



Request for Proposals

Peninsula Clean Energy, a California Joint Powers Authority, is seeking proposals
from interested vendors for

Load and Resource Scheduling Coordinator Services

Load Forecasting Services

Renewable Forecasting Services

Congestion Revenue Rights Portfolio Management

Responses are due **September 15, 2020 5 PM Pacific Time.**



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1. RFP OVERVIEW

Peninsula Clean Energy Authority (PCE) issues this Request for Proposals (RFP) to seek offers from qualified providers for one or more of the following services: load and resource scheduling, load and resource forecasting, and CRR portfolio management.

This RFP-

- Provides general background on Peninsula Clean Energy
- Describes the service sought by Peninsula Clean Energy (scope of work)
- Provides an opportunity for Proposers to describe their qualifications and experience and explain how they can contribute to services requested.

Offers for this RFP are due **September 15, 2020 by 5 PM PPT**. PCE will evaluate the offers received from this RFP. PCE expects to notify shortlisted respondents by September 23, 2020. PCE may interview shortlisted respondents and the contract may be taken to Peninsula Clean Energy's Board of Directors for final approval.

PCE is seeking services across eight tasks. Respondents offering scheduling coordination services must bid on Tasks 1 – 3. Tasks 4 – 8 can be bid in addition to Tasks 1 – 3 or independently, meaning respondents may bid on one or all of Tasks 4 – 8 without bidding on Tasks 1 – 3. Additional detail on each of these tasks is provided Section 11, Detailed Project Description and Scope below.

- Task 1: Load Scheduling Coordinator Services
- Task 2: Resource Scheduling Coordinator Services
- Task 3: Load and Resource Optimization
- Task 4: Load Forecasting Services – Day-ahead and short-term (1-14-day horizon)
- Task 5: Load Forecasting Services – Medium-term to long-term (1-10-year horizon)
- Task 6: Renewable Energy Forecasting Services – Short-term renewable forecasting (1-14-day horizon)
- Task 7: Renewable Energy Forecasting Services – Medium-term to long-term renewable forecasting (1-10-year horizon)
- Task 8: Congestion Revenue Rights Portfolio Management Services

PCE's 3,600 GWh annual load resides in the California Independent System Operator (CAISO) Balancing Authority Area and PCE is seeking a qualified Scheduling Coordinator (SC) to schedule PCE's load on a 24x7 basis starting January 1, 2021. PCE believes there is opportunity for optimization by hiring one scheduling coordinator for both load and resources. PCE's current Resource SC contract runs through September 2021, so Resource SC services

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would start September 27, 2021. Contracts for short term load forecasting and CRR portfolio management services would start by January 1, 2021. Other tasks are more flexible for timing start.

Proposers are required to price each task independently if bidding for multiple tasks but may, if desired, propose alternative prices if PCE chooses to combine two or more of the proposed services.

2. ABOUT PENINSULA CLEAN ENERGY

Peninsula Clean Energy, a community choice energy aggregator, is San Mateo County's official electricity provider. Formed in February 2016, Peninsula Clean Energy is a joint powers authority, consisting of the County of San Mateo and all twenty of its towns and cities. Peninsula Clean Energy provides cleaner and greener electricity, and at lower rates, than the incumbent investor-owned utility (IOU), Pacific Gas & Electric Company (PG&E). Peninsula Clean Energy plans for and secures commitments from a diverse portfolio of energy-generating resources to reliably serve the electric energy requirements of its customers over the near-, mid-, and long-term planning horizons. Peninsula Clean Energy's programs include advancing the adoption of electric vehicles and transitioning building fossil fuel uses to low carbon electricity. For more information on Peninsula Clean Energy, please go to www.peninsulacleanenergy.com.

Peninsula Clean Energy was the second of three Community Choice Aggregators in California to obtain investment-grade credit ratings. In May 2019, Peninsula Clean Energy received an investment grade credit rating of Baa2 from Moody's and in April 2020, Peninsula Clean Energy received an investment grade credit rating of BBB+ from Fitch. As of December 31, 2019, Peninsula Clean Energy had an unaudited cash balance of \$175.4 million, of which \$162.4 million was unrestricted. The unrestricted cash balance represented 264 days of cash on hand, well in excess of Peninsula Clean Energy's Board updated policy requirement of 180 days. Peninsula Clean Energy's financial statements including its fiscal year 2018-2019 audited financials are available on Peninsula Clean Energy's website.

Peninsula Clean Energy currently provides electricity service to approximately 300,000 customer accounts. This represents a population of over 700,000 people with 3,600 GWh of clean electricity annually.

As part of its mission-driven, collaborative, not-for-profit, locally-focused roots, Peninsula Clean Energy is committed to two key organizational priorities:

- 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
- Contribute to San Mateo County reaching the state's goal to be 100% greenhouse gas-free by 2045

and to the following strategic goals:

1. Secure sufficient, low-cost, clean sources of electricity that achieve Peninsula Clean Energy's priorities while ensuring reliability and meeting regulatory mandates

2. Strongly advocate for public policies that support Peninsula Clean Energy’s Organizational Priorities
3. Implement robust energy programs that reduce greenhouse gas emissions, align energy supply and demand, and provide benefits to community stakeholder groups
4. Develop a strong brand reputation that drives participation in Peninsula Clean Energy’s programs while ensuring customer satisfaction
5. Employ sound fiscal strategies to promote long-term organizational sustainability
6. Ensure organizational excellence by adhering to sustainable business practices and fostering a workplace culture of innovation, diversity, transparency, and integrity

2.1 PCE’s Procurement Portfolio

PCE currently has a total of eight Power Purchase Agreements (“PPA”) that make up its portfolio and is in negotiations to procure power from additional PPA’s including storage, wind and solar resources. The table below includes the six PPA’s in which PCE holds the scheduling coordinator responsibilities. PCE also procures shorter-term contracts for fixed priced energy, resource adequacy, renewable energy, and carbon free energy to meet its goals and compliance obligations.

The table below identifies the long-term PPAs in which PCE holds the scheduling coordinator responsibilities.

Resource Name	Resource Type	Status	Capacity (MW)	SC	Contract Start
Wright Solar Freeman	Solar	Operating	200	PCE	01/2020
Mustang II	Solar	In Construction	100	PCE	11/2020
Hatchet Creek	Small Hydro	Operating	7.5	PCE	03/2017
Bidwell Ditch	Small Hydro	Operating	2	PCE	03/2017
Roaring Creek	Small Hydro	Operating	2	PCE	03/2017
Clover Creek	Small Hydro	Operating	.99	PCE	04/2018

3. RFP SCHEDULE

Event	Date
RFP Issued	August 21, 2020
Deadline for Bidder RFP Questions	September 8, 2020
Deadline for PCE’s Response to Questions	September 11, 2020
RFP Proposals Due	September 15, 2020, 5 PM PPT
Shortlist Notification	September 23, 2020
Shortlist Interviews	September 28-29
Contract Negotiations	October 1 - 15
Contract Approval by PCE Board, if necessary	October 22, 2020
Execute Contracts	October 23, 2020

- **Question & Answer:** Proposers should submit questions concerning the RFP at procurement@peninsulacleanenergy.com on or prior to September 8, 2020.
- **Offers Due:** Participants’ Offers must be submitted by **September 15, 2020 at 5 PM PPT** to procurement@peninsulacleanenergy.com, and must include the required documents described below in Section 5 and price each service using the bid template (*Attachment 1*) provided in this RFP.
- **Offer Review:** Peninsula Clean Energy will evaluate all Offers according to the criteria listed in Section 6 below. During this phase, Peninsula Clean Energy will identify submitted Offers for short-listing, and then notify short-listed Participants. Peninsula Clean Energy expects to notify short-listed Participants by September 23, 2020.
- **Contract Redline:** Prior to interview, each shortlisted participant will provide a redline of PCE’s contract.
- **Interviews with Shortlisted Participants:** Peninsula Clean Energy will conduct virtual interviews with Shortlisted Parties on September 28-29.
- **Contract approval from PCE Board:** Certain contracts may need to be approved by PCE’s Board. If this is required, the contract will need to be made available publicly.

4. PROPOSAL SUBMITTAL

Proposals must be received on or before the above deadline and submittal must be by email to procurement@peninsulacleanenergy.com with the subject "Proposal - Scheduling Coordinator Services RFP <Vendor Name> <Bid for <Indicate Task ##>".

By participating in Peninsula Clean Energy's RFP process, a Proposer acknowledges that it has read, understands, and agrees to the terms and conditions set forth in these RFP instructions. Peninsula Clean Energy reserves the right to reject any offer that does not comply with the requirements identified herein. Furthermore, Peninsula Clean Energy may, in its sole discretion and without notice, modify, suspend, or terminate the RFP without liability to any organization or individual. The RFP does not constitute an offer to buy or create an obligation for Peninsula Clean Energy to enter into an agreement with any party, and Peninsula Clean Energy shall not be bound by the terms of any offer until Peninsula Clean Energy has entered into a fully executed agreement. Only electronic submittals will be accepted.

5. CONTENT OF RESPONSE

Interested vendors must submit the following documents to be considered in the RFP. Please complete the Submission Materials in Section 5.1 and the Qualifications and Experience in Section 5.2 below. Proposers only need to respond to the questions in Section 5.2 for the services they are bidding.

5.1 Submission Materials

1. Cover Letter with the following elements (1 page):

- Reference to this RFP
- Legal business name, address, telephone number, and business status (corporation, limited partnership, individual, etc.).
- Name of vendor's representative with respect to this RFP along with telephone number and email address.
- Include identification of relevant licenses and certifications, if applicable.
- Identification of which tasks Proposer is responding.
- Existence of and circumstances surrounding any claims and violations against you or your organization.
- A signature of an authorized individual.

2. Qualifications and Experience:

- Describe your organization's experience related to the specific tasks you are bidding on as further described in section 5.2 below.
 - Please limit your response per task to no more than 5 pages. Responses for Tasks 1-3 are allowed a total of 15 pages.
- Provide resumes for the key staff that will be providing these services.
 - These materials do not need to be included in the 5 page limit per task.

3. Pricing:

- All services should be priced using the RFO bid template - see *Attachment 1*.
- Preferred payment structures for to meet the Scope of Work in Section 11.
 - Tasks 1-3: Load and Resource Scheduling Services may be offered as a fixed monthly cost or \$/MWh cost.
 - Tasks 4-7: Load and Resource Forecasting Services are not limited to any pricing structure, PCE is open to different pricing structures and encourages innovative thinking.
 - Example – A pricing structure based on accuracy of forecasts

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- Task 8: Congestion Revenue Rights Portfolio Management are not limited to any specific pricing structure, PCE is open to different pricing structures and encourages innovative thinking.
 - Examples – fixed monthly, annual, or incentive based structure
- *Required* – Proposers are asked to price each service independently if bidding for multiple services as further specified in the bid template. PCE reserves the right, at its sole discretion, to reject any bids for multiple services that are not priced independently.
- *Optional* – If desired, proposers may offer a second alternative price if PCE were to couple two or more of the proposed services. Please detail any discounts that are available and the conditions for such discounts.

4. Financial strength of Proposer including the following:

- Credit rating;
- Parent Company; and
- Financial Statements

5. Certificates of Insurance for the following coverages:

- Commercial General Liability – for bodily injury, property damage, and personal injury \$1,000,000 – each occurrence \$2,000,000 – in aggregate
- Business Automobile Liability – “any auto” (Company Vehicles) – At least \$1,000,000
- Personal Automobile Liability – “any auto” (Personal Vehicles) – At least \$500,000
- Worker’s Compensation and Employer’s Liability (EPL) – injury or death, each accident At least \$1,000,000 (EPL not required for Sole Proprietor)

6. References:

- Please provide contact information for at least two references that can speak to your experience providing the services described.
- If you are bidding on multiple tasks, please provide at least two references that can speak to each task. If you provided multiple services to one reference, it is fine for that reference to speak to your organization’s experience providing multiple services.
- If you have provided similar services to a California CCA, please include a CCA reference.

7. Supplier Diversity Questionnaire (Optional):

- Peninsula Clean Energy’s Supplier Diversity Questionnaire can be downloaded at: <https://www.peninsulacleanenergy.com/wp-content/uploads/2020/05/Peninsula-Clean-Energy-Supplier-Diversity-Questionnaire.docx>. Please note, your response (or lack thereof) will have no impact on your contract status or eligibility to work with Peninsula Clean Energy in accordance with state law.

5.2 Qualifications, Experience and Approach

In your response, please answer the following questions listed for each Task you seek to include in your proposal to PCE. We encourage bidders to provide proposals for multiple tasks if they have the appropriate qualifications and experience. Respondents offering scheduling coordination services must bid on Tasks 1 – 3. Tasks 4 – 8 can be bid in addition to Tasks 1 – 3 or independently, meaning respondents may bid on one or all of Tasks 4 – 8 without bidding on Tasks 1 – 3. Proposers are required to price each task independently if bidding for multiple tasks but may, if desired, propose alternative prices if PCE chooses to combine two or more of the proposed tasks. Bidders are asked to provide a detailed explanation of the discounts applied and the conditions for those discounts.

Tasks 1-3: Proposals for SC Services

PCE is seeking proposals from Scheduling Coordinators (SC) who can provide both load and generation scheduling services. Please answer the questions below, which detail our preferred qualifications for load and resource scheduling. Please note: Respondents to Task 1 – 3 will promptly receive a case study from PCE after submitting a proposal. The case study for load and resource scheduling will be due if respondent is shortlisted and before conducting a virtual interview.

1. General Questions:
 - a. Please confirm that your entity is certified and listed on the CAISO Scheduling Coordinator [List of SC Entities](#).
 - b. Please demonstrate experience with the following –
 - i. Meet scheduling requirements of CAISO and WECC
 - i. 7-day, 24-hour real-time services, including weekends and holidays
 - ii. 7-day per week, day-ahead pre-scheduling services
 - c. Use of Scheduling Infrastructure Business Rules (SIBR), Automatic Dispatch System (ADS), Customer Markets Results Interface (CMRI), Customer Interface for Resource Adequacy (CIRA), Master File User Interface, and other applicable CAISO applications.
 - d. Describe any tools your organization uses for sharing scheduling and settlement information with clients.
 - e. Detail how you propose to manage the CAISO invoices and settlements, how fees due to CAISO would be passed through to PCE, and how CAISO resettlements would be documented.
 - f. Does your 24x7 trading desk have backup facilities to relocate to for emergency purposes?
 - g. Describe whether your organization acts as both a Load Scheduling Coordinator and Resource Scheduling Coordinator in CAISO and detail your

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- experience with both. In your experience, please describe the advantages and / or drawbacks of having one SC for both load and resource scheduling.
- h. PCE has previously used a SCID provided by our load scheduling coordinator. Describe the pros and cons that should be considered if PCE acquired its own SCID with CAISO and whether or not you can support PCE in this process.
 - i. Identify any challenges you foresee in providing these services and what steps you would take to mitigate these challenges.
 - j. Describe any additional information that you believe would be helpful for PCE to know in evaluating your proposal.
2. Summarize experience and background acting as a Scheduling Coordinator for load, including the following:
- a. Years of experience scheduling load in CAISO.
 - b. Methods you'd recommend to effectively manage load in CAISO.
 - c. Methods for reporting on profit and losses (accounting for PCE's financial transactions to hedge energy purchases), metered load, forecasts, schedules, weather, etc.
 - d. Detail how your organization maintains and sends settlement quality meter data to CAISO in accordance with the CAISO Tariff, and how clients are able to acquire the data to be used for their own purpose.
 - e. Describe your experience managing Ancillary Services (AS) for load in CAISO and any methods you would employ to reduce AS related costs.
3. Summarize experience and background acting as a Scheduling Coordinator for Participating Generators, including:
- a. Years of experience scheduling renewable projects in California.
 - b. Number, type, and size of projects.
 - c. Describe the experience your organization has in asset management:
 - i. Include how you report on profit and losses, metered volumes, forecasts, schedules, curtailment, outages, weather, etc.
 - ii. What methods would you recommend to effectively optimize a VER resource?
 - iii. In your experience how have you monitored and avoided scheduling the resource during periods of negative pricing?
 - iv. Please share how the VERs you currently schedule are bid into CAISO. Are they scheduled into both the Day-Ahead and Real-time Markets? Are they economic or self-scheduled bids?
 - d. Describe the experience your organization has with solar + storage resources:
 - i. Describe the experience your organization has in scheduling and dispatching solar + storage resources. What technology type and size of

- storage are you scheduling? What markets are the resources participating in?
- ii. Describe your organization's experience optimizing a battery between energy and ancillary services markets.
 - iii. Describe your understanding of the CAISO and CPUC rules around Resource Adequacy and how storage resources must be scheduled to receive RA value.
 - iv. What challenges do you foresee in optimizing a storage resource to ensure it qualifies for Resource Adequacy, while making it available to provide energy to meet PCE's load demand, and taking advantage of opportunities to sell in the Ancillary Services Market?
- e. Please describe any experience your organization has with distributed energy resources (DER) and demand response.
- i. What is your experience with scheduling aggregated DER resources into CAISO markets?
 - ii. Did your organization create resource aggregations or was this done by a Distributed Energy Resource Provider (DERP) or Demand Response Provider (DRP)?
 - iii. If working with a DERP or DRP, describe the workflow and process setting up, bidding, and operating the aggregation in the market.
 - iv. What market model(s) were used for participation?
 - v. For PDRs, what baseline methodology was used? How did actual CAISO settlements compare with expected settlements for PDR resources?
 - vi. Describe any specific challenges experienced with bidding/scheduling aggregated DER resources and any best practices you have developed and/or recommend.
 - vii. Are you involved in or following ongoing proceedings with CAISO (such as Energy Storage Distributed Energy Resource (ESDER)) to refine and/or develop market models for behind the meter (BTM) DER participation? Do you see any potential CAISO market implementations that could improve (or worsen) market values for BTM DER participation and if so to what degree and in what timeframe?
4. Summarize your experience optimizing load demand with the resources that supply that portfolio
- a. Describe the bidding and dispatch strategies you would employ to schedule PCE's load and optimize a variety of generation technologies to maximize the value of PCE's overall portfolio in the CAISO market.
 - b. PCE's goal is to become 100% renewable on a time-coincident basis (i.e., match hourly load with renewable supply) by 2025. Describe any strategies, software, and tools you would employ to effectively match 100% of PCE's hourly load with renewable generation. Note, PCE's portfolio by 2025 will include storage resources to shift renewable generation into non-solar hours.

Task 4: Load Forecasting Services – Day-ahead and short-term (1-14-day horizon)

1. Describe your approach to short-term load forecasting including assumptions, models, etc
2. Identify the software/platform used to develop load forecasts, including the following:
 - a. What are the inputs?
 - b. How is weather data normalized?
3. Explain the different ways in which PCE and PCE's SC can retrieve the forecast data for load scheduling.
 - a. Do you currently work with any SC's in providing load forecasts?
4. Describe the frequency with which the forecast is updated.
5. Describe how your organization measures accuracy of load forecasting and how successful you have been at meeting these metrics for other customers.
6. Describe how you have advised clients to account for impacts of COVID-19 and shelter in place orders.
7. Describe if you consider any risk metric in your forecasts and how you differentiate between error in load forecasting and price forecasting (mainly spread between the DA and RT).
8. Describe how would you respond to unpredicted events that could impact DA forecasts, such as Public Safety Power Shutoff (PSPS) events that PG&E issues.
9. Please provide a sample of a report you would provide to PCE with load forecasting data.
10. Identify any challenges you foresee in providing these services and what steps you would take to mitigate these challenges.
11. If you are also bidding on Task 1-3, please describe any advantages/disadvantages of having the same entity provide load forecasting and SC services.

Task 5: Load Forecasting Services – Medium-term to long-term (1-10-year horizon)

1. Describe your approach to medium to long-term load forecasting including assumptions, models, etc.
2. Identify the software/platform used to develop load forecasts, including the following:
 - a. What are the inputs?
 - b. How is weather data normalized?
3. Describe the different ways in which PCE can retrieve the forecast data for planning purposes.
4. Describe the frequency with which the forecast data is updated.
5. Describe how your organization measures accuracy of load forecasting and how successful you have been at meeting these metrics for other customers.
6. Describe how you have advised clients to account for impacts of COVID-19, shelter in place orders, and any resulting economic impacts.
7. Describe if you consider any risk metric in your forecasts or/and if you can provide confidence intervals for your forecasts.

8. Describe how you incorporate long term changes into your load forecasting including transportation and building electrification and economic and population changes.
9. Please provide a sample of a report you would provide to PCE with load forecasting data.
10. Identify any challenges you foresee in providing these services and what steps you would take to mitigate these challenges.

Task 6: Renewable Energy Forecasting Services – Short-term renewable forecasting (1-14-day horizon)

1. Describe your approach to short-term renewable forecasting including assumptions, models, etc.
2. Identify the software/platform used to develop renewable forecasts.
 - a. What are the inputs?
 - b. How is weather data normalized?
3. Describe the different ways in which PCE and PCE's SC can retrieve the forecast data for resource scheduling.
4. Do you currently work with any SC's in providing renewable forecasts?
5. Describe the frequency with which the forecast data is updated.
6. Describe how your organization measures accuracy of renewable forecasting and how successful you have been at meeting these metrics for other customers.
7. Describe how would you quantify the risk associated with renewable forecasting and if you can employ probabilistic forecasting methods.
8. Please provide a sample of a report you would provide to PCE with renewable forecasting data.
9. Identify any challenges you foresee in providing these services and what steps you would take to mitigate these challenges.
10. If you are also bidding on Task 1-3, please describe any advantages/disadvantages of having the same entity provide renewable energy resource forecasting and SC services.

Task 7: Renewable Energy Forecasting Services – Medium-term to long-term renewable forecasting (1-10-year horizon)

1. Describe your approach to medium to long-term renewable forecasting including assumptions, models, etc.
2. Provide an example of your software/platform used to develop renewable forecasts.
 - a. What are the inputs?
 - b. How is weather data normalized?
3. Describe the different ways in which PCE can retrieve the forecast data for planning purposes.

4. Describe the frequency with which the forecast data is updated.
5. Describe how your organization measures accuracy of renewable forecasting and how successful you have been at meeting these metrics for other customers.
6. Describe how would you quantify the risk associated with renewable forecasting and if you can employ probabilistic forecasting methods.
7. Please provide a sample of a report you would provide to PCE with renewable forecasting data.
8. Identify any challenges you foresee in providing these services and what steps you would take to mitigate these challenges.

Task 8. Congestion Revenue Rights Portfolio Management Services

1. Please confirm that your entity is certified and listed on the CAISO Scheduling Coordinator [List of SC Entities](#).
2. Please demonstrate your experience with the following –
 - a. Managing Congestion Revenue Rights (CRRs) in CAISO for load serving entities. How long has your entity been managing CRRs and for how many load serving entities?
 - b. Describe any strategies you would consider to best manage PCE's CRR portfolio. What strategy would you recommend for PCE?
 - c. Describe how CRRs might be used to hedge congestion risk for any resources procured by PCE and scheduled in CAISO.
3. Describe any tools your organization uses for analyzing CRR related activities and how this information is relayed to clients.
 - a. Describe how you report on the monthly P&L of each CRR portfolio, including the paths that were settled and the P&L received at those paths.
 - i. How are CAISO CRR true-up's accounted for in P&L reporting.
4. Describe any issues you foresee, if any, in managing CRRs for PCE while another SC manages PCE's load. How will the submission process be handled, and will coordination be required of both SC's to manage CRRs or can the CRR SC work independently of the load SC?
5. Please provide an example or description on how your entity intends to develop a CRR strategy for PCE. Detail all the considerations, risks and timelines that must be met to effectively employ this strategy.
6. Identify any challenges you foresee in providing these services and what steps you would take to mitigate these challenges.

6. REVIEW AND SELECTION PROCESS

Evaluation will be based on a combination of quantitative and qualitative criteria. Peninsula Clean Energy will evaluate each Offer against these criteria and select a subset of Offers to move to the Shortlist phase. The most qualified individual(s) or firm(s) will be recommended by the RFP Evaluation Committee based on the overall strength of each proposal, and the evaluation is not restricted to considerations of any single factor such as cost. The criteria used as a guideline in the evaluation will include, but not be limited to, the following:

1. Qualifications and experience of the entity, including capability and experience of key personnel and experience with other public and/or private agencies to provide these services, and ability to answer the questions in Section 5 and meet the Scope of Work outlined in Section 11.
2. History of successfully performing services for public and/or private agencies and other CCA's.
3. Financial viability of proposer.
4. Completeness of the proposed approach, including clarity of understanding of the scope of services to be provided and appropriateness of the proposed solution/services.
5. Cost to Peninsula Clean Energy for the services described by this RFP.
6. References.

7. AGREEMENT TERMS

Awardees will be required to enter into a contract using PCE's contract terms. Modification of the contract terms may be proposed for consideration by PCE but are not guaranteed to be accepted. Rejection of the final terms from PCE is grounds for disqualification. The contract will be provided at or prior to PCE shortlisting the chosen proposers. Shortlisted proposers will be required to provide a contract redline during the interview phase.

7.1 Term of Work

The services under this RFP are expected to commence according to their respective dates detailed below. PCE will sign between a two to three-year term for each service with an option to extend the contract for an additional year upon agreement by both parties.

1. Load Scheduling Coordinator Services are expected to commence on January 1, 2021 for a three-year term.
2. Resource Scheduling Coordinator Services are expected to commence no earlier than September 27, 2021, and the term shall extend through the end of the agreement for Load Scheduling Coordinator Services.
3. Both Load Forecasting Services and Renewable Energy Forecasting Services are expected to commence on January 1, 2021 for a two-year term.
4. Congestion Revenue Rights Portfolio Management Services are expected to commence on January 1, 2021 for a three-year term.

7.2 Performance Assurance

Proposers for Load Scheduling Coordinator Services Tasks 1 – 3 will be required to post a performance assurance to PCE following contract execution. The amount of Performance Assurance will be between \$1,000,000 to \$5,000,000 depending on the Proposers credit rating. Performance Assurance can be posted as cash or letter of credit.

8. SUPPLIER DIVERSITY

Consistent with its strategic goals, Peninsula Clean Energy has a strong commitment to foster a work environment that espouses sustainable business practices and cultivates a culture of innovation, diversity, transparency, integrity, and commitment to the organization's mission and the communities it serves. As part of that goal, Peninsula Clean Energy strives to ensure its use of vendors and suppliers who share its commitment to sustainable business and inclusionary practices.

To help ensure an inclusive set of vendors and suppliers, Peninsula Clean Energy's policy requires it to:

1. Strive to use local businesses and provide fair compensation in the purchase of services and supplies;
2. Proactively seek services from local businesses and from businesses that have been Green Business certified and/or are taking steps to protect the environment; and
3. Engage in efforts to reach diverse communities to ensure an inclusive pool of potential suppliers.

General Order 156 (GO 156) is a California Public Utilities Commission ruling that requires utility entities to procure at least 21.5% of their contracts with majority women-owned, minority-owned, disabled veteran-owned and LGBT-owned business enterprises' (WMDVLGBTBEs) in all categories. Qualified businesses become GO 156 certified through the CPUC and are then added to the GO 156 Clearinghouse database.

The CPUC Clearinghouse can be found here: www.thesupplierclearinghouse.com. While Peninsula Clean Energy is not legally-required to comply with GO 156, Peninsula Clean Energy's policies and commitment to diversity are consistent with the principles of GO 156, and, therefore, respondents to this RFP are asked to voluntarily disclose their GO 156 certification status as well as their efforts to work with diverse business enterprises, including those owned or operated by women (WBE), minorities (MBE), disabled veterans (DVBE), and lesbian, gay, bisexual, or transgender people (LGBTBE).

As a public agency and consistent with state law, Peninsula Clean Energy will not use any such provided information in any part of its decision-making or selection process. Rather, Peninsula Clean Energy will use that information solely to help evaluate how well it is conforming to its own policies and goals. Pursuant to California Proposition 209, Peninsula Clean Energy does not give preferential treatment based on race, sex, color, ethnicity, or national origin.

9. PENINSULA CLEAN ENERGY LEGAL OBLIGATIONS

Peninsula Clean Energy is not obligated to respond to any offer submitted as part of the RFP. All parties acknowledge that Peninsula Clean Energy is a public agency subject to the requirements of the California Public Records Act, Cal. Gov. Code section 6250 et seq. Peninsula Clean Energy acknowledges that another party may submit information to Peninsula Clean Energy that the other party considers confidential, proprietary, or trade secret information pursuant to the Uniform Trade Secrets Act (Cal. Civ. Code section 3426 et seq.), or otherwise protected from disclosure pursuant to an exemption to the California Public Records Act (Government Code sections 6254 and 6255) (“Confidential Information”). Any such other party acknowledges that Peninsula Clean Energy may submit to the other party Confidential Information. Upon request or demand of any third person or entity not a party to this RFP (“Requestor”) for production, inspection and/or copying of information designated as Confidential Information by a party disclosing such information (“Disclosing Party”), the party receiving such information (“Receiving Party”), as soon as practical but within three (3) business days of receipt of the request, shall notify the Disclosing Party that such request has been made, by telephone call, letter sent via email and/or by US Mail to the address or email address listed on the cover page of the RFP. The Disclosing Party shall be solely responsible for taking whatever legal steps are necessary to protect information deemed by it to be Confidential Information and to prevent release of information to the Requestor by the Receiving Party. If the Disclosing Party takes no such action, after receiving the foregoing notice from the Receiving Party, the Receiving Party shall be permitted to comply with the Requestor's demand and is not required to defend against it.

10. GENERAL TERMS AND CONDITIONS

1. **Peninsula Clean Energy's Reserved Rights:** Peninsula Clean Energy may, at its sole discretion: withdraw this Request for Proposal at any time, and/or reject any or all materials submitted. Respondents are solely responsible for any costs or expenses incurred in connection with the preparation and submittal of the materials for this RFP.
2. **Public Records:** All documents submitted in response to this RFP will become the property of Peninsula Clean Energy upon submittal and will be subject to the provisions of the California Public Records Act and any other applicable disclosure laws.
3. **No Guarantee of Contract:** Peninsula Clean Energy makes no guarantee that a contractor and/ or firm added to the qualified vendor list will result in a contract.
4. **Response is Genuine:** By submitting a response pursuant to this RFP, Respondent certifies that this submission is genuine, and not sham or collusive, nor made in the interest or on behalf of any person not named therein; the submitting firm has not directly or indirectly induced or solicited any other submitting firm to put in a sham bid, or any other person, firm or corporation to refrain from submitting a submission, and the submitting firm has not in any manner sought by collusion to secure for themselves an advantage over any other submitting firm.

11. DETAILED PROJECT DESCRIPTION AND SCOPE

PCE is seeking services across eight tasks in this RFP to serve PCE's load and resource scheduling, load and resource forecasting, and CRR management. Respondents offering scheduling coordination services must bid on Tasks 1 – 3. Tasks 4 – 8 can be bid in addition to Tasks 1 – 3 or independently, meaning respondents may bid on one or all of Tasks 4 – 8 without bidding on Tasks 1 – 3. Proposers are required to price each service independently if bidding for multiple service but may, if desired, propose additional prices if PCE chose to combine two or more of the proposed services.

Task 1: Load Scheduling Coordinator Services

Act as Scheduling Coordinator (“SC”) on PCE’s behalf in the CAISO market and provide the following services while performing in accordance with the obligations of SC, as defined by CAISO in the Tariff and Business Practice Manuals:

1. Scheduling:
 - a. Provide 7-day, 24-hour day-ahead pre-scheduling, and any real-time services as needed for scheduling transactions in CAISO, including load, energy, resource adequacy, ancillary services, and/or other products in neighboring markets, as applicable.
 - b. Receive load forecasts from forecasting consultant chosen through Task 4 below. This may or may not be the same entity that provide load scheduling services.
 - c. Submit demand bids to CAISO Day Ahead Market to meet PCE's forecasted load requirements.
 - d. Monitor bids for accuracy by using commercially reasonable measures to validate submitted bids against their schedules.
 - e. Submit Inter-SC Trades (IST), import schedules, and prepare any e-tags as necessary to satisfy any of PCE's agreements with energy suppliers.
 - f. Perform the scheduling and bidding services in accordance with the CAISO Tariff, protocols, and business practice modules.
 - g. File with the CAISO all schedules and meter data reports required of the Scheduling Coordinator on behalf of PCE.
 - h. Establish a single 'Scheduling Coordinator' identification with CAISO for PCE to isolate all CAISO charges and credits specific to PCE.

2. Compliance Submissions:

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- a. Facilitate and assist PCE in all load related filings due to CAISO, such as historical load submissions required of load serving entities.
 - b. Coordinate and submit annual and monthly Resource Adequacy Supply Plans to the CAISO through CIRA.
 - c. Coordinate and submit PCE requests for remaining import capability through the CAISO annual multi-step process.
3. Settlement Services:
- a. Calculate, bill, and collect any pass-through charges owed to CAISO and pass-through payments credited from CAISO to PCE, including but not limited to all CAISO charges, Imbalance Charges, Ancillary Services Charges, Grid Management Fees.
 - b. Receive or remit payments on behalf of PCE for all CAISO Invoice and Payment Advices on a weekly basis or pursuant to the CAISO Payment Calendar.
 - c. Review charges/revenues on settlement statements for accuracy and resolve any discrepancies.
 - d. File invoice disputes with CAISO on behalf of PCE and organize any further actions necessary to resolve the disputes.
4. Reporting and Documentation:
- a. Develop and formalize an operational protocol document to adhere to in collaboration with PCE.
 - b. Store and record all SQMD quality data and make data available to PCE, in a form mutually agreed upon.
 - c. Perform shadow settlements and deliver validation report:
 - i. Provide a weekly CAISO invoice report, in a form mutually agreed upon, to summarize all CAISO charges and credits by charge code for that invoice.
 - ii. Provide a monthly CAISO invoice report, in a form mutually agreed upon, to summarize all activities for the prior month.
5. Data Requirements:
- a. Manage and maintain computer systems required to transmit or receive information from CAISO in accordance with Prudent Industry Practice and CAISO Tariff.
6. Consulting:
- a. Provide regular, as needed, consulting to PCE to implement strategies that are consistent with PCE's goals, e.g. achieving 100% renewable on time-coincident basis (matching load with supply).

- b. Provide pre-scheduling and real-time optimization services to balance load with the resources within PCE's portfolio¹
7. CAISO Registration:
- a. Facilitate all CAISO Scheduling Coordinator registration and certification requirements according to CAISO Tariff and Business Practice Manuals.

Task 2: Resource Scheduling Coordinator Services

Act as Scheduling Coordinator ("SC") on behalf of PCE in the CAISO market for generating resources and provide the following services while performing in accordance with the obligations of SC, as defined by CAISO:

1. Scheduling:
 - a. Meet scheduling requirements of CAISO and WECC:
 - i. 7-day, 24-hour real-time services, including weekends and holidays (with backup facilities available)
 - ii. 7-day per week, day-ahead pre-scheduling services
 - b. Develop, submit and adjust schedules and bids into the CAISO Day-Ahead Market (DAM) and Real-Time Market (RTM).
 - c. Receive renewable resource forecasts from forecasting consultant chosen through Task 6 below. This may or may not be the same entity that provides scheduling coordinator services.
 - d. Update schedules received from Facility Operator and transmit schedules to the Control Area Operator and act on any further instructions received.
 - e. Schedule resources under the CAISO prevailing protocols for interconnected variable energy resources (VERs).
 - f. Dispatch storage resources into the CAISO market to provide Energy, Resource Adequacy, and Ancillary Services, while adhering to the Tariff, Business Practice Modules, and CPUC regulations for bidding storage resources.
 - g. Provide services under a PCE-specific SCID.
2. Asset Management:
 - a. Provide dispatch management and act as interface between the plant operator and the Control Area Operator; meeting all Dispatch Operating Targets (DOT), outages, and curtailment notices.
 - b. Participate in CAISO's New Resource Implementation process, if applicable, including the following:

¹ A service that will be of importance at a later date, after PCE procures more resources for its portfolio

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- i. Meet the SC requirements listed on the New Resource Implementation Checklist provided by CAISO and assist PCE in completing the required documentation for CAISO;
 - ii. Work closely with the Interconnect Customer (IC) and Operation Control Center for Participating Generator in following CAISO's "Bucket" system requirements prior to achieving Commercial Operation; and
 - iii. Coordinate pre-COD testing with PCE, Facility Operator, any of PCE's PPA contract counterparties, and CAISO, including the set up for trial operation for Initial Synchronization as required to be approved for Commercial Operation.
3. Resource Optimization:
 - a. Schedule and optimize a portfolio of resources to meet PCE goals and strategies.
4. Compliance Submissions:
 - a. Coordinate and submit annual and monthly Resource Adequacy Supply Plans for the generator to the CAISO through CIRA.
5. Settlements:
 - a. Obtain, document, and regularly audit settlement quality meter data in accordance with the CAISO Tariff.
 - b. Calculate, bill, and collect any pass-through charges owed to CAISO and pass-through payments credited from CAISO.
 - c. Review charges/revenues on settlement statements for accuracy and resolve any discrepancies.
 - d. Receive or remit payments on behalf of PCE for all CAISO Invoice and Payment Advices on a weekly basis or pursuant to the CAISO Payment Calendar.
 - e. Formally submit disputes or questionable charges associated with the Participating Generator through CAISO's dispute process.
6. Reporting and Documentation:
 - a. Develop and formalize an operational protocol document to adhere to in collaboration with PCE.
 - b. Document communications with CAISO, transmission operators and the plant operator, including but not limited to information requests, outage and curtailment notifications, validation errors, and general notices.
 - c. Collect and report the following resource data in hourly and five-minute intervals, when applicable:
 - i. CAISO shadow settlements with description of the charges types and how they are applied to the scheduled and metered volumes;
 - ii. VER forecasts for Participating Generator;
 - iii. Bids and Self-Schedules submitted to SIBR;

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- iv. Day-ahead and Real-time Market Awards shown in CMRI;
 - v. CAISO Meter Data in MWh's;
 - vi. Imbalance MWh's between Actual and Scheduled; and
 - vii. Day-Ahead and Real-Time LMP's broken down by the three price components; LMP price, congestion, and losses.
7. Data Requirements:
- a. Manage and maintain computer systems required to transmit or receive information from CAISO in accordance with Prudent Industry Practice.
8. Outage Management Services:
- a. Coordinate unit outages with generation operators and CAISO in accordance with the Tariff. Manage, record, and coordinate planned and unplanned outages effectively in the Outage Management System (OMS) in accordance with the CAISO Tariff.
 - b. Monitor Planned Outage Substitution Obligation (POSO) notifications from CAISO and perform substitution requests in CIRA when necessary.
9. Consulting:
- a. Provide regular, as needed, consulting to PCE to implement strategies that are consistent with PCE's goals, e.g. achieving 100% renewable on time-coincident basis (matching load with supply).
 - b. Consult with client on strategic bidding strategies to maximize CAISO revenue and/or minimize exposure; e.g., optimizing portfolio of resources in the Day-Ahead Market (DAM) and Real-Time Market (RTM); reducing curtailment risk and exposure to negative pricing; perform risk assessment of deploying new bidding strategies.
 - c. Review PCE PPA with Participating Generator, related project documentation, and PCE's current risk management policies to strategize appropriate scheduling and bidding practices.
10. CAISO Registration:
- a. Facilitate all CAISO Scheduling Coordinator registration and certification requirements according to CAISO Tariff and Business Practice Manuals.

Task 3. Load and Resource Optimization

- 1. Optimize bidding and dispatch strategies across PCE's load and a full range of generation technologies to maximize the value of PCE's overall portfolio in the CAISO market.

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2. Optimize resources to meet load demand, alleviating over-generation in hours where generation exceeds load.
3. Perform Cost-Benefit analyses for battery storage optimization. For example, evaluate whether to dispatch the storage in hours where PCE lacks generation to meet its load or to dispatch the storage economically, during higher priced intervals.
4. Consult PCE on strategies to improve load and resource optimization.

Task 4: Load Forecasting Services - Day-ahead and short-term (1-14-day horizon)

1. Develop short-term load forecasts to serve as PCE's final demand forecasts to CAISO
 - a. Forecast should take into account at a minimum historical load, recent customer usage, current customer types and counts, and weather forecasts.
2. Transmit accurate real-time, hour-ahead, day-ahead, week-ahead, and two week-ahead load forecasts to PCE and to PCE's Load Scheduling Coordinator ("SC") daily on an appropriate time frame for submission to CAISO.
 - a. Aggregate total load forecast data for PCE service territory and disaggregate by rate class and city.
3. Deliver monthly forecast reconciliation reports to compare forecast against actual electricity usage.
 - a. Update forecasting algorithms and models to reduce forecasting errors.
 - b. Including reporting on accuracy of forecast.

Task 5: Load Forecasting Services - Medium-term to long-term (1-10-year horizon)

1. Develop medium-term to long-term load forecast and sensitivity scenarios to inform PCE's planning, procurement and budgeting processes as well as support PCE's regulatory reporting requirements to CEC, CPUC, CAISO, etc.
2. Forecasts should take into account historical load, current and projected customer counts, impacts of expected transportation and building electrification, behind the meter resources, economic and population changes.

Task 6: Renewable Energy Forecasting Services - Short-term (1-14-day horizon)

1. Prepare short-term forecasts for renewable energy generators in PCE's portfolio to supplement or replace VER forecasts provided by CAISO.

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2. Short-term forecasts should take into account at a minimum historical generation and short-term weather forecasts, as well as any other appropriate factors.
3. Forecasts should be transmitted daily to PCE and to PCE's scheduling coordinator on an appropriate time frame to inform day ahead scheduling in the CAISO market.

Task 7: Renewable Energy Forecasting Services - Medium-term to long-term (1-10-year horizon)

1. Prepare long-term forecasts for renewable energy generation to support PCE's budget and procurement planning processes for the following scenarios:
 - a. Projects currently in PCE's portfolio; and
 - b. Portfolio of generic projects for planning purposes.
2. On an ad hoc basis evaluate accuracy of forecasts provided through RFO procurement processes.

Task 8. Congestion Revenue Rights Portfolio Management Services

1. Assist PCE in obtaining CRRs through the CAISO annual and monthly nomination and allocation process.
2. Consult with PCE on CRRs to nominate, which will remain under PCE's sole discretion, and provide the following:
 - a. Market analysis to support selection of CRR nominations including strategies for mitigating congestion costs.
 - b. A report of the results from the market analysis, in a form accepted by PCE, including a description of the deployed strategy, identified constraints, outages, and any other necessary information.
3. Provide a CRR revenue forecast for the relevant calendar year after PCE receives annual allocations.
4. Provide a monthly report, in a form accepted by PCE, to summarize the prior months CRR portfolio performance and compare against the CRR revenue forecast.
5. Review all CRR settlement statements for accuracy and highlight any discrepancies.
6. Assist PCE with any CRR holder registration and ongoing administrative requirements throughout the Term.

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7. Update annually a one-year forward calendar to include the pertinent dates when CRR nominations and auctions occur as well as any other dates that are relevant for the CRR process.
8. Minimum Participant Requirement (FERC Order 741)
 - a. PCE will bear the responsibility of funding the CRR Candidate Holder Minimum Participant Requirement, if necessary, with CAISO.