

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



FILED

11/10/25
04:59 PM
R2508004

Order Instituting Rulemaking to Update
Distribution Level Interconnection
Rules and Regulations.

Rulemaking 25-08-004
(Filed August 14, 2025)

**REPLY COMMENTS OF THE VEHICLE-GRID INTEGRATION COUNCIL ON
ORDER INSTITUTING RULEMAKING TO UPDATE DISTRIBUTION LEVEL
INTERCONNECTION RULES AND REGULATIONS**

Zach Woogen
Executive Director
Vehicle-Grid Integration Council
1401 21st St., Suite 5409
Sacramento, California 95811
Telephone: (510) 665-7811
Email: vgicregulatory@vgicouncil.org

Grace Pratt
Caliber Strategies
801 K Street, Suite 2800
Sacramento, CA 95814
Telephone: (818) 264-6437
Email: grace@caliberstrat.com

Date: November 10, 2025

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

Order Instituting Rulemaking to Update
Distribution Level Interconnection
Rules and Regulations.

Rulemaking 25-08-004
(Filed August 14, 2025)

**REPLY COMMENTS OF THE VEHICLE-GRID INTEGRATION COUNCIL ON
ORDER INSTITUTING RULEMAKING TO UPDATE DISTRIBUTION LEVEL
INTERCONNECTION RULES AND REGULATIONS**

In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the Vehicle-Grid Integration Council (“VGIC”) hereby submits these reply comments on the *Order Instituting Rulemaking to Update Distribution Level Interconnection Rules and Regulations* (“OIR”), issued on August 20, 2025.

I. INTRODUCTION.

VGIC appreciates the numerous parties that submitted Opening Comments on the OIR. In response to parties, VGIC offers the following comments:

- Interconnection application fees should be scoped into this proceeding;
- Bidirectional electric vehicle (“EV”) charging systems that are enabled for bidirectional mode only when electrically isolated from the grid are not required to interconnect under Rule 21;
- Interconnection for small non-export battery systems, including bidirectional EV charging systems, should be streamlined; and
- VGIC agrees that consideration of alternative communication protocols is appropriate.

II. INTERCONNECTION APPLICATION FEES SHOULD BE SCOPED INTO THIS PROCEEDING.

In Opening Comments, VGIC, Southern California Edison (“SCE”), California Solar & Storage Association (“CALSSA”), Ford, Tesla, and the Solar Energy Industries Association (“SEIA”) all recommend discussing and likely modifying the \$800 **non-Net Energy Metering (“NEM”)** interconnection fee in California. San Diego Gas & Electric (“SDG&E”) states that adding the interconnection fee to this proceeding for Commission is unnecessary because the utilities already have authorization to update these costs via Advice Letter.¹

VGIC’s understanding is that only the application fees for NEM / Net Billing Tariff (“NBT”) systems are permitted to be updated via Advice Letter. VGIC is aware of one Commission decision that discusses interconnection fee updates via Advice Letter, D.16-01-044, which established the NEM Successor Tariff or “NEM 2.” D.16-01-044 states:

“Interconnection fees **for the NEM successor tariff** can only be changed by submitting a new fee calculation, based on the three cost areas set out above, in a Tier 2 advice letter served on the service list of this proceeding or any subsequent proceeding in which this NEM successor tariff (and/or any future successor tariff) is within the scope.”²

VGIC interprets that this decision language on a Tier 2 Advice Letter process for updating interconnection fees applies only to NEM / NBT systems. However, if this understanding is incorrect, VGIC requests that the Commission clarify the ability of the utilities to change the application fee via Advice Letter. VGIC is open to the utilities being able to update interconnection application fees based on actual costs incurred via a pathway outside of this proceeding, but our current understanding is that the Commission has not allowed this. We discuss our understanding below.

¹ SDG&E Opening Comments at p.11.

² D.16-01-044 at p.88.

VGIC raised the issue of the \$800 interconnection fee in a formal presentation to the Interconnection Discussion Forum (“IDF”) in June 2025. At the meeting, Energy Division staff presented on the history of Commission decisions on the fee. The original \$800 fee was set by D.00-12-307. Since then, modifications have been made to supplemental fees and other interconnection fees; however, the base \$800 fee has remained the same.³ D.20-09-035 last took up the topic of interconnection fees. In that decision, no modifications were made to the fee, but the utilities were ordered to do additional reporting on the costs of processing non-NEM systems smaller than 1 MW.⁴ VGIC does not recall either Energy Division staff or any of the utilities citing any method for them to change this \$800 fee via Advice Letter during the June 2025 IDF meeting, and VGIC is not aware of any language that authorizes this in the above-referenced decisions.

Meanwhile, SCE agrees that interconnection application fees should be in scope and specifically asks that “a discussion on how to update these fees based on actual utility costs be included as part of the OIR.”⁵ As discussed above, VGIC believes that utilities could update their interconnection fees outside of a Rulemaking based on actual costs incurred. VGIC recommends that the Commission aim to define a pathway for the utilities to more regularly update the non-NEM interconnection fees, especially for smaller systems < 1 MW. As bidirectional EV charging systems become more common and utilities become more familiar and comfortable with this equipment, VGIC anticipates that the costs to process non-NEM systems will decrease. This proceeding should discuss the appropriate costs to track and include in an interconnection fee update process, similar to the process defined for NEM systems in D.16-01-044.

³ D.05-08-013.

⁴ D.20-09-035 at p.49.

⁵ SCE Opening Comments at p.34.

In the interim, VGIC agrees with CALSSA that additional reporting on utility costs would be helpful. While SCE and SDG&E have provided cost reporting for non-NEM systems <1 MW, we recommend the Commission direct Pacific Gas and Electric (“PG&E”) to report on these costs. CALSSA also recommends that the utilities should track costs for systems <100 kW.⁶

VGIC agrees with the intent of CALSSA’s request for tracking costs for smaller systems, and we suggest that the utilities track costs for systems less than 30 kW. For context, today’s residential non-NEM bidirectional EV charging systems are offered at ~10 kW of discharge capability. We believe that reporting should capture these smaller systems so that the data can be used to set appropriate fees for those systems. Applying a similar cost reporting framework to ~900 kW non-NEM solar systems, or even 90 kW systems, and ~10 kW bidirectional EV charging systems limits the usefulness of this reporting for informing non-NEM interconnection application fees.

III. BIDIRECTIONAL EV CHARGING SYSTEMS THAT ARE ENABLED FOR BIDIRECTIONAL MODE ONLY WHEN ELECTRICALLY ISOLATED FROM THE GRID ARE NOT REQUIRED TO INTERCONNECT UNDER RULE 21.

Traditionally, the use of “break-before-make” backup generators in California has not been governed by Rule 21. This break-before-make process requires that the “power must be shut off (break) before the system can function again.”⁷ This can also involve the use of a transfer switch to ensure that power does not flow back to the grid. Some bidirectional EV charging systems have been used in bidirectional mode only to provide power to customers when the power goes out. These configurations should continue to use the existing rules for the deployment of backup generators, not Rule 21.

⁶ CALSSA Opening Comments at p.14.

⁷ PG&E Backup Power Installation Guide: <https://www.pge.com/assets/pge/docs/clean-energy/battery-storage/Backup-Power-Installation-Guide.pdf>

Ford, The Mobility House, and Tesla highlight a lack of clarity in the treatment of EVs used as purely backup generators in California. Even though existing backup generator rules state that only a notification process is required, not a full interconnection, Ford states that “some California utilities have required EV backup customers, whose systems never operate in parallel with the grid, to initiate a Rule 21 application and pay the application fee solely to provide this notice.”⁸ The Mobility House cites language that could be one reason for confusion amongst the utilities. D.20-09-035 refers solely to “bidirectional operation” without specifically defining this term, which “leaves room for interpretation that both grid-integrated/grid-following inverters and grid-forming inverters for use at islanded sites could require interconnection simply because they both involve discharge.”⁹ Tesla highlights that this type of broad language is also used in this scoping memo, where question 3a as drafted refers to “non-exporting vehicle-to-grid (V2G) systems for electric vehicle charging stations and home *and building backup power*,”¹⁰ but this could “imply that perhaps systems designed for backup only should be subject to interconnection review.”¹¹

VGIC strongly agrees that bidirectional EV charging systems enabled in bidirectional mode exclusively in a break-before-make configuration should not require interconnection under Rule 21, as these systems are not enabled to discharge while operating in parallel to the grid. Discussion of requirements for these systems should be out of scope for this proceeding. However, given the confusion surrounding the applicability of Rule 21, the Commission should ensure that if and when technical requirements for bidirectional EV charging systems are updated,

⁸ Ford Opening Comments at 3.

⁹ The Mobility House Opening Comments at 4.

¹⁰ OIR at 7.

¹¹ Tesla Opening Comments at 8.

the relevant language is sufficiently specific, referring only to bidirectional EV charging systems that are enabled to discharge parallel to the grid, rather than those enabled to discharge only when electrically isolated from the grid.

Lastly, VGIC strongly recommends, generally, that the Commission and other stakeholders describe specific configurations for bidirectional charging rather than relying on largely undefined terms like “vehicle-to-grid”, “vehicle-to-home”, and “vehicle-to-building.” The configurations “grid-isolated”, “grid-parallel, non-export”, “grid-parallel, export,” and “grid following-forming mode switching” are examples of much more precise and well-defined terms for use in modifying Rule 21.

IV. INTERCONNECTION FOR SMALL NON-EXPORT BATTERY SYSTEMS, INCLUDING BIDIRECTIONAL EV CHARGING SYSTEMS, SHOULD BE STREAMLINED.

For systems that do operate in parallel to the grid, but do not export past the customer's meter, additional streamlining of the interconnection process should be explicitly scoped into this proceeding. PG&E recommends that streamlining be pursued specifically for non-export battery systems under 30 kW. PG&E notes that “Screening criteria could replace engineering reviews, and clear peak output standards could enable fast-tracking. Direct filing and alternative legal processes should be considered to further reduce barriers for these projects.”¹² VGIC agrees that this issue should be taken up in this proceeding, and the Commission should specify that streamlining for batteries includes bidirectional EV charging systems, which the Commission has previously found to be a type of energy storage for the purposes of interconnection.

¹² PG&E at 4.

V. VGIC AGREES THAT CONSIDERATION OF ALTERNATIVE COMMUNICATION PROTOCOLS IS APPROPRIATE.

In Opening Comments, SCE recommends that testing and certification requirements be clarified for non-IEEE 1547 protocols allowed under mutual agreement. Currently, Rule 21 requires certification to one of the communications protocols outlined in IEEE 1547-2018 Section 10.7: IEEE 2030.5, IEEE1815 (i.e., DNP3), or SunSpec Modbus. However, other communications protocols are also emerging for bidirectional EVs, including OCPP 2.1, as pointed out by SCE. SCE asks whether, if one of these other protocols are used by mutual agreement with the utility, “Could the DERs not be required to support one of the 3 1547-2018 protocols?”¹³

VGIC recommends that the Commission consider this issue, but with an intent toward clarifying that if a different communication protocol is agreed to by the utility, the DER does not have to be certified to one of the IEEE 1547-2018 communication protocols *in addition to* that communication protocol (e.g., OCPP 2.1). If the utility has deemed a separate communication protocol to meet their standards for communication performance, additional certifications are duplicative and serve only to increase costs for customers. At the same time, VGIC still believes that it is appropriate to keep the three protocols as automatically acceptable, as this will make it easier for technology providers to design systems to meet utility needs without extensive engagement with individual utilities, which can facilitate interconnection generally. If another protocol becomes popular, the Commission should consider whether that protocol should be added to the list of “deemed approved” protocols, but only when sufficient interest has been shown. Ultimately, the Commission should avoid spurring uncertainty in a market of solution providers that is currently orienting around today’s requirements. To do so, the Commission should strive to

¹³ SCE Opening Comments at 30.

avoid “moving the goal posts” when it comes to required communication protocols by ensuring new communication protocol pathways are optional, but not required, and not taking away existing communication protocol pathways.

VI. CONCLUSION.

VGIC appreciates the opportunity to provide these reply comments on the OIR. We look forward to further collaboration with the Commission and stakeholders on this initiative.

Respectfully submitted,

/s/ Zach Woogen

Zach Woogen

Executive Director

VEHICLE-GRID INTEGRATION COUNCIL

Date: November 10, 2025