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## **Pacific Gas and Electric Company's (PG&E's) 2016 Energy Storage Request for Offers ("RFO") Frequently Asked Questions**

1. What is PG&E seeking in this RFO?

PG&E is seeking offers for energy storage at the transmission, distribution, and customer connected domains.

For third-party owned energy storage offers, PG&E is only seeking capacity (Resource Adequacy) products from the energy storage project.

For utility-owned energy storage offers, PG&E is seeking (1) energy storage projects at an identified site to act as a distribution deferral asset and market resource, (2) energy storage projects adjacent or near one of three identified PG&E-owned PV sites, and (3) stand-alone energy storage projects anywhere in PG&E's service territory that would act as a California Independent System Operator (CAISO) wholesale market resource.

2. What is the deadline<sup>1</sup> to submit offers to PG&E for the 2016 ES RFO?

The deadline for PG&E to receive offers for the 2016 ES RFO is January 31, 2017 by 1pm Pacific Prevailing Time.

Additional key dates and deadlines that Participants should be aware of for the RFO can be found in the RFO Solicitation Protocol in Section 1.C., Schedule Overview.

3. Does PG&E have a deadline by which to complete the RFO?

Yes. No later than December 1, 2017, PG&E must file an application seeking CPUC approval of agreements resulting from the RFO.

4. Is site control required at the time of Offer submission?

Yes. Participants must demonstrate site control at the time of Offer submission, except for Offers for the PG&E-Owned PV Sites Projects, PG&E-Owned Distribution Deferral Asset Project, and customer-connected Projects.

To demonstrate site control, participants should describe the elements of site control (direct ownership and leases, and options to own or lease the site), easements, and rights-of-way required for the Project and Gen-Tie, the associated requirements for each, and any steps taken towards obtaining such site control, easements, and rights-of-way for the entire term of the proposed Agreement.

5. What is the minimum size for an energy storage Project?

Offers at all connection levels must be at least 1 MW<sup>2</sup> in size.

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<sup>1</sup> The schedule and documents for the ES RFO are subject to change at PG&E's sole discretion at any time and for any reason.

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PG&E will consider Offers where multiple ES resources are aggregated to meet the minimum size. For Projects connected to the CAISO Transmission System, multiple ES resources can be aggregated so long as: (1) the aggregate product has a single CAISO Resource ID, (2) the aggregate product can be measured similar to having a single CAISO meter, (3) the aggregate product has one Locational Marginal Price node, and (4) the aggregate product complies with the CAISO Tariff.

For the utility-owned distribution deferral asset project, see the requirements in Section III.F, PG&E-owned Distribution Deferral Asset and Appendix E1, Distribution Deferral Asset Project. For utility-owned storage assets at PV sites, see the requirements in Appendix E2, PG&E-owned Photovoltaic Sites.

The maximum project size that PG&E will accept is 50 MW.

6. Does PG&E require a minimum discharge duration?

ES Projects must have a fifteen (15) minute minimum Discharge Duration.

The PG&E-owned distribution deferral Project must have a four (4) hour minimum discharge duration, depending on the individual site set forth in the Protocol in Table III.1, Distribution Deferral Site.

PG&E-owned ES Projects at PV sites must have four (4) hour minimum discharge duration, as specified by PG&E for individual sites set forth in the Protocol in Table III.2, ES at PV Sites.

If an Offer includes RA as part of the Product, then the Project must meet the applicable CPUC requirements for duration and CAISO requirements for deliverability as well as any other requirements that will enable PG&E to receive all of the RA benefits associated with the Project.

7. Is PG&E seeking a particular type of energy storage technology?

No, PG&E is not seeking a particular type of energy storage technology. However, Offers must meet the CPUC eligibility requirements for energy storage. PG&E encourages offers for diverse energy storage technologies and has identified technology diversity as one of its qualitative evaluation criteria.

8. Does PG&E have any guidance on how to identify potentially preferred locations?

For ES Projects submitted as a PG&E-owned Distribution Deferral Asset the location is identified in the Protocol in Section III.F.

PG&E-owned ES at PV Sites are identified in the Protocol in Section III.G.

For all other ES Projects, PG&E has a preference for Projects in its service territory. Offers for Projects in Northern California (north of Path 26 or "NP26") by the California Independent

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<sup>2</sup> PG&E's CPUC application for approval for its 2016 Energy Storage RFO indicated that the minimum size would be 10 MW; subsequently, PG&E has determined to broaden participation and lower the minimum size to 1 MW.

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System Operator (“CAISO”) will have an equal or higher value than comparable Offers from Projects outside of NP 26. Developers may use the map developed for the RAM and PV programs, for more information about PG&E’s system. Link to map:  
<http://www.pge.com/b2b/energysupply/wholesaleelectricssuppliersolicitation/PVRFO/pvmap/>

9. What if a project is not eligible for this RFO?

PG&E is required to hold biannual energy storage solicitations. Thus, PG&E expects to issue energy storage RFOs in 2018 and 2020. However, PG&E cannot confirm the eligibility requirements or targets of future RFOs.

10. Is there a limit to the number of offers or variations a Participant can submit?

Yes. Participants may submit up to twelve (12) offers. Participants may submit one offer for a specific project at a specific location, using a specific ES technology, and for a specific contract type (e.g., CSA, RA, or PSA); varying these attributes are substantial changes and are considered new Offer(s).

Each offer may include up to ten (10) variations (i.e., the original base offer and 9 additional variations of that offer). A variation may alter such attributes as delivery term, price, commercial operation date, duration of charge/discharge, capacity, or operational characteristics such as ramp rates.

11. What type of agreement is PG&E looking to execute as a result of the RFO?

PG&E may elect to execute a range of agreement types out of the RFO. Please refer to the RFO Solicitation Protocol Section II.B., Agreement Types, for additional information.

12. Will PG&E accept offers that are joint proposals from multiple Participants?

PG&E may consider offers that are joint proposals from multiple Participants. Participants must contact PG&E using the [EnergyStorage@pge.com](mailto:EnergyStorage@pge.com) mailbox and provide a description of the proposed joint proposal, organizational structure sought by the Participants (e.g., joint venture or other), and what information would be shared by Participants.

If Participants seeking to submit offers that are joint proposals are also planning to submit separate individual offers into the solicitation, they should separately notify PG&E and describe the controls they plan on implementing to ensure confidential information will not be shared.

13. Can a Project be phased in over time as long as the totaled offered capacity is online by 2024?

Yes, a Project can be phased in over time as long as its total offered capacity is online by 2024 for the Capacity Storage Agreement, Resource Adequacy Only Capacity Storage Agreement or the Behind-the-Retail Meter Capacity Storage Agreement.

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## INTERCONNECTION

1. Does PG&E require Participants to have submitted an application for an interconnection study at the time of offer submission?

Yes, depending on the Offer type, PG&E requires Participants to have submitted an application for an interconnection study at the time of offer submission. Offers including Resource Adequacy must meet the applicable CAISO requirements for deliverability.

**Third party-owned transmission- or distribution- connected Projects and utility-owned Projects:** Participants must have completed a Phase I interconnection study (or equivalent<sup>3</sup>) or have documentation showing that the Project passed the Distribution Provider or CAISO Fast Track screens at the time of Offer submittal. Participants must remain active in the applicable interconnection queue until the Project's required network upgrades have been completed.

**PSA – Distribution Deferral Asset:** Participants submitting Offers for utility-owned distribution deferral asset are not required to establish a valid and active interconnection application by the time of Offer submittal. PG&E has already filed an application for interconnection under the Wholesale Distribution Tariff and the main interconnection facilities will not be in the Participant's scope of work.

**PSA – PG&E PV Sites:** Participants submitting Offers for utility-owned ES at a PG&E-owned PV generation site do *not* need to establish a valid and active interconnection application by the time of Offer submittal. However, Participants will be responsible for all activities and costs associated with obtaining interconnection, including interconnection study costs, network upgrades, and interconnection facilities as determined via the relevant interconnection process.

2. Would a new energy storage project that will share a common interconnection with an existing generation resource (i.e., under a Large Generator Interconnection Agreement) be considered by PG&E as equivalent to having a completed Phase I interconnection study (or equivalent)?

Offers will be reviewed at the time of offer submittal to determine whether the existing interconnection is sufficient to provide the product offered. Please note that the product offered must be offered as a stand-alone product (e.g., any resource adequacy must be directly attributable to the energy storage).

Using an existing interconnection agreement (IA) will not qualify as having met the Phase 1 study requirement unless the Participant can provide evidence that the existing IA has sufficient capacity for both the existing generation and the new energy storage resource. If the interconnection capacity is insufficient for both projects, new interconnection studies will have

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<sup>3</sup> For example, a System Impact Study.

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to be performed and upgrades may be required in order for the energy storage project to qualify for resource adequacy. Please contact the CAISO or relevant PTO to determine which interconnection process would apply.

3. What should Participants do if their Phase 1 interconnection study for CAISO Cluster 9 is delayed?

Participants must submit all Offer Packages by the January 31, 2017 deadline to be considered by for PG&E's 2016 ES RFO. If the Phase 1 interconnection study for CAISO Cluster 9 is delayed, Participants should complete their Offer Package(s) to the best of their ability and provide a note regarding the delay in the Introductory Letter, along with supporting documentation. Any Participants who received a delayed Phase 1 interconnection study, with supporting documentation, will have until February 15, 2017 to provide PG&E with an updated Offer Package reflecting only those changes specific to the interconnection study. If there are further delays, Participants should notify PG&E and provide documentation of the delay. PG&E will consider those issues on a case by case basis.

## **EVALUATION**

1. Will PG&E provide the detailed calculation methods or the results of its valuation process to Participants or other interested parties?

No. PG&E's evaluation methodology, selection process, and results are proprietary and are not available to Participants or third parties. An exception is made for the staff of the CPUC and members of the Procurement Review Group in order to support PG&E's execution and cost recovery for ES procurement agreements. An overview of PG&E's methodology is provided in Chapter 5 of the testimony filed along with PG&E's Application. That testimony is available at this [link](#).

## **PG&E-OWNED PV SITES**

1. Can PG&E please provide the tilt angle of the panels at the 3 PV sites?

The tilt angles for the Huron, Gates, and Stroud PV sites are 25 degrees.

2. Is union or prevailing wage labor required?

Prevailing wages may need to be paid to personnel working on the common facilities of the proposed energy storage project, for PSAs at PG&E-owned PV sites.

3. What kind of ancillary services and energy products are preferred for PV-PG&E sites?

For PG&E-owned PV sites, PG&E wants energy, ancillary services (regulation up/down or Regulation Energy Management (REM), spinning reserves, non-spinning reserves), RA, and Flex RA.

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- Is PG&E seeking offer variations for the energy storage systems at the PG&E-owned PV sites that vary the size and duration indicated in the solicitation materials??

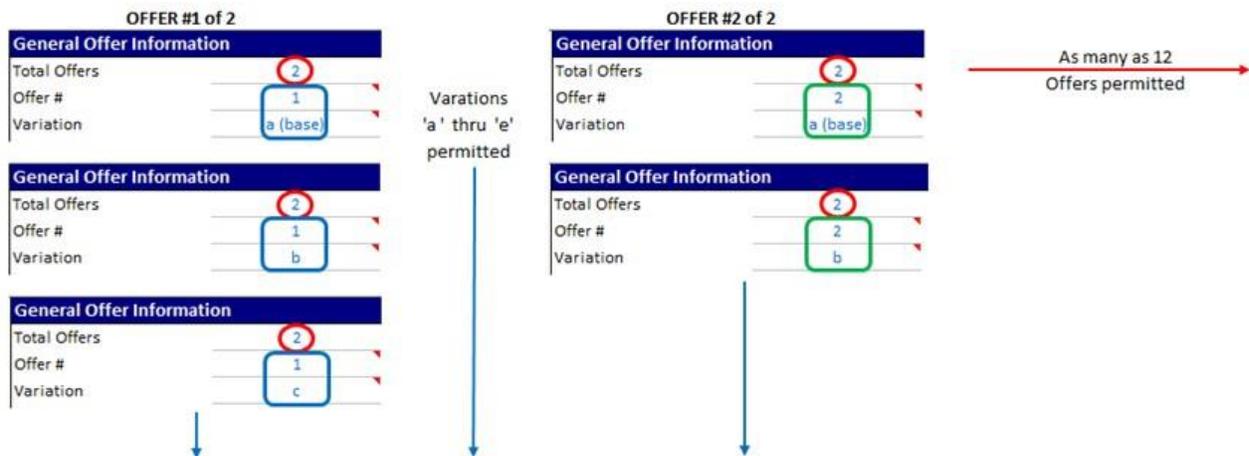
No. PG&E is only seeking a 4 MW Dmax and a 4 hour Discharge Duration at the PG&E-owned PV sites. Any variations of this requirement will not be accepted.

### OFFER FORM QUESTIONS

- Could PG&E clarify the difference between offers and variations, and how to number/letter them?

Participants may submit up to twelve (12) Offers. Changes in a Project’s location, technology, or specific agreement type (e.g., CSA or PSA) would result in a new Offer. Participants may submit up to ten (10) variations. If a Project’s location, technology, or specific agreement type remain constant, then changes in other characteristics such as delivery term, price, commercial operation date, capacity, or duration would constitute a unique variation.

**Example:** Offer Form screenshots for two Offers are illustrated below. The first Offer (PSA) has 3 variations, a → c. The second Offer (CSA) has two variations, a → b. In the illustration below there would be five (5) Offer Form workbooks submitted, for the five (5) unique variations. Each Offer should submit a complete Offer package of applicable appendices. PSA packages should not include CSA information and vice versa.



- When the Purchase and Sale Agreement for Distribution Deferral is selected, the “Project Information” tab has been completely filled out, but the form states that there is still 1 missing or incorrect value on the tab.

This is an error within the Offer Form in the validation of the “Project Information” tab when the Purchase and Sale Agreement for Distribution Deferral is selected. PG&E recognizes that Offer Forms submitted for the PSA Distribution Deferral project will not show “Complete” for the “Project Information” tab. Offer Forms submitted in this scenario will not be deemed

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incomplete by PG&E when reviewed.

3. How should Participants fill out the Agreement specific tab (i.e. Capacity Storage Agreement or RA Only Offers) and Operating Information tab if offering a fraction of the total capacity from the energy storage project?

PG&E expects that the information a Participant enters on the “Operating Information” tab is inclusive of the whole project. The information Participant enters on the Agreement specific tab will reflect the specific fraction of RA the Participant will offer to PG&E.

4. When inputting Offer data into the Offer Form for the Capacity Storage Agreement, Resource Adequacy Only Capacity Storage Agreement, or Behind-the-Retail Meter Capacity Storage Agreement should the values for Payment Quantity and Dmax be the same?

Payment Quantity (entered on the Agreement specific tab) and Dmax (entered on the Operating Information tab) do not need to be the same. Payment Quantity is the amount Participant bids along with Contract Price for which it wants to be paid for delivering Contract Quantities. Dmax is maximum power the Project can continuously discharge.

## **BEHIND THE METER PROJECTS**

1. For the BTM Capacity Storage Agreement, can non-storage demand side resources (i.e. Demand Response, Thermal Storage) be used to fulfill the contract?

Since this is an energy storage solicitation, PG&E is only seeking storage to provide Resource Adequacy. Thermal storage counts as a form of storage but demand response that does not utilize storage does not.

2. Why does the energy settlement calculation in the Capacity Storage Agreement subtract out the lowest Day Ahead Energy Price divided by efficiency, but the BTM Capacity Storage Agreement does not?

The BTM Capacity Storage Agreement energy settlement was designed for a load reducing BTM energy storage resource. With load reduction, the storage resource is only shifting the amount of energy consumed from one time period to another. Participants are effectively compensated for their charging energy by not paying for that energy when they reduce load at a later time. This differs from in front of the meter resources, where they are drawing energy from the grid to specifically discharge that energy.

In the event that a Participant believes its offer does not work well with this settlement, PG&E is open to discussing alternative settlements. Participants should note this in their offer.

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3. Why is the BTM Capacity Storage Agreement energy settlement designed for a load reducing BTM energy storage resource? The BTM CSA specifically states that PG&E is buying a Resource Adequacy storage product (rather than capacity in the form of demand response).

The BTM Capacity Storage Agreement allows a Participant to provide Resource Adequacy in any manner it chooses; however, currently the only way a BTM resource can get RA from CAISO is through a Proxy Demand Resource, which is a load reducing resource. Please refer to the CAISO Tariff to determine the best way for your resource to participate in the RFO.

4. For the BTM Capacity Storage Agreement, can the Project utilize SGIP?

Participants may not utilize SGIP to provide the Contract Quantities. SGIP may be used for other Units that comprise the Project, provided that Participants comply with all requirements of SGIP.

5. Can the Project Units installed using the SGIP incentive and the Project Units that comprise the Contract Quantity bid to PG&E utilize a single inverter and shared balance of plant components?

Participants may choose to configure their Project in any way, as long as they are able to identify the Units that utilized SGIP and Units that did not utilize SGIP. A Unit may not be “split” into SGIP and non-SGIP components. Also, PG&E makes no representations or warranties with respect to the availability of SGIP, and in the event the Participant utilizes SGIP, the Participant must comply with all rules and requirements under SGIP.

6. Does PG&E have any flexibility on the requirement in the BTM Capacity Storage Agreement that Customers in Participant’s Portfolio may not be enrolled in any event-based demand response program offered by Buyer?

BTM participants acting as demand response are subject to Rule 24, which states:

“Non-Utility DRPs are also prohibited from enrolling and registering a customer service account in DR Services if the customer is already enrolled in a PG&E event-based demand response program. The customer can dis-enroll from the PG&E program at any time if it withdraws to enroll in a DRP service.”

Please refer to Rule 24 for further information.

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7. Can a Customer in Participant's Portfolio be enrolled in Automated Demand Response (AutoDR)?

Participants are only eligible for AutoDR if they participate in a PG&E demand response program. Since the energy storage RFO is not a PG&E demand response program, Participants may not be eligible for AutoDR. Please consult with PG&E's AutoDR team for more information.