**DATA REQUEST**

1. **Please calculate the proposed use cases with another version of the EV HP (A.1907006) UDC and commodity rates using the following time-of-use (TOU) periods: (for convenience SDAP will allow double the amount of time to respond to question 1). Please provide in an excel document.**

|  |  |  |
| --- | --- | --- |
|  | **Summer All Days** | **Winter All Days** |
| **Peak** | **5 PM – 9 PM** | **5 PM –9 PM** |
| **Non-Peak** | **All other hours** | **All other hours** |

**Background for this data request:**

1. **SDG&E’s A.1907009 use cases 1-4 assume overnight charging (12 midnight to 6 AM)**
2. **SDG&E’s A.1907009 use case 5 assumes mainly daytime charging**
3. **PG&E’s A.1811003 and D.1910055 use cases assume mainly daytime charging**
4. **CARB data, *see link below (also attached document for your reference) on CARB 2-8-2019 publication on California’s Average Grid Electricity used and Hourly Carbon Intensity:*** <https://www.google.com/search?rlz=1C1CHBF_enUS771US771&ei=CcLmXbriGOu7tgX_g5L4Aw&q=carb+california+average+electricy+used&oq=carb+california+average+electricy+used&gs_l=psy-ab.3..33i10i299l3.72159.79149..79423...0.1..1.276.4429.10j27j1......0....1..gws-wiz.......0i71j0i273j0i67j0i131j0j0i333j0i22i30j33i160j33i299j33i22i29i30j33i10i160.kHS28PuemAg&ved=0ahUKEwj6ipCypZrmAhXrna0KHf-BBD8Q4dUDCAs&uact=5>

**The data indicates that daytime hours (8 AM – 4 PM) have the lowest annual average emissions.**

1. **SDAP recognizes that a wide variety of customers will take service under EV-HP if it becomes available in A.1907006; some customers may prefer overnight charging; others will need daytime charging for operational reasons**
2. **SDAP believes that EV fleet and Charging Station owners would prefer the simplest possible rate design consistent with cost causation and emissions minimization.**
3. **The differences between super-off-peak and off-peak rates in SDG&E’s current EV-HP A.1907006 proposal are relatively small; this means that there will be little loss of accuracy resulting from blending the two in to a single 19 hour “non-peak” period.**

**SDG&E Response:** SDG&E requested an extension to answer Question #1 until January 30, 2020, which SDAP agreed to.

1. In response to an SDAP data request in A.19-03-002, dated October 17, 2019 and responded to on October 29, 2019. SDG&E responded (see blue italic text below):

**SDAP Question**: In 2018, the CAISO Day-Ahead hourly price exceeded 35 cents per kWh in 33 hours, with a maximum of $1.01 per kWh. If that hour had been a CPP event hour, would the super-position of a $1.01 market price and a CPP adder result in double-counting capacity costs?

***SDG&E Response:***

*No, CAISO prices are energy only; the CAISO does not have a capacity market.*

**SDAP Q.** a.  Would SDG&E agree that the CAISO day-ahead market price of $1.01 per kWh at hour 20 of 7/24/2018 exceeds the physical marginal energy cost in that hour (as determined by the physical heat rate (Btu/kWh) of the least efficient generating unit operating in that hour)?  If not, why not?

***SDG&E Response****: For reference, the day ahead SoCal City Gate price in hour 20 of 7/24/2018 was $39.52. This implies a market heat rate of 25,557, which exceeds the heat rate of the least efficient unit in the system, but the marginal energy cost does not account for Variable Operations and Maintenance Costs or the cost for starting up power plants.*

**SDAP Q** b.  Could the difference between the $1.01 CAISO day-ahead market price and the physical marginal energy cost be regarded as recovery of capacity-related cost in the CAISO day-ahead energy market? If not, why not?

***SDG&E Response*:** *The CAISO day-ahead market price is the marginal energy price in that hour. By definition, the marginal energy price not only covers the variable cost of the marginal unit dispatched in that hour,* ***but any additional revenue contributes to recovery of the marginal unit’s fixed capacity- related costs.*** *(emphasis added by SDAP)*

**New SDAP question 12-3-19:**

If the **"additional revenue"** referred to in SDG&E's response:  “**any additional revenue contributes to recovery of the marginal unit’s fixed capacity- related costs."**

recovers capacity-related cost, and the System CPP adder **also** collects capacity-related costs, please explain why there is not double counting of capacity costs?

**SDG&E Response:**

The VGI/GIR rates are designed so that 50% of capacity costs are recovered in the base rate and 50% of capacity costs are recovered in the adder. Therefore, there is no double counting of capacity costs as designed.

1. Please provide SDGE’s Annual Average hourly window of Carbon Intensity for Electricity use for 2018 and 2019 for each hour (0-24) and provide this average by the month for each hour. If not available then provide most current, please show this is an excel document.

**SDG&E Response:**

Please see the attached Excel file titled: SDAP DR02 – Q3.xlsx

1. **What is The Historical Processed SDGE Caiso Day Ahead Hourly kWh price which is included in the hourly base rates for each hour in the year as it relates to the Dynamic Day Ahead Hourly Rates?**
   1. **Year 2018**
   2. **Year 2019 thru to current date at time of responding.**
   3. **See example from proceeding 17-01-020 SDGE answer on 2-6-17 SDAP DR 01, Question 16 (this answer was provided to me in an excel document from SDGE with the 2016 historical data, I am looking for the same answer except for the historical information from 2018 and 2019)**
   4. **Please show this in a work paper.**

**SDG&E Response:** SDG&E objects to this request to the extent it seeks information that is not within SDG&E’s control and possession and/or that is equally available to SDAP. Subject to and without waiving this objection, SDG&E responds as follows:

CAISO historical prices can be found on the Public California ISO Open Access Same-time Information System: <http://oasis.caiso.com/mrioasis/logon.do>

See the attached workpaper titled: “SDAP DR 02 – Q4.xlsx”

1. **What are the Event Dates and Hours in 2018 and 2019 for SDAP in the C-CPP top 150 hours and D-CPP top 200 hours. Please provide this thru current date at time of responding.** 
   1. **See example from proceeding 17-01-020 SDGE answer on 3-7-17 SDAP DR 02, Question 20 (this answer was provided to me in an excel document from SDGE with the 2016 historical circuit data, I am looking for the same answer except for the historical information will be from 2018 and 2019)**
      * 1. **Please show this in a work paper.**

**SDG&E Response:**

SDG&E objects to this request to the extent it seeks information that is not within SDG&E’s control and possession and/or that is equally available to SDAP. Subject to and without waiving this objection, SDG&E responds as follows:

SDG&E previously provided the 2018 event dates and hours that are applicable for SDAP in A.18-12-006, SDAP Data Request #2. SDG&E does not currently have the 2019 data available.

* 1. **See example from proceeding 17-01-020 SDGE answer on 2-6-17 SDAP DR 01, Question 37 (this response [below] by SDGE clearly explains that the Circuit Events trigger the price and is based on historical prices from individual circuits).**

**SDG&E Response to Q 37 :**

* + - 1. **System events (C-CPP) are generated using the CAISO’s Day-Ahead Forecast for SDG&E’s service territory; the CAISO’s Day-Ahead Forecast is matched to an event threshold which is based off of the top 150 hours of the previous year. If the system hourly forecast crosses the event threshold, a C-CPP event is triggered for that hour(s).**
      2. **Distribution events (D-CPP) are generated from an internal forecast, where each circuit is modeled individually producing an hourly forecast for the circuit. The day-ahead forecast for each circuit is then matched to the circuit’s respective event threshold which is based off of the top 200 hours of the previous year. If circuit hourly forecast crosses the event threshold, a DCPP event is triggered for that hour(s).**
      3. **As the event hours are established (using a threshold calculated with historic data), the actual total number of event hours may be over or under 150 and 200 respectively. There is no maximum number of C-CPP and D-CPP event hours per year; these event adders may be applied individually or together at the same time.**

1. Is there a Maximum number of CCPP or DCPP event hours per year? Please explain.

**SDG&E Response:**

No. Event hours are determined based on the threshold set at the beginning of the year. All hours with a forecasted load greater than the threshold are deemed event hours.

1. Is there a maximum number of Events in the year in the Public GIR rate?
   1. If so, What is it?

**SDG&E Response:**

Please see the response to Question #6.

1. Does a Double Event count as 1 event or how many?
   1. What event(s) category is a Double event applied in? (System or Circuit)
   2. How does a Double Event impact the maximum events in the GIR rate?

**SDG&E Response:**

The commodity and distribution adders are determined independently of one another, but may be applied at the same time if each respective threshold is exceeded. The Commodity adder is based on the system’s top 200 hours, and the Distribution adder is based on the top 150 hours of a customer’s respective circuit. Both the D-CPP and C-CPP event adders will be applied to any hour that is forecasted to exceed the established threshold, with no specific limit to the number of event hours annually.

1. How is the ***circuit event triggered*** on my circuit?

**SDG&E Response:**

The D-CPP event hour threshold is based on a historic reference point that is established using the top 200 circuit peak hours. An event is triggered when the day-ahead forecast for the circuit exceeds the established threshold.

1. Please confirm that a circuit event is called whenever the day-ahead forecast load on my circuit exceeds the circuit threshold.

**SDG&E Response:** A circuit event is triggered when the day-ahead forecasted load exceeds the circuit threshold.

1. What is the circuit ***threshold***?

**SDG&E Response:** The circuit threshold is the 200th-highest hourly load on that circuit from the previous year.

1. How is the circuit ***threshold*** created and determined, please explain?

**SDG&E Response:**

Distribution events (D-CPP) are generated from an internal forecast, where each circuit is modeled individually, producing an hourly forecast for the circuit. The day-ahead forecast for each circuit is then matched to the circuit’s respective event threshold, which is based off of the top 200 hours of the previous year. If circuit hourly forecast crosses the event threshold, a DCPP event is triggered for that hour(s).

1. What is the formula for the ***threshold***?

**SDG&E Response:** The circuit threshold is the 200th-highest hourly load on that circuit from the previous year.

1. What is the threshold level?

**SDG&E Response:** The circuit threshold is the 200th-highest hourly load on that circuit from the previous year.

1. What is the current (2019) distribution event threshold for SDAP circuit?

**SDG&E Response:** The current distribution event threshold for Circuit 0491 is 2545.9 kW.

1. What was the Circuit Threshold Level amount for SDAP circuit in the following years?
   * 1. 2019, 2018, 2017, 2016

**SDG&E Response:**

2016: 2560.3 kW

2017: 2490.2 kW

2018: 2545.9 kW

2019: Not Yet Determined

1. For 2019, is the threshold equal to the 200th highest circuit load observed in 2018 (i.e., the minimum of the top 200 hourly circuit loads)? If not, please explain.

**SDG&E Response:** Yes. The circuit threshold for 2019 is the 200th-highest hourly circuit load from 2018.

1. What is the threshold level for the system that impacts SDAP?
   1. What is the formula?

**SDG&E Response:** The system-level threshold is the 150th-highest hourly system load from the previous year.

1. What was the System Threshold amount in the following years?
   * 1. 2019,2018,2017,2016

**SDG&E Response:**

2016: 3546 kW

2017: 3531 kW

2018: 3655 kW

2019: Not Yet Determined

1. **Circuit 0491: Regarding year 2018 and 2019 to date.** 
   1. **How many customers are on this circuit?**

**SDG&E Response:** See the attached Excel titled: SDAP DR02 Q20 – Circuit0491 Events.xlsx.

* 1. **How many classes of customers are on this circuit?**
     1. **How many are residential**
        1. **What is the Top 10% kW loads?**
     2. **How many are Small Commercial** 
        1. **What is the Top 10% kW loads?**
     3. **How many are Large Commercial**
        1. **What is the Top 10% kW loads?**
     4. **If others, please provide each Class**
        1. **What is the Top 10% kW loads?**

**SDG&E Response:**

SDG&E objects to this data request and outside the scope of this proceeding. Subject to and without waiving these objections, SDG&E responds as follows:

(1) As of year-end 2018, 157 customers were on Circuit 0491.

(2) In 2018, four classes of customers were on Circuit 0491.

(3) The event hours for Circuit and System events for 2018 are provided in attached workpaper named SDAP DR 02 – Q20.xlsx. SDG&E’s 2019 data is not available at this time.

1. **In the GRC 2016, the Time of Use Hours changed, please describe the Total Annual Hours due to this change. Please indicate the Total Annual number of hours before this change and then the current Total Annual number of hours for each window. I am specially looking for the Total Annual Hours for each window below before and after the TOU change.** 
   1. **On Peak Total Annual Hours**
   2. **Off Peak (formerly Mid peak) Total Annual Hours**
   3. **Super Off Peak (formerly Off Peak) Total Annual Hours**
   4. **How many annual peak hours increased**
   5. **How many annual Off-peak hours increased**
   6. **How many annual Super Off Peak hours decreased?**
   7. **How many total annual hours increased**
   8. **How many total annual hours increased on weekends**
      1. **How many days in the year are weekends?**
   9. **How many total annual hours increased on Holidays**
      1. **How many days in the year are Holidays?**
   10. **Please show this in a work paper.**

**SDG&E Response:**

SDG&E objects to this request to the extent it seeks information that is equally available to SDAP. Subject to and without waiving this objection, SDG&E responds as follows:

As previously provided in R.18-12-006 in response to SDAP Data Request #2, Question #7, please see attached workpaper titled “SDAP DR 02 – Q21.xlsx”.

1. **Ratchet Rate: Please explain how Ratchet Rate impacts a customer and how and who it impacts.**

**SDG&E Response:** A rachet mechanism is a rate feature that locks in a floor at a certain level for the customer’s demand portion of the bill by taking historical demand into consideration. For SDG&E’s M/L C&I Customer Class tariffs, a customer’s non-coincident demand charge is based on the higher of the maximum monthly demand or 50% of the maximum annual demand of the prior year. This mechanism is meant to incentivize consistent reduction of a customer’s maximum demand and ensure cost recovery for customers who have larger peaks in some months of the year but still require system capacity to serve their peak load in those months with lower peak demands. The rachet mechanism reduces the risk of cross-subsidization from customers with high load factors to customers with low load factors and incentivizes customers to consistently manage demand.