

## Attachment 1

**From:** Peterson, Robert

**Sent:** Wednesday, May 02, 2018 9:27 AM

**To:** 'Swain, Mathew' <MTSN@pge.com>; 'Ellis, Lee' <LEE2@pge.com>; 'Johnson, Tom' <TJJ1@pge.com>; 'Lambert, Jo Lynn' <JLLm@pge.com>

**Cc:** 'tom@horizonh2o.com' <tom@horizonh2o.com>; 'Patrick Donaldson' <patrick@horizonh2o.com>; 'Maier, Lon' <Lon.Maier@cpuc.ca.gov>; 'aram@kevalaanalytics.com' <aram@kevalaanalytics.com>; 'Cassie Quaintance' <cassie@kevalaanalytics.com>; jack.mulligan@cpuc.ca.gov

**Subject:** ESTR: follow-up about System Data (Deficiency Letter No. 4, Item G (3.1))

Hi Mathew,

We reviewed PG&E's proposal and provide the following responses and clarifications.

Our responses are listed in red in the attached [...see next page of this Attachment 1]. In general, we need to see the sample data before we can confirm it would be adequate if provided for an entire DPA. Please submit the sample data with Atascadero 1101 as soon as possible for review (**DUE: 5/16/18**). Please pay careful attention to the clarifications in the attached when preparing the response to help ensure the initial and subsequent responses are adequate.

Rob Peterson | Senior Analyst/Project Manager | Infrastructure Permitting and CEQA, Energy Division | California Public Utilities Commission | 300 Capitol Mall, Suite 418, Workstation #85, Sacramento, California 95814 | 916/823-4748

## Estrella Project

### Paso Robles Distribution Planning Area (DPA) and San Luis Obispo DPA Study Requirements: Deficiency Letter No. 4, Item G (3.1), CPUC Clarification by Email on 3/26/18

Based on the 4/6/2018 meeting in which distribution load forecasting was discussed, below is the list of suggested information data set to be provided for the Paso Robles planning area. Our responses are listed below, in red. In general, we will need to see the sample data before we can confirm it would be adequate if provided for an entire DPA. Please submit the sample data with Atascadero 1101 as soon as possible for review (DUE: 5/16/18). Please pay careful attention to the clarifications here (a, b) and below (in red) when preparing the response to help ensure the initial and subsequent responses are adequate:

- a. We request the same scope and types of data for the entire San Luis Obispo DPA that we requested for the entire Paso Robles DPA (see pp. 3-4).
- b. We also request each of the PG&E power flow cases that CAISO relied on to support their approval of the proposed project. These should be provided at the same time as the initial Atascadero 1101 response package.

Please note that a secure ftp site will be required for file transfer purposes. OK

It is proposed that, initially, the data for a single feeder will be provided in order to verify that data formats are acceptable. PG&E suggests the Atascadero 1101 be used as the test case for data, but any other feeder is equally acceptable. OK

It is our understanding that connectivity data from GIS, the equipment files, and the feeder load-flow simulation files is not needed by you at this time, but may be requested at a future date. This is accurate, for now, but we will ask for this in our larger, follow-up request after reviewing the proposed data sampling.

- 1) Hierarchy showing relationships between banks and feeders OK
- 2) Available SCADA data for each substation transformer bank and feeder in the planning area. Data provided shall be in the units of MW for transformer bank loading and in amps for feeder loading. Up to five years of historic data will be provided, depending on historic SCADA data availability for each asset. OK
- 3) We think SCADA data is the best source for feeder and bank shapes for purposes of this study. In order to use AMI data, you would need to clean multiple years of AMI meter data, create non-AMI meter approximations, and determine generator load data. Using SCADA data would avoid these burdens and provides the real-time distribution load data from substation assets within the DPA. We suggest that you review the SCADA data and then let us know if you need additional data such as AMI meter data.

\*Unfortunately, this proposal would not be adequate. We request the source data that PG&E provided to Integral Analytics for use in the LoadSEER tool.

- 4) Annual electric load growth forecast for each feeder from the adopted 2016 IEPR. OK
- 5) Annual non-residential PV growth forecast for each feeder from the adopted 2016 IEPR. OK
- 6) Annual residential PV growth forecast for each feeder from the adopted 2016 IEPR. OK
- 7) Annual EV growth forecast for each feeder from the adopted 2016 IEPR. OK
- 8) Annual AAEE growth forecast for each customer-class on each feeder from the adopted 2016 IEPR. OK
- 9) Annual LMDR (Load Modifying Demand Response) growth forecast for each feeder from the adopted 2016 IEPR. OK
- 10) 576 hour shapes for Non-Residential PV, Residential PV, EV, AAEE, and LMDR  
\*We request 8760 data. Our tools are capable of handling it.
- 11) 576 hour shapes for 4 customer classes in the Paso Robles area: Industrial, Commercial, Residential, and Agricultural.  
\*We request 8760 data. Our tools are capable of handling it.
- 12) Hourly weather data for the Paso Robles weather station (PPRB) from 4/1/1983 to 9/30/2017  
OK
- 13) Future known new loads, by feeder, indicating relevant customer-class OK
- 14) Feeder and bank capabilities. Data provided shall be in the units of MW for transformer bank capabilities and in amps for feeder capabilities OK

## Updated Deficiency Letter No. 4, Item G (3.1), CPUC 3/26/18 Clarification Email

### Clarification about Required System Data

We request that PG&E meet with our team by phone to discuss the most efficient means to provide the following system data. The data are due on April 27, 2018. The data are in addition to those specified in Deficiency Letter No. 4, Attachment 1.

Note that *Infrastructure data* includes two categories: *GIS* and *non-GIS*. Non-GIS infrastructure data can be provided within a GIS file's associated table and does not need to be provided separately if it is contained in the GIS files. The goal of providing non-GIS infrastructure details separately is to simplify the compliance process so that geospatial joins do not have to be performed if they are not necessary. Some data we consider infrastructure data may fall outside of a narrow interpretation of infrastructure (e.g. customer class/meter associations) but is generally bundled with it for purposes of data type continuity.

*Load data* is generally time-series data, representing consumption of electricity over time. Time-series data is generally incompatible with geospatial data because the volume of data associated with time-series is much larger than geospatial data systems are capable of processing.

### GIS Infrastructure Data:

GIS data [either ESRI shape files (preferred) or Google KMLs] of the following:

- 1) Existing and proposed transmission lines for PG&E's Paso Robles Distribution Planning Area (DPA) and existing transmission lines in the San Luis Obispo DPA;
- 2) Existing and proposed substations in both the Paso Robles DPA and San Luis Obispo DPA;
- 3) Current distribution infrastructure lines (primaries and secondaries) in both DPAs;
- 4) Service address/location IDs or meter IDs (to be able to be paired with meter data described below) in both DPAs;
- 5) Known distributed generation (DG; in front of and behind the meter) with system sizing information, including in front or behind the meter position; system sizing information must identify if it is nameplate, AC, or CEC de-rated in both DPAs; and

- 6) Bulk Power generation resources within the DPA (if any) with system sizing information; system sizing information must identify if it is nameplate, AC, or CEC de-rated in **both DPAs**.

**Non-GIS Infrastructure Data [CSV (preferred) or Excel formats are acceptable] of the following:**

- 1) Service address/location or meter ID and circuit association table for all load in **both DPAs**;
- 2) Identification of any advanced metering infra-structure (AMI) opt-out locations in **both DPAs**;
- 3) DG type, size, online date, and circuit association for all Distributed Energy Resources in **both DPAs**;
- 4) Circuit and transformer association for all circuits in **both DPAs**;
- 5) Transformer and substation association for all transformers in **both DPAs**; and
- 6) Customer class and service location/meter association for all service locations/meters in **both DPAs**.

**Load Data:**

Can be provided via Application Programming Interface (API; preferred) or in CSV format. There must be an association with a circuit, substation, or service location/meter ID as is appropriate for all records.

- 1) SCADA data for all circuits in **both DPAs**, where available, for a period of 5 full years;
- 2) SCADA data for all substations in **both DPAs**, where available, for a period of 5 full years;
- 3) AMI meter data (interval) for all meters in **both DPAs**, where available, for a period of 1 full year (12 full months of data), ending with the most recent month for which a full month of data is available; and
- 4) Monthly KWh for all AMI opt-out customers in **both DPAs**.