

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking Regarding  
Microgrids Pursuant to Senate Bill 1339 and  
Resiliency Strategies.

Rulemaking 19-09-009  
(Filed September 12, 2019)

**COMMENTS OF SAN DIEGO GAS & ELECTRIC COMPANY (U 902-E) ON ENERGY  
DIVISION QUESTIONS APPENDED TO AMENDED SCOPING MEMO**

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Pursuant to the *Assigned Comm'r's Amended Scoping Memo and Ruling for Track 3* (February 9, 2021) (“amended scoping memo”), San Diego Gas & Electric Company (“SDG&E”) hereby submits its comments in response to Attachment A to the amended scoping memo. The questions are set forth below as stated in Attachment A, with the same numeration.

**I. OVERVIEW OF SDG&E’S POSITION AND RECOMMENDATION**

The amended scoping memo states the California Public Utilities Commission’s (“Commission” or “CPUC”) intent to consider these key issues:<sup>1</sup>

- Whether the Commission should require PG&E, SCE, and SDG&E to waive standby charges for a customer operating a microgrid, regardless of fuel source, so long as: (1) waiving a standby charge will enable the microgrid customer to provide an incremental benefit to other customers; that is (2) commensurate with the magnitude of the otherwise applicable standby charges.
- Should the Commission limit the eligibility of microgrid resources for the standby charge waiver to ensure compliance with the State’s air pollution and greenhouse gas emissions reduction requirements?
- Under what conditions should standby charges be waived or reduced?

These questions conflate the utility’s cost of service with a microgrid’s potential value. However, as reinforced in the amended scoping memo, “cost responsibility surcharges are the result of a well-litigated process in which the Commission has examined the costs associated

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<sup>1</sup> Amended scoping memo at 7-8.

with departing load, standby service, and new or incremental load service to determine the appropriate allocation of those costs to a customer to preserve cost-equity.”<sup>2</sup>

To comply with Senate Bill (“SB”) 1339 and protect customers from more inequitable cross-subsidies, the Commission must separate a customer’s fair-share of the utility’s **cost** of service to its customers from the **value** that a microgrid may provide to the grid. Such value is generally associated with resiliency during grid outages and must be an identifiable incremental addition to the compensation that individual generation resources comprising the microgrid may already be receiving (*e.g.*, through the Net Energy Metering (“NEM”) tariff). The Commission has appropriately scoped the value of resiliency in Tracks 3 and 4 of this proceeding “to ensure that bundled customers remain indifferent.”<sup>3</sup>

In enacting SB 1339, the legislature not only sought to facilitate commercialization of microgrids but to do so without shifting costs between customers. From its earliest days, utility regulation has adopted the same principles of cost equity and ratepayer indifference while ensuring that all consumers have access to safe and reliable electric service. Reliable electric service requires serving all customer demand in real-time and planning infrastructure to meet forecast customer loads. Proposals to offset microgrid costs with exemptions from cost-responsibilities undermine the public utility nature of electric service, send inaccurate price signals, promote uneconomic bypass, and are simply unfair to customers not receiving services from the microgrid. Customers within a microgrid depend on, and benefit from the grid – there is no logical excuse to burden non-participating customers with legitimate and approved costs incurred on behalf of participating customers. Microgrid customers must pay their fair share of

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<sup>2</sup> *Id.* at 6.

<sup>3</sup> Decision (“D.”) 21-01-018 at 53; amended scoping memo at 8.

those costs that the utility incurs on their behalf. SB 1339 is explicitly grounded on this principle.

The amended scoping memo (at 7) defines standby service for customers whose load is:

(a) regularly and completely provided by facilities not owned or operated by an investor-owned utility; or (b) who at times takes auxiliary service from another public utility; or (c) who requires the investor-owned utility to provide reserve capacity and to always stand ready to supply electricity on an irregular or noncontinuous basis.

This definition comports with the Commission’s policies established in D.01-07-027, which examines at some length the nature of standby rates and service.<sup>4</sup> The Staff Concept Paper explains the type of cost-responsibility surcharges and the costs covered under each, including standby charges.<sup>5</sup> Regardless of the resiliency services provided by a microgrid, the commercialization of microgrids under SB 1339 must not subsidize or create false value streams by exempting microgrids and/or the microgrid customers from paying their fair share of utility cost of service.

## **II. RESPONSE TO THE AMENDED SCOPING MEMO’S QUESTIONS**

SDG&E responds below to the questions directed to the utilities, stating the questions with the numeration in Attachment A to the amended scoping memo, including the introductory background and question.

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<sup>4</sup> In terms of fundamentals, this decision (at 64) aptly observes: “Standby rates should be designed to appropriately reflect costs imposed on the utility system by all customers, including those employing onsite generation.”

<sup>5</sup> Commission Energy Division, *Microgrids and Resiliency Staff Concept Paper*, Attachment 2 to *Administrative Law Judge’s Ruling Requesting Comment on the Track 2 Microgrid and Resiliency Strategies Staff Proposal Facilitating the Commercialization of Microgrids Pursuant to Senate Bill 1339* (July 23, 2020) (“Staff Concept Paper”). Staff Concept Paper at 62-64 discusses Departing Load, Nonbypassable, and Standby Charges.



**A. Background and Question<sup>6</sup>**

**1. Do you agree with the overview of standby charges provided in section A above? If not, please explain.**

SDG&E agrees with the overview, but it overlooks several important details. SDG&E suggests adjustments to the background discussion, as follows:

- **The overview should discuss the types of customers that are exempt from standby charges and why.**

There are three categories for exemptions. The first category is NEM customer-generators. While the overview correctly identifies that non-NEM eligible generation resources are subject to standby charges, this is not to say that the utility does not incur any costs in providing each NEM customer with standby services. In enacting Assembly Bill (“AB”) 327 (2013), the California legislature made a policy decision that “eligible customer-generators shall not be assessed standby charges on the electrical generating capacity of the kilowatt-hour production of a renewable electrical generation facility.”<sup>7</sup> The state exempted NEM customers from their fair-share of utility cost of service in order to incent public investment to meet climate change goals:

.... one way to encourage substantial private investment in renewable energy resources, stimulate in-state economic growth, reduce demand for electricity during peak consumption periods, help stabilize California’s energy supply infrastructure, enhance the continued diversification of California’s energy resource mix, reduce interconnection and administrative costs for electricity suppliers, and encourage conservation and efficiency.<sup>8</sup>

This is an important piece to note because the Legislature made a different policy determination in SB 1339: the Commission is required to facilitate the commercialization of

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<sup>6</sup> Attachment A at 1.

<sup>7</sup> Public Utilities (“P.U.”) Code § 2827(g).

<sup>8</sup> *Id.* at § 2827(a).

microgrids “without shifting costs between ratepayers.”<sup>9</sup> Put differently, SB 1339 states no policy to exempt microgrids from any charges; to the contrary, SB 1339 specifies in three places that the Commission is prohibited from “shifting costs between customers.”<sup>10</sup>

The second category for exemptions is for customers with solar systems with nameplate capacity of 1 megawatt (“MW”) or less used to serve load. The Commission in D.01-07-027 agreed that these customers are similar to NEM customers and extended the exemption to such customers for policy reasons similar to those supporting the NEM exemption.

The third category for exemptions is for customers selling power to the utility. Customers selling 100% of the onsite power production to the utility and simultaneously purchasing 100% of the power serving onsite load from the utility are rightly exempt. They sell all of their generation to the utility under contract, so it is not recognized as electricity serving the customer’s onsite load. Under these circumstances, these customers continue to pay 100% of the costs for utility service and therefore, applying a standby charge would result in an inappropriate double-charge. Put differently, the utility isn’t really incurring a cost to “stand by” in this situation.

There is no policy rationale for exempting microgrid customers where that would shift the utility cost of standby service to other customers.

- **SDG&E recommends the last scenario provided in the bullet items at the end of the first paragraph of Attachment A (at 1) be amended as follows:**

With certain pre-existing exemptions, standby charges are applicable to customers who receive standby service. Standby service is provided to customers who remain connected to the utility grid and whose load is partially or completely met from sources other than the utility.

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<sup>9</sup> P.U. Code §§ 8371 (b) and (d).

<sup>10</sup> *Id.*, and § 8372(b).

- **Standby charges are assessed and charged to the customer – not to the sponsor of a multi-customer, multi-property microgrid.**

Standby charges are assessed at the individual customer meter – not at the microgrid sponsor level. The questions below are premised on a microgrid sponsor avoiding standby charges. If the microgrid sponsor has a customer account and associated service connection meter with the utility, then the discussion around standby charges applies.

However, for microgrids consisting of multiple customers involving multiple premises, the discussion is inapplicable to the microgrid sponsor because standby charges are assessed to the individual meters within the microgrid that have onsite generation (and that are not otherwise exempt from standby charges). Further, a utility has an obligation to serve and maintains a relationship with each individual customer meter; the utility's billing system is constructed accordingly.

## **B. Overarching Scoping Questions<sup>11</sup>**

### **1. Should the CPUC require the IOUs to waive or reduce standby charges for a customer operating a microgrid if specific conditions are met?**

#### **a) If so,**

- i. What are the specific conditions that should be met to qualify for a standby charge waiver or reduction?**
- ii. Which standby charges should be reduced or waived, and by how much?**
- iii. Please explain any additional details of how a standby charge waiver or reduction should be implemented that are necessary for the CPUC to consider.**

#### **b) If not, why not?**

Unless a new customer with onsite generation commits to reducing its load simultaneously with, and in an equal amount to, a reduction in generation output resulting in zero additional imports from the grid, there are no conditions under which standby charges should be

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<sup>11</sup> Attachment A at 1-2.

waived. The Commission has appropriately determined that “[s]tandby rates should be designed to appropriately reflect costs imposed on the utility system by all customers, including those employing onsite generation.”<sup>12</sup>

To the extent existing standby charges are not adequately designed to recover the current cost of utility standby service, SDG&E recommends a review or evaluation to ensure that standby charges appropriately recover the current cost of utility service. As the industry, resource diversity, and customer needs have changed over time, it may be prudent to evaluate existing standby charge design to reflect these changes. However, this proceeding is not the appropriate venue to review the standby tariff rate design as whole. The next opportunity to review standby rate design will be within the General Rate Case (“GRC”) Phase Two application.

**2. What are potential consequences of waiving standby charges? Please quantify wherever possible.**

If the Commission were to exempt microgrid customers from standby charges, the costs imposed by those microgrid customers would be shifted to non-microgrid customers, violating SB 1339.<sup>13</sup> As noted above, in specific situations, the Legislature has made policy decisions to exempt certain customers from certain rate components or charges to support explicit goals, such as private investment, economic development, and meet greenhouse gas (“GHG”) emissions reduction.

If a determination were to be made to exempt certain customers from specific charges and the benefits did not outweigh the cost-exemption, the result is simply a dead-weight increase in costs borne by the non-exempted customers. In other words, the non-participating customers

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<sup>12</sup> D.01-07-027 at 64.

<sup>13</sup> P.U. Code § 8372(b) states that the Commission “shall ensure the microgrid rates and charges do not shift costs to, or from, a microgrid customer or nonmicrogrid customer.” *See also id.* at §§ 8371 (b) and (d).

pay for the cost-exemption, plus still must pay for the lack of benefits received. For example, customer A and customer B pay \$10 each prior to any exemptions. A determination is made that a \$1 exemption for customer A could result in \$2 worth of benefits for both customer A and customer B. If these results materialize, this scenario creates a net positive cost-benefit for customer A and customer B. Customer A would have a resulting \$7 total cost ( $10 - 1 - 2 = 7$ ) and customer B with a resulting \$9 total cost ( $10 + 1 - 2 = 9$ ). However, if the \$2 of benefits do not materialize and create \$0-worth of benefits, then customer B has paid the \$1 of cost-exemption, plus is still paying for the full cost before exemptions, and is now subject to an \$11 total cost ( $10 + 1 - 0 = 11$ ). Meanwhile, customer A ends up with a lower total cost of \$9 ( $10 - 1 = 9$ ).

Until the benefits of a microgrid to non-microgrid customers are quantified with a reasonable degree of certainty and can be attributed to the microgrid operation, it is impossible to make a policy determination that any exemption would result in a positive cost-benefit scenario for ratepayers. Accordingly, this proceeding should not exempt microgrids from standby charges and instead, should develop a separate compensation mechanism that appropriately values the services rendered and creates a transparent process, showing both the utility cost of service and the valuation of the microgrid service(s).

- a) If reducing or eliminating standby charges for microgrids would facilitate the installation of new microgrid capacity that would create benefits for non-microgrid customers, please detail how, and quantify the benefits.**

If microgrid customers are exempted from standby charges, they would receive an inefficient price signal based on faulty economic principles. Microgrid sponsors and customers should make investments in technology based on accurate price signals that reflect the real cost to provide services. Standby charges may affect the economics of microgrids, but an exemption would create a cross-subsidy, where nonparticipating customers are subsidizing microgrid

customers. In this situation customers within a multi-customer microgrid that have onsite generation benefit from being connected to utility facilities during both blue-sky and resiliency microgrid operation, and in both conditions benefit from the utility providing standby service in the event the customer's onsite generation experiences a partial or complete outage.

Ratepayers should not subsidize a specific business model to ensure that projects are viable or profitable for microgrid investors. The Commission should not pick winners and losers – although microgrid proponents claim significant benefits, these are still unproven. If microgrid projects are not economic with the correct price signals (*i.e.*, cost-based standby charges applied) and need an exemption subsidy to be built, then the projects are probably not the least-cost way to reduce GHG emissions and to provide the resiliency benefits that the microgrid sponsor claims. Furthermore, if the microgrid sponsor needs so much help upfront, how is long-term maintenance ensured without more subsidies? The investor-owned utility (“IOU”) will remain the provider of last resort for those customers.

**b) If reducing or eliminating standby charges for microgrids would result in a cost shift prohibited by SB 1339, please detail how, and quantify the cost shift.**

Using SDG&E's current standby tariff,<sup>14</sup> the amount of cost-shift varies depending upon the level of standby service and the service voltage. A customer being served at the secondary service voltage level would pay \$20.77/kW (\$8.32/kW for the transmission cost component and \$12.45/kW for the distribution cost component. To illustrate the magnitude of potential cost-shift, a simplified example is included here. A microgrid project with 10 MW (10 MW is equal

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<sup>14</sup> Current rates effective February 1, 2021 via Advice Letter 3669-E-A. See SDG&E's Schedule S, Standby Services at Sheet 1, available at [http://regarchive.sdge.com/tm2/pdf/ELEC\\_ELEC-SCHEDS\\_S.pdf](http://regarchive.sdge.com/tm2/pdf/ELEC_ELEC-SCHEDS_S.pdf). The Commission should note that using this exemplar does not concede that this tariff is appropriate to support all possible microgrid scenarios. Further, SDG&E's service territory has a much lower proportional penetration of large commercial and industrial load, so the relative amount of standby service that SDG&E provides is less than what the other IOUs provide. This accounts for some of the differences in SDG&E's standby tariff from that of the other IOUs.

to 10,000 kW) of resources who is exempted from standby charges would result in a cost-shift of \$2.5 million per year ( $\$20.77/\text{kW} \times 10,000 \text{ kW} \times 12 \text{ months} = \$2,492,400$ ), assuming the full project capacity is contracted for standby service and not taking into account any future rate changes.<sup>15</sup>

As we have seen throughout this proceeding, a microgrid can have many configurations. One such configuration would be a single behind-the-meter customer with a rooftop solar system paired with battery storage. For an additional data point to the simplified example above, the standby charge exemption for current SDG&E NEM customers results in an estimated annual cost-shift of approximately \$245.3M per year.<sup>16</sup>

To estimate the resulting standby charge cost-shift associated with current residential NEM customers, SDG&E applied a consistent rate design methodology that was used to determine the current distribution standby charge for commercial and industrial customers to calculate an estimated residential distribution standby charge for this example. As noted above, SDG&E's current distribution standby charge is \$12.45/kW, and SDG&E has estimated, using consistent methodology, that a residential distribution standby charge would be \$3.97/kW. SDG&E has 1,110,344 kW of residential NEM-installed capacity and 326,930 kW non-residential NEM-installed capacity.

- For the residential NEM standby charge cost-shift estimation,  $1,110,344 \text{ kW} \times \$12.29/\text{kW}^{17} = \$163.8 \text{ million per year}$ .
- For non-residential NEM standby charge cost-shift estimation,  $326,930 \text{ kW} \times \$20.77/\text{kW} = \$81.5\text{M per year}$ .

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<sup>15</sup> This example assumes the customer's generator never experiences an outage. If a customer is not paying for standby service and its generator experiences an outage, the customer is billed based on the maximum recorded demand during the billing period.

<sup>16</sup> SDG&E's total NEM cost-shift as of January 2021 was \$540 million *annually*, or about \$200 per nonparticipating residential customer. This number is growing.

<sup>17</sup> Transmission standby charge of  $\$8.32/\text{kW} + \$3.97/\text{kW} =$  estimated residential standby charge of  $\$12.29/\text{kW}$ .

If NEM customers were not exempt from standby charges, the applied charge would mitigate some of the NEM cost-shift, as NEM customers would pay a larger portion of their cost of service. SDG&E notes that the total enrolled NEM capacity is a combination of eligible technologies.

In Rulemaking (“R.”) 20-08-020, the Commission is evaluating the current NEM structure,<sup>18</sup> but the estimation of standby charge cost-shift associated with NEM customers has important informative value here, as many such customers could be part of a microgrid or create their own microgrid.<sup>19</sup> Any exemptions or policy determination made in this proceeding regarding microgrids affects the cost shift to non-NEM customers being addressed in R.20-08-020.

The Commission should aim to reduce GHG emissions meet and resiliency needs at the least cost to consumers. Cost responsibility surcharge exemptions for microgrid customers have the potential to create inequity issues akin to those amassed through NEM. Staff correctly pointed out the long-term risk to all ratepayers when exempting certain customers from charges:

.... tariffs can be closed at any time upon Commission approval of an application by the IOU or on the motion of Energy Division, including the tariff established by this decision. Parties should remember this because we intend to avoid the legacy period issues that persisted with NEM.<sup>20</sup>

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<sup>18</sup> D.21-02-007 adopted guiding principles for NEM Reform which included “equity among customers” (guiding principle b) and P.U. Code § 2827.1(b)(7) stating: “customer generators are provided electric service at rates that are just and reasonable” (guiding principle a).

<sup>19</sup> P.U. Code § 8370(d) defines a microgrid as “an interconnected system of loads and energy resources, including, but not limited to, distributed energy resources, energy storage, demand response tools, or other management, forecasting, and analytical tools, appropriately sized to meet customer needs, within a clearly defined electrical boundary that can act as a single, controllable entity, and can connect to, disconnect from, or run in parallel with, larger portions of the electrical grid, or can be managed and isolated to withstand larger disturbances and maintain electrical supply to connected critical infrastructure.”

<sup>20</sup> D.21-01-018 at 52-53. NEM (NEM 1.0) and NEM Successor Tariff (NEM 2.0) customers are able to stay on their applicable NEM tariff for 20 years from interconnection, thereby shifting costs to other customers for decades.



In SDG&E's service territory today, the annual NEM cost-shift is approximately \$540 million per year. These costs that are unfairly avoided by NEM customers are shifted to nonparticipating customers, which are the customers who can least afford bill increases. Customers who adopt distributed generation technology have statistically been wealthier,<sup>21</sup> meaning that typically, wealthy customers are shifting costs to middle- and lower-income customers.<sup>22</sup> The Commission has acknowledged some of the existing issues and consequences of current NEM policy.<sup>23</sup> There is no evidence to suggest that this pattern would not be repeated with microgrids; providing a subsidy to microgrid customers could result in an additional significant cost-shift. The customers who have the ability to either construct or opt-in to a microgrid must have the financial means to do so. It is unlikely that customers in lower income or disadvantaged communities will be the customers who are given the choice to opt-in to microgrids. The Commission should not adopt a policy that could shift millions of dollars in costs to nonparticipating customers, and from the less-affluent to the more-affluent.

Regardless of where microgrids are placed, in a wealthy community, on a tech company's campus, or in a disadvantaged community, they have the potential only to provide energy "solutions" in the form of reduced bills for a subset of customers, at the expense of nonparticipating customers, if the appropriate cost of service is not applied. Exemptions may help

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<sup>21</sup> Berkeley Lab, *The Impacts of Policies and Business Models on Income Equity in Rooftop Solar Adoption* (November 2020), available at <https://emp.lbl.gov/publications/impact-policies-and-business-models>.

<sup>22</sup> Verdant Associates, LLC, *Net-Energy Metering 2.0 Lookback Study* (January 21, 2021) at 32-34, submitted to California Public Utilities Commission Energy Division and served on the R.20-08-020 service list.

<sup>23</sup> California Public Utilities Commission, *Utility Costs and Affordability of the Grid of the Future: An Evaluation of Electric Costs, Rates and Equity Issues Pursuant to P.U. Code Section 913.1* (February 2021) at 27-29, available at: [https://www.cpuc.ca.gov/uploadedFiles/CPUC\\_Website/Content/Utilities\\_and\\_Industries/Energy/Reports\\_and\\_White\\_Papers/Feb%202021%20Utility%20Costs%20and%20Affordability%20of%20the%20Grid%20of%20the%20Future.pdf](https://www.cpuc.ca.gov/uploadedFiles/CPUC_Website/Content/Utilities_and_Industries/Energy/Reports_and_White_Papers/Feb%202021%20Utility%20Costs%20and%20Affordability%20of%20the%20Grid%20of%20the%20Future.pdf).

reduce upfront costs of microgrid development to secure project financing, but they hide the value of resiliency to microgrid customers – let alone to non-participating customers. It is quite possible that those non-participating customers simply do not value the resiliency for a few hours to a few days of the year enough to justify the cost-shift. Parties with a product to sell do not want to acknowledge this.

California should try to reach its GHG and resiliency goals in the most economically efficient way possible to ensure that all customers have access to clean, affordable energy. Subsidizing microgrid sponsors' bottom lines by exempting microgrids from cost responsibility – maintaining the utility's (and their bundled customers') responsibility to incur those costs – does not help achieve emission reduction goals in an equitable or least cost-manner.

### **C. Questions for Utilities**

- 1. Provide a high-level overview of the standby service rate schedule and the key options available to customer generators, including customer microgrids. Describe the relationship, if any, between the standby service rate schedule, a customer's otherwise applicable rate schedule, and a rate schedule that covers credits for generation, such as a net energy metering rate schedule.**

SDG&E's current standby tariff is designed to include two components: 1) a transmission standby charge and 2) a distribution standby charge. Both components are designed to be recovered on a demand basis as a \$/kW rate. Customers do not pay standby charges during a grid outage. The standby tariff is considered a "rider" tariff and is applied incrementally to the customer's otherwise applicable tariff ("OAT"). Depending upon the customer's class type, the customer's OAT may include a combination of customer, usage, and demand charges:

- A customer charge is typically a \$/meter/month application
- A usage charge is typically a \$/kWh application
- A demand charge is a \$/kW application

Each customer class rate design is determined in the applicable GRC Phase Two or rate design window proceedings, which evaluate the utility's rate design proposals. Additionally, SDG&E's Electric Energy Commodity Cost ("EECC") tariff assesses the applicable usage and demand charges, reflecting the cost of providing commodity services to the relevant bundled customers. Combining the OAT, EECC, and Standby Tariffs, SDG&E applies the appropriate cost of services to each customer.

If a customer with onsite generation is subject to an OAT that includes a non-coincident demand charge, SDG&E performs a monthly review of the customer's usage and standby-contracted demand to determine. SDG&E sometimes performs a manual adjustment of their OAT charges to ensure the customer does not pay twice for the same service during periods where the onsite generation is unable to supply all of the customer's energy needs. If a customer is on an NEM tariff, the NEM customer is exempted from standby charges, among other billing adjustments,<sup>24</sup> and their OAT and EECC charges are assessed as applicable to the customer.

**2. Under what circumstances, if any, is a customer obligated to take service under a standby service rate schedule? What CPUC Decision(s) or Resolution(s) authorized the utility to create that obligation? If any of the Decision(s) or Resolution(s) were adopted pursuant to specific legislation, identify the legislation. Please explain the following observations in your response:**

PURPA<sup>25</sup> requires utilities to provide certain services, including standby service, to customers with cogeneration and small power production facilities qualifying under that federal statute.<sup>26</sup> D.87-12-069 approved updates to SDG&E's Schedule S as a result of a settlement

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<sup>24</sup> P.U. Code § 2827 exempts NEM customers from paying standby charges. NEM tariff design is billed on the difference between total energy delivered and energy exported.

<sup>25</sup> Public Utility Regulatory Policies Act (Pub. L. 95-617, 92 Stat. 3117, enacted November 9, 1978).

<sup>26</sup> 18 Code of Federal Regulations § 292.305(b)(1)(ii). PURPA regulations refer to standby as "backup power." Such a service long preceded PURPA and was included in the PURPA regulations to ensure utilities would not discriminate in providing services, including backup, to qualifying facilities. *See id.* at (a)(2).

agreement which adjusted the applicability, rate design, and revenue allocation of standby charges.<sup>27</sup> In 2001, the Commission adopted standby rate design policies for onsite generation facilities and determined that standby charges should apply to any non-exempt onsite generation facility requiring some level of standby service, whether for supplemental, backup, or maintenance purposes.<sup>28</sup>

On June 11, 2001, SDG&E filed Advice Letter 1335-E implementing D.01-07-027. On August 22, 2002, the Commission issued Resolution (“Res.”) E-3779 approving, with modifications, the draft tariffs filed by Advice Letter 1335-E, including changes to Schedule S. SDG&E subsequently filed a supplemental advice letter implementing Res. E-3779.<sup>29</sup> SDG&E’s Schedule S Special Condition 3 states “[t]his schedule shall apply to any customer with an executed Contract or Agreement permitting the operation of the generator in parallel with the Utility.”<sup>30</sup>

**3. What is the utility’s gross monthly revenue from standby charges over past three years? Provide breakdown by customer class, service voltage category, reservation capacity, and by interconnection to the utility transmission or utility distribution system.**

SDG&E’s standby tariff is offered at the following voltage levels:

- Primary
- Secondary
- Secondary substation
- Primary substation
- Transmission

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<sup>27</sup> D.87-12-069 at 23-24.

<sup>28</sup> D.01-07-027.

<sup>29</sup> Advice Letter 1335-E-A, approved August 22, 2002, effective May 22, 2001.

<sup>30</sup> Advice Letter 1690-E, (approved May 27, 2005, effective May 29, 2005) approved changes to Special Conditions 3 and 4 at Sheet 2.

SDG&E currently has customers on standby service at secondary, primary, primary substation, and transmission voltage levels. SDG&E's standby revenue breakdown by customer class, service voltage level by year, and average monthly is detailed in Table 1 below.

Customers do not pay for standby services during a grid outage.

**Table 1: SDG&E 2018-2020 Gross Standby Revenues**

<b>Customer Class and Voltage Level</b>	<b>2018 Total (\$M)</b>	<b>2019 Total (\$M)</b>	<b>2020 Total (\$M)</b>	<b>Total (2018-2020) (\$M)</b>	<b>Average Monthly between 2018-2020 (\$M)</b>
<b>Commercial</b>	\$2.4	\$2.6	\$2.6	\$7.6	\$0.2
Secondary	\$1.2	\$1.5	\$1.6	\$4.3	\$0.1
Primary	\$0.9	\$0.8	\$0.9	\$2.6	\$0.1
Transmission	\$0.4	\$0.3	\$0.1	\$0.7	<\$0.1
<b>Industrial</b>	\$17.3	\$17.2	\$18.8	\$53.4	\$1.5
Secondary	\$8.0	\$8.3	\$9.3	\$25.6	\$0.7
Primary	\$3.9	\$3.6	\$3.7	\$11.2	\$0.3
Primary Substation	\$1.0	\$1.0	\$1.1	\$3.1	\$0.1
Transmission	\$4.4	\$4.3	\$4.7	\$13.4	\$0.4
<b>Total Standby</b>	<b>\$19.7</b>	<b>\$19.8</b>	<b>\$21.4</b>	<b>\$61.0</b>	<b>\$5.1</b>

4. **As of year-end 2020, how many customer accounts are taking standby service, by customer class? Are any of those accounts microgrids, to the best of your knowledge? How often has the standby service been triggered (*i.e.*, the utility has provided electricity) for those that are microgrids?**

As of year-end 2020, SDG&E has 33 commercial customer accounts and 35 industrial customer accounts under standby service. To the best of SDG&E's knowledge, of the 68 total customer accounts currently under standby service, only two customers have the ability to disconnect from the grid and operate in an islanded mode (*i.e.*, operate as a behind-the-meter

(“BTM”) microgrid). Over the last three years and of the 68 total customer accounts, five of the customer accounts have not triggered standby service in any of the 36 months from 2018-2020. The remaining 63 customer accounts have utilized SDG&E’s standby service at some capacity for all months in the period of 2018-2020.

**5. As of year-end 2020, how many customer generators have active executed contracts using physically assured load reduction?**

As of year-end 2020, SDG&E does not have any customers that have executed a physical assurance contract.

**D. Existing Rate Schedule Features (directed to Utilities and Developers)**

The below questions are directed towards utilities and developers.

**1. Describe the existing ways a customer generator or microgrid project can take service that would not obligate the customer to incur a standby charge, citing for reference to the exact applicable CPUC authorized tariffs, rates, or rules. Are there existing exemptions from standby charges that could apply to certain microgrid use cases? If so, describe.**

P.U. Code § 2827 exempts NEM customers from standby charges. D-01-07-027, Ordering Paragraph 3, exempted from standby charges solar customers with solar generation less than or equal to 1 MW, who serve load and do not sell power or make more than incidental export of power onto the utility’s grid. Customers under a simultaneous purchase and sale agreement with the utility are also exempted from standby charges.<sup>31</sup>

The utility standby tariffs require an agreement between the individual customer and the utility. To the extent an individual customer with a BTM microgrid that is eligible under the exemptions listed above, then that individual customer would be exempted from standby charges. Because the utility’s tariffs are CPUC-jurisdictional *retail tariffs* and relevant billing

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<sup>31</sup> SDG&E’s Schedule S, Standby Services at Sheet 1, available at [http://regarchive.sdge.com/tm2/pdf/ELEC\\_ELEC-SCHEDS\\_S.pdf](http://regarchive.sdge.com/tm2/pdf/ELEC_ELEC-SCHEDS_S.pdf).

are applied to *individual customers* with onsite generation that are within a multi-customer microgrid, standby charges could not be assessed to a third-party *microgrid sponsor* providing energy services to customers within a microgrid.

2. **What obstacles prevent customer generators or microgrid project developers from using the customer provision of physically assured load reduction (for one example, refer to PG&E Electric Sample Form No. 79-1050)? Would options such as providing physical assurance through reliable firmware settings and less expensive protective relay equipment reduce those obstacles?**

SDG&E offers no comments in response to this question at this time.

3. **If a microgrid project developer or customer generator account signs a physical assurance agreement, will they be eligible to participate in the base interruptible program,<sup>32</sup> emergency load reduction program,<sup>33</sup> or other demand response programs, by promising to island when called and continuing to serve their own customer microgrid load?**

Physical assurance agreements assume that the onsite generation will meet the customer's energy needs. In the event the customer's onsite generation is unable to meet the customer's energy needs, the physical assurance agreement requires that the customer will instantaneously and automatically drop their load. In both of these instances, there is no energy being imported from the grid and therefore no ability for the customer to decrease their needs from the grid further. From a metering perspective, the utility sees a demand of 0 kW and energy of 0 kWh at all times and therefore would be unable to reduce energy needs beyond what the meter sees. Unable to reduce energy needs further, the customer would be unable to receive credit under the base interruptible, emergency load reduction, or other demand response programs.

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<sup>32</sup> Base Interruptible Program: A utility rate schedule that offers a monthly bill credit to businesses that commit to reducing energy to a minimum pre-determined level when requested.

<sup>33</sup> Emergency Load Reduction Program is a potential new program under consideration in R.20-22-003, *Order Instituting Rulemaking to Establish Policies, Processes, and Rules to Ensure Reliable Electric Service in California in the Event of an Extreme Weather Event in 2021*.

#### **E. Questions for Developers**

SDG&E offers no comments in response to the questions in this section at this time.

#### **F. Resource Eligibility Questions**

No exemptions or waivers of standby charges should be granted, regardless of resource or technology. Any exemption or waiver of cost responsibility charges would result in a cost-shift which is specifically barred by state law. As noted in the amended scoping memo, certain types of resources are already exemption, or partially exempt, from standby charges.<sup>34</sup> While this section of questions is specifically about resource types regardless of services provided, any additional exemptions would result in a cost-shift as noted in responses to other questions.

#### **G. Questions to Identify Details of Proposed Service Provided**

##### **1. What existing services (define and describe in detail) do distributed energy resources in microgrids already qualify for that the microgrid owner can offer to the IOU or the CAISO?**

Subject to meeting the eligibility requirements of each market/program/solicitation, in-front-of-the-meter (“IFOM”) distributed energy resources located within the electrical boundary of a microgrid are currently qualified to provide the following services:

- Energy via the CAISO’s<sup>35</sup> wholesale electricity market.
- Ancillary service capacity in the CAISO’s wholesale electricity market.
- Resource Adequacy capacity for CPUC-jurisdictional Load-Serving Entities (“LSEs”).
- Renewable Energy Credits for California LSEs.

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<sup>34</sup> Amended scoping memo, Attachment A at 4. Note that P.U. Code § 2827 exempts NEM customers from standby charges. D-01-07-027 exempted from standby charges solar customers with solar generation less than or equal to 1 MW who serve load and do not sell power or make more than incidental export of power onto the utility’s grid. Customers under a purchase and sale agreement with the utility are exempted from standby charges because the generation is not used solely for meeting onsite load and pay their share of transmission and distribution charges under their OAT.

<sup>35</sup> California Independent System Operator Corporation.



- Distribution deferral services<sup>36</sup> via the IOUs' annual competitive solicitation process within the CPUC's Distribution Investment Deferral Framework
- Transmission deferral via the CAISO's annual Transmission Planning Process proposal submittal window.
- Bilateral transactions with any party on mutually agreed commercial terms.

Subject to meeting the eligibility requirements of each market/program/solicitation, BTM distributed energy resources that are within the electrical boundary of a microgrid (either single- or multi-customer) are currently qualified to provide the following services:

- Energy Efficiency via LSE-administered programs
- Supply-Side Demand Response delivered via CAISO market models: Proxy Demand Response, Non-Generating Resources and Distributed Energy Resource Provider
- IOU programs include Capacity Bidding, A/C cycling, Demand Response Auction Mechanism
- IOU's Load Modifying Demand Response: Permanent Load Shifting, Time-of-Use, Critical Peak Pricing, Peak Time Rebate, Real Time Pricing
- Resource Adequacy capacity for CPUC-jurisdictional LSEs
- Distribution deferral services via the IOUs' annual competitive solicitation process within the CPUC's Distribution Investment Deferral Framework
- Transmission deferral via the CAISO's annual Transmission Planning Process project submittal window

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<sup>36</sup> The CPUC has identified the following four distribution services as potentially deferrable by distributed energy resources: planned conventional distribution upgrades that mitigate (1) peak thermal overloads, (2) unacceptable voltages, (iii) reliability needs ("back-ties"), and/or (4) resiliency needs ("microgrids").

**2. Under what specific circumstances would it be in the public interest to require utilities to waive or reduce standby charges to a microgrid for intentional islanding? How should the benefits to the public be identified, measured, and valued?**

Recognizing that a customer's onsite generating resource is never 100% available or reliable, utilities incur costs to transmit and distribute electricity to the customer during periods when the customer's generator is operating below the customer's demand needs (adjusted for the generator's auxiliary loads). Except for customers that are statutorily exempt (see SDG&E's response to questions in section F above), these costs are recovered through standby charges.

Customers with onsite generation can choose to disconnect from the grid and operate in microgrid mode at different times and for varying lengths of time, but doing so will not reduce the costs that the utility has already incurred to provide electric service to customers with onsite generation. Moreover, the utility will resume providing standby service whenever the customer chooses to reconnect to the grid.<sup>37</sup>

Requiring utilities to waive or reduce standby charges for customers participating in a microgrid simply shifts those costs to other customers. Any benefits provided by a microgrid to the public should be compensated directly through monetized value streams; not indirectly through waivers of charges, where such charges have been established through comprehensive and deliberative rate-setting proceedings. It is not in the public interest to expand the waiver of standby charges beyond what is already statutorily required, and to do so would violate SB 1339.

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<sup>37</sup> A customer with onsite generation that is a part of a microgrid that uses utility facilities (a multi-customer microgrid that is not eligible for Rule 19 exemptions), also relies on utility standby service. If the customer's generation output is reduced or lost during microgrid operation, the utility must have the distribution equipment and generating resources available within the microgrid to compensate for the reduction in the microgrid's generation.

3. **Would providing electric service to a critical facility as defined by D.19-05-042 in situations where the IOU does not provide service, such as during a planned public safety power shutoff, be sufficient to merit waiving or reducing standby charges? (E.g., if a microgrid that serves a critical facility must island to continue to provide service to the critical facility during a utility planned outage such as a PSPS, should the standby charge be waived or reduced for that microgrid for any month in which that occurred?) If so, why should a waiver or reduction in standby charges be available to microgrids and not other types of backup generation? Please explain your answer. If you think criteria other than those defined in D.19-05-042 should be used to determine eligibility, please explain which criteria should be used and why.**

No. When the utility's distribution facilities are reenergized and the customer supplying the critical facility reconnects to the larger grid, the utility is standing-by to provide service in the event there is a reduction in the output of the customer's onsite generation. As discussed in SDG&E's response to question G.2, the utility incurs costs to provide standby service and these costs should be recovered from the customers that rely on that service. These costs do not change because the customer was supplying a defined critical facility during a grid outage.

4. **Other than islanding, is there a different type of grid service that can be uniquely provided by microgrids (or specific types of microgrids), and not the individual resources comprising the microgrids, that would merit a standby charge waiver or reduction (please define the type of microgrid and the grid service)? How should the benefits to the public be identified, measured, and valued?**

SDG&E is not aware of any services provided by a microgrid, including services provided by individual resources within the microgrid, that merit a waiver or reduction of standby charges for microgrid customers with onsite generation. As discussed in SDG&E's response to question G.2, the utility incurs costs to provide standby service and these costs should be recovered from the customers that rely on that service. All customers with onsite generation, regardless of whether they are within a microgrid boundary, rely on the utility's standby service and should pay the associated costs. Any demonstrated benefits to the public should be separately compensated through monetized value streams.

**5. How should a customer be required to demonstrate that it can provide a particular service in exchange for a standby charge waiver or reduction and why?**

- a) Physical equipment meeting certain specifications;**
- b) Software settings capable of inducing equipment behavior;**
- c) Contractual obligation only;**
- d) Combination of the above;**
- e) Other.**

Other than statutorily-required exemptions, there is only one basis for waiving standby charges for customers with onsite generation:<sup>38</sup> standby charges could be waived to the extent a customer with onsite generation contractually commits to reduce its load simultaneously with, and in an equal amount to, any reduction in the output of its generator. The contractual commitment by the customer would require a demonstration that loads could be automatically reduced, provide for utility monitoring, and include appropriate penalties for any failure to reduce loads as required. This contractual commitment is commonly known as a “physical assurance agreement.”

Note that a customer who decides to permanently disconnect from all utility facilities would no longer be an SDG&E customer and therefore not subject to any SDG&E tariffs, including the standby tariff.

**6. What trigger should CPUC require a customer to respond to in exchange for a waiver or reduction in standby charges and why?**

Other than existing statutorily required exemptions, or a contractual commitment of physical assurance as described above, any exemption of standby charges or other utility cost of service charges would result in a cost-shift which is specifically barred by SB 1339. A more appropriate and transparent form of compensation for services would include a separate

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<sup>38</sup> Customers that do not operate their onsite generation in parallel with the utility (*i.e.*, back-up generators) do not rely on the utility for standby service and are therefore not subject to standby charges because of the temporary and mobile aspect of the resource.

mechanism outside of existing utility cost of service charges. While the resulting net total may be similar, maintaining the existing cost of utility service rate design and incrementally adding a new compensation mechanism for services offered creates a more transparent and equitable approach to allocation of costs.

## **H. Cost Benefits Questions**

### **1. Are standby charges appropriately rooted in cost causation principles? If reducing or exempting microgrids from standby charges would result in a cost shift prohibited by Senate Bill 1339, please detail how.**

As required by D.01-07-027, the Commission determined that “[s]tandby rates should be designed to appropriately reflect costs imposed on the utility system by all customers, including those employing onsite generation.”<sup>39</sup> SDG&E’s standby tariff includes transmission and distribution demand charges that are designed based on commercial and industrial customers consistent with approved rate design from SDG&E’s GRC Phase Two.<sup>40</sup> As explained in response to B.2, any new exemption of cost of utility service charges, including standby charges would result in a cost-shift. As discussed above, prior determinations for exemption have been based on policy grounds rather than on a quantification of benefits received or on cost-equity principles, which resulted in a cost-shift that is being addressed, per AB 327, in R.20-08-020.

In the instance of microgrids, quantification of benefits has not been determined and is appropriately scoped into Tracks 3 and 4 of this proceeding. Instead of considering a waiver or exemption of existing cost responsibility charges, separate mechanisms are more appropriate for compensating microgrids for the service(s) they provide. This approach offers transparency and equity, is rooted in cost causation principles, and much more easily accommodates changes in the value of various services over-time.

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<sup>39</sup> D.01-07-027 at 64.

<sup>40</sup> D.17-08-030.

**2. How can the estimate of public benefits to non-participating ratepayers not connected to a microgrid be quantified in such a way as to be able to provide a basis for waiving or reducing standby charges?**

The most transparent and straightforward way to measure any benefits a microgrid may provide would be to compensate the microgrid directly for those services as they are rendered. SDG&E recommends the Commission maintain the existing cost of utility service charges and develop separate compensation mechanisms designed to appropriately value the service(s) offered by a microgrid. SDG&E notes that a number of these compensation mechanisms already exist. As described in SDG&E's response to question G.1, there are a number of ways that microgrid customers with onsite generation can receive compensation for the services their resources provide. These compensation streams do not require new tariffs or changes to existing tariffs.

**3. What form of evidence that the microgrid provides incremental benefit to other customers must the microgrid owner provide to justify the waiver? (e.g. If the microgrid can demonstrate measurable, quantified benefits to non-participating customers or the utility or the microgrid serves critical facilities, essential services and others identified by D.19-05-042.)**

The incremental benefits that a microgrid customer may be able to provide to other customers would be evidenced through enforcement of the tariff and/or contractual terms under which those benefits are provided. For example, a microgrid customer with onsite generation that provides Resource Adequacy capacity would be subject to the CAISO's Participating Demand Response tariff rules. If a microgrid customer is able to provide services in addition to those listed in section G.1 that justify compensation, SDG&E recommends developing a separate compensation mechanism to appropriately value the services rendered.

4. **What controls are needed to ensure that the customer generator or microgrid project is not over-compensated and not double-counted from among multiple programs, including the Base Interruptible Program, the Emergency Load Reduction Program, individual power purchase agreements or bilateral contracts, Net Energy Metering, and the various incentive programs such as the Self Generation Incentive Program?**

The existing compensation structures for each of the services listed in section G.1 contain provisions to avoid over- and double compensation. While value stacking is an appropriate way to achieve economics for services rendered, it is the Commission's responsibility to ensure that ratepayers are not paying twice for the same service.

#### **I. Questions to Identify Details of Potential Waiver**

1. **What specific parts of the standby charges rate schedule should be waived or reduced, if any waivers or reductions are granted?**
  - a) **Reservation;**
  - b) **Other (please explain).**

Other than existing statutorily required exemptions, standby charges should not be waived or reduced. As discussed in SDG&E's response to questions H.1 and H.2, SDG&E believes a more appropriate way to compensate a microgrid for services rendered is by using separate, already-available, compensation mechanisms or, where existing mechanisms do not reflect the service being provided, developing new mechanisms.

2. **What amount of standby charges should be waived if waivers are granted, and why?**
  - a) **All;**
  - b) **Proportionate to benefit;**
  - c) **All if no demand charges in that billing period;**
  - d) **Other (please explain).**

None. Any exemption or reduction of standby charges would result in a cost-shift. The Commission should develop a separate compensation mechanism to appropriately value the

services rendered by a microgrid to ensure fair and equitable rates amongst microgrid participating customers and non-participating customers.

The fact that a microgrid may have no demand charges within a particular billing period does not change the costs that the utility has incurred, and will incur, to make sure the utility can provide service in future billing periods when the customer's onsite generation is reduced or unavailable.

- 3. How long should a waiver be granted if any waivers are granted, and why?**
- a) Indefinitely;**
  - b) Certain number of years (please specify);**
  - c) Annual, with annual renewal;**
  - d) Certain capacity enrolled;**
  - e) Other (please explain).**

Waivers should not be granted for any time period. See SDG&E's response to questions I.1 above. Absent some form of physical assurance that ensures a specified amount of standby service is being avoided, the utility will be providing standby service for the nameplate capacity of the customer's onsite generation. SDG&E urges the Commission to consider the continuing effect of the NEM cost shift when contemplating potential waivers and lengths of waivers.

Unless it is reduced or eliminated, the 20-year legacy period granted to existing NEM customers has resulted in a significant cost shifts that will continue even if NEM is reformed going forward.



4. **If the CPUC takes the action above such as modifying the standby charge, should CPUC limit the applicability of the standby charge waiver to new projects, or should the waiver apply to existing projects as well? Please justify your answer, after first stating your position:**
- a) **Please describe what types of incremental benefits a waiver of standby charges would be likely to enable existing microgrids to provide to non-microgrid customers. Please describe in detail how a waiver of standby charges would enable the delivery of each proposed benefit, and how the benefit would be incremental to the present circumstances.**
  - b) **Please estimate, in \$/MW, the financial value of each incremental benefit that waiving standby charges for existing microgrids would deliver to non-microgrid customers.**

SDG&E does not recommend any exemption or reduction of standby charges. SDG&E is open to the idea of reviewing or evaluating the existing standby charge rate design to ensure it appropriately captures the cost of utility service as defined in the rate design principles of D.01-07-027.<sup>41</sup> As discussed in response to questions H.1 and H.2, any benefits to the public provided by a microgrid customer with onsite generation, should be recognized through the monetization of those benefits; not indirectly through an exemption or reduction in standby charges.

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<sup>41</sup> D.01-07-027 at 56 included in rate design principles that standby charges should “1) provide for fair cost allocation among customers; 2) allow the utility adequate cost recovery while minimizing costs to customers” among other things.

### III. CONCLUSION

SDG&E requests that the Commission accept these comments.

Respectfully submitted,

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