

Docket No.: A.20-10-011

Exhibit No.: \_\_\_\_\_

Date: April 29, 2022

Witness: Ed Burgess

**REBUTTAL TESTIMONY OF ED BURGESS  
ON BEHALF OF THE VEHICLE GRID INTEGRATION COUNCIL**

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1     **I.     INTRODUCTION**

2     **Q.     Please state your name, title, and business address.**

3     A.     My name is Ed Burgess. I am a Senior Director at Strategen Consulting and the Senior  
4           Policy Director for the Vehicle Grid Integration Council (“VGIC”). My business address  
5           is 2150 Allston Way, Suite 400, Berkeley, California 94704.

6     **Q.     On whose behalf are you testifying?**

7     A.     I am testifying on behalf of the Vehicle Grid Integration Council.

8     **Q.     What is VGIC?**

9     A.     VGIC is a 501(c)6 membership-based trade association committed to advancing the role  
10           of electric vehicles (“EV”) and vehicle-grid integration (“VGI”) through policy  
11           development, education, outreach, and research. VGIC supports the transition to a  
12           decarbonized transportation and electric sector by ensuring the value from EV  
13           deployments and flexible EV charging and discharging is recognized and compensated in  
14           support of achieving a more reliable, affordable, and efficient electric grid.

15    **Q.     Who are VGIC’s current members?**

16    A.     VGIC’s members include Enel X, Ford, General Motors, Honda, Nissan, Nuvve,  
17           Stellantis (formerly Fiat-Chrysler), Toyota, dcbel, Engie, Fermata Energy, Flexcharging,  
18           Flo/AddEnergie, Sunrun, The Mobility House, Wallbox, WeaveGrid, Veloce, and  
19           Sacramento Municipal Utility District.<sup>1</sup>

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<sup>1</sup> The opinions expressed in this testimony reflect those of VGIC, and do not necessarily reflect the views of all of the individual VGIC member companies.

1 **Q. Did you submit direct testimony in this proceeding?**

2 A. Yes. I submitted direct testimony on April 13<sup>th</sup>, 2022 that responded to PG&E's  
3 supplemental application filed on March 24<sup>th</sup>, 2022.

4 **Q. What is the purpose of your rebuttal testimony?**

5 A. The purpose of my rebuttal testimony is to respond to PG&E's April 13<sup>th</sup> Direct  
6 Testimony related to export compensation for non-Net Energy Metering ("NEM")  
7 customers enrolled in its Commercial DAHRTP rate as filed in A.20-10-011. I will also  
8 address additional issues PG&E raised in its Motion filed on April 22<sup>nd</sup> and Reply filed  
9 on April 28<sup>th</sup> replying to VGIC's Response filed on April 27<sup>th</sup>.

10 **II. PG&E's APRIL 28<sup>TH</sup> REPLY TO VGIC's APRIL 27<sup>TH</sup> RESPONSE**

11 **Q. PG&E's Reply on April 28<sup>th</sup> notes that "PG&E and VGIC have begun good faith  
12 settlement discussions" and that "initial discussions were positive and constructive."  
13 Do you agree with this characterization?**

14 A. Yes. I participated in the initial discussions referred to by PG&E and agree that the was  
15 positive and constructive. While I have not had the opportunity to review PG&E's  
16 Rebuttal Testimony being filed concurrently with my own testimony today, I am hopeful  
17 that PG&E's Rebuttal will reflect some of the progress that was made in these  
18 preliminary discussions. I am also optimistic that VGIC will continue to have productive  
19 discussions with PG&E over the coming weeks towards reaching a settlement.

20 **Q. Given your optimism, how would you characterize the issues addressed in the  
21 remainder of your rebuttal testimony?**

1 A. At this point in time, VGIC believes there are still deficiencies with PG&E’s current  
2 proposal put forward in its supplement testimony filed on March 24<sup>th</sup> and direct  
3 testimony filed on April 13<sup>th</sup>. However, VGIC is eager to continue a collaborative  
4 dialogue with PG&E that could resolve some, if not all, of these deficiencies. Thus, while  
5 this rebuttal is still critical of PG&E’s initial proposal, VGIC understands that PG&E  
6 may be amenable to alternative solutions and that PG&E may propose such solutions in  
7 its Rebuttal filed today. In that spirit, VGIC believes that this rebuttal is still helpful in  
8 further clarifying why PG&E’s initial proposal, which is further detailed in its April 13<sup>th</sup>  
9 testimony, is still an inadequate or only partial solution. Additionally, I believe this  
10 Rebuttal could help to narrow the scope of remaining issues that need to be resolved  
11 between VGIC and PG&E through settlement discussions.

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13 **III. PG&E’S APRIL 13<sup>TH</sup> DIRECT TESTIMONY DOES NOT OFFER ANY**  
14 **ADDITIONAL JUSTIFICATION FOR ITS PROPOSED MARKET**  
15 **PARTICIPATION APPROACH IN CONTRAST TO A RETAIL BILL BASED**  
16 **APPROACH.**

17 **Q. Please summarize PG&E’s primary justification for proposing a market**  
18 **participation model rather than a retail bill based model for export compensations**  
19 **from non-NEM customers.**

20 A. In its Direct Testimony, PG&E cites reliability concerns as a primary justification for  
21 proposing a market participation model – rather than a retail bill-based approach – to

1 compensate non-NEM exports for customers participating in DAH RTP.<sup>2</sup> Specifically,  
2 PG&E states that retail bill compensation models allow for distributed energy resources  
3 (“DER”) to send “uninstructed” energy onto the system. PG&E defines “uninstructed” as  
4 “meaning there is no requirement or processes to coordinate the volume of energy that  
5 would flow onto the distribution and transmission systems outside of limitations and  
6 conditions established in the interconnection tariff.”<sup>3</sup>

7 **Q. Does the established interconnection tariff already impose specific requirements on**  
8 **exporting DERs to ensure safety and reliability?**

9 A. Yes. PG&E’s own testimony clearly states that the existing interconnection tariff already  
10 provides a set of “limitations and conditions” on exported or uninstructed energy. In fact,  
11 PG&E’s Rule 21 tariff governs interconnection for DERs, and specifically requires that  
12 Rule 21 interconnected DERs (i.e., inverters) meet certain conditions intended to ensure  
13 safety and reliability.<sup>4</sup> Notably, Rule 21 was updated pursuant to D.20-09-035  
14 specifically to address concerns related to the safety and reliability of V2G  
15 interconnection.

16 **Q. Does PG&E’s direct testimony in this proceeding detail how the established**  
17 **interconnection tariff is insufficient to ensure safety and reliability for exports from**  
18 **DAH RTP customers?**

19 A. No. PG&E does not offer any facts, data, or other evidence to support its claim that the  
20 established interconnection tariff (i.e., Rule 21) is insufficient to ensure safety and

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<sup>2</sup> PG&E Direct Testimony at pp. 2-3.

<sup>3</sup> PG&E Direct Testimony at p. 2.

<sup>4</sup> PG&E Electric Rule No. 21. Section Hh. *Smart Inverter Generating Facility Design and Operating Requirements* at p. 187.

1 reliability. VGIC disagrees with PG&E’s implication that the established interconnection  
2 process is not robust enough to ensure safety and reliability concerns. If such reliability  
3 concerns were material, they would have already been addressed in the appropriate Rule  
4 21 proceeding (e.g., R.17-07-007) or will be addressed as additional concerns arise. In  
5 fact, there are already thousands of inverter-based DERs exporting to PG&E’s system in  
6 the form of rooftop solar, and yet PG&E continues to operate its distribution system  
7 reliably. Allowing other types of inverter-based resources, such as V2G EVSE from non-  
8 NEM DAHRTP customers, to be part of this mix will not fundamentally change anything  
9 from a reliability standpoint that the current Rule 21 approach is unable to handle.

10 **Q. PG&E hypothesizes that a significant number of DERs could pose a challenge to a**  
11 **future Distribution System Operator (“DSO”). Do you agree?**

12 A. No. PG&E states that it believes that the presence of a significant number of DERs could  
13 threaten reliability for the Distribution System Operator (“DSO”), “when the distribution  
14 system is reconfigured in such a way that it cannot accommodate DER exports that are  
15 allowed within the interconnection agreement parameters.”<sup>5</sup> Although PG&E uses the  
16 term “DSO” throughout its Direct Testimony, this overlooks the simple fact that there is  
17 no entity in California known as a DSO, and it is unclear whether one will ever be  
18 established. PG&E’s assertions regarding how a high DER future would challenge a DSO  
19 are highly speculative. In addition, PG&E does not define what it means by “when the  
20 distribution system is reconfigured in such a way that it cannot accommodate DER  
21 exports.”<sup>6</sup>

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<sup>5</sup> PG&E Direct Testimony at p. 3.

<sup>6</sup> PG&E Direct Testimony at p. 3.

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**Q. PG&E expresses concern that exports from DAHRTP customers could create reliability challenges for the CAISO, “as it would need to adjust market dispatches to accommodate unplanned exports and may need to carry additional reserves if the volume of exports is large and uncertain.”<sup>7</sup> Do you agree?**

A. No. PG&E’s description of CAISO’s planning and operations approach is somewhat misleading. CAISO already deals with significant uncertainty regarding variable system load and variable generation.<sup>8</sup> Advanced forecast techniques and carrying additional reserves are already standard practices for CAISO to deal with these uncertainties and would still be implemented if V2X somehow exacerbated uncertainty in net load to a large degree, although it is unclear to VGIC that this would even be the case any time soon. Over time, CAISO has continually refined its techniques to better forecast load and generation elements, including DERs, and VGIC is reasonably confident CAISO will continue to do so in the event V2X penetration becomes large enough that it significantly influences CAISO operations. As noted in VGIC’s Opening Testimony, we do not believe this will happen in the near future given that the DAHRTP non-NEM customers represent only a small portion of total customer interest in V2X technologies, let alone BTM resources within CAISO. Additionally, because the DAHRTP pricing is linked to the CAISO price signal, and customers will be encouraged to respond accordingly, compensating exports using the DAHRTP price should actually be effective at *improving* system reliability from CAISO's perspective relative to a rate that does not encourage

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<sup>7</sup> PG&E Direct Testimony at p. 3.  
<sup>8</sup> CAISO. *Day-Ahead Market Enhancements: Third Revised Straw Proposal. “Need for Day-Ahead Market Enhancements”*. April 27, 2022. <http://www.caiso.com/InitiativeDocuments/Third-Revised-Straw-Proposal-Day-Ahead-Market-Enhancements.pdf>. Page 14-17.



1 BEV's to export during scarcity events. Moreover, DAH RTP can be made available in  
2 the near term (i.e., 2023), when California's reliability needs are expected to be most  
3 acute due to potential generation shortfalls in the summer. This contrasts with PG&E's  
4 proposal which might take many years for a viable market integration option to be  
5 resolved.

6 **Q. Do you agree that implementing a retail bill-based compensation mechanism for**  
7 **non-NEM DAH RTP customers would result in reliability concerns?**

8 A. No. In fact, VGIC believes that expanding the export approach that it is already offering  
9 to a subset of its DAH RTP customers (i.e., NEM customers) will support reliability by  
10 ensuring resources are compliant with Rule 21 and supporting CAISO system needs  
11 through its underlying rate design.

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13 **IV. CONTESTED ISSUES IDENTIFIED IN PG&E'S APRIL 22, 2022 MOTION**

14 **Q. Are you familiar with the Motion PG&E filed on April 22, 2022 in this proceeding?**

15 A. Yes. The motion requested an evidentiary hearing and identified several issues PG&E  
16 believes may be contested between the Company and VGIC. These include the  
17 following:

- 18 • Sub-issue 2.A: Is PG&E's market participation approach germane such that it belongs in  
19 this proceeding[?]
- 20 • Sub-issue 2.B: Resource Adequacy Valuation and Compensation Methodology
- 21 • Sub-issue 2.C: Export Valuation

- 1 • Sub-issue 2.D: Alternative approaches
- 2 • Sub-issue 2.E: ELRP Dual Participation
- 3 • Sub-issue 2.F: VGIC’s current position appears to be that PG&E may be open to a
- 4 rate/market participation hybrid approach

5 **Q. Do you agree with PG&E’s assessment of these contested issues?**

6 A. There is only minimal detail provided on each of these topics so it is difficult for me to  
7 provide a complete answer. I presume PG&E might expound upon these topics in its  
8 Rebuttal being filed concurrently with my own Rebuttal testimony today. However, I do  
9 have a few preliminary observations on the issues PG&E raised in its April 22, 2022  
10 Motion.

11 **Q. Can you share your preliminary observations on these issues, recognizing that the**  
12 **information from PG&E is very limited at present?**

13 A. Yes. I will address each sub-issue in turn:

14 *Sub-issue 2.A: Is PG&E’s market participation approach germane such that it belongs in*  
15 *this proceeding[?]*

16 As addressed in my opening testimony, VGIC reiterates that the overall thrust of the  
17 ALJ’s 1-14-2022 Ruling in this proceeding, including the detailed questions on page 3,  
18 was for PG&E to develop a retail non-NEM export rate. If PG&E had initially followed  
19 the ALJ’s direction, then VGIC believes this would not be a contested issue. Instead,  
20 PG&E chose not to comply with the ALJ’s direction and chose to pursue a totally  
21 different pathway towards V2G compensation that would potentially take years to  
22 resolve. Notably, this conflicts with D. 21-11-017 which states that “to ensure PG&E can

1 fully implement its DAHRTP rate for BEV customers in 2023 as proposed, we will not  
2 delay the second phase of this proceeding indefinitely.”<sup>9</sup> Moreover, PG&E’s April 22,  
3 2022 Motion attempted to shift the burden of proof onto VGIC for developing the initial  
4 retail non-NEM export rate. VGIC would have been more than happy to work with  
5 PG&E to provide input to the development of the retail non-NEM export rate, however  
6 VGIC was never consulted prior to PG&E’s Motion being filed. Despite all these  
7 concerns, constructive settlement talks are now under way and VGIC is reasonably  
8 confident that PG&E and VGIC will be able to align on a retail non-NEM export rate  
9 approach. As discussed above, VGIC is participating in productive settlement discussions  
10 with PG&E and is optimistic about continuing these discussions in the near future.

11 *Sub-issue 2.B: Resource Adequacy Valuation and Compensation Methodology*

12 In opening testimony, VGIC addressed PG&E’s discussion of Resource Adequacy  
13 Valuation. However, VGIC does not believe that this issue can be resolved in this  
14 proceeding and does not seek to contest it any further.

15 *Sub-issue 2.C: Export Valuation*

16 In the Motion, PG&E states: “PG&E’s proposal clarifies that it seeks to avoid the  
17 negative consequences of NEM type over-compensation...” As VGIC discussed in its  
18 opening testimony, the export rate VGIC proposed already avoids NEM type over-  
19 compensation since it is a “generation only” rate and does not include any compensation  
20 for the distribution components of retail rates. The only element of the existing DAHRTP  
21 rate that might require some additional scrutiny in this regard is the Revenue Neutral

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<sup>9</sup> D. 21-11-017, p 41.

1 Adder. However, any concerns about overcompensation regarding the Revenue Neutral  
2 Adder should also be counterbalanced by the fact that energy exported from a V2G  
3 resource can have increased system value relative to imports, such as avoided line losses  
4 from displaced generation. Thus, for simplicity, VGIC continues to recommend that the  
5 export rate be set equivalent to the DAHRTP charging rate. At a future date these  
6 elements (e.g., revenue neutral adder, line losses, etc.) could be re-examined. Finally,  
7 VGIC reiterates its position that a distribution value component should be considered in  
8 the future.

9 Sub-issue 2.D: Alternative approaches

10 PG&E states that it “will explain why compensation at the full generation rate component  
11 would not be appropriate.” VGIC is unable to further assess this critique without more  
12 information. It is not clear that there will be a formal opportunity to do so prior to a  
13 hearing in this case.

14 Sub-issue 2.E: ELRP Dual Participation

15 PG&E states that, “Per ELRP decision (D.20-11-003 [sic], p.133) dual participation is not  
16 allowed with RTP.” VGIC believes PG&E is mistaken on this issue. In fact, page 133 of  
17 the Final Decision (D.21-12-015) issued in R.20-11-003 states the following (emphasis  
18 added): “We omit the provision in the Proposed Decision that Residential ELRP  
19 customers or ELRP group A.4 and A.5 may not simultaneously be enrolled in a critical  
20 peak pricing, SmartRate or similar dynamic rate tariff and enroll in the ELRP pilot, since  
21 IOUs do not have visibility into whether customers are taking service under critical peak

1 pricing, SmartRate or similar dynamic rate tariffs."<sup>10</sup> As such, BEV customers  
2 participating in ELRP group A.5 should be able to participate in a dynamic tariff rate  
3 such as DAHRTP without requiring a Petition to Modify the ELRP decision. Given this,  
4 VGIC maintains its recommendation in opening testimony to permit dual participation in  
5 DAHRTP and ELRP. More generally, VGIC's overarching concern here is that the  
6 market for V2G products and services is still emerging, and there are very few stable  
7 revenue streams available that can help this suite of technologies and services to develop  
8 even further. In fact, ELRP is currently the only form of compensation for V2G in  
9 California outside of demonstration projects. Thus, VGIC stresses the importance of  
10 optionality so that new market entrants can test the viability of different operating  
11 paradigms and use cases. A market participant might be hesitant to participate in the new  
12 DAHRTP export rate if that meant foreclosing the opportunity to continue participating  
13 in the more well established ELRP program. Additionally, it's unclear if the DAHRTP  
14 export rate would provide the same level of certainty in compensation as ELRP, and in  
15 turn the same level of beneficial exports, during ELRP events.

16 *Sub-issue 2.F: VGIC's current position appears to be that PG&E may be open to a*  
17 *rate/market participation hybrid approach*

18 It is unclear to VGIC what this means. However, as VGIC established in opening  
19 testimony, we are open to a parallel or "hybrid" approach whereby VGIC's proposed  
20 DAHRTP retail export rate is available as soon as the DAHRTP retail charging rate is

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<sup>10</sup> Moreover, this modification is clearly reflected in the revisions made to Attachment 2. See Proposed Decision Attachment 2 at p. 6 (<https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M419/K191/419191939.PDF>) and Final Decision 21-12-015 Attachment 2 at p. 6 (<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M428/K821/428821668.PDF>).

1 available. Meanwhile, the steps required for PG&E's market integration effort, including  
2 the proposed Market Assessment Study and Workshop Plan, could continue to be  
3 pursued in parallel. Once the market integration approach is ready for customer  
4 participation, it could be offered as an alternative to the DAHRTP export rate.

5 VGIC believes this hybrid/parallel approach is appropriate and necessary to avoid a  
6 scenario whereby a DAHRTP customer wishes to export (which will be technically  
7 feasible on Day 1 of DAHRTP's availability) but would unfairly be compensated \$0/kWh  
8 for these exports. This situation could arise as soon as 2023 and potentially far beyond,  
9 until PG&E's proposed market integration stakeholder process concludes.

10 If there is no export rate available between the time when the DAHRTP-CEV rate is first  
11 effective and the time PG&E's proposal is first implemented, VGIC believes this would  
12 send a very confusing signal to the rapidly growing market for V2X products and  
13 services. This would be especially concerning when these products and services are  
14 desperately needed *now* to shore up summer reliability needs and address PSPS events.

15  
16 **Q. Does this conclude your testimony?**

17 A. Yes.

**Appendix A:**

Declaration of Ed Burgess in Support of Rebuttal Testimony on Behalf of the Vehicle Grid  
Integration Council

**DECLARATION OF ED BURGESS IN SUPPORT OF REBUTTAL TESTIMONY ON  
BEHALF OF THE VEHICLE GRID INTEGRATION COUNCIL**

I, Ed Burgess, am the Senior Policy Director for the Vehicle Grid Integration Council (VGIC). Having worked for VGIC since its founding in 2020, I am currently managing policy and regulatory affairs for VGIC and its 19 members. My business address is 2150 Allston Way, Suite 400, Berkeley, CA 94704. I declare under penalty of perjury that the foregoing facts in this document are true and correct.

Executed on April 29, 2022 at Berkeley, California.

A handwritten signature in black ink, appearing to read "Edward A. Burgess". The signature is cursive and fluid, with a long horizontal stroke at the end.

Ed Burgess