

TURN DATA REQUEST
TURN-SDG&E-DR-04
SDG&E SB 350 TRANSPORTATION ELECTRIFICATION PROPOSALS (A.17-01-020)
SDG&E RESPONSE
DATE RECEIVED: July 24, 2017
DATE RESPONDED: August 2, 2017

DATA REQUEST

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:

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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.

Chapter 5

1. Regarding the Commercial Grid Integration Charge (GIC) fixed, monthly incentive that SDG&E discusses at on pp. CF-24 – CF-25 (starting at line 5) of the Chapter 5 testimony:
 - a. What would incentivize commercial customers to limit their demand during the incentive period, given that the cost is limited to an amount lower than SDG&E's calculation of the cost caused by demand? Please identify and explain each item that will incentivize customers to limit demand during the incentive period.

SDG&E Response (provided by Cynthia Fang):

Even with the transitional GIC incentive, customers will still receive price signals that will encourage efficient energy consumption. During and after the

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transitional period, the GIC will encourage customers to keep their demand low in all hours, while the dynamic hourly adders will encourage reduced energy use during system and circuit peak hours.

- b. Once the incentive period is closed, what would prevent a commercial customer from changing to a different rate? Please provide SDG&E's complete rationale for the response.

SDG&E Response (provided by Cynthia Fang):

By the time the 5-year GIC transition period is complete, customers will have already learned and adjusted to the behaviors that would make them successful at saving under a dynamic hourly rate. SDG&E's proposed GIR includes a lower percentage of high-cost hours annually (about 4%) compared to SDG&E's Schedule AL-TOU (about 15%), Schedule EV-TOU (about 33%) or Schedule EV-TOU-2 (about 24%).

- c. Please reconcile the fact of SDG&E's rate design incentive proposal with the following passage from p.CF-20 (lines 4-10):

"In addition, SDG&E proposes a transitional direct and transparent incentive in the near term is appropriate in order to support the State's TE goals as well as encourage the election of the GIR rates more broadly ensure. The direct and transparent incentive in the form of a monthly payment (\$/month) reduces the GIC for a period of 5 years while it transitions to cost-based levels. **When incentives or subsidies have been deemed necessary to further public policy objectives, it is only when they are applied separately (i.e., outside of rate design) and can be transparently identified, that cost-causation principles can still be maintained.**" (Emphasis added)

SDG&E Response (provided by Cynthia Fang):

As noted in the testimony of Cynthia Fang¹, SDG&E's proposed GIC transition path is direct and transparent, and is offered in support of the State's Transportation Electrification goals, and is therefore appropriate.

¹ Direct Testimony of Cynthia Fang - page CF-20, line 4 & 6.

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- d. Would the incentive, in the form of a reduction to the Commercial Grid Integration Charge, represent a reduction to the revenue that would be collected from customers who select the Commercial Grid Integration Rate, or would the Commercial Grid Integration Rate be restructured to be revenue neutral with and without the incentive? Please explain.

SDG&E Response (provided by Cynthia Fang):

As the proposals in this application are put forth in support of the State's Transportation Electrification goals, SDG&E feels it would be appropriate to recover any revenue undercollections from all customers.

2. Regarding Table 5-2 on p. CF-25 of the Chapter 5 testimony:

- a. Please identify and provide a detailed explanation of the basis for the amount of the fixed, monthly incentives.

SDG&E Response (provided by Cynthia Fang):

The GIC incentive is designed to provide customers with a 5-year transition as the GIC moves towards cost-based levels. As noted in the Testimony of Cynthia Fang,² the transitional GIC is calculated on a percentage basis, starting with a 25% reduction in Year 1 of the transition, and reducing each year after that until Year 5.

- b. The table implies that the following are the year-1 incentives for each demand interval (i.e., the GIC at Year 1 with Incentive minus the GIC without Incentive):

²Direct Testimony of Cynthia Fang, page CF-24, lines 5-6.

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Demand (kW)	Incentive
0-20	\$ 130.59
20-50	\$ 220.63
50-100	\$ 364.71
100-200	\$ 634.85
200-300	\$ 995.03
300-400	\$ 1,355.23
400-500	\$ 1,715.41
500+	Up to \$40,000.00 ¹
¹ Calculated as 25% of \$160k	

- i. What is the basis for proposing incentives that vary on the basis of demand, where a customer who reaches 500+ kW of demand receives a year-1, monthly subsidy of as much as \$40,000 but a customer who reaches a demand of between 0-20 receives \$130.59?

SDG&E Response (provided by Cynthia Fang):

As noted in the Testimony of Cynthia Fang,³ the transitional GIC is calculated on a percentage basis, starting with a 25% reduction in Year 1 of the transition, and reducing each year after that until Year 5. Due to the nature of a percentage calculation, customers who fall in the higher demand band will receive a higher reduction, as their initial GIC amount is higher.

- ii. Please identify the number of EVs that would need to be charged by a fleet manager for a commercial fleet to reach each of the demand ranges in the table.

SDG&E Response (provided by Cynthia Fang):

The number of EVs that would result in a given level of demand would depend on the size of the EVs, the number of EVs that are charged at the same time, and other variables that SDG&E cannot know. As such,

³Direct Testimony of Cynthia Fang, page CF-24, lines 5-6.

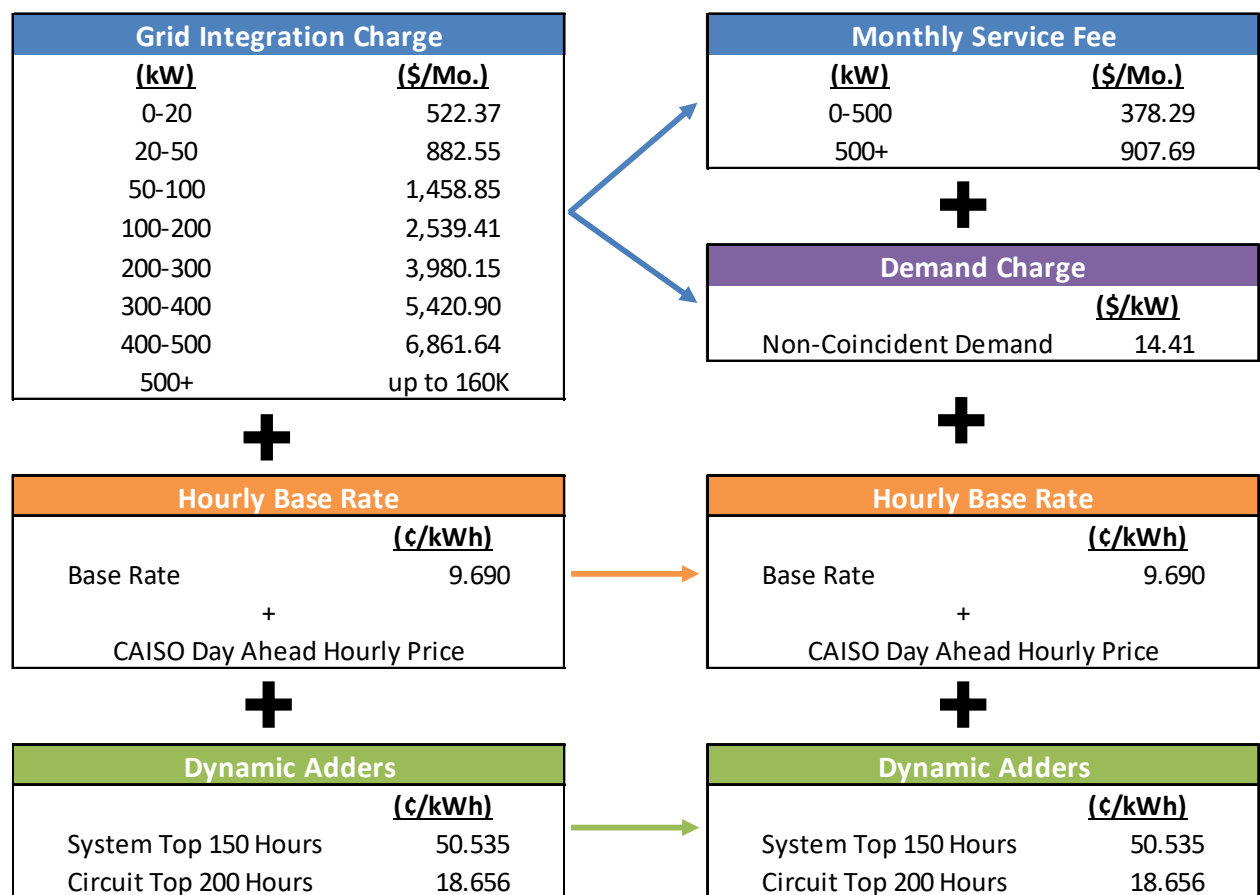
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SDG&E cannot determine the number of EVs that would be associated with each level of demand.

- c. Please disaggregate the Commercial Grid Integration Charge at each incentive level (including without incentive) for each kW range into amounts for the customer and demand charges.

SDG&E Response:

Please see the diagram provided below.



- d. Please provide detailed workpapers that support the amounts of the monthly incentives (for each kW of demand) with full working cells and all assumptions identified and supported.

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SDG&E Response (provided by Cynthia Fang):

Please see attached “TURN_SDGE DR_04 - Q2d Comm GIR Transition”.

- e. Please identify the cost to the system of the incentive at each kW range and incentive level, disaggregated between customer and demand charges. In responding to this request, please identify the number of EVs and/or fleets that SDG&E assumes to make each of the cost calculations and provide the workpaper that SDG&E uses to develop the forecasted, maximum demand that customers will generate.

SDG&E Response (provided by Cynthia Fang):

SDG&E does not develop its rates based on assumptions surrounding anticipated number of EVs. The proposed GIRs are developed to be revenue neutral, and include the GIC transition path, which is proposed in order to provide customers with a 5-year transition onto cost-based GICs.

- 3. Regarding the Residential Grid Integration Charge (GIC) fixed, monthly incentive that SDG&E discusses at lines 6-10 on p. CF-26 of the Chapter 5 testimony:
 - a. What would incentivize residential customers to limit their demand during the incentive period, given that the cost is limited to an amount lower than SDG&E’s calculation of the cost caused by demand? Please identify and explain each item that will incentivize customers to limit demand during the incentive period.

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 1a.

- b. Once the incentive period is closed, what would prevent a residential customer from changing to a different rate? Please provide SDG&E’s complete rationale for the response.

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 1b.

- c. Please reconcile the fact of SDG&E’s rate design incentive proposal with the following passage from p. CF-20 (lines 4-10):

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“In addition, SDG&E proposes a transitional direct and transparent incentive in the near term is appropriate in order to support the State’s TE goals as well as encourage the election of the GIR rates more broadly ensure. The direct and transparent incentive in the form of a monthly payment (\$/month) reduces the GIC for a period of 5 years while it transitions to cost-based levels. **When incentives or subsidies have been deemed necessary to further public policy objectives, it is only when they are applied separately (i.e., outside of rate design) and can be transparently identified, that cost-causation principles can still be maintained.**” (Emphasis added)

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 1c.

- d. Would the incentive, in the form of a reduction to the Residential Grid Integration Charge, represent a reduction to the revenue that would be collected from customers who select the Residential Grid Integration Rate, or would the Residential Grid Integration Rate be restructured in order to be revenue neutral with and without the incentive? Please explain.

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 1d.

- 4. Regarding Table 5-3 on p. CF-26 of the Chapter 5 testimony:

- a. Please identify and provide a detailed explanation of the basis of the amount of the fixed, monthly incentives.

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 2a.

- b. The table implies that the following are the year-1 incentives for each demand interval (i.e., the GIC at Year 1 with Incentive minus the GIC without Incentive):

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Demand (kW)	Incentive
0-3	\$ 19.49
3-6	\$ 31.76
6-9	\$ 44.02
9+	\$ 62.42

- i. What is the basis for proposing incentives that vary on the basis of demand, where a customer who reaches 9+ kW of demand receives a year-1, monthly subsidy of \$62.42 but a customer who reaches a demand of between 0-3 receives \$19.49?

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 2(b)(i).

- ii. Does SDG&E believe that a residential customer with demand of 9+ kilowatts is more likely than a customer with demand of between 0 and 3kW to require a larger incentive in order to incentivize an EV purchase? Please provide the complete rationale for the response.

SDG&E Response (provided by Cynthia Fang):

The transitional GIC is calculated on a percentage basis, such that participants with demand in the 0 to 3 kW range receive a GIC of \$10 in Year 1. The percentage reduction phases out through Year 5, at which time the GIC will have reach cost-based levels. Due to the nature of a percentage calculation, customers who fall in the higher demand band will receive a higher reduction, as their initial GIC amount is higher.

Additionally, the GIC transition path is intended to provide customers with a transition to a cost-based GIC as they familiarize themselves with the hourly dynamic rate structure. As noted in the Testimony of Randy Schimka,⁴ Residential Customers participating in SDG&E's residential charging program will receive a credit of up to \$1,000 (\$1,500 for those residing in Disadvantaged Communities) towards the installation of their EV charging equipment.

⁴ Prepared Testimony of Randy Schimka – Chapter 4, page RS-6, lines 1-5.

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- iii. Does SDG&E believe that an incentive of \$19.49 per kW is not sufficient to incentivize a prospective residential EV purchaser to purchase an EV? Why or why not?

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 4(b)(ii).

- iv. Please identify the number of EVs that would need to be charged for a residential fleet to reach each of the demand ranges in the table.

SDG&E Response (provided by Cynthia Fang):

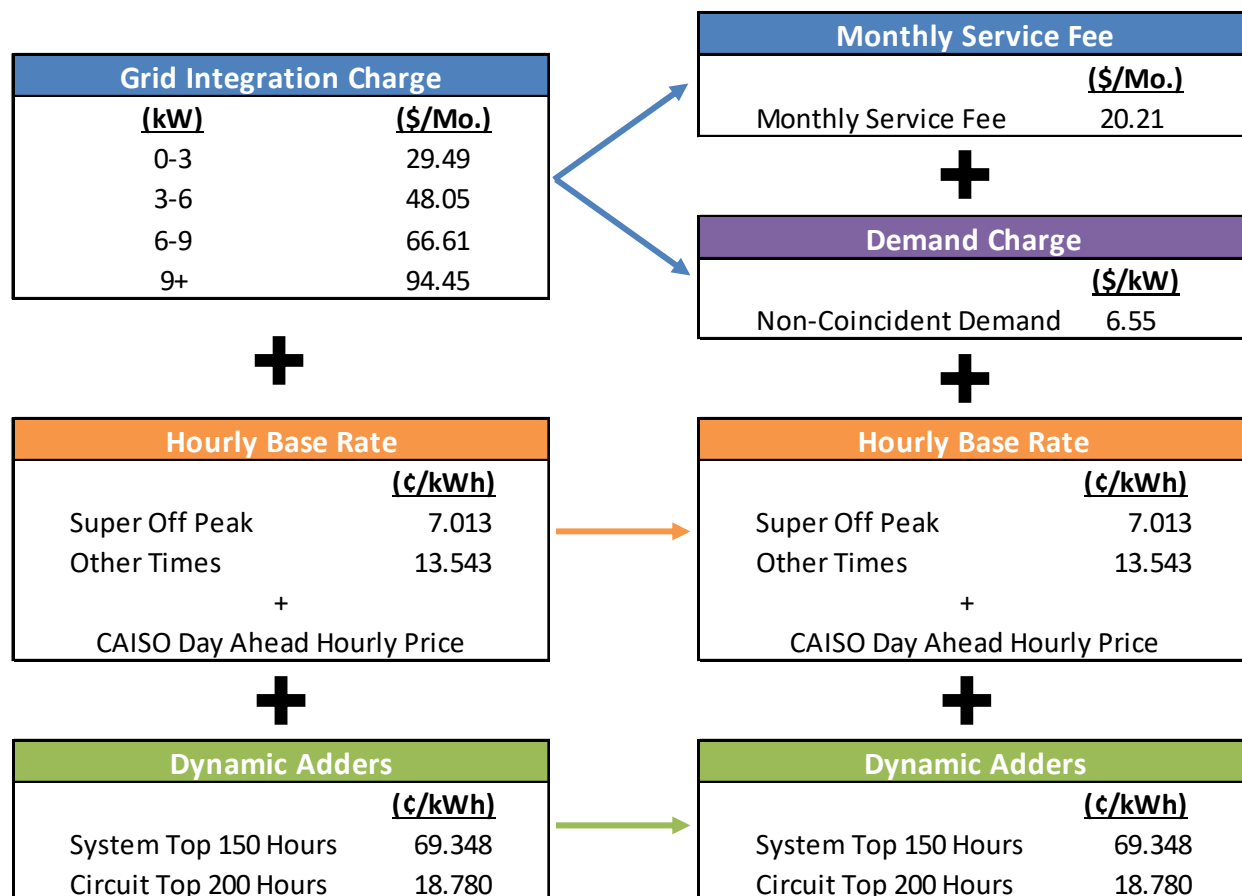
A “fleet” of EVs is not applicable to residential customers. SDG&E’s residential GIR is intended for whole-house use of a single residential customer.

- c. Please disaggregate the Residential Grid Integration Charge at each incentive level (including without incentive) for each kW range into amounts for the customer and demand charges.

SDG&E Response (provided by Cynthia Fang):

Please see the diagram provided below.

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- d. Please provide detailed workpapers that support the amounts of the monthly incentives (for each kW of demand) with full working cells and all assumptions identified and supported.

SDG&E Response (provided by Cynthia Fang):

Please see attached “TURN_SDGE DR_04 – Q4d Res GIR Transition”

- e. Please identify the cost to the system of the incentive at each kW range and incentive level, disaggregated between customer and demand charges. In responding to this request, please identify the number of EVs that SDG&E assumes to make each of the cost calculations and provide the workpaper that

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SDG&E uses to develop the forecasted, maximum demand that customers will generate.

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 2e.

5. In what proceeding will SDG&E assign the cost of the incentive program to the general body of ratepayers?

SDG&E Response (provided by Cynthia Fang):

As noted in the testimony of Cynthia Fang,⁵ SDG&E is requesting permission, in this proceeding, to recover these costs from all customers.

6. Does an incentive that effectively reduces the demand charge increase the risk that SDG&E would need to make distribution investments that the company would not otherwise need to make, all else equal, in the absence of the demand-charge-based incentive payment?

If so, please describe and quantify the risk and provide SDG&E's rationale for the reasonableness of enabling such risk.

If not, please provide SDG&E's complete rationale for such.

SDG&E Response (provided by Cynthia Fang):

No, even with the transitional GIC incentive, customers will still receive price signals that will encourage efficient energy consumption. During and after the transitional period, the GIC will encourage customers to keep their demand low in all hours, while the dynamic hourly adders will encourage reduced energy use during system and circuit peak hours.

⁵ Direct Testimony of Cynthia Fang, page CF-20, lines 14-15.

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7. Please provide all studies, analysis, etc. that SDG&E has produced to:

- a. Support the proposal for providing an incentive to its customers to purchase EVs for both the residential and commercial customers.

SDG&E Response (provided by Cynthia Fang):

Even with the transitional GIC incentive, customers will still receive price signals that will encourage efficient energy consumption. The GIC transition path is intended to provide customers with a transition to a cost-based GIC as they familiarize themselves with the hourly dynamic rate structure.

- b. Support the proposal for including the incentive in SDG&E's GIR for both the residential and commercial customers.

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 7a.

- c. Support the proposal for including the incentive in the GIR's proposed customer and distribution fee for both the residential and commercial customers.

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 7a.

- d. Justify that the specific amount of each of the incentives that SDG&E is proposing is sufficient to induce a transportation consumer to purchase an EV without being more than is necessary for both the residential and commercial customers.

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 2(b)(ii).

- e. Conclude that the amount incentive is sufficient but necessary to induce the number of EVs that will satisfy state transportation-electrification goals, to the level they are allocated to SDG&E's service territory.

SDG&E Response (provided by Cynthia Fang):

Please see the response to Question 7a.