**A.17-01-020**

**PG&E Electric Vehicle Infrastructure and Education Senate Bill 350 Transportation Electrification Program**

**TURN Data Request**

**Data Request Number:** TURN-03

**Date Sent: May 17, 2017**

**Response Due: June 1, 2017**

Please provide an electronic response to the following question. A hard copy response is unnecessary. The response should be provided on a CD sent by mail or as attachments sent by e-mail to the following:

|  |  |  |  |
| --- | --- | --- | --- |
| Haley de Genova  The Utility Reform Network  785 Market Street, Suite 1400  San Francisco, CA 94103  [legalassistant@turn.org](mailto:legalassistant@turn.org) | Elise Torres  The Utility Reform Network  785 Market Street, Suite 1400  San Francisco, CA 94103  [etorres@turn.org](mailto:etorres@turn.org) | Eric Borden  The Utility Reform Network  785 Market Street, Suite 1400  San Francisco, CA 94103  [eborden@turn.org](mailto:eborden@turn.org) |  |

For each question, please provide the name of each person who materially contributed to the preparation of the response. If different, please also identify the SDG&E witness who would be prepared to respond to cross-examination questions regarding the response.

For any questions requesting numerical recorded data, please provide all responses in working Excel spreadsheet format if so available, with cells and formulae functioning.

For any question requesting documents, please interpret the term broadly to include any and all hard copy or electronic documents or records in SDG&E’s possession.

1. Regarding SDG&E’s testimony, page JCM-19, lines 7 to 8, state: “Unmanaged charging can increase peak net load, potentially leading to the need for additional local generation resources and capacity investments.”
2. Please provide the planning criteria that drive the decision to build additional local generation resources.
3. How many additional Megawatts of load must be added to SDG&E’s system during the net peak to trigger the need for new, additional generation resources? Please provide all assumptions, sources, and calculations related to this response.
4. Please provide SDG&E’s current forecast of when (year) additional local generation resources will be required to be built to meet net peak load and how much additional generation will be required. Please provide the source(s) and all assumptions, including the amount of (net) load increase from 2016 to the year indicated.
5. Please provide SDG&E’s forecast of net peak load (MW) through 2035, including the month, day, time, and hour it is expected to occur.
6. Regarding response to TURN DR-02, question 21b:
   1. Please explain what the “tax credit” is mentioned in the response. For example, does this relate to bonus depreciation? Please provide all applicable references to IRS rules or anything else relevant in the response.
   2. Please explain if the tax credit mentioned is available in years past 2019, indicating which years and the amount (%) deductible.
   3. Why does the tax credit only affect 2019? Please explain.
   4. If the tax credit is available for years past 2019, please indicate the annual and total effect on the program’s cost, revenue requirement, and rate increases/decreases if the benefit is flowed through to ratepayers. Please provide all assumptions, calculations, and workpapers.
7. Please provide the charging assumptions for customers signed up for an EV TOU rate in the Chapter 8 “Reference Case.” Please explain where is this indicated in the cost-effectiveness model and how this affects results?
8. Regarding TURN-01, question 10, attachment “Res Results Scenario A with TURN DR1 Q10dc Analysis:”
   1. Please provide an explanation/definition for the marginal cost categories for each item (marginal energy, marginal losses, marginal A/S, Marginal RPS, Marginal Gen Capacity, Marginal T&D Costs). This should include how these values are modeled/calculated and applicable examples.
   2. Please explain the theoretical basis for why the values “absent” and “with” program would be higher or lower (e.g. why the program is expected to reduce costs for each of these categories). Please provide separately for each marginal cost category as in part (a) and use quantitative examples where possible or helpful to the explanation.
   3. What are the on-peak charging assumptions for drivers in the reference case (“Absent Program”) on a tiered rate versus TOU rate? The response should include what percentage of charging occurs on-peak for drivers on a TOU rate and DR rate.
      1. Does this assumption differ for SDG&E’s cost-effectiveness model presented in Chapter 8? Please explain if yes.
   4. Please provide all assumptions with sources regarding how marginal generation capacity costs are calculated in the two scenarios. The response at a minimum should include:
      1. What year additional capacity is expected to be required under both scenarios?
      2. How this affects the marginal generation calculation. &
      3. If this is a local (SDG&E) or statewide assumption.
9. In the Technical Appendix to Chapter 8 (Appendix A), page 8, E3 states “In other words, this analysis assumes a percentage of free riders that is comparable to those typically used in energy efficiency program valuation in California.”
   1. Please provide all sources for the “Implied Net-to-gross ratios” shown in Table 4.
   2. Please provide all evidence, sources, and an explanation for why energy efficiency and electric vehicle adoption under SDG&E’s program net-to-gross ratios are expected to be similar.
10. In the cost-effectiveness tests and underlying spreadsheets provided to TURN (e.g. “Res Results Scenario A” and “Res Results Scenario B”) please explain whether the “Gasoline Cost” includes avoided CO2 emissions. If so, please explain the methodology behind this calculation (and applicable references in the Excel spreadsheets) and if not, please explain why not.
11. Please estimate the percentage of single family homes in SDG&E’s territory that require a panel upgrade to install a Level 2 charging station.