

2018 Renewables & Storage RFO

January 24, 2018

10:00 am – 12:00 pm PPT



***Offers due Friday, February 9, 2018
12:00 pm PPT***

***Participants must pre-register by
Friday, February 2, 2018 to participate***



PCE Team



Siobhan Doherty
Director of Power Resources



Eric Weiner
Renewable Energy Analyst

Agenda

- RFO Overview
- PCE Open Position
- Requirements and Evaluation
- Offer Submittal
- Webinar Q&A

Housekeeping

- All participants will be muted during the Webinar.
- During the Q&A portion, you can raise your hand if you have a question and the moderator will un-mute you.
 - You also have the option to text written questions to the moderator on the GoToMeeting sidebar and we will read the question for you and then respond.
- These slides and responses to any questions received by Friday January 19th are posted to the RFO Web site.


Overview

- Peninsula Clean Energy (PCE) is a community choice energy (CCE) program.
- PCE is San Mateo County's official electricity provider.
- PCE is a joint powers agency, formed in February 2016, consisting of the County of San Mateo and all twenty of its cities.
- PCE mission – to provide residents and businesses in San Mateo County with high percentages of renewable and carbon-free energy at competitive prices.
- This RFO seeks offers for generating resources certified by the California Energy Commission as Eligible Renewable Resources.
- PCE provides cleaner and greener electricity, at lower rates than the incumbent investor-owned utility (IOU), Pacific Gas & Electric Company (PG&E).

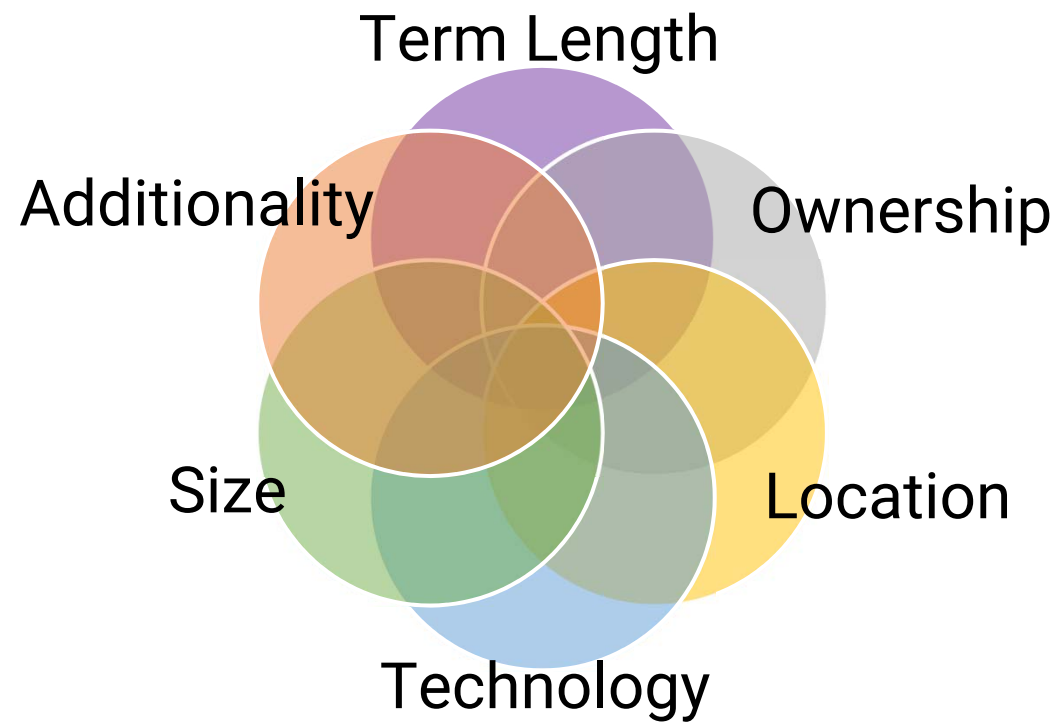
Integrated Resource Plan

- In December 2017, PCE's Board approved PCE's first Integrated Resource Plan (IRP):
 - Documents PCE's current procurement status; and
 - Outlines PCE's resource planning policies and objectives over a ten-year planning timeframe.
- Participants are encouraged to closely read this document to understand PCE's priorities in building its supply portfolio.
- You can download and review the IRP here:
<https://www.peninsulacleanenergy.com/our-power/energy-sources/>.

PCE Procurement Goals and Policies

| | |
|---|--|
|  <p>PCE Strategic Goals <i>Adopted by PCE's Board of Directors in October 2016</i></p> | |
| Design a diverse power portfolio that is greenhouse gas free | |
| <ul style="list-style-type: none"> • 100% GHG free by 2021 • 100% CA RPS-eligible renewable energy⁸ by 2025 • Minimum of 20 MWs of new local power by 2025 | |
| Continually strive to offer ECOplus at rates that are at parity or lower than PG&E rates | |
| Stimulate development of new renewable energy projects and clean-tech innovation in San Mateo County and California through PCE's procurement activities | |
| Demonstrate quantifiable economic benefits to the County/region and place a priority on local hiring and workforce development practices and environmental justice | |
| Implement programs to further reduce greenhouse gas emissions by investing in programs such as local clean power production, electric vehicles, energy efficiency, and demand response, and partnering effectively with local business, schools, and nonprofit organizations | |
| Maximize and maintain customer participation in PCE | |
| <ul style="list-style-type: none"> • Provide a superior customer experience • Develop PCE brand awareness and loyalty throughout the County • Actively encourage voluntary participation in its ECO100 renewable energy product • Actively encourage participation in other programs PCE develops • Achieve recognition from the EPA's Green Power Partnership for Green Power Communities for all cities with municipal accounts enrolled in ECO100 by 2018 | |
| Build a financially sustainable organization | |
| <ul style="list-style-type: none"> • Build sufficient reserves in a rate stabilization fund • Achieve an investment grade credit rating by 2021 | |
| 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 | |

Designing A Diverse Portfolio

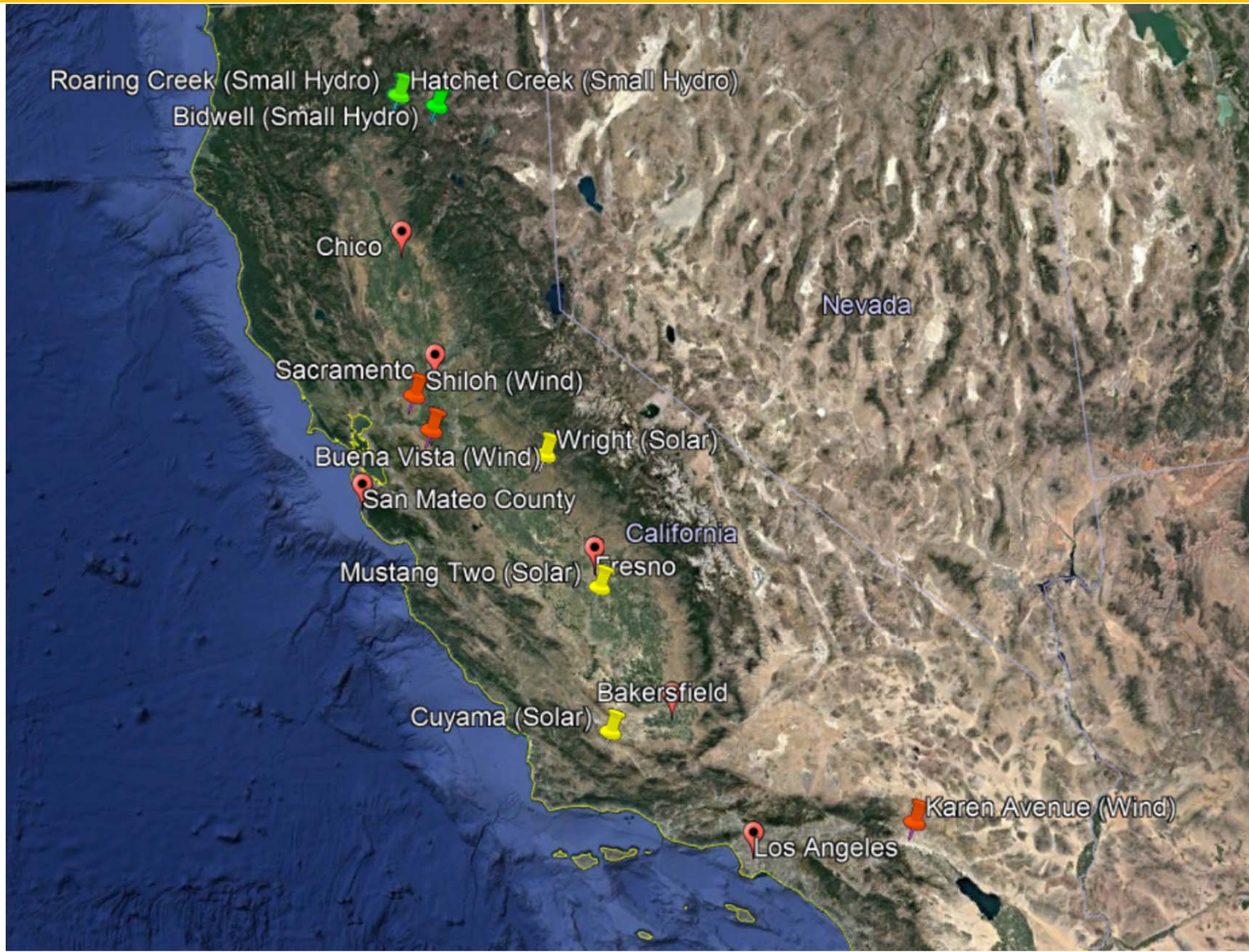


PCE Current Procurement Status

- PCE has executed 9 PPAs for project specific renewable energy purchases

| Resource (Technology) | Size (MW) | Contract Term (Years) | Owner (or Developer) | Location (County) |
|-----------------------|-----------|-----------------------|----------------------|-------------------|
| Solar | 200 | 25 | Frontier | Merced |
| | 100 | 15 | Recurrent | Kings |
| | 40 | 1 | First Solar | Santa Barbara |
| Wind | 25-150 | 5 | Avangrid | Solano |
| | 38 | 5 | Leeward | Contra Costa |
| | 11.7 | 3 | EDCC | Riverside |
| Small Hydro | 7.5 | 5 | Hydrodynamics | Shasta |
| | 2 | 2 | Hydrodynamics | Shasta |
| | 2 | 2 | Hydrodynamics | Shasta |

PCE Current Procurement Status



PCE Current Procurement Status

- PCE has executed four contracts to purchase RPS-eligible energy from non-project-specific sources

| Resource (Technology) | Contract Term (Years) | Owner (or Developer) | Location |
|--------------------------|--------------------------|-------------------------|------------|
| Renewable | 4 | Direct | WECC |
| | <1 | PG&E | California |
| | <1 | Powerex | WECC |
| | 2 | Constellation | WECC |

- PCE has signed four contracts to meet our GHG-Free targets

| Resource (Technology) | Contract Term (Years) | Owner (or Developer) | Location |
|--------------------------|--------------------------|-------------------------|------------|
| GHG-Free | 4 | Direct | California |
| | 4 | Tenaska | California |
| | 1 | Powerex | California |
| | <1 | Morgan Stanley | California |

PCE Current Procurement Status

- PCE has executed two contracts to hedge power prices

| Resource (Technology) | Contract Length (Years) | Owner (or Developer) | Location |
|--------------------------|-------------------------------|-------------------------|----------|
| System | 4 | Direct | WECC |
| | 2 | Constellation | WECC |

Open Position

- We've adopted the following contracting guidelines for fixed price contracts
 - Forward contracts increase cost certainty
 - Maintain flexibility and ensure portfolio diversification
- Annual procurements to meet 15-25% of load (550 – 950 GWh)

| | % of Load Procured | |
|-------------------|--------------------|------|
| | Min | Max |
| Current Year | 90% | 100% |
| Year 2 | 75% | 90% |
| Year 3 | 65% | 80% |
| Year 4 and Beyond | 55% | 70% |

Additionality

- Additionality means that a project or activity would not have happened without the buyer
- Target: Minimum 50% of portfolio from “New” projects v. existing projects
- New: Means projects that PCE causes to be built or repowered
- Repowered: For repowered facilities to count towards our new goal, would require a significant investment in the repowering



Term Length

- Target 50% of portfolio from long term contracts
- Fill remainder of portfolio with diversity of contract lengths

| | 2021 | 2022 | 2023 | 2024 | 2025 |
|--------------------|-------|-------|-------|-------|-------|
| Long (>10 yrs) | 50% | 50% | 50% | 50% | 50% |
| Short (<1 yr) | 15% | 15% | 15% | 15% | 15% |
| Medium (1-4 yrs) | 17.5% | 17.5% | 17.5% | 17.5% | 17.5% |
| Interm. (5-10 yrs) | 17.5% | 17.5% | 17.5% | 17.5% | 17.5% |

Project Size

Guideline

Pursue diversity of project sizes

No one project output makes up more than 15% of GWh load

Ownership

- Limit exposure to any one developer/owner
- Ensure developer/owner has experience to develop/operate project

Guideline

No more than 15% of GWh load from any one owner

Experience developing & operating similar size projects

Financing plan and successful track record with finance organizations

Don't work with owners that oppose CCAs

Financially stable organization

Resource / Technology Mix

- Limit exposure to any one manufacturer
- Match our generation profile to our load profile

Guideline

Procure from diverse set of technologies to match supply to load

No more than 20-25% of load from any one manufacturer



Location

- Limit exposure to price differentials between our service territory and project locations
- Limit exposure to any one pricing node
- Diversify generation profiles to aggregate portfolio to match load

Guideline

Prioritize projects / locations to minimize congestion pricing

No more than 15% of load from one LMP / interconnection point

Supports PCE's Sustainable Workforce Policy

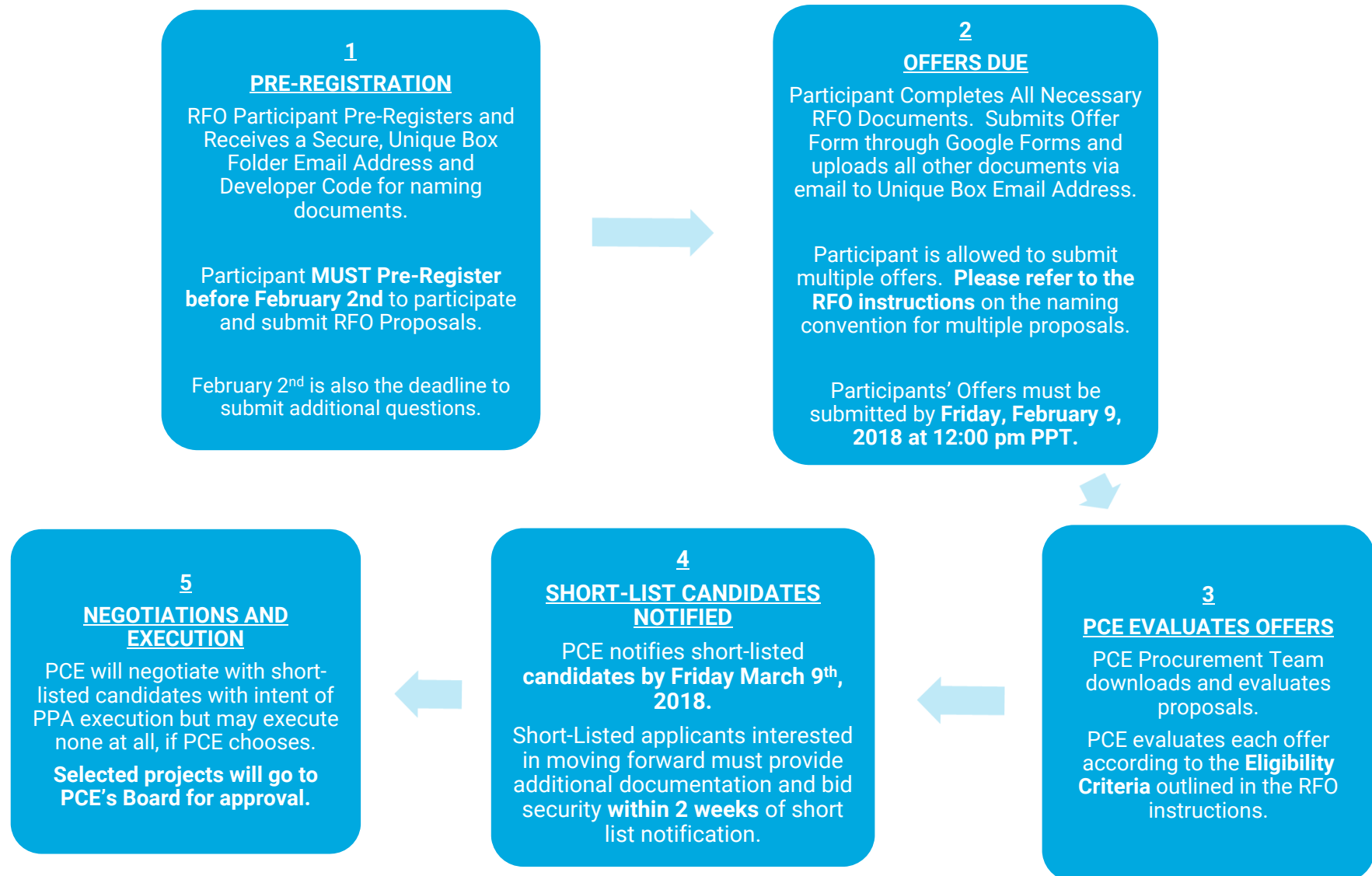
Evaluate environmental impacts

Prioritize projects that help to match supply to load



RFO Overview

RFO Process



Schedule

| Date | Event |
|---|--|
| Friday, January 12, 2018 | PCE launches RFO; publishes RFO instructions, pro form PPA and other RFO documents |
| Friday, January 19, 2018 | Deadline for Webinar question submittal |
| Wednesday, January 24, 2018, 10:00 am PPT | PCE hosts RFO webinar |
| Friday, February 2, 2018 | Deadline for pre-registration and additional question submittal |
| Wednesday, February 7, 2018 | PCE posts responses to questions |
| Friday, February 9, 2018, 12:00 pm PPT | Deadline for offer submittal |
| Friday, March 9, 2018 | Anticipated date PCE will notify each participant regarding short-list status |
| Friday, March 23, 2018 | Anticipated deadline for short-listed participants to submit deposits, PPA redlines and additional documents |

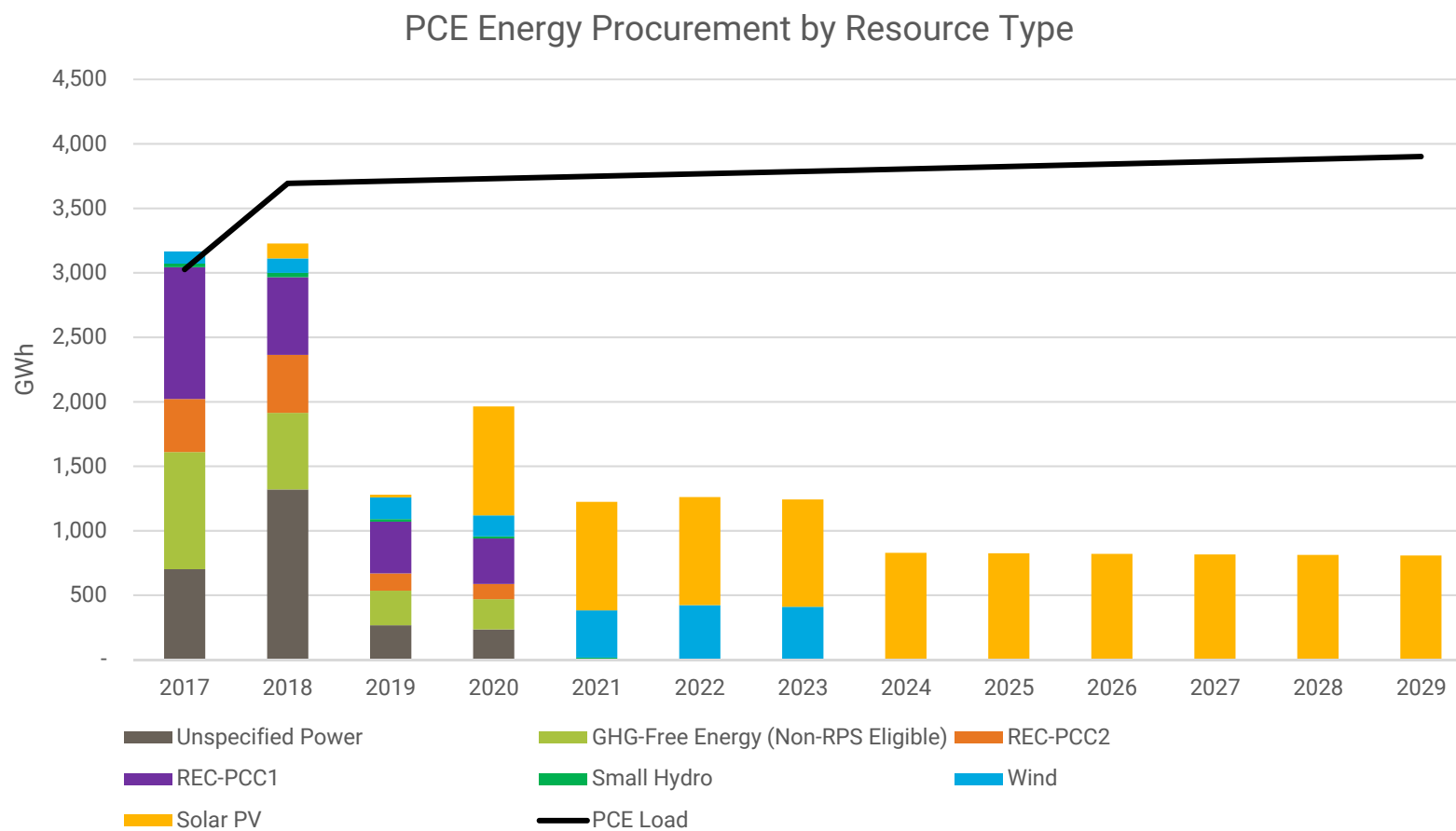
Communications

- All RFO form documents are available on PCE's website at: <https://www.peninsulacleanenergy.com/our-power/pce-2018-renewables-rfo/>.
- All announcements, updates and Q&As will be posted on the website.
- All questions must be submitted through the form here: https://docs.google.com/forms/d/1v22HE8FE_aJvMYdre_pJd2dGGQHL0RrKHGpHSyh4g7s/edit.
- All other communications should be directed to: procurement@peninsulacleanenergy.com.



PCE Open Position

Open Positions



Open Position 2018

| HE | 2018 | Long/(Short) MWh | | | | | | | | | | |
|----|---------|------------------|--------|--------|--------|--------|--------|--------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| 1 | -365 | -324 | -399 | -454 | -429 | -384 | -390 | -523 | -531 | -455 | -504 | -533 |
| 2 | -365 | -354 | -377 | -426 | -382 | -347 | -462 | -433 | -406 | -439 | -387 | -513 |
| 3 | -373 | -370 | -384 | -445 | -392 | -290 | -414 | -469 | -502 | -453 | -478 | -438 |
| 4 | -371 | -369 | -381 | -383 | -354 | -368 | -397 | -453 | -470 | -392 | -436 | -456 |
| 5 | -348 | -375 | -349 | -397 | -277 | -294 | -454 | -483 | -428 | -477 | -450 | -512 |
| 6 | -415 | -423 | -363 | -478 | -713 | -851 | -665 | -440 | -418 | -449 | -504 | -582 |
| 7 | -433 | -513 | -669 | -1,582 | -1,853 | -2,049 | -1,884 | -1,665 | -1,193 | -799 | -528 | -537 |
| 8 | -749 | -1,042 | -1,988 | -2,801 | -2,735 | -2,806 | -2,816 | -2,943 | -2,510 | -2,151 | -1,382 | -1,184 |
| 9 | -1,867 | -2,007 | -2,973 | -2,973 | -2,898 | -2,992 | -3,005 | -3,122 | -2,907 | -2,931 | -2,307 | -4,208 |
| 10 | -2,362 | -2,192 | -2,933 | -3,100 | -3,108 | -3,059 | -3,102 | -3,228 | -2,946 | -2,942 | -2,587 | -5,054 |
| 11 | -2,285 | -2,186 | -2,982 | -3,029 | -2,956 | -3,142 | -3,165 | -3,266 | -2,979 | -2,840 | -2,316 | -4,681 |
| 12 | -2,205 | -2,060 | -2,639 | -2,906 | -2,958 | -3,058 | -3,099 | -3,222 | -2,896 | -2,683 | -2,325 | -4,612 |
| 13 | -2,033 | -2,105 | -2,774 | -2,948 | -3,055 | -3,016 | -3,172 | -3,288 | -2,942 | -2,748 | -2,318 | -4,639 |
| 14 | -2,141 | -2,043 | -2,749 | -2,828 | -3,189 | -2,947 | -3,190 | -3,280 | -3,077 | -2,899 | -2,408 | -4,866 |
| 15 | -2,247 | -2,169 | -2,597 | -2,826 | -3,126 | -3,044 | -3,219 | -3,361 | -3,077 | -2,905 | -2,385 | -5,098 |
| 16 | -1,836 | -2,126 | -2,625 | -2,804 | -3,055 | -2,931 | -3,211 | -3,396 | -3,036 | -2,358 | -1,665 | -3,835 |
| 17 | -669 | -1,270 | -1,849 | -2,419 | -2,773 | -2,937 | -3,213 | -2,979 | -2,095 | -1,143 | -592 | -1,013 |
| 18 | -605 | -492 | -547 | -1,308 | -1,554 | -1,832 | -1,885 | -1,717 | -775 | -649 | -697 | -727 |
| 19 | -619 | -612 | -558 | -556 | -551 | -574 | -639 | -803 | -736 | -712 | -753 | -745 |
| 20 | -621 | -548 | -604 | -652 | -505 | -583 | -590 | -807 | -746 | -702 | -659 | -711 |
| 21 | -585 | -569 | -567 | -591 | -485 | -564 | -598 | -776 | -731 | -653 | -642 | -721 |
| 22 | -520 | -453 | -543 | -593 | -515 | -526 | -608 | -686 | -607 | -642 | -562 | -656 |
| 23 | -534 | -402 | -511 | -573 | -429 | -457 | -513 | -597 | -634 | -573 | -601 | -628 |
| 24 | -393 | -401 | -394 | -479 | -443 | -469 | -465 | -588 | -586 | -501 | -470 | -491 |

Open Position 2019

| HE | 2019 Long/(Short) MWh | | | | | | | | | | | |
|----|-----------------------|----------|--------|--------|--------|---------|---------|---------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| 1 | -7,864 | -6,947 | -6,377 | -6,022 | -5,290 | -5,592 | -5,531 | -6,067 | -6,622 | -6,643 | -7,548 | -7,994 |
| 2 | -7,535 | -6,645 | -6,021 | -5,680 | -4,922 | -5,201 | -5,135 | -5,656 | -6,271 | -6,279 | -7,182 | -7,572 |
| 3 | -7,380 | -6,538 | -5,870 | -5,510 | -4,760 | -4,978 | -4,925 | -5,416 | -6,067 | -6,159 | -7,031 | -7,353 |
| 4 | -7,340 | -6,521 | -5,863 | -5,525 | -4,750 | -4,937 | -4,867 | -5,352 | -5,994 | -6,119 | -6,971 | -7,309 |
| 5 | -7,622 | -6,796 | -6,096 | -5,692 | -4,932 | -5,124 | -5,023 | -5,534 | -6,165 | -6,337 | -7,217 | -7,538 |
| 6 | -8,274 | -7,462 | -6,681 | -6,263 | -5,449 | -5,558 | -5,413 | -6,048 | -6,670 | -6,885 | -7,870 | -8,097 |
| 7 | -9,435 | -8,663 | -7,868 | -7,299 | -6,240 | -6,248 | -6,013 | -6,829 | -7,535 | -7,930 | -8,986 | -9,115 |
| 8 | -10,284 | -9,470 | -8,697 | -8,071 | -7,036 | -7,048 | -6,715 | -7,547 | -8,114 | -8,680 | -9,766 | -9,688 |
| 9 | -10,400 | -9,600 | -8,873 | -8,478 | -7,486 | -7,686 | -7,398 | -8,234 | -8,620 | -8,964 | -10,040 | -7,922 |
| 10 | -10,565 | -9,778 | -9,111 | -8,829 | -7,979 | -8,334 | -8,049 | -8,973 | -9,197 | -9,364 | -10,282 | -7,653 |
| 11 | -10,590 | -9,853 | -9,345 | -9,136 | -8,447 | -8,937 | -8,732 | -9,735 | -9,803 | -9,775 | -10,429 | -7,854 |
| 12 | -10,502 | -9,798 | -9,416 | -9,301 | -8,727 | -9,370 | -9,243 | -10,256 | -10,261 | -10,009 | -10,420 | -7,879 |
| 13 | -10,357 | -9,742 | -9,412 | -9,382 | -8,849 | -9,664 | -9,653 | -10,699 | -10,599 | -10,158 | -10,357 | -7,681 |
| 14 | -10,161 | -9,609 | -9,336 | -9,366 | -8,901 | -9,883 | -9,984 | -11,139 | -10,939 | -10,271 | -10,276 | -7,369 |
| 15 | -9,952 | -9,410 | -9,151 | -9,247 | -8,863 | -10,029 | -10,169 | -11,371 | -11,171 | -10,304 | -10,131 | -7,131 |
| 16 | -9,856 | -9,244 | -8,951 | -9,043 | -8,749 | -10,011 | -10,200 | -11,444 | -11,244 | -10,244 | -10,045 | -7,742 |
| 17 | -10,174 | -9,310 | -8,911 | -8,881 | -8,655 | -9,896 | -10,178 | -11,387 | -11,251 | -10,155 | -10,329 | -10,105 |
| 18 | -11,359 | -9,899 | -8,989 | -8,836 | -8,538 | -9,693 | -9,950 | -11,123 | -11,109 | -10,109 | -11,341 | -11,741 |
| 19 | -11,699 | -10,474 | -9,161 | -8,675 | -8,221 | -9,271 | -9,470 | -10,516 | -10,649 | -10,132 | -11,404 | -11,918 |
| 20 | -11,531 | -10,363 | -9,466 | -8,791 | -8,066 | -8,800 | -8,981 | -9,942 | -10,507 | -10,258 | -11,111 | -11,705 |
| 21 | -11,156 | -10,018 | -9,438 | -9,086 | -8,215 | -8,495 | -8,520 | -9,628 | -10,175 | -9,838 | -10,726 | -11,378 |
| 22 | -10,426 | -9,268 | -8,782 | -8,462 | -7,804 | -8,157 | -8,008 | -8,824 | -9,297 | -9,062 | -10,033 | -10,693 |
| 23 | -9,452 | -8,379 | -7,905 | -7,550 | -6,840 | -7,233 | -7,110 | -7,741 | -8,235 | -8,103 | -9,139 | -9,760 |
| 24 | -8,517 | -7,516 | -6,986 | -6,649 | -5,944 | -6,305 | -6,189 | -6,792 | -7,259 | -7,237 | -8,229 | -8,760 |

Open Position 2020

| HE | 2020 Long/(Short) MWh | | | | | | | | | | | |
|----|-----------------------|----------|---------|--------|--------|--------|--------|---------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| 1 | -8,472 | -7,799 | -6,941 | -6,616 | -5,886 | -6,189 | -6,142 | -6,681 | -7,195 | -7,204 | -8,136 | -8,570 |
| 2 | -8,132 | -7,473 | -6,575 | -6,232 | -5,486 | -5,754 | -5,723 | -6,222 | -6,823 | -6,823 | -7,740 | -8,138 |
| 3 | -7,964 | -7,328 | -6,397 | -6,064 | -5,318 | -5,508 | -5,470 | -5,963 | -6,609 | -6,675 | -7,576 | -7,912 |
| 4 | -7,931 | -7,323 | -6,400 | -6,068 | -5,283 | -5,461 | -5,399 | -5,893 | -6,523 | -6,632 | -7,535 | -7,867 |
| 5 | -8,221 | -7,638 | -6,635 | -6,260 | -5,463 | -5,620 | -5,554 | -6,056 | -6,694 | -6,856 | -7,787 | -8,100 |
| 6 | -8,936 | -8,406 | -7,259 | -6,812 | -5,123 | -4,725 | -4,597 | -6,350 | -7,211 | -7,469 | -8,479 | -8,701 |
| 7 | -10,160 | -9,726 | -8,161 | -5,915 | -3,118 | -2,480 | -440 | -2,717 | -5,518 | -7,855 | -9,669 | -9,804 |
| 8 | -10,858 | -9,828 | -6,244 | -4,930 | -2,827 | -2,090 | 990 | -273 | -1,917 | -4,212 | -8,324 | -10,257 |
| 9 | -9,427 | -8,377 | -5,306 | -4,604 | -2,746 | -2,431 | 872 | -259 | -1,228 | -3,180 | -6,095 | -7,916 |
| 10 | -8,776 | -8,154 | -5,157 | -4,694 | -3,227 | -3,063 | 132 | -905 | -1,670 | -3,003 | -5,979 | -7,181 |
| 11 | -8,777 | -8,221 | -5,323 | -5,064 | -3,662 | -3,725 | -621 | -1,796 | -2,481 | -3,685 | -6,091 | -7,241 |
| 12 | -8,832 | -7,986 | -5,537 | -5,161 | -3,895 | -4,187 | -1,198 | -2,454 | -3,239 | -4,126 | -6,334 | -7,220 |
| 13 | -8,822 | -7,974 | -5,540 | -5,362 | -4,087 | -4,545 | -1,697 | -2,977 | -3,709 | -4,289 | -6,289 | -6,963 |
| 14 | -8,493 | -7,573 | -5,449 | -5,390 | -4,133 | -4,856 | -2,087 | -3,568 | -4,133 | -4,353 | -6,065 | -6,606 |
| 15 | -8,223 | -7,660 | -5,143 | -5,301 | -3,999 | -4,998 | -2,361 | -3,806 | -4,324 | -4,339 | -6,035 | -6,377 |
| 16 | -8,460 | -7,773 | -4,913 | -5,280 | -3,967 | -5,081 | -2,560 | -3,983 | -4,648 | -4,967 | -6,607 | -7,395 |
| 17 | -10,267 | -8,785 | -5,795 | -5,729 | -4,642 | -5,373 | -2,970 | -4,579 | -5,833 | -7,722 | -10,366 | -10,772 |
| 18 | -12,257 | -10,961 | -8,521 | -7,361 | -5,666 | -6,283 | -4,308 | -6,886 | -9,871 | -10,884 | -12,217 | -12,604 |
| 19 | -12,581 | -11,788 | -9,925 | -9,392 | -8,204 | -8,487 | -8,094 | -10,684 | -11,494 | -10,974 | -12,279 | -12,786 |
| 20 | -12,383 | -11,639 | -10,242 | -9,578 | -8,896 | -9,596 | -9,834 | -10,850 | -11,357 | -11,101 | -11,957 | -12,538 |
| 21 | -11,998 | -11,243 | -10,214 | -9,913 | -9,055 | -9,294 | -9,365 | -10,507 | -11,021 | -10,612 | -11,531 | -12,172 |
| 22 | -11,187 | -10,391 | -9,500 | -9,241 | -8,599 | -8,931 | -8,808 | -9,645 | -10,069 | -9,780 | -10,767 | -11,450 |
| 23 | -10,156 | -9,411 | -8,570 | -8,251 | -7,558 | -7,923 | -7,826 | -8,474 | -8,928 | -8,760 | -9,818 | -10,463 |
| 24 | -9,166 | -8,461 | -7,597 | -7,285 | -6,580 | -6,919 | -6,846 | -7,453 | -7,889 | -7,816 | -8,855 | -9,407 |

Open Position 2021 - 2023

| HE | 2021 Long/(Short) MWh | | | | | | | | | | | |
|----|-----------------------|----------|---------|---------|---------|---------|---------|---------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| 1 | -11,342 | -10,323 | -9,597 | -9,386 | -6,977 | -6,814 | -6,650 | -7,300 | -8,539 | -8,938 | -10,273 | -10,882 |
| 2 | -10,898 | -9,917 | -9,126 | -8,899 | -6,493 | -6,289 | -6,094 | -6,721 | -8,062 | -8,436 | -9,713 | -10,346 |
| 3 | -10,694 | -9,743 | -8,903 | -8,656 | -6,300 | -6,043 | -5,803 | -6,375 | -7,780 | -8,312 | -9,652 | -10,145 |
| 4 | -10,675 | -9,744 | -8,904 | -8,656 | -6,310 | -6,013 | -5,747 | -6,333 | -7,713 | -8,390 | -9,618 | -10,050 |
| 5 | -11,080 | -10,141 | -9,217 | -8,896 | -6,531 | -6,185 | -5,876 | -6,625 | -7,983 | -8,751 | -9,980 | -10,366 |
| 6 | -12,030 | -11,093 | -10,027 | -9,509 | -5,959 | -4,754 | -5,081 | -7,073 | -8,821 | -9,680 | -10,914 | -11,141 |
| 7 | -13,671 | -12,735 | -10,945 | -7,689 | -2,679 | -1,422 | -1,266 | -3,733 | -7,588 | -10,458 | -12,450 | -12,595 |
| 8 | -14,560 | -12,638 | -7,913 | -5,815 | -2,032 | -1,031 | -401 | -1,683 | -4,358 | -7,173 | -11,410 | -13,353 |
| 9 | -12,622 | -10,444 | -6,709 | -5,703 | -2,295 | -1,774 | -1,025 | -2,138 | -4,121 | -6,458 | -9,373 | -11,330 |
| 10 | -11,862 | -9,945 | -6,520 | -6,061 | -3,137 | -2,817 | -2,274 | -3,267 | -4,915 | -6,612 | -9,441 | -10,816 |
| 11 | -11,856 | -9,888 | -6,743 | -6,515 | -3,920 | -3,903 | -3,532 | -4,732 | -6,116 | -7,465 | -9,683 | -10,861 |
| 12 | -11,801 | -9,798 | -6,987 | -6,730 | -4,311 | -4,669 | -4,515 | -5,749 | -7,191 | -8,070 | -9,934 | -10,739 |
| 13 | -11,566 | -9,815 | -6,963 | -7,019 | -4,497 | -5,156 | -5,248 | -6,539 | -7,841 | -8,304 | -9,884 | -10,276 |
| 14 | -11,028 | -9,456 | -6,818 | -7,000 | -4,541 | -5,571 | -5,719 | -7,295 | -8,425 | -8,415 | -9,705 | -9,901 |
| 15 | -10,641 | -9,515 | -6,462 | -6,924 | -4,379 | -5,597 | -5,957 | -7,514 | -8,636 | -8,360 | -9,679 | -9,719 |
| 16 | -10,992 | -9,600 | -6,306 | -6,867 | -4,303 | -5,491 | -5,909 | -7,550 | -8,850 | -8,861 | -10,115 | -10,708 |
| 17 | -13,748 | -11,095 | -7,473 | -7,323 | -4,926 | -5,436 | -5,975 | -7,833 | -9,819 | -11,334 | -13,851 | -14,084 |
| 18 | -16,455 | -14,336 | -11,510 | -9,892 | -6,400 | -6,680 | -6,834 | -9,727 | -13,443 | -14,227 | -15,943 | -16,243 |
| 19 | -16,763 | -15,376 | -13,528 | -12,989 | -10,135 | -9,991 | -10,143 | -13,121 | -14,681 | -14,174 | -15,867 | -16,356 |
| 20 | -16,421 | -15,123 | -13,944 | -13,329 | -11,069 | -11,503 | -11,724 | -12,978 | -14,421 | -14,273 | -15,355 | -15,975 |
| 21 | -15,856 | -14,585 | -13,839 | -13,750 | -11,247 | -11,062 | -11,113 | -12,387 | -13,849 | -13,510 | -14,784 | -15,465 |
| 22 | -14,800 | -13,520 | -12,876 | -12,812 | -10,541 | -10,534 | -10,270 | -11,181 | -12,525 | -12,303 | -13,756 | -14,474 |
| 23 | -13,450 | -12,272 | -11,638 | -11,488 | -9,086 | -9,052 | -8,895 | -9,565 | -11,003 | -10,799 | -12,524 | -13,275 |
| 24 | -12,202 | -11,098 | -10,407 | -10,240 | -7,821 | -7,725 | -7,569 | -8,285 | -9,566 | -9,607 | -11,256 | -11,909 |

Open Position 2024 and Beyond

| HE | 2024 Long/(Short) MWh | | | | | | | | | | | |
|----|-----------------------|----------|---------|---------|---------|---------|---------|---------|-----------|---------|----------|----------|
| | January | February | March | April | May | June | July | August | September | October | November | December |
| 1 | -12,200 | -11,797 | -10,672 | -10,876 | -10,617 | -10,778 | -11,138 | -11,520 | -11,477 | -10,946 | -11,720 | -12,303 |
| 2 | -11,715 | -11,329 | -10,180 | -10,324 | -10,058 | -10,128 | -10,476 | -10,858 | -10,872 | -10,431 | -11,241 | -11,736 |
| 3 | -11,483 | -11,102 | -9,924 | -10,030 | -9,723 | -9,727 | -10,046 | -10,427 | -10,474 | -10,124 | -10,967 | -11,421 |
| 4 | -11,446 | -11,073 | -9,885 | -9,973 | -9,623 | -9,557 | -9,846 | -10,231 | -10,297 | -10,011 | -10,899 | -11,367 |
| 5 | -11,864 | -11,481 | -10,173 | -10,200 | -9,738 | -9,588 | -9,916 | -10,384 | -10,476 | -10,248 | -11,260 | -11,738 |
| 6 | -12,873 | -12,525 | -11,007 | -10,796 | -9,050 | -8,084 | -9,025 | -10,699 | -11,124 | -11,050 | -12,216 | -12,629 |
| 7 | -14,629 | -14,345 | -11,988 | -9,016 | -5,784 | -4,661 | -5,132 | -7,375 | -9,746 | -11,799 | -13,824 | -14,199 |
| 8 | -15,599 | -14,323 | -9,057 | -7,177 | -5,070 | -4,061 | -4,020 | -5,273 | -6,534 | -8,611 | -12,876 | -15,001 |
| 9 | -13,721 | -12,168 | -7,895 | -7,090 | -5,292 | -4,717 | -4,505 | -5,645 | -6,256 | -7,899 | -11,061 | -13,022 |
| 10 | -12,992 | -11,687 | -7,747 | -7,487 | -5,960 | -5,579 | -5,538 | -6,538 | -7,059 | -8,063 | -11,214 | -12,509 |
| 11 | -12,983 | -11,667 | -7,981 | -7,966 | -6,551 | -6,452 | -6,548 | -7,636 | -8,155 | -9,006 | -11,517 | -12,707 |
| 12 | -12,910 | -11,560 | -8,210 | -8,168 | -6,812 | -7,067 | -7,312 | -8,459 | -9,137 | -9,588 | -11,804 | -12,678 |
| 13 | -12,659 | -11,591 | -8,194 | -8,468 | -7,079 | -7,592 | -8,007 | -9,163 | -9,770 | -9,825 | -11,727 | -12,346 |
| 14 | -12,114 | -11,254 | -8,058 | -8,465 | -7,328 | -8,138 | -8,626 | -9,977 | -10,434 | -9,998 | -11,467 | -11,907 |
| 15 | -11,702 | -11,211 | -7,709 | -8,414 | -7,385 | -8,435 | -9,105 | -10,432 | -10,768 | -10,037 | -11,364 | -11,574 |
| 16 | -12,025 | -11,267 | -7,564 | -8,428 | -7,510 | -8,650 | -9,440 | -10,709 | -11,090 | -10,616 | -11,803 | -12,449 |
| 17 | -14,753 | -12,790 | -8,730 | -8,939 | -8,347 | -9,015 | -9,932 | -11,324 | -12,194 | -13,204 | -15,453 | -15,865 |
| 18 | -17,536 | -16,125 | -12,724 | -11,500 | -10,032 | -10,541 | -11,155 | -13,449 | -15,922 | -16,109 | -17,538 | -18,062 |
| 19 | -17,878 | -17,276 | -14,752 | -14,546 | -13,771 | -13,858 | -14,590 | -16,876 | -17,216 | -16,126 | -17,480 | -18,095 |
| 20 | -17,529 | -17,033 | -15,208 | -14,960 | -14,732 | -15,432 | -16,168 | -16,975 | -17,097 | -16,302 | -16,973 | -17,698 |
| 21 | -16,946 | -16,465 | -15,113 | -15,448 | -15,091 | -15,161 | -15,691 | -16,701 | -16,635 | -15,623 | -16,342 | -17,153 |
| 22 | -15,840 | -15,330 | -14,114 | -14,509 | -14,410 | -14,609 | -14,952 | -15,555 | -15,322 | -14,464 | -15,253 | -16,138 |
| 23 | -14,429 | -13,976 | -12,827 | -13,124 | -12,954 | -13,193 | -13,520 | -13,961 | -13,757 | -13,086 | -13,910 | -14,762 |
| 24 | -13,103 | -12,694 | -11,561 | -11,804 | -11,600 | -11,820 | -12,161 | -12,544 | -12,375 | -11,814 | -12,646 | -13,372 |

Preferred Products

- PCE is particularly interested in products that help meet the following open positions:
 - PCC 1: 1-2 year contracts covering 2018-2019;
 - PCC 2: 1-2 year contracts covering 2019-2020;
 - Fixed price contracts to fill in the open hours identified in the previous slides:
 - Medium (5-10 years) and long-term (10+ years) contracts; and
 - Renewables with or without storage;
 - In-state and out-of-state wind projects; and
 - New or existing projects.



Requirements and Evaluation

Eligible Products

- Generating facilities must be an eligible renewable resource (ERR) per the California Energy Commission.
- Located within Western Electricity Coordinating Council (WECC) territory.
- Minimum 1 megawatt (MW) AC; maximum 500,000 megawatt-hours (MWh) per year from any one project.
- Both new and existing projects are eligible.
- Development milestones:
 - Site control; and
 - CAISO Phase 2 interconnection study or greater.
- RECs must be transferred to PCE via the Western Renewable Energy Generation Information System (WREGIS).

Eligible Products – PCC1

- For Portfolio Content Category (PCC) 1:
 - Product includes all:
 - Electric energy,
 - Green Attributes/Renewable Energy Credits (RECs), and
 - Capacity Attributes (if available);
 - Single, flat price per MWh delivered to the generator's pricing node (Pnode); and
 - **And** a single, flat price per MWh delivered to the NP15 trading hub.
- Respondents may propose alternative pricing options so long as the aforementioned pricing requirements have been satisfied.

Eligible Products – PCC2

- For PCC 2:
 - Index plus a single, flat REC premium; and
 - **May** also include an offer with a single, flat price per MWh.
- Respondents may propose alternative pricing options so long as the aforementioned pricing requirements have been satisfied.

Evaluation Criteria

| Quantitative | Qualitative |
|-------------------------|--|
| Market forward prices | Project viability including status of interconnection, site control, and permits |
| Value of capacity | Technology viability |
| Value of energy storage | Location |
| Proposed contract price | Project team experience |
| | Financing plan and financial stability of owner/developer |
| | Consistency with PCE's mission statement and Integrated Resource Plan |
| | Consistency with PCE's Workforce Policy |
| | Consistency with PCE's Sustainable Vendor Policy |
| | Environmental impacts and related mitigation requirements |

Offer Submittal

Offer Submittal

Required Information and Documents

- Participants may submit multiple projects and may submit variations (separate offers) on each project.
- Only complete electronic submittals using the Offer Form and emails to your unique email address will be accepted.
- Document naming convention:
 - DeveloperCode_ProjectName_ProjectVariation_Document Name.pdf (*for all non-Excel files*); and
 - DeveloperCode_ProjectName_ProjectVariation_Document Name.xlsm (*for all Excel files*).
 - **Developer Code will be assigned during the pre-registration process.*

Required Information and Documents

- Submit all documents into the RFO's document management system as email attachments using your unique RFO email address.
 - No text in the body of the email.
 - The cumulative size of the attachments cannot exceed 80 MB.
 - Please only submit final documents as there is no way for a Participant to delete a document from the system once submitted.
 - You will receive an email confirmation once your document is uploaded to the system.

Documents Due by February 9th 12 PM PPT

- By the offer submittal deadline:
 - A **cover letter** defining the relationships among offers for each project.
 - A document describing the roles, experience and qualifications of all **project team** members.
 - A document addressing PCE's **Sustainable Workforce Policy**.
 - A document addressing PCE's **Ethical Vendor Standards**.
 - One complete, separate **Offer Form** for each project/offer combination.
 - A completed **Generation Profile and LMP Historical Data form**.
 - A document describing the **project's characteristics and development status**.
- Please see the RFO instructions for more information on each document.

Evaluation & Notification

- Following the submission deadline, PCE will download all proposals.
- We will evaluate against the evaluation criteria identified above.
- Once we have completed our evaluation, we will notify Participants of the status of their proposal.
- We expect to complete the evaluation and notifications by March 9, 2018.

Documents Required for Short-Listed Participants

- Two weeks following short-list notification:
 - **Short-listing deposit** of \$3.00/kW AC of project capacity;
 - An executed **confidentiality agreement**;
 - A complete **redline** of the pro forma PPA;
 - The most recent **Phase 2 Interconnection Study** and (if available) interconnection agreement;
 - **Site map**, showing nearest cross streets, latitude and longitude; and
 - Demonstration of **site control**.

Q&A

Q&A

Q&A Process

- Participants submitted written questions through Friday, January 19, 2018.
- PCE will discuss each question and provide a response during the webinar.
- Subsequently, PCE will provide a written summary of Q&A discussed during the webinar.
- The written responses will take precedence over responses given during the webinar.
- Participants will have until February 2, 2018 to submit additional written questions.
- PCE will post responses to all questions by February 7, 2018.

Questions Submitted by Participants

| # | Question | Response |
|---|---|---|
| 1 | Can we bid pricing for individual projects, and pricing for all projects as a portfolio? | Yes, please refer to page 11 of the RFO Instructions. As long as a bidder provides the required pricing scenarios, alternatives may also be proposed. |
| 2 | For pricing scenarios, would with union labor and without union labor be considered two different configurations? | Yes, if this would result in different prices. |
| 3 | How will a Renewable+Storage resource be compared against a Renewable only resource based on the evaluation criteria laid out in the RFO? | PCE will evaluate the benefits and costs as explained in the RFO Instructions. |
| 4 | Are there additional benefits/values that PCE can gain from a Renewable+Storage project beyond shaping of renewable energy? | Yes, although shaping the renewable energy output is the primary benefit. Other benefits may include grid resiliency, incremental RA, and ancillary services. |
| 5 | For offers that incorporate storage, does PCE have a preferred pricing structure? | No, we are open to different pricing structures. |

Questions Submitted by Participants

| # | Question | Response |
|---|--|---|
| 6 | Is there a certain storage size or time to dispatch that is preferred with a storage option? | No, this is up to the Participant. We encourage you to review the Open Position heat maps in Appendix A of the RFO Instructions. |
| 7 | For a combined solar and storage offer, does PCE have any minimum requirements or preferred ratios for the storage component? | No, this is up to the Participant. We encourage the Participant to propose projects that will have the greatest value to PCE based on the information provided in the Open Position tables and the IRP. |
| 8 | For a combined solar and storage offer, in addition to shifting energy to meet hourly demand, do you want the combined resource to be capable of satisfying resource adequacy requirements? How do you define resource adequacy in this context? | If the storage offer is able to provide resource adequacy we will include this in the evaluation of the offer. |

Questions Submitted by Participants

| # | Question | Response |
|----|--|---|
| 9 | For a combined solar and storage offer, do you prefer to reserve a portion of the battery for ancillary services (i.e. regulation or load following?) If so, is there an optimal percentage that you would like to reserve? | No, this is up to the Participant. We encourage the Participant to propose projects that will have the greatest value to PCE based on the information provided in the Open Position tables and the IRP. |
| 10 | Is the \$3/kW-ac offer deposit requirement applicable to an energy storage system's capacity in addition to the renewable energy generator capacity (for offers that incorporate energy storage), or is it solely assessed based upon the renewable energy generator's capacity? | For offers that include storage, this would apply to the combined storage + energy facility capacity. |
| 11 | Does PCE have a preferred pro forma PPA/PPA provisions for 1) offers that incorporate storage and 2) hub-settled products (as bidders are instructed to provide pricing for both p-node and hub delivery)? | No, PCE intends to negotiate on a deal-specific basis for projects with these attributes. |

Questions Submitted by Participants

| # | Question | Response |
|----|---|---|
| 12 | Please confirm that the energy sales agreement is a PPA for the physical delivery of power (and not a contract for differences or a financial settlement). | Yes, this is for physical delivery. Please refer to the form PPA on the RFO web site |
| 13 | Who is the entity that will be signing the PPA? | Peninsula Clean Energy |
| 14 | Is the entity credit rated? If yes, what is the credit rating? If no, is there a plan to be credit rated? If no, what type of credit support can we expect to see in the PPA? | Peninsula Clean Energy does not currently have a credit rating, but we are credit worthy. You can find PCE's budget and financials here: https://www.peninsulacleanenergy.com/resources/budget-and-finances/ . |

Questions Submitted by Participants

| # | Question | Response |
|----|--|---|
| 15 | Does PCE intend to purchase resource adequacy benefits under any of the contracts, and if so, in what amount and term? | Yes, if a project is capable of offering resource adequacy benefits, this will be included in the procurement. Please refer to the definition of Product in the form PPA. We are not looking to procure stand-alone RA as part of this RFO. If you would like to offer a proposal for stand-alone RA, please email procurement@peninsulacleanenergy.com . |
| 16 | For an existing renewable resource in California with a COD of mid-2027 be considered an eligible bid? | Yes, there is no outside date for CODs. You are free to submit an offer with a later COD. It will not disqualify your offer from consideration. However, it will be a factor in the evaluation process, and may affect whether it is selected. |

Questions Submitted by Participants

| # | Question | Response |
|----|--|---|
| 17 | For PCE's long term need will you consider a COD before 2024? What is the desired COD and term for the long term need? | Yes, the open position tables are to provide data on open positions at different points in time, not to indicate COD timeline preferences. Please refer to the IRP for information on our procurement strategies. |
| 18 | How short or long of a PPA are you willing to consider? | PCE is looking to build a diverse portfolio. Our targets for different diversity factors, including term length and size, are outlined in the IRP. |
| 19 | The RFO states, "PCE encourages participants to submit offers for products of short-, medium- and long-term lengths from new and existing projects." Is there a particular term length that PCE favors for different project sizes or delivery points? | No, PCE is looking to build a diverse portfolio that includes short, medium and long-term contracts. Our targets for different diversity factors, including term length and size, are outlined in the IRP. |

Questions Submitted by Participants

| # | Question | Response |
|----|--|--|
| 20 | What is the load profile of the electricity being procured? | Please refer to the Open Position tables in Appendix A of the RFO Instructions. |
| 21 | When do you need the electricity? | Please refer to the Open Position tables in Appendix A of the RFO Instructions. |
| 22 | Can PCE provide guidance on their open positions for 2022 and 2023? | These are the same as the open position provided for 2021. |
| 23 | If we executed a Confidentiality Agreement in the last PCE RFO, do we need to execute another CA? | Only short-listed Participants will need to execute a Confidentiality Agreement. Once notified of short-listing, a Participant will have two weeks to provide the security deposit and other documentation including the Confidentiality Agreement. |
| 24 | If more than one email offer file is submitted, will PCE use the latest file submitted as the one for consideration? | Yes, if we notice that the same document was submitted twice, we will look at the later timestamp. However, please only submit final documents. It will be difficult for us to sort through all offers to make sure we are looking at the final document if more than one document is submitted. |

Questions Submitted by Participants

| # | Question | Response |
|----|---|---|
| 25 | Is the Offer Form strictly for submitting pricing and the other documents required to be emailed? | The Offer Form requests data related to pricing as well as some additional data. We have posted an Offer Form template to the RFO Web site. The information requested on this form should be submitted on the Offer Form and other documents should be submitted as email. Please do not include text in the body of those emails, and follow the document naming convention in the RFO Instructions. |
| 26 | The instructions say to submit one Offer Form per Project-size combination. Can different COD's for a Project be submitted under the same Offer Form? | Yes, different COD and pricing combinations can be submitted on one Offer Form. Please refer to the Offer Form template posted to the RFO Web site. |
| 27 | Will a respondent be able to download the Offer Form to fill it in then upload for submittal? Alternatively, can you send the Offer Form template? | An Offer Form template has been posted to the RFO Web site. You must submit the Offer Form via the Google Form platform. Once submitted, you will receive an email confirmation with a copy of your responses. |

Questions Submitted by Participants

| # | Question | Response |
|----|--|--|
| 28 | Will projects that do not yet have a Phase II interconnection study (i.e. projects with only a Phase I interconnection study) be considered? | We have a strong preference for projects with a completed Phase 2 study. This will be a factor in the evaluation process, and may affect whether an offer is selected. |
| 29 | Would a project with a completed Phase 1 study for the “Proposed Project” along with Phase 2 study results for a project previously proposed on the same site with the same point of interconnection be eligible? | We have a strong preference for projects with a completed Phase 2 study. This will be a factor in the evaluation process, and may affect whether an offer is selected. |
| 30 | The 'Project LMP Data Input' tab of the LMP Generation Form requests 3 years of Day Ahead LMPs. A pnode is only created once a project goes online. If our project is not yet online, should we provide 3 years of LMPs from a nearby pnode? | Yes, please provide LMP data from the closest PNode possible. The form also requests 4 years of LMP data (1/1/2014-12/31/2017) |

Questions Submitted by Participants

| # | Question | Response |
|----|--|---|
| 31 | Regarding the Generation Profile and LMP Historical Data form, please clarify if the 8760 results ("Project Gen Profile (A)" tab) should capture average annual generation over the life of the contract or Year 1. | Please provide expected generation for Year 1. |
| 32 | Regarding the Generation Profile and LMP Historical Data form, please clarify if the monthly-hourly production results ("Project Gen Profile (B)" tab) should be provided for the expected useful life of the project, or the proposed duration of the contract. | These should be provided for the proposed term of the contract. |
| 33 | Generation/LMP Excel Form has locked cells in B and C tab. | A new Generation/LMP Excel form has been uploaded (V.2) to the RFO website. Please use the V.2 Form. Please remember to save your files as .xlsm files. |

New Q&A

- If you would like to ask a question:
 - Please raise your hand on the GotoWebinar sidebar and the moderator will un-mute you.
 - You also have the option to text written questions to the moderator on the and we will read the question for you and then respond.

Thank you for participating!

All documents including this presentation and Q&A are
available at the PCE RFO Web site:

<https://www.peninsulacleanenergy.com/our-power/pce-2018-renewables-rfo/>

***Offers due Friday, February 9, 2018
12:00 pm PPT***