

## PG&E Excess Supply Pilot Frequently Asked Questions (FAQ)

### *What is the Pilot?*

The Excess-Supply Pilot (XSP) is a PG&E Pilot focused on testing the capabilities of demand-side resources to increase load as a service to the grid during the times of over generation on transmission and/or distribution lines as well as in the case of negative prices. Consistent with CPUC policy, the Pilot does not intend that Participants simply use more energy; instead, it is intended that Participants will utilize XSP events to shift energy usage.

### **General Program Information:**

#### *Who Can Participate?*

Subject to an enrollment cap, the Pilot is open to any individual customers or aggregators within PG&E service territory who can meet the requirements. The Pilot is open to both bundled and direct access customers.

#### *How long will the Pilot last?*

The XSP is currently scheduled to run through December 2017.

#### *Will the Pilot transition into a formal program?*

The intention of the Pilot is to test out certain aspects of utilizing DR to mitigate excess supply conditions. At this time it is too early to tell whether this will transition into a formal program.

#### *What are the participation requirements?*

It is expected that each participant will enroll a single resource composed of a single aggregation with one or more locations. Each resource must:

- Include customers from a single Sub-LAP
- Preferably, be served by a single Load-Serving Entity (LSE)
- Be able to achieve the pilot capacity requirements of 30 kW, for at 2 hours over a participant-defined 4-hour period.

#### *Can we enroll a larger set of customers and then nominate only a portion of the total possible capacity?*

Yes, although this may entail unwanted impacts since all enrolled customer locations are measured when calculating baselines and measuring performance during awards.

### *What is a Sub-LAP?*

Sub-LAP is short-hand for a Sub-Location Aggregation Point. Although PG&E service territory is divided into 16 distinct Sub-LAP regions, CAISO market resources cannot include locations from different Sub-LAPs. Olivine assists participants in determining the correct Sub-LAP for a customer location during enrollment.

Note that while the XSP is not placing participant resource into the California ISO market, it is important that resources have a local characteristic. As such, it was decided to use the Sub-LAP as a reasonable geographic reason for the pilot.

Also note, that the Sub-LAP designations were updated on January 1, 2017 but PG&E has not published a new map. In summary, the changes are that PGLP was removed and split into PGZP and PGKN; PGNV was merged into PGNP; and PGSA was removed and merged into PGSI and PGNP.



### *What is a Load-Serving Entity (LSE)?*

The LSE is the entity responsible for procuring electricity for their customers. For Bundled customers, the LSE is Pacific Gas & Electric. For Direct Access customers, the LSE is an Energy Service Provider (ESP). The LSE is important because individual CAISO Demand Response resources cannot include customer locations served by different LSEs.

In the XSP, underlying customer locations can belong to different LSEs as long as the resource is not utilized within the XSP.

### *Does it matter who my LSE is?*

No.

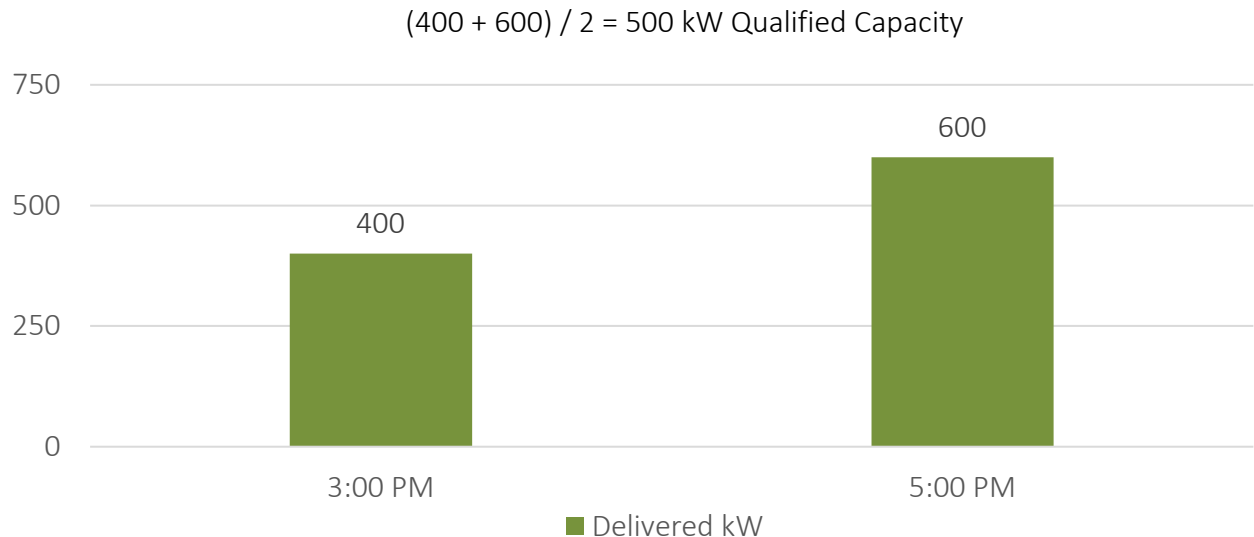
### *How much capacity can I enroll?*

The general intention is to distribute capacity to encourage a group of diverse participants, with each enrolling a single resource. Allocations will take into account the needs of the Pilot, and the unique specifics of the participant's resource.

## Nomination & Bidding:

### *What is Qualified Capacity?*

All resources will be tested for two contiguous hours to determine their *Qualified Capacity* before becoming operational. To determine this value, the total average energy delivered over the period will be subtracted from the baseline:



### *Can I change my Qualified Capacity?*

Participants may request a change in their Qualified Capacity up to the maximum curtailable load as specified when registering service accounts. If the request is approved by the Pilot Administrator, it will be granted provisionally until the test is performed. If the test is successful, this will also become the nomination for that month.

### *How much can I nominate?*

Once tested, participants make a monthly nomination between 30 kW and their Qualified Capacity. The monthly nomination is the basis for capacity payments.

### *When are nominations for the following month due?*

Nominations are made monthly and must be provided to Olivine by noon on the 3<sup>rd</sup> to last business day of the month. Olivine may send reminders to complete the monthly nomination, however it remains the sole responsibility of the participants to do so. If no nomination is received by the deadline, the previous nomination value will be used.

### *What are the ongoing pilot requirements?*

After having the qualified capacity value and nomination, participants must nominate monthly to earn a monthly capacity payment, noting that the capacity payment depends on the election as well as event performance.

The resources committed to this Pilot must nominate a monthly capacity value into the pilot as well as 4 hours per day during which this capacity value can be dispatched. The nomination can be changed every calendar month.

- The 4 hours can be made up of either one block of 4 contiguous hours or two blocks of 2 contiguous hours
- Blocks may not span midnight
- Blocks may not overlap with 7-9 AM nor 6-8 PM
- There are 2 product options, each option containing two groupings of event days.
  - Monday through Friday; Saturday and Sunday
  - Monday through Thursday; Friday through Sunday
- The Participant may choose different hours for each grouping and may nominate 0 in either grouping, but if not nominating 0, the nominated value must be the same between the two groups.
- Events will not occur on program holidays

#### *What are the operational hours of the Pilot?*

The Pilot is operational 24 hours a day, 7 days a week. Participants may choose to nominate in any of these hours with the exception of the excluded periods noted above.

#### *Can I be awarded non-contiguous hours?*

No. All awards will be either 1 hour or 2 contiguous hours in duration.

#### *How is load increase measured?*

Load increase is calculated using a baseline methodology. The baseline itself is computed following the baseline methodology set forth by CAISO in the Proxy Demand Resource (PDR) product<sup>1</sup>. The baseline is a “10 in 10” calculation, taking the average of the most recent 10 non-event days subject to a 20% morning-of adjustment. The ultimate load increase measurement is the load during the event minus the baseline.

#### *What is the relationship between Qualified Capacity and nominations?*

The *Qualified Capacity* is a tested kW value that has been demonstrated as achievable by the resource. The *nomination* is a capacity commitment to the program, at or below the Qualified Capacity.

## **Capacity Payments**

#### *What are the program requirements to be eligible for capacity payments?*

Participants must have a qualified capacity and monthly nomination.

There are no penalties associated with ineligibility for capacity payments.

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<sup>1</sup> For more, see CAISOs PDR Full Market Module: <http://www.caiso.com/275d/275d778249a30.pdf>

*Are there energy payments in the XSP?*

No. It is the intention of the XSP to promote energy shifting to achieve the desired effect, and it is up to the participants to absorb, mitigate or avoid any increase in retail (energy and/or demand) to the end customers.

*How are the capacity payments calculated?*

Raw hourly performance is calculated as the hourly delivery divided by the nomination quantity. Hourly delivery will be measured using an average of the intra-hour metered quantities minus the hourly PDR baseline.

Raw Performance	Adjusted Performance
$x > 50\%$	100%
$25\% < x \leq 50\%$	50%
$0\% < x \leq 25\%$	25%
$x \leq 0\%$	0%

The performance values are rounded up according to the tiers from the table above. A weighted average of all performance for the entire month will then be calculated and multiplied by the customers’ nomination value and the capacity price to determine the monthly settlement value.

The capacity price depends on the number of days in the election:

# of days	\$/kW-month
2	\$5
3	\$6
4	\$7
5	\$8
7	\$10

*How many events can I expect per month?*

Unlike some other programs and pilots, XSP resources will be dispatched every month. The expected number of events per month varies by the number of days nominated:

# of days	Events
2	2
3	3
4	4
5	5

7	7
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*How often does settlement occur?*

Settlements occur monthly roughly 45 days after the trade month; actual payment dates will be based on final wholesale baseline data from the CAISO.

**Relationship with SSP**

*Are there limitations on including customer locations in both the XSP and SSP?*

Yes. Joint participation in the XSP and SSP is at the resource level, meaning that the entire resource and all underlying customers must be enrolled in both the XSP and SSP.

*Are there other restrictions imposed due to multiple participation?*

To avoid interaction between the two pilots, there are restrictions placed on SSP bidding hours. Normally, SSP participants may bid 24 x 7; however, when coupled with XSP, SSP resources will be unable to bid 4-hours before and 4-hours after the XSP nomination selection. For some participants and technology types it may not be feasible to participate in both programs; however, with the flexibility in XSP nomination hours and day types, participants have the opportunity to design availability hours to maximize the opportunity of multiple participation.

*How do settlements interact across the programs?*

Each program is settled independently from the other. The design of the SSP bid exclusion periods – detailed above – ensures that the settlement calculations do not utilize the same bidding hours.