



**PENINSULA
CLEAN ENERGY**

Request for Proposals for

Load and Resource Scheduling Coordinator Services

Load Forecasting Services

Renewable Forecasting Services

Congestion Revenue Rights Portfolio Management

Q&A Responses

September 11, 2020

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

RFO Website: <https://www.peninsulacleanenergy.com/rfp-scheduling-coordinator-forecasting-and-crr-mangement-services/>

1. Q&A Responses for Load and Resource Scheduling Coordinator Services

#	Question	Response
1	Can PCE provide an estimate of the number and type of new resources it expects to need scheduling services for during the contract term?	PCE will require SC services for its six resources listed on page 6 of our RFP protocol through the 3-year term. PCE has a 38 MW wind PPA the PCE is not currently the SC for, however, PCE is considering taking on the SC responsibilities starting Q1 2022. One of PCE's solar PPA's is seeking to add storage and expects this to start operating in December 2022. PCE anticipates adding a co-located solar + storage resource with a late 2022 COD. We are also evaluating bids through a renewable energy RFO and will continue to seek additional resources to meet Peninsula Clean Energy's goal to be 100% renewable.
2	Can PCE describe its current process for collecting and validating meter data for its load customers?	PCE receives weekly and monthly reports from Calpine who acts as PCE's MDMA and our current load SC for T+3, T+8 and T+48 data. PCE's current load SC conducts some initial verification and PCE checks the consistency of data between these reporting sources. PCE also compares this against internal load forecasts.
3	Does PCE have a Settlement Quality Meter Data (SQMD) plan on file with the ISO?	Yes
4	Who acts as the Meter Data Management Agent (MDMA) for PCE?	Calpine Solutions
5	PCE's Integrated Resource Plan (IRP) list two wind facilities totaling 188 MWs of name plate capacity. Are those assets physically delivered to PCE through the ISO's Inter-SC Trade (IST) feature?	No, these resources are bid into the RT and DA Market by the scheduling coordinator, who is currently the seller for both of these resources.
6	Can PCE provide an estimate of the number of IST's executed with the ISO on a daily basis?	We typically transact using IST's for our financial hedges and that has ranged between 2-4 contracts that settle on a daily basis. We haven't had more than 4 at a given time.

7	Can PCE provide a sense of the highest weekly invoice amount issued by the ISO for its load account over the past 2 years?	We consider this confidential and proprietary and can discuss this with shortlisted parties.
8	The RFP states that the SC will remit payments to the ISO on a weekly basis. What timeline does PCE envision reimbursing the SC for payments made to the ISO?	PCE anticipates monthly payment terms.
9	For position management, what tools / systems does PCE currently use to track details of all tolled/PPA generation supply, bilateral hedges, RECs (if applicable), RA, etc?	PCE uses a series of spreadsheets to monitor its net open position. Python is used to evaluate our open hedge targets and needs. One spreadsheet aggregates all the details of PCE's contracts including hedges, PPAs, carbon-free and RECs. A separate spreadsheet is used to manage and track the details of the contracts within our RA portfolio.
10	For long-term resource planning, does PCE have an existing in-house or third-party model or view for long-term load forecasting (please describe)?	PCE is currently piloting third-party software for use in resource planning and portfolio risk management. PCE has an existing in-house python model that forecasts long-term load.
11	Please confirm invoicing & settlement of PPA generation and bilateral hedge transactions is <u>not</u> included in the scope of the current RFP (e.g. only ISO settlements are in scope)?	Correct, PCE will handle the invoicing and settlement of PPA generation but we will lean on the monthly CAISO settlement reports that the SC provides for PCE's resources to validate metered generation and pricing at the pnode. PCE's bilateral hedges are transacted through IST's and we will need the SC to provide the ISO settlements to confirm the IST's. We may also ask the SC to aggregate a report of e-Tags for any imported generation that PCE contracts for to validate the total monthly volume delivered to PCE.
12	Regarding Section 1(h) of the General Questions section under Tasks 1-3, PCE discusses obtaining a new SCID. Is the assumption that PCE is contemplating becoming a certified Scheduling Coordinator with CAISO and then designate the winning bidder as the "SC Agent"?	PCE is considering obtaining its own SCID for scheduling purposes. PCE does not plan to take on any of the SC responsibilities itself but if we decided to obtain our own SCID then we would rely on the winning bidder/provider to act as the "SC Agent."
13	Does PCE envision the SC providing any PPA validation for each generator in the SC portfolio?	No, PCE will use the CAISO meter and settlement data provided by the SC for the PPA's but it will remain PCE's responsibility to validate the PPA invoices.

<p>14</p>	<p>Section 4. Describes PCE’s goal of becoming 100% renewable with coincident load/supply (below). In the following description, is PCE seeking a longer term study to evaluate the portfolio and load profile in order to evaluate what resources mix is necessary or is this intended to be a Day Ahead/ Real Time function (or both)? If the intent in DA/RT, would the expectation be that the SC would begin this service once generation was introduced into the SC portfolio or would coordination with the gen SC be required? From RFP Protocol - a. “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.”</p>	<p>We are not asking for bids for a study to identify resources to meet our load as we are conducting that study under other contracts. The intent of this RFP is to hire an SC and operationalize the bidding of resources that we are contracting with. Actual scheduling and DA/RT optimization of renewable generation to match our load will not likely occur during the 3-year term of the SC agreement. We anticipate this occurring in 2024 in preparation to meet our 100% goal by 2025. By this time, there may be some coordination required if we are not the SC for one of our PPAs, for example we will not be the SC for one of our wind resources but we will be the SC for any solar + storage projects.</p>
<p>15</p>	<p>Please provide more details on PCE’s CAISO SCID/market participant status. Is PCE expecting respondents to provide an SCID under their own entity and post collateral to support PCE or will PCE create their own SCID?</p>	<p>PCE does not currently have its own SCID but is considering getting its own and is looking into the process of posting its own collateral with the ISO. As long as PCE is able to acquire this responsibility, it won’t be expected that SC post collateral for energy and CRR participation with CAISO.</p>
<p>16</p>	<p>Will PCE pay their own invoices or would they require the SC to pay for the invoices?</p>	<p>PCE would prefer that the SC pay the invoices on its behalf. If a different structure would significantly impact your bid, please describe this in your bid documents.</p>

17	If the SC is required to pay the invoices, what would be the preferred payment terms for CAISO invoices?	PCE would prefer monthly payment terms. If a different structure would significantly impact your bid, please describe this in your bid documents.
18	Do you know if either of PCE's current solar PPA's include or contemplate the addition of energy storage?	One of PCE's solar PPA's is seeking to add storage and expects this to start operating in December 2022.
19	The RFP mentions additional storage, wind, and solar resources. Should the addition of such resources be priced incrementally to the original bid?	Yes, please do. Your original bid should include the four small hydro resources and two solar resources listed on page 6 of the RFP Protocol document. We're asking that additional renewable resources be priced incrementally if added to PCE's portfolio.
20	Section 5.2(3)(e) asks numerous questions about experience with demand response (DR) but I don't see a mention of any DR resources below. Is this just for informational purposes or will there be DR management as well?	Correct, PCE does not have any DR resources that will require scheduling in this RFP so it is for information purposes only. This will be of great interest to PCE as we have a team dedicated to expanding DR in our territory. We included this section because we'd like to hear if your organization has experience scheduling DR resources and to become familiar with your understanding of the market.
21	Should the proposal include services for ERTM and/or middle-office services?	PCE does not expect the SC provider to provide ERTM services as PCE will continue to manage its contracts internally, however if your organization provides ERTM and/or middle-office services your welcome to detail these services and how they may compliment the SC service you provide to PCE.

2. Q&A Responses for Load and Resource Forecasting Services

#	Question	Response
1	Are the sites that will require renewable energy forecasts limited to those listed in the table in Section 2.1 (2 solar, 4 hydro)? Could more resources (wind, solar, and/or) be included for Task #6? If so, what would	At a minimum, the renewable energy forecasting will apply to the 6 identified sites. We are also currently evaluating bids received through a renewable energy RFO and will continue to seek additional

	the makeup look like by Jan 1, 2021, and over the course of the 2-3 years?	resources to meet Peninsula Clean Energy's goal to be 100% renewable. Additional resources may be added.
2	What is PCE's requirement for refresh rate of short-term load forecasts?	Daily would be okay.
3	Is there a standard format for delivery of customer data by PCE to Load Forecasting service provider? Specifically, looking for clarity on how active account data, account attributes, historical/billed usage, etc. will be integrated between the 2 parties	We can have our customer data manager, Calpine, provide a customer file and daily usage file via a secure portal. The T+55 load data that is posted daily by CAISO can be forwarded to the forecasting service provider. PCE receives a weekly report from PG&E (the 4013 report) which provides a snapshot of current customers and their attributes. Historical load data (T+12) is available at the customer class level at hourly intervals and is generally updated weekly. Historical billing information by customer is available in billing cycle intervals and is updated daily, but PCE typically receives a weekly report from our customer data manager, Calpine. PCE could provide this data to the selected vendor.
4	Can you provide an inventory of data points considered in scope of items that will be delivered to Load Forecasting service provider to facilitate execution of corresponding deliverables (customer type, rate class, location/zip, meter type, product attributes, historical/billed usage, information about on-site generation, customer categories required for forecast segmentation, wholesale settled usage data, etc.)? Where applicable, what granularity will these data points be provided on (monthly, hourly, sub-hourly)?	PCE receives a weekly report from PG&E (the 4013 report) which provides a snapshot of current customers and their attributes, including customer type, rate class, location/address, meter type, etc. Historical load data (T+12) is available at the customer class level at hourly intervals and is generally updated weekly. Historical billing information by customer is available in billing cycle intervals and is updated daily, but PCE typically receives a weekly report from our customer data manager, Calpine. PCE could provide this data to the selected vendor. If there is specific data needed please describe this in your proposal.
5	On what cadence will data updates be provided by PCE to Load Forecasting service provider? Will updates to Retail data feeds (active account data, account attributes, historical and/or billed usage) and Wholesale data feeds (settled usage,	Currently updates are provided to SC on a daily basis. PCE can provide AMI data on a daily basis and T+8 data on a weekly basis.

	etc) be available as needed in real time? Or will data updates be pushed periodically?	
6	Is the expectation that the Load Forecast deliverables are net of distributed generation on-site behind individual meters? Said differently, is the expectation that Load Forecast deliverables are projected at the net usage level? Or should load forecasts truly be a projection of total/gross Load, out of which Peninsula will maintain a separate production forecast which can be subtracted out of the load forecast to arrive at net usage? The CAISO is implementing a process in late 2020 to include Behind the Meter (BTM) generation figures in SQMD usage files submitted.	The current expectation is for load forecasting to be at the net usage level. It may be interesting to separate behind-the-meter distributed generation from our total load at some point but this isn't included in our current scope of work. If this is a service that your firm can offer, please provide a description in your bid documents, including your understanding of CAISO's implementation process to include BTM figures in SQMD and how you think this may impact PCE's load forecast.
7	On what granularity should medium/long-term forecast deliverables be provided? Is expectation that these deliverables are provided at an hourly grain? Monthly grain? Monthly non-coincident peak basis?	We would prefer both hourly and monthly as we use both forecasts for planning purposes.
8	What are the typical sensitivity scenarios that PCE requests as a part of the medium-term load forecasts?	We would like to look at impacts of severe weather scenarios (unexpectedly cold or hot periods) on our load forecasts. In addition, it would be interesting to look at short-medium term impacts of socio-economic factors such as COVID on PCE's load forecasts. If there are other sensitivities that you recommend, please describe these in your bidding documents.
9	Is there any correlation between the requirements in the parallel Data warehouse RFP and any of the requirements included in these forecasting sections.	At some point in the future we expect the data warehouse to incorporate forecasting data but this will have to come at a future phase in the process.
10	For Task 4, what data will you settle your load on in 2021 and 2022 — metering data or profiled data?	Settlement quality metered data
11	For Task 5, what are the intended use cases? Will it be to purchase long-term contracts?	Yes, the medium-to-long term load forecast will help us to plan for how much we need to contract and will help us budget for later years.
12	For Task 6, are you looking for short-term renewable forecasts for the assets to which you hold a PPA (listed on page 6),	Specifically, for this RFP we are seeking forecasts for the assets we've included on page 6 and you can assume this in pricing this service. We are also evaluating bids

	for behind-the-meter renewable generation among PCE’s customers, or otherwise?	through a renewable energy RFO and will continue to seek additional resources to meet Peninsula Clean Energy’s goal to be 100% renewable. We will likely seek forecasting services for behind-the-meter generation at a later date. Please share a bit of your experience forecasting behind-the-meter generation if that is a service you provide.
13	Would you be interested in receiving day-ahead and real-time price forecasting to determine your day-ahead load schedule?	Potentially, but the intent is that the day-ahead and short-term load forecasting provider would transmit the DA load forecast to the SC that is scheduling PCE’s load.
14	What are the main criteria you will use to evaluate forecast performance?	We will factor in the MAPE and take consideration of imbalance energy costs resulting from deviations from the day-ahead forecast. We’ve also asked bidders to identify what criteria they recommend.
15	Would you be interested to structure the commercial agreement for Tasks 4 and 6 as a shared savings structure, in which the monthly price is set as a percentage of the monthly savings for PCE versus a benchmark approach?	Yes, we would be open to this kind of approach but it may be of interest to provide a more standard approach as well for us to compare.
16	Will PCE be providing solar irradiance information to support the load and renewable forecasting efforts, or are vendors expected to get that themselves.	PCE is open to different structures and asks bidders to provide a recommendation. If the bidder’s recommendation is for PCE to provide this data, please include details on the form and frequency that the bidder would require.
17	Does PCE know which customers have BTM solar and EVs at the meter/customer level? Is this information that can be provided to the selected vendor.	PCE receives quarterly interconnect reports from PG&E that document back-up generation capacity and behind-the-meter solar capacity for its customers. PCE could provide these reports to the selected vendor. PCE does not have data on which systems are currently operational or active. PCE has some information EVs but the data quality is limited.
18	Can you obtain monthly billing data (# of customers, sales, revenue) for your service territory extending back 10-15	PCE’s full service began 5/1/2017. PCE has hourly data by customer class since 5/1/2017 that would be provided to the selected vendor. If data prior to 5/1/2017 is

	years for the residential, commercial and industrial classes? If not, how many years of history can you access?	required, PCE could work with the selected vendor to request that data from PG&E.
19	Can you obtain hourly class-level AMI data (number of meters, hourly load) for your service territory extending back 3-4 years? If not, how many years of history can you access?	PCE's full service began 5/1/2017. PCE has hourly data by customer class since 5/1/2017 that would be provided to the selected vendor. If data prior to 5/1/2017 is required, PCE could work with the selected vendor to request that data from PG&E.
20	Can you obtain historical solar PV capacity estimates by class? If so, how many years of history can you access?	PCE receives quarterly interconnect reports from PG&E that document back-up generation capacity and behind-the-meter solar capacity for its customers. PCE could provide these reports to the selected vendor.
21	Do you have historical electric vehicle estimates by class? If so, how many years of history can you access?	Yes, PCE has 10 years of historical data for the electric vehicles in our territory separated by class and we can share this information.
22	Task 4: Would you be able to provide disaggregate historical consumption by zones/cities?	PCE receives annual reports from PG&E (Item 16 and Item 17) that disaggregate load by customer in hourly and monthly intervals. These reports could be shared with a selected vendor.
23	Task 4: How is going to be the delivery method?	We can forward what we are provided from PG&E.
24	Task 6: Would you provide historical generation data of the wind and hydro resources (MW, MWh) and the water river flown (m3/min) for the hydro resources?	PCE can provide historical generation data for the wind and hydro resources. However, PCE does not currently have historical data for river flow associated with the hydro resources.
25	Task 6: Do the small hydro sites have upstream reservoirs that may influence them due to market requirements?	No.

3. Q&A Responses for CRR Portfolio Management Services

#	Question	Response
1	For CRR management, does PCE have an existing risk policy that determines the acceptable limits and general approach to path nominations, for example that provides specific guidelines for any paths	Currently, PCE does not but we intend to update our risk policy and this can be something we include. We would be open to hearing from the provider regarding their

	that are not acceptable to nominate, or for what amount of MW are acceptable / desirable to nominate on certain classes of paths?	experience and we can arrange for developing an appropriate strategy.
2	Regarding the timeline of implementation, the CRR provider would be expected to take over January 1, 2021, which would not allow for the CRR provider to include any feedback in the 2021 annual allocation process. Would PCE be amenable to a contract in which there is a different fee structure for year one versus years two-three?	Yes, we can consider a different fee structure for 2021 compared to 2022-2023 due to this.
3	Does PCE require the SC to post collateral with the ISO for energy and CRR market participation?	PCE's current SC is posting collateral with the ISO on PCE's behalf but PCE is looking into CAISO's process to move this responsibility under PCE so that no longer falls under the responsibility of our SC. As long as PCE is able to acquire this responsibility, it won't be expected that SC post collateral for energy and CRR participation with CAISO.

4. About PCE

Peninsula Clean Energy is San Mateo County's not-for-profit, locally controlled electricity provider. Peninsula Clean Energy was launched collaboratively in 2016 by the County of San Mateo and all twenty of its municipalities. We are a joint powers authority that provides all electric customers in San Mateo County with cleaner electricity at lower rates than those charged by Pacific Gas & Electric Company. The organization is governed by a Board of Directors comprised of elected officials representing all cities, towns and the Board of Supervisors in San Mateo County, and is supported by a staff of expert professionals.