meet cost, reliability, risk reduction, and environmental goals • Final summary spreadsheets and PowerPoint maps, charts, and tables. 	<ul style="list-style-type: none"> • Comprehensive spreadsheet summarizing all offers with key descriptive information and selection criteria ranking for each offer • Comprehensive summary report and an Excel spreadsheet with final resource recommendations • PowerPoint with project summary and recommendations 	August – September
4	Post- RFO negotiation support	<ul style="list-style-type: none"> • Support PCE and SJCE with ad hoc analysis requests during contract negotiations 		October - December

Details

TASK 1: PREPARATION, SOLICITATION DESIGN AND SUPPORT

In task 1, we will prepare all materials and platforms needed to assure a smooth RFO process.

Kick-off meeting

The first step is a kick-off meeting via Skype where Ascend will begin by working with PCE and SJCE to understand and clarify organizational goals and priorities. These goals and priorities will then be used to further define selection criteria and their relative importance (weighting factors), which will then be used to guide the design of the RFO, including minimum requirements, information/data requests, and outreach activities.

Project Plan

We have found that development of an internal valuation plan prior to the RFO release is a critical step in assuring a smooth methodical process. These documents clearly define:

- RFO schedule
- Project plan, with tasks, responsible persons, and dates
- Strategy for bidder communications (website, webinar, email, etc.)
- Quantity of RECs and RA desired
- Any preferences for local, diverse, etc.
- Process for scoring development risk
- Scoring rubric and weighting scheme
- Price forecasts for energy at NP15; system and local RA
- Approach to characterizing basis risk
- Key stakeholders such as the evaluation team members
- QA/QC plan
- List of bidder contacts for marketing purposes
- Discuss pipeline to get PCE's current portfolio data

Developing this document together will help everyone stay on the same page and improve consistency and quality in the evaluation process.

External solicitation materials

Ascend will work with PCE and SJCE to generate external facing documents (i.e. the RFO Protocol). These documents include:

- Description of valuation process
- List of submission requirements
- Standard offer form and excel based data templates. The data templates will include all necessary data for the valuation analysis (a macro-enabled spreadsheet will quickly organize offer data for the evaluation team)

TASK 2: SJCE POWERSIMM SET UP

Ascend will build a PowerSimm model of SJCE's load and resource contracts in order to perform portfolio level analysis with the short listed resources.

TASK 3: RFO EVALUATION

Ascend will perform all necessary tasks related to proposal evaluation and assessment. This includes providing an initial screen of offers to identify errors and notify bidders and then performing advanced analytics to perform the final selection (shortlist selection).

A. Cost-Effectiveness Analysis for Shortlisting

Projects will be valued using Ascend's analytic platform PowerSimm to simulate generation/dispatch and calculate value. The primary analysis output is the net energy value (generation and battery revenues minus PPA cost). System and local resource adequacy (RA) value is quantified based on forecasts of CAISO RA prices and effective load carrying capacities, including required storage durations. This will be reviewed and approved by PCE and SJCE.

B. Portfolio Level Analysis

Work with SJCE and PCE to combine resources into portfolios to analyze portfolio effects; changes in hourly position for energy, GHG, and RECs; risk and hedging benefits of alternative portfolios, etc.

Final Analysis Communications

Support PCE and SJCE in incorporating quantitative evaluation into overall scoring framework. Ascend will generate two summary slide decks with supporting spreadsheets. We provide:

- Statistical summary of projects by type, PPA cost, location, storage duration, etc.
- Summary bar charts showing the rank ordered economic value of each project
- Maps showing project locations by project type
- Qualitative summary by project for factors such as development risk, environmental performance, local benefits, etc.
- Summary report of hourly GHG free and %renewable profile, probably in a heatmap format

All documents will be prepared to be clear, informative, and easy to understand for Board members and a general audience. Documentation of assumptions, modeling, selection criteria, and outputs will also be provided.

TASK 4: POST RFO NEGOTIATION SUPPORT

This task should be T&M on an as needed basis to support PCE and SJCE in negotiations with bidders. Requests can include re-runs of valuations given alternative pricing or physical characteristics of projects.

Exhibit B

In consideration of the products and services provided by Contractor described in Exhibit A and subject to the terms of the Agreement, PCEA shall pay Contractor based on the following fee schedule and terms:

The following tasks will be provided at the following Fixed Price amounts:

Task #	Task Name	Price
1	Pre-RFO Activities	\$40,000
2	SJCE Portfolio Set Up	\$10,000
3a	RFO Valuation	\$60,000
3b	Portfolio Analysis	\$20,000
Total		\$130,000

Task 4 will be provided on a time and materials basis at the following hourly rates with a total not to exceed of \$15,000:

Name	Responsibility	Consulting Rates (\$/hr)
Anand Govindarajan, Ph.D.	Senior Analyst	\$250
Brandon Mauch	Manager	\$270
Brent Nelson	Manager	\$260
Daniel Weingarten	Senior Energy Analyst	\$230
Danielle Labruzzo	Senior Energy Analyst	\$220
David Millar	Director	\$310
Gary Dorris, Ph.D.	Engagement Director	\$490
Moein Choobineh	Energy Analyst	\$210
Sameera Gudladona	Energy Analyst	\$200
Scott Wigglesworth	Director	\$270
Sean Burrows	Senior Energy Analyst	\$270
Valerie Katz	Energy Analyst	\$220
Zach Brode	Energy Analyst	\$220

Payment will be due 30 days after invoices are received.

For Tasks 1 – 3, Ascend will provide invoices upon completion of the task.

For Task 4, Ascend will provide an invoice for any time or materials at the end each month.



PENINSULA CLEAN ENERGY
JPA Board Correspondence

DATE: June 12, 2020
BOARD MEETING DATE: June 25, 2020
SPECIAL NOTICE/HEARING: None
VOTE REQUIRED: None

TO: Honorable Peninsula Clean Energy Authority Board of Directors
FROM: Siobhan Doherty, Director of Power Resources
SUBJECT: Amendment to Contract with Siemens industry

BACKGROUND:

All California load serving entities are required to file an Integrated Resource Plan (IRP) with the California Public Utilities Commission (CPUC) in even years. The 2020 IRP is due September 1, 2020. Peninsula Clean Energy has contracted with Siemens Industry, Inc. along with East Bay Community Energy, San Jose Clean Energy, and the Clean Power Alliance of Southern California to conduct modeling and analysis of Peninsula Clean Energy's IRP portfolios through 2030. However, due to increases and changes in the scope of work in part due to changing requirements from the CPUC, the scope of work for the project has changed and the budget for Peninsula Clean Energy's share of costs has increased to not more than \$105,000.

RESOLUTION NO. _____

PENINSULA CLEAN ENERGY AUTHORITY, COUNTY OF SAN MATEO,

STATE OF CALIFORNIA

* * * * *

**APPROVAL OF A CONTRACT AMENDMENT TO CONSULTANT CONTRACT WITH
SIEMENS, INC. IN AN AMOUNT NOT TO EXCEED \$105,000**

RESOLVED, by the Peninsula Clean Energy Authority of the County of San Mateo, State of California (“Peninsula Clean Energy” or “PCE”), that

WHEREAS, PCE was formed on February 29, 2016; and

WHEREAS, in April 2020 the Board approved a Strategic Plan identifying one of Peninsula Clean Energy’s organizational priorities as: “design a power portfolio that is sourced by 100% carbon-free energy by 2025 that aligns supply and consumer demand on a 24 x 7 basis”; and

WHEREAS, the California Public Utility Commission has been authorized by statute to conduct a statewide integrated resources planning process; and

WHEREAS, Peninsula Clean Energy is developing an Integrated Resource Plan for submission to the integrated resources planning process; and

WHEREAS, quantitative evaluation of renewable energy projects is complex and requires specialized tools and knowledge; and

WHEREAS, Siemens Industry, Inc. has the expertise and knowledge to assist

Peninsula Clean Energy with the development and analysis of portfolios for Peninsula Clean Energy's Integrated Resource Plan submission; and

WHEREAS, Peninsula Clean Energy and Siemens Industry, Inc. entered into a contract for professional services to assist Peninsula Clean Energy with the development and analysis of portfolios for Peninsula Clean Energy's Integrated Resource Plan submission on October 28, 2019; and

WHEREAS, changes in compliance requirements from the CPUC and other changes in the scope of the analysis has required a revision of the scope of work and increase in the total project budget of approximately \$119,865; and

WHEREAS, Peninsula Clean Energy has entered into a cost sharing agreement with San Jose Community Energy (SJCE), Clean Power Alliance of Southern California (CPA), and East Bay Community Energy (EBCE) wherein SJCE, CPA and EBCE will reimburse Peninsula Clean Energy for their shares of the cost of contract, which share is approximately 72% of the contract and Peninsula Clean Energy's share is approximately 28% of the contract or approximately \$103,622,

NOW, THEREFORE, IT IS HEREBY DETERMINED AND ORDERED that the Board approves and authorizes the Chief Executive Officer to execute the amendment to the agreement with Siemens Industry, Inc. extending the term through December 31, 2020 and increasing the total budget to approximately \$119,865, the costs of which will be shared between PCE, SJCE, CPA and EBCE and of which PCE's share shall not exceed \$105,000.

* * * * *

**AMENDMENT NO. 2 TO AGREEMENT BETWEEN PENINSULA CLEAN ENERGY
AND SIEMENS INDUSTRY, INC.**

THIS AMENDMENT TO THE AGREEMENT, entered into this XXth day of June, 2020 by and between PENINUSLA CLEAN ENERGY, a California joint powers authority, hereinafter called "PCE," and Siemens Industry, Inc., hereinafter called "Contractor";

W I T N E S S E T H:

WHEREAS, the parties entered into an Agreement on October 28, 2019, for the purpose of developing and analyzing a joint integrated resources plan for PCEA and Joint CCAs to meet the regulatory compliance requirements of the California Public Utilities Commission in the Integrated Resources Proceeding R.16-02-007 ("Agreement"); and

WHEREAS, the parties executed Amendment 1 to said agreement effective February 20, 2020 for the purpose of clarifying the billing schedule and invoicing procedures.

WHEREAS, the parties wish to further amend the Agreement to extend the term of the agreement, adjust and clarify task descriptions deliverables in the Statement of Work, and accordingly adjust task budgets and invoicing schedule.

NOW, THEREFORE, IT IS HEREBY AGREED BY THE PARTIES HERETO AS FOLLOWS:

- 1. Exhibit A – IRP Technical Consulting Services Scope of Work is replaced in its entirety by the attached “Revised Exhibit A”.**
- 2. Appendix B – Fee Schedule is replaced in its entirety by the attached “Revised Exhibit B”.**
- 3. Paragraph X is replaced by the following: Subject to compliance with all terms and conditions, the term of the Agreement shall be from October 28, 2019 to September 30, 2020.**
- 4. Except as expressly amended herein, all other provisions of the Agreement shall remain in full force and effect.**
- 5. This Amendment No. 2 shall take effect upon the date of execution by both parties.**

Exhibit B

In consideration of the services provided by Contractor described in Revised Exhibit A and subject to the terms of the Agreement, PCEA shall pay Contractor based on the following fee schedule and terms:

	Preferred Portfolio 46 MMT	Preferred Portfolio 38 MMT	Compliant Portfolio 46 MMT	Compliant Portfolio 38 MMT	SJCE 30 MMT Preferred Portfolio	Disaggregate Four Portfolios	Risk Assessment	Reports	Travel	Total
Total by Deliverable	\$109,000	\$82,250	\$13,000	\$13,000		\$44,000	\$53,500	\$37,000	\$2,015	\$365,465
Task 1 – Project Management	\$12,000	\$8,000	\$1,000	\$1,000		\$4,000	\$3,500	\$2,000		\$31,500
Task 2 – Compile and Develop Inputs	\$35,000	\$25,000								\$60,000
Task 3 – Create Joint IRPs	\$60,000	\$40,000	\$12,000	\$12,000						\$124,000
Task 3a - PCE Hourly		\$9,250								\$9,250
Task 3b- SJCE 30 MMT					\$11,700					\$11,700
Task 4 – Risk Analysis							\$50,000			\$50,000
Task 5 – Participate in stakeholder meetings	\$2,000									\$2,000
Task 6 – Disaggregate IRPs for three CCAs						\$40,000				\$40,000
Task 7 – Final reports								\$35,000		\$35,000
Travel									\$2,015	\$2,015

IN WITNESS WHEREOF, the parties hereto have executed this Amendment as set forth below.

PENINSULA CLEAN ENERGY AUTHORITY

By: _____
Janis C. Pepper, CEO

Dated: _____

SIEMENS INDUSTRY, INC.

By: _____
Scott Hulett
Managing Director, Power Technologies International Business Unit

Dated: _____

By: _____
David Cavanaugh
Commercial Controller, Power Technologies International Business Unit

Dated: _____

Revised Exhibit A: IRP Technical Consulting Services Scope of Work

Note: East Bay Clean Energy (EBCE) remains a limited participant in the project. EBCE is developing their portfolios and IRP filings with the support of a third party. Consultant (Siemens) is not required to optimize portfolios, perform sensitivity analysis or stochastics, provide disaggregated results, or prepare reports or IRP filing services for EBCE. To the extent Consultant efforts provide EBCE results from JCCA analysis without additional project effort or cost, Consultant will share these disaggregated results with EBCE for informational purposes. This term applies to all aspects of the Scope of Work below unless otherwise specifically stated.

Task 1. Project Management

- a. Facilitate a one-day in person kickoff meeting followed by regular weekly meetings with the Joint CCAs throughout the entire process. The purpose of these meetings will be to develop assumptions, goals, procurement preferences and plans, and desired sensitivity analyses that will guide creation of the Joint IRPs. Consultant is to provide an agenda and summary for each meeting. Participation in weekly meetings by Consultant staff will be conducted by conference call.
- b. Establish communication protocols with the CCAs so that each CCA can track progress on the IRP workplan and have appropriate input throughout the process.
- c. Establish protocols for staff substitutions including notice and consent by CCAs.
- d. Develop a project plan and schedule with key milestones and deliverable due dates that meet the CPUC proceeding schedule. Ensure the project plan meets all CPUC requirements and objectives and each CCA's objectives and approval requirements. Ensure the plan has appropriate contingencies to allow for CPUC changes in schedule, requirements, or deliverables.

- e. Obtain comments from each CCA on the project plan and schedule.
- f. Develop procedures for maintaining confidentiality of information to secure confidential data from release and to fulfill legal requirements to avoid anti-trust or collusion concerns, as established by the Joint CCAs.
- g. Track and ensure timely progress in accordance with project timeline and schedule of deliverables.
- h. Monitor CPUC IRP proceedings and meet with CPUC staff periodically as needed to ensure the plan and modeling meets all regulatory requirements.
- i. Track budget and submit a monthly detailed invoice setting forth work undertaken and completed to Peninsula Clean Energy.
- j. Be available to answer questions from the Joint CCAs jointly, or each CCA individually as needed.

Deliverables and due dates:

Deliverable	Timeline
Prepare protocols for tracking progress	Within 2 weeks of executing contract
Draft project plan and schedule	For review at kickoff meeting
Schedule and facilitate one-day kickoff meeting	Within 2 weeks of executing contract
Prepare agendas for weekly meetings and distribute to CCAs ahead of meeting	Weekly; at least 24 hours before meeting
Distribute summaries of weekly meetings including attendees present, discussions, and any decisions	Weekly; within 24 hours of meeting
Prepare monthly invoices	Monthly; within 10 days after the end of the month until the last invoice is submitted and settled

Task 2. Compile and Develop Inputs

- a. Canvass CCAs on 1) individual values, modeling constraints, goals, current programs and resources; 2) what objectives are most important and 3) the proper balance between cost, rate stability, sustainability and reliability. These include individual CCA renewable and GHG targets. These priorities are to guide the development of the four Compliant and Preferred Portfolios described in Task 3.
- b. Comprehensively identify inputs and data needed to create Joint IRPs and gather needed information from the respective CCAs for the four Compliant and Preferred Portfolios. Ensure the inputs meet CPUC requirements and objectives, including CPUC mandated inputs and including as the CPUC changes these requirements.
- c. Create and provide a clear template to gather consistent and compatible data from each CCA. Inform CCAs of any data formatting requirements.
- d. Review information received and conduct any clarifying interviews needed to supplement and harmonize the information provided.
- e. Work with CCAs to agree on the objectives that are most important and to assign metrics to each objective that can be tracked over time.
- f. Develop a clear and comprehensive document capturing all modeling assumptions, including a comparison of CPUC required inputs versus Consultant in-house assumptions. This includes but may not be limited to:
 1. Load forecast using required IEPR annual load forecasts and CCA identified load shapes.
 2. Existing Resources
 1. Under an NDA, each CCA will provide Consultant information on existing contracts and their performance through a date compatible with timely completion of the modeling results.

2. Consultant will consider aggregating the renewable commitments for each CCA program and the penetration rates assumed for each of the programs (generally each CCA has a least two offerings, a fully renewable and a partially renewable program).
3. New Resources/Technology options.
 1. Consultant technical staff will provide cost and performance forecasts for energy block market purchases, renewables and storage, ramping technologies, and emerging technologies, to be approved by the Joint CCAs, including DER technologies.
 2. Consultant will use CPUC required technology costs and performance characteristics for the following technologies.

USA Base Technologies	California Specific Technologies
Advanced 2x1 Combined Cycle	Flow Batteries
Small Aero Simple Cycle CT	Floating Offshore Wind
RICE – NG	Geothermal
Utility Solar PV – Tracking	Biogas
Onshore Wind	Small Scale Hydro
Batteries - Lithium-ion	Long duration storage (Pumped Hydro)

- g. To the extent that CPUC required assumptions differ materially with Consultant in-house assumptions, Consultant shall identify such differences and recommend to the Joint CCAs approaches to test or assess the impact

of such differences through scenarios analysis or risk analysis.

1. Consultant will provide market-based forecasts for northern California and WECC (prices of fuels, carbon, other emissions, capital costs for viable generating and demand side technologies and other typical inputs).
 - i. For the Portfolios, Consultant will use the CPUC input assumptions where they are provided and will fill in the gaps with its latest forecasts.
 - ii. To the extent that CPUC required input assumptions differ materially with Consultant in-house or recommended assumptions, Consultant shall identify such differences and recommend to the Joint CCAs approaches to test the impact of such differences through scenarios analysis or risk analysis.
2. Consultant will work with the CCAs to develop inputs for four Portfolios (two 46 MMT Portfolios and two 38 MMT Portfolios). See Task 3 for Portfolio descriptions.

Deliverable	Timeline
Consultant will execute an NDA with the joint CCA	Within 1 week of the kickoff meeting
Create and provide a clear draft template to gather consistent and compatible data sets from each CCA with all necessary due dates	1 week after signing the service order.
Discuss feedback on template	At kickoff meeting
Finalize template	1 week after kickoff meeting

Obtain approval for the Joint CCAs on all assumptions to be used for the Conforming Portfolios.	As appropriate.
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Task 3. Create Joint CCA IRPs

- a. Model the performance of two aggregated Preferred Portfolios, one for a 46 MMT greenhouse gas target and one for a 36 MMT greenhouse gas target, using Aurora Capacity Expansion Tool or other production cost software to establish cost performance, reliability, GHG emissions, and criteria pollutant emissions. Preferred Portfolios shall refer to portfolios using individual CCA RPS and GHG targets. For screening different technologies and selecting preferred portfolios of demand side and supply side assets, Consultant will utilize AURORAxmp. Forecast joint forward requirements for two Preferred Portfolios and select appropriate resources. Incorporate, as appropriate, information provided by other CCAs.

As of June 18, 2020, the CPUC appears to be requiring that the 46 MMT case conform to the GHG benchmarks corresponding to the 46 MMT case, while the 38 MMT case can meet or beat the GHG benchmarks associated with the 38 MMT case. All cases are required to conform to the CPUC load and cost assumptions, and all such portfolios are termed “conforming.” Portfolios which additionally comply with CCA-specific targets and requirements are termed “preferred” and typically have more aggressive renewable and GHG targets than CPUC requirements. Portfolios that instead comply with CPUC-assigned GHG emissions benchmarks are termed “compliant.”

- b. Create Two Joint Preferred Portfolios that are consistent with the CPUC reference cases for the adopted 46 MMT and 38 MMT state targets, CPUC required inputs, and the additional priorities of the CCAs as

identified in step 2a above. The Preferred Portfolios shall meet or exceed the CPUC 46 and 38 MMT targets and use individual CCA RPS and GHG targets. The Preferred Portfolios may exceed the carbon reduction goals of 46 MMT and 38 MMT established by the CPUC.

1. Where necessary, assist Joint CCAs to agree on assumptions.
2. Using CPUC agreed-upon assumptions, CCA-specific data, and any other additional agreed-upon assumptions and priorities, undertake modeling to identify a joint plan with alternatives to allow each CCA to meet state law requirements and each CCA's GHG benchmark.
3. Work with CCAs to select an agreed-upon suite of additional resources that achieve the goals listed in ii.
4. Coordinate with CPUC staff as needed to ensure all modeling is compliant with CPUC requirements and objectives.
5. Develop methodologies in consultation with CCAs for showing that the resultant portfolios meet each CCA's fair share of reliability and renewable integration/ramping needs as described in CPUC Decision 20-05-028.

- c. Create Two Joint Compliant Portfolios that are consistent with the CPUC reference cases for the adopted 46 MMT and 38 MMT state targets, CPUC required inputs, and the additional priorities of the CCAs as identified in step 2a above. The Compliant Portfolios shall approximately meet the CPUC 46 and 38 MMT targets. The two Compliant Portfolios may be developed by adjusting the resource mix of the two respective Preferred Portfolios until they approximately meet the 46 MMT and 38 MMT state targets.

- d. Create one 30MMT Portfolio for SJCE that is consistent with the CPUC 38MMT Reference System Portfolio Case. This case may be developed by adjusting the resource mix from the 38MMT Compliant or Preferred Portfolios to get a portfolio that approximately meets SJCE's proportionate share of a 30MMT statewide goal. Undertake a stochastic risk analysis of this case as described in Task 4.
- e. True-up with CPUC 2019 reference system plan.
- Consultant shall incorporate the required constraints and assumptions from the Reference System Portfolio approved by the CPUC on March 26, 2020.

Deliverables: Four (4) Joint CCA Portfolios, a 46 MMT Portfolio and a 38 MMT Portfolio using individual CCA RPS and GHG targets, and a 46 MMT and 38 MMT Portfolio that approximately meet but do not exceed the CPUC targets. These will include:

- A report describing recommendations as a result of the joint IRP efforts including documenting the assumptions, methodologies, and modeling analyses.
 - All the data and inputs required to file the IRP reports with the CPUC in easily shareable formats like MS Excel spreadsheets, and / or MS Word and / or MS PowerPoint documents (as directed by the Joint CCAs) including cost, reliability/renewable integration needs, GHG-emissions, other pollutants, rate results, and a dashboard enabling sensitivity analysis.
 - Consultant will provide these spreadsheets for each Portfolio.
- f. Evaluate sensitivities
1. Consultant will compare the two 46 MMT Portfolios and two 38 MMT Portfolios to evaluate the incremental changes in cost, rates,

and emissions from exceeding the state targets with the individual CCA RPS and GHG targets.

2. Develop one sensitivity based on reduced demand for each CCA, which may be caused by less than expected subscription to each CCAs customer programs, by direct access, or other cause. Consultant shall work with each CCA to determine the amount of demand reduction to assume in the sensitivity. Consultant shall provide the impacts with regard to stranded long- term resources and rates.
3. In coordination with the joint CCAs, Consultant shall develop agreement on the set of metrics for reporting from the sensitivity scenarios, such as GHG emissions, reliability measures, and cost.
4. Deliverables:
 - Provide the CCAs with a comprehensive list of key variables and the sensitivities that are recommended.
 - Obtain feedback from the joint CCAs on the approach, sensitivities and assumptions.
 - Provide sensitivity modeling results in excel format that show the impacts of the future outcomes and key risks for each CCA.

Task 3a PCE Hourly Analysis

Consultant shall develop an Alternative 38 MMT Portfolio for PCE only to determine what additional resources would be required to allow PCE to meet 100% of PCE demand for all hours of the study period using internal resources. The process is expected to require several trial and error production cost simulations, up to a maximum of four iterations.

Task 3b SCJE 30 MMT portfolio

Create one 30MMT Portfolio for SJCE that is consistent with the CPUC 38MMT Reference System Portfolio Case. This case may be developed by adjusting the resource mix from the 38MMT Compliant or Preferred Portfolios to get a portfolio that approximately meets SJCE's proportionate share of a 30MMT statewide goal. Undertake a stochastic risk analysis of this case as described in Task 4.

Task 4. Risk Analysis

Consultant shall perform a stochastic risk analysis on changes to assumptions. Once the four Preferred and Compliant Portfolios have been completed, Consultant shall perform stochastic risk analysis on three of the portfolios: 46 MMT and 38 MMT Preferred Portfolios and the 46 MMT Compliant Portfolio. Consultant will test each portfolio against a range of future conditions to ensure that the portfolio selected will stand up under a range of uncertainty via a stochastic approach which includes the development of 200 Monte Carlo iterations of the key variables and testing each portfolio against each iteration of the variables. Consultant has distributions for all the key variables (load forecasts, emission prices, fuel prices, technology costs, etc.) that can be used for selecting the 200 iterations of the model. Consultant will subject each of the portfolios to the full range of stochastics and track how well each portfolio performs against the range of market conditions.

Consultant will develop a distribution of costs, emissions and all the metrics selected at the initiation of the project. The analysis will provide a range of market price exposure, in terms of volume and price, to which the CCA portfolios exposed. The analysis will also provide ranges of curtailment based on the range of market conditions and the extent to which portfolios might be out of market under certain conditions.

The stochastic metrics will also provide insights into reliability of the CCA portfolio by indicating price spikes under various future conditions that indicate severe shortages. This analysis assumes the CAISO market will serve the energy as a supplier of last resort, but prices may spike during shortages

Task 5. Support external stakeholder meetings

Support one external stakeholder meetings. Based on the feedback received and further discussion with the joint CCAs, provide adjustments to Joint IRP models or additional documentation.

1. Consultant to assist with presentation materials and addressing questions.
2. Additional analysis to be performed on a time and materials basis.

PTI Consulting Hourly Rates	Rate (\$ per Hour)
Principal	365
Principal Engineering Consultant	328
Senior Staff Consultant	290
Manager	277
Senior Consultant	243
Engineering Project Manager	244
Staff Engineering Consultant	244
Consultant	220
Senior Engineering Consultant	205
Engineering Consultant	181
Analyst	171
Admin	76

Deliverables: Provide summary information on the modeling methodology and results in a PowerPoint format to be shared with external stakeholders.

Task 6. Create individual CCA Reports and Filings

- Create a report describing individual CCA recommendations as a result of the joint IRP effort. Consultant to support the development of these reports by documenting the IRP modeling techniques, assumptions, goals, as well as results pertaining to recommended procurement, rate, reliability metrics, GHG-emissions, and other pollutants in Word format to be used as a component of CCA IRP Narrative Template filing.
- FOR CPA, SJCE, and PCE ONLY: Consultant to provide all the data and inputs required to file the IRP reports for each portfolio with the CPUC in easily shareable formats such as MS Excel spreadsheets, and / or MS Word and / or MS PowerPoint documents (as directed by the Joint CCAs). This will include all the resource, cost, reliability, renewable integration, and local pollution impacts, including the conforming portfolios rate results, GHG-emissions, integration needs, assumptions, and dashboards.
- FOR CPA, SJCE, and PCE ONLY: Consultant will fill out the Resource Data Template, the Clean System Power Calculator, and the relevant Narrative Template sections (currently primarily in Section I and II of the narrative template) regarding methods and results with the results of the IRP results for those portfolios selected by each CCA, including cost, reliability/renewable integration needs, GHG-emissions, other pollutants, rate results, and a dashboard enabling sensitivity analysis. These files will be in the proper format required by the CPUC.
- FOR CPA, SJCE, and PCE ONLY: a PowerPoint document describing the individual CCA recommended procurement results.
- Consultant will ensure the final reports to be filed with the CPUC meet all CPUC regulatory requirements and can ultimately be utilized for the IRP filing.

- Answer questions from the CPUC or other stakeholders on the final plans to ensure regulatory compliance.

Deliverables: a total of three (3) IRP Word reports, one (1) for each CCA, a total of three (2) sets of MS Excel file(s) that contains the results of the conforming IRP results, and a total of three (3) PowerPoint documents describing the individual CCA recommended procurement results.

Task 7. Post-Submission Support

Consultant will support any additional data requests or supplemental analysis, as requested by the CPUC or under the California Public Records Act (CPRA), California Civil Code Section 6250, et seq., on a time and materials cost basis as negotiated between Consultant and a CCA or the Joint CCAs. Rates provided above in Task 5 shall apply.