



**ELECTRIC SCHEDULE NEMFC** Sheet 1  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

**APPLICABILITY:** This schedule is applicable to a Bundled Service, Community Choice Aggregation Service (CCA Service) or Direct Access Service (DA Service) Customer who is served under a Time-of-Use (TOU) rate schedule, and who:

(1) installs an Eligible Fuel Cell Electrical Generating Facility, as defined below, with a generating capacity no greater than 5,000 kW, located on or adjacent to the customer's owned, leased or rented premises, that is interconnected and operates in parallel with PG&E's grid while the grid is operational, and is sized to offset part or all of the Customer's electrical requirements;

(2) is the recipient of local, state, or federal funds, or who self-finances projects designed to encourage the development of Eligible Fuel Cell Electrical Generating Facilities, and

(3) uses technology that achieves reductions in emissions of greenhouse gases (GHG) pursuant to Public Utilities Code Section 2827.10 subdivision (b) as established by the California Air Resources Board (CARB) and as regularly updated consistent with the statute (GHG Standards), except as provided in Special Condition 8 of this tariff and

(T)

(4) meets all other requirements in this schedule.

Such a customer will be referred to hereafter as a "Fuel Cell Customer-Generator." Customers eligible for service under this schedule are exempt from any new or additional charges not included in their Otherwise Applicable Schedule (OAS), except as described in Special Condition 2.

This Schedule is closed to new Fuel Cell Electrical Generating Facilities that did not commence operation (receive Permission to Operate (PTO)) on or **before December 31, 2023**.

Pursuant to Decision 23-11-068 Fuel Cell Customer-Generators who received Permission to Operate on or after January 1, 2017 must comply with GHG emission requirements specified in this tariff at Special Condition 9 to be eligible to continue service under this tariff. As part of this requirement, a Fuel Cell Customer-Generator must certify for the first time no later than February 1, 2025, that the fuel cell meets the GHG requirement and must recertify annually before the anniversary of their PTO date. These customers will be subject to an annual documentation fee. Due to CARB's anticipated review of GHG emission standards, this February 1, 2025, deadline has been extended at the direction of the California Public Utilities Commission to a date eight months following a final decision issued by the CARB concerning updates to its Fuel Cell NEM Regulation. Please refer to Special Condition 9 for more detail on this requirement.

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(N)

This service is not applicable to a CCA Service or DA Service Fuel-Cell Customer-Generator where the customer's Community Choice Aggregator (CCA) or DA Electric Service Provider (ESP) does not offer a fuel cell net energy metering tariff. In addition, if an eligible Fuel Cell Customer-Generator participates in direct transactions with a CCA or ESP that does not provide distribution service for the direct transactions, the CCA or ESP, and not PG&E, is obligated to provide net energy metering to the customer.

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(Continued)



**ELECTRIC SCHEDULE NEMFC** Sheet 2  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

APPLICABILITY: A Fuel Cell Electrical Generating Facility greater than one megawatt seeking interconnection with PG&E's transmission system under this Rate Schedule that is not subject to one of the exceptions described in Electric Tariff Rule 21 Section B.1 (Cont'd.) (Applicability) shall interconnect in accordance with the instructions provided there. Such customers shall also apply via PG&E's online application portal (*YourProject*) for the purpose of initiating an application and determining eligibility of their Fuel Cell Electrical Generating Facility under this Schedule. This requirement is not applicable to such Fuel Cell Electrical Generating Facilities with Permission to Operate letters received as of May 6, 2022, or proposed Fuel Cell Electrical Generating Facilities with materially complete interconnection applications submitted as of May 6, 2022. (L)

The "Eligible Fuel Cell Electrical Generating Facility" is defined as a generating facility that meets all applicable safety and performance standards in accordance with PG&E's Electric Rule 21 and pursuant to PU Code Section 2827.10 (a)(2) that includes:

- 1) an integrated powerplant systems containing a stack, tubular array, or other functionally similar configuration used to electrochemically convert fuel to electric energy;
- 2) an inverter and fuel processing system where necessary, and
- 3) other plant equipment, including heat recovery equipment necessary to support the plant's operation or its energy conversion.

Customers seeking generator interconnections in portions of San Francisco and Oakland where PG&E has a network grid must contact PG&E about generation export limitations.

Customers seeking generator interconnections in portions of San Francisco and Oakland where PG&E has a network grid must contact PG&E about generation export limitations. Pursuant to PU Code Section 2827.10, this schedule is offered on a first-come, first-serve basis and has a maximum cumulative rated generating capacity (the Cap) of 281 MW (PG&E capacity). Statewide capacity is 500 MW.

Customers seeking preference for eligibility under this rate shall file an application with the CPUC to establish that their facilities are located in a community with significant exposure to air contaminants, or localized air contaminants, or both, including but not limited to communities of minority populations or low-income populations, or both, based on the ambient air quality standards established pursuant to PU Code Section 2827.10(d) and Division 26 (commencing with Section 39000) of the Health and Safety Code. The CPUC shall determine how such preference shall be implemented. In no event shall such an application, if granted, cause the cumulative rated generating capacity served by PG&E under this schedule to exceed the PG&E Cap.

Schedule NEMFC applies also to specified Net Energy Metering-eligible (NEM-eligible) generators in a generating facility comprised of multiple NEM and non-NEM Eligible generators, served through the same Point of Common Coupling (PCC), where the any NEM-eligible generating capacity is not more than allowed in the Applicability Section of its respective NEM tariff. Such facilities will be referred to as Multiple Tariff Facilities, and any group of generators within such a facility that is subject to the same tariff provisions for billing and metering purposes will be referred to as a Constituent Generator Group. In order to be eligible for this rate schedule in a Multiple Tariff Facility, the Customer-Generator must also meet all the requirements of Special Condition 7 for the Schedule NEMFC eligible generator, and must also meet any other applicable tariffs.

(Continued)



**ELECTRIC SCHEDULE NEMFC** Sheet 3  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

**APPLICABILITY:** (cont'd) Due to the complexity of Multiple Tariff Facilities, NEMFC generating facilities interconnecting under the provisions of Special Condition 7 may require additional review and/or interconnection facilities and other equipment, and may incur interconnection costs, as provided for in PG&E's Electric Rule 21 and Special Condition 2.

**TERRITORY:** The entire territory is served.

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**RATES:** Only the Generation Rate Component of the energy charge (kWh) of the Fuel Cell Customer-Generator's OAS ("Generation Rate Component") shall be used in the calculation of credits when the Fuel Cell Customer-Generator is a net energy producer, on a monthly basis, for any TOU period. Only the Generation Rate Component of the Fuel Cell Customer-Generator's OAS shall be used to calculate the charge for generation when the Fuel Cell Customer-Generator is a Net Energy consumer on a monthly basis, for any TOU period. If the Fuel Cell Customer-Generator is being served under CCA Service or under DA Service, the applicable monthly bill charges or credits related to the Generation Rate Component will be specified by their CCA or ESP, as applicable, in accordance with the eligible Fuel Cell Customer-Generator's OAS and PG&E's Community Choice Aggregation and Direct Access tariffs. All other charges, including but not limited to, Transmission Charges, Distribution Charges, Monthly Customer Charges, Minimum Charges, Demand Charges, and non-energy related charges, shall be calculated according to the Fuel Cell Customer-Generator's OAS for all energy supplied by PG&E prior to the netting of energy charges and credits.

The charges and credits for Multiple Tariff Facilities taking service on this rate schedule under the provisions of Special Condition 7 will be calculated using the OAS identified by the Customer-Generator in its application for interconnection and its interconnection agreement with PG&E or as subsequently changed by the Customer-Generator in accordance with PG&E's Electric Rule 12.

Customers-Generators with Multiple Tariff Facilities with existing NEM, NEMBIO and/or NEMFC eligible generators, interconnecting additional generators will receive a bill true-up, prior to taking service under Special Condition 7. This ensures that all NEM accounts have the same Relevant Period, as defined in Special Condition 3, going forward.

**SUB-SCHEDULE:** Eligible Customer-Generators will be placed on Rate Schedule NEMFC, unless they are applying for service under the provisions of one of the following sub-schedule:

NEMFCA – For Customer-Generators taking service under the provisions of Special Condition 4—LOAD AGGREGATION.

NEMMT – For Customer-Generators taking service as a Multiple Tariff Facility under Special Condition 7 of this tariff.

(Continued)



**ELECTRIC SCHEDULE NEMFC** Sheet 4  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

**SPECIAL  
CONDITIONS:**

**1. METERING:**

- a. Fuel Cell Net Energy Metering shall be accomplished using a TOU meter capable of separately registering the flow of electricity in two directions. If the Fuel Cell Customer-Generator's existing meter is not capable of separately measuring the flow of electricity in two directions, the Fuel Cell Customer-Generator shall be responsible for all expenses involved in purchasing and installing a meter that is able to separately measure electricity flow in two directions. If dual metering is installed, the Net Energy metering calculation shall yield a result identical to that of a single meter capable of separately measuring the flow of electricity in two directions.
- b. If none of the normal metering options at PG&E's disposal that are necessary to render accurate billing are acceptable to the Fuel Cell Customer-Generator, PG&E shall have the right to refuse service under this rate schedule.
- c. Multiple Tariff Facilities will be metered under one of the options described in Special Condition 7.
- d. Customer-Generators with service accounts that qualify for Special Condition 4 *Load Aggregation* are required to meet the provisions of Special Conditions 1.a and 1.b for the account serving the Eligible Fuel Cell Electrical Generating Facility only; all other service accounts are only required to have the metering specified in the TOU rate schedule on which it is billed.

**2. FEES:**

Interconnection Fee. No new requests for enrollment on this Schedule are accepted after December 31, 2023. However, existing NEMFC customers that would like to continue on this tariff, are allowed to pursue any material modification allowed under Electric Rule 21 that does not conflict with this tariff. For any material modification, existing NEMFC customers must submit a new Rule 21 interconnection request along with an interconnection fee in accordance with the terms of Electric Rule 21.

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Notwithstanding Rule 21, pursuant to P.U. Code 2827.10 NEMFC will be charged interconnection inspection fees as follows:

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- a. If the Eligible Fuel Cell Generating Facility incorporates only CEC certified inverters, and there are no aggregated accounts, as described in Special Condition 4.... \$180.00
- b. If the Eligible Fuel Cell Generating Facility incorporates only CEC certified inverters, and there are one or more aggregated accounts as described in Special Condition 4....\$480.00;
- c. If the Eligible Fuel Cell Generating Facility incorporates non-CEC certified inverters, and there may or may not be aggregated accounts as described in Special Condition 4, the fee will be based on an the hourly manpower rate times the labor and travel time to perform field certification testing of non-certified equipment as specified in Rule 21 Section L.5.

The inspection fee will be calculated using the same hourly rate to perform *Additional Commission Test Verifications* in Rule 21.

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(Continued)

Advice 7143-E  
Decision D.23-11-068

Issued by  
**Shilpa Ramaiya**  
Vice President  
*Regulatory Proceedings and Rates*

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Resolution	



**ELECTRIC SCHEDULE NEMFC** Sheet 5  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

SPECIAL  
CONDITIONS:  
(Cont'd.)

3. BILLING:

Fuel Cell Customer-Generator will be billed monthly for all charges other than Generation Rate Component. With each monthly billing statement, PG&E shall provide the Fuel Cell Customer-Generator with information regarding energy (kWh) consumption and energy (kWh) exports.

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At the end of each Relevant Period, PG&E, CCA or ESP as applicable, shall perform Reconciliation. A Relevant Period consists of any twelve monthly billing cycles commencing on the date PG&E provides the Customer-Generator with PG&E's written approval to begin parallel operation of the generating facility for purposes of participating in NEMFC, and on every subsequent anniversary thereof. If an eligible Customer-Generator terminates service, or experiences a change in electric commodity service provider, prior to the end of any 12 monthly billing cycles the Relevant Period will consist of that period from the anniversary date until the effective date of that termination.

For a CCA Service or DA Service Fuel Cell Customer-Generator, Generation Rate Component credits, if any, do not reduce the charges owed to PG&E for energy supplied to the eligible Customer-Generator.

a. The Reconciliation shall be performed as follows:

NEMFC Customer-Generators will receive a bill that totals 1) all Generation Rate Component charges for the Relevant Period; 2) all Eligible Generation Credits for the Relevant Period; and 3) all other charges, due in that billing cycle of the Relevant Period.

The "Eligible Generation Credit" equals the lesser of 1) all monthly Generation Rate Component charges for the Relevant Period; or 2) the absolute value of all monthly Eligible Generation Credit for the Relevant Period. Any excess credit that exceeds the Eligible Generation Credit will be retained by PG&E, CCA or ESP, as applicable, and the customer will not be owed any compensation for this excess.

For operations with no Load Aggregation as defined in Special Condition 4, only the account serving the Eligible Fuel Cell Generating Facility is used to determine Generation Rate Component charges.

For operations with Load Aggregation as defined in Special Condition 4, the Generation Rate Component charges for the usage from all the Eligible Service Accounts is used to determine the Eligible Generation Credit.

- b. In the case of Load Aggregation for operations, defined in Special Condition 4, each Eligible Service Account will be billed for Generation Rate Component charges, based on the rate schedule for the particular service account, at the end of the Relevant Period, or sooner if the account closes, experiences a change in electric commodity service provider, or is no longer eligible for Load Aggregation.
- c. ESP Charges: If PG&E provides DA metering for the ESP, UDC consolidated billing (that is, PG&E Consolidated Billing as described on PG&E's Rule 22), or ESP dual or consolidated billing support services for DA Customer-Generators or their ESP's rates, PG&E may recover the incremental costs related to net energy metering from the Customer-Generator's ESP in accordance with Rate Schedule E-EUS.
- d. CCA Charges: If the Customer-Generator's accounts are on CCA Service, PG&E may recover the incremental costs related to net energy metering from the Customer-Generator's CCA in accordance with Rate Schedule E-CCA.

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**ELECTRIC SCHEDULE NEMFC** Sheet 6  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

SPECIAL  
CONDITIONS:  
(Cont'd.)

4. **LOAD AGGREGATION:** PG&E shall aggregate the load of the Fuel Cell Customer-Generator's accounts where the Fuel Cell Customer Generator is the customer of record and the following requirements are met: (i) the accounts are on an applicable time-of-use rate schedule, and (ii) the accounts are located on the property where the Eligible Fuel Cell Electrical Generation Facility is located or on property adjacent or contiguous to that property as long as those properties are solely owned, leased, or rented by the Eligible Fuel Cell Customer-Generator; and (iii) all the accounts are served by the same electric commodity service provider. (i.e. the Eligible Fuel Cell Customer-Generator account and all aggregated accounts must all be on bundled service or all on CCA service, or all on DA service.)
5. **INTERCONNECTION:** Prior to receiving approval for Parallel Operation, the Customer-Generator must submit a completed PG&E application form and interconnection agreement as follows:

<b>Sub-schedule</b>	<b>Application</b>	<b>Interconnection Agreement</b>	
NEMFC / NEMFCA	<i>Online Rule 21 Generator Interconnection Application, (Form 79-1174)</i>	<i>Interconnection Agreement for Net Energy Metering of Eligible Fuel Cell Facilities (Form 79-1010)</i>	
		For Customer-Generators applying prior to the establishment of the fuel cell Standards, the Customer must also complete and sign Appendix D to Form 79-1010.	(N)         (N)
NEMMT (Multiple Tariff Facilities – See Special Condition 7)	<i>(same as for NEMFC)</i>	<i>Generating Facility Interconnection Agreement (Multiple Tariff) (Form 79-1069-02)</i>	(N)
		For Customer-Generators applying prior to the establishment of the fuel cell Standards, the Customer must also complete and sign Appendix J to Form 79-1069-02.	(N)           (N)

6. **STANDBY CHARGES:** Consistent with electric Rate Schedule S – Standby Service, to the extent that charges for transmission and distribution services are recovered through demand charges in any billing period, no standby charges shall apply in that monthly billing cycle, except Multiple Tariff Facilities interconnected under the terms of Special Condition 7, may be subject to the requirements of Schedule S.

(Continued)



**ELECTRIC SCHEDULE NEMFC** Sheet 7  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

**SPECIAL  
CONDITIONS:**  
(Cont'd.)

**7. MULTIPLE TARIFF FACILITIES:** (T)

Multiple Tariff Facilities have the following additional provisions:

- a. When Net Generation Output Metering (NGOM) is required, such NGOM must conform to the requirements set forth in Electric Rule 21, Section J.3. (T)
- b. A NEM-eligible Constituent Generator Group is defined as a constituent generator group that is eligible for service under the provisions of either schedule NEM, NEMBIO or NEMFC or their sub-schedules.
- c. A non-NEM-eligible Constituent Generator Group is defined as a constituent generator group that does not take service under the provisions of schedules NEM, NEMBIO or NEMFC, but interconnects under the provisions of Electric Rule 21.
- d. All metering for Multiple Tariff Facilities called for in this special condition must meet the requirements needed to bill under the Customer-Generator's OAS. All metering equipment and Non Export relays necessary to implement the provisions in this section will be provided at the Customer-Generator's expense. (T)
- e. Any generators eligible for tariff NEMFCA or NEMBIOA (accounts with the loads from eligible accounts aggregated on the main NEMFC or NEMBIO account pursuant to Special Condition 4 of the NEMFC or NEMBIO tariff) will be treated as a separate Constituent Generator Group. (N)  
|  
(N)
- f. Where multiple NEM-eligible Constituent Generator Groups are present, and energy (kWh) is exported to the grid at the PCC, the billing credit will be based upon the proportional contribution of the energy production (kWh) of each NEM-eligible Constituent Generator Group over the billing period as follows:
  - 1) Sum all NEM-eligible Constituent Generator Groups' NGOM readings.
  - 2) Determine the proportion of energy (kWh) attributable to each NEM-eligible Constituent Generator Group by dividing the NGOM reading of each by the sum from (1) above.
  - 3) NEM-eligible Export is the lesser of either all exported energy as measured at the PCC or the sum of the energy per (1) above.
  - 4) Take the NEM-eligible Export and assign it to each NEM-eligible Constituent Generator Group based on its respective proportion of NGOM reading.

(Continued)



**ELECTRIC SCHEDULE NEMFC** Sheet 8  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

- |                                     |      |  |                       |
|-------------------------------------|------|--|-----------------------|
| SPECIAL<br>CONDITIONS:<br>(Cont'd.) | 7.   | MULTIPLE TARIFF FACILITIES: (Cont'd)   | (T)                   |
|                                     | 5)   | Determine the bill credit for the Customer-Generator as provided under the Customer-Generator's OAS in combination with the net energy metered tariff billing treatment type for each NEM-eligible Constituent Generator Group.  | (T)<br>(T)            |
|                                     | 6)   | If interval metering is chosen per, Special Condition 7(g)(2)(c) below, this allocation of bill credit will be done on the aggregated intervals over a billing period. If the OAS is a time-of-use (TOU) rate schedule, the allocation will be performed for each aggregated TOU period separately.  | (T)                   |
|                                     | g.   | Multiple Tariff Facility Configurations and Metering.  |                       |
|                                     | 1)   | For two or more types of NEM-eligible Constituent Generator Groups, the Customer-Generator must select one of the following options:   | (T)                   |
|                                     | a)   | Install NGOM on each Constituent Generator Group. In addition, metering is required at the PCC capable of separately registering the flow of energy (kWh) in two directions. Billing credit will be calculated as provided for in Special Condition 7(f). Billing credit will be applied consistent with the appropriate net metering tariff as follows:   | (T)                   |
|                                     | i.   | First, apply NEMBIO and/or NEMFC credits (if any) to Generation Rate Component charges on any of their respective aggregated accounts, and then to Generation Rate Charges on accounts served by the generating facility (Host Account).   | (N)<br>(T)<br>(T)     |
|                                     | ii.  | Second, apply any NEMFC credits if there are no aggregated accounts, to Generation Rate Component charges on the accounts served by the generating facility.   | (T)<br> <br>(T)       |
|                                     | iii. | Third, apply NEM credits (if any) as appropriate to the remainder of the energy charges on the account served by the Generating Facility.  | (T)                   |
|                                     | b)   | If the Customer-Generator has no Constituent Generator Group(s) eligible for NEMFCA or for Schedule NEMBIOA, but has a Constituent Generator Group eligible for Schedule NEM consisting of one or more Renewable Electrical Generation Facilities, the customer-generator may elect to take service for such under either Schedule NEMBIO or NEMFC, as appropriate to one of the other Constituent Generator Group(s). | (T)<br>(N)<br><br>(D) |

(Continued)



*San Francisco, California*

Cal. P.U.C. Sheet No. 37824-E  
Cal. P.U.C. Sheet No. 32448-E

## Sheet 9

7. MULTIPLE TARIFF FACILITIES: (Cont'd)

g. Multiple Tariff Facility Configurations and Metering (Cont'd)

2) For both, NEM-eligible and non-NEM-eligible Constituent Generator Groups, the Customer-Generator must select one of the following options:

a) **The Non Export Relay Option:** A Customer-Generator must install a non-export relay on their non-NEM Constituent Generator Groups and install metering as follows: 1) If there is only one type of Constituent Generator Group then metering at the PCC is all that is required and the terms of the appropriate NEM tariff for that group will apply; 2) If there are two or more types of NEM-eligible Constituent Generator Groups, then Metering at the PCC and NGOM metering of each NEM-eligible Constituent Generator Group is required. The requirements of Special Condition Sections 7(f) and 7(g) apply.

b) **The Load Metering Option:** The Customer-Generator must install NGOM on each NEM-eligible Constituent Generator Group, install energy consumption metering at the load, and install metering at the PCC as follows: 1) If there is one type of NEM-eligible Constituent Generator Group then the terms of the appropriate NEM tariff for that group will apply; 2) If there are two or more types of NEM-eligible Constituent Generator Groups, then the terms of Special Condition Sections 7(f) and 7(g) apply.

c) **The Interval Meter Option:** The Customer-Generator must install interval NGOM on each NEM-eligible Constituent Generator Group and install interval metering at the PCC as follows: 1) If there is one type of Constituent Generator Group then the terms of the appropriate NEM tariff for that group will apply; 2) If there are two or more types of NEM-eligible Constituent Generator Groups, then the terms of Special Condition Sections 7(f) and 7(g) for interval metering apply. Energies (kWh) generated in an interval are aggregated over a billing period according to the OAS.

h. Multiple Tariff Facilities, served under CCA Service, may only participate to the extent their CCA offers net energy metering for the specific Constituent Generator Group(s).

i. For Multiple Tariff Facilities involving NEM2 NEM-eligible Constituent Generator Groups, see the special condition for MULTIPLE TARIFF FACILITIES in schedule NEM2.

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**ELECTRIC SCHEDULE NEMFC** Sheet 10  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

SPECIAL  
CONDITIONS:  
(Cont'd.)

8. EMISSIONS STANDARD APPLICATION:

Pursuant to PUC Section 2827.10, CARB will provide for a schedule of annual GHG Standard updates. (T)

a) NEMFC Eligible Fuel Cell Electrical Generating Facilities  
Interconnected Before January 1, 2017

A customer that has received permission to operate (original PTO) its generating facility from PG&E under the NEMFC schedule prior to January 1, 2017, can continue to take service under NEMFC, and does not need to meet the GHG emission requirements as stated in Special Condition 9 of this tariff.

b) NEMFC Eligible Fuel Cell Electrical Generating Facilities Interconnecting on or after January 1, 2017.

A customer that has received permission to operate (original PTO) its generating facility from PG&E under the NEMFC schedule on or after January 1, 2017, can continue to take service under NEMFC provided it complies with the requirements set forth in Special Condition 9 of this tariff.

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Advice 7561-E  
Decision

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Vice President  
Regulatory Proceedings and Rates

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**ELECTRIC SCHEDULE NEMFC** Sheet 11  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

SPECIAL  
CONDITIONS:  
(Cont'd.)

9. GHG EMISSION REQUIREMENTS PURSUANT TO D.23-11-068

The NEMFC GHG emission standards developed by CARB became effective on October 26, 2020. CARB has developed standards for the years 2017 through 2025, shown in Table 1 below.

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Table 1: NEMFC GHG Emission Standards<sup>1</sup>

Year	Average Annual GHG Emission Standards (kgCO <sub>2</sub> e/MWh)
2017	409
2018	399
2019	389
2020	379
2021	365.6
2022	352.2
2023	338.8
2024	325.4
2025	312

CARB will calculate annual GHG emission standards and publish them on the CARB website every three years until 2047.

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Fuel Cell Customer-Generators that received PTO on or after January 1, 2017, shall be subject to the following requirements.

Extension of Time to Comply: The February 1, 2025, and 60-day deadline referenced below to pay the annual documentation fee and submittal of required documentation and data for initial certification has been suspended due to CARB's anticipated review of the GHG emissions standards. The new deadline will be eight months following a final decision issued by the CARB concerning updates to its Fuel Cell NEM Regulation.

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- a. **Annual Documentation Fee:** A non-refundable annual documentation fee of \$4,100 must be submitted with the initial certification by February 1, 2024. To continue to qualify for this Schedule, subsequent non-refundable annual documentation fee of \$3,100 will be due annually beginning in January 2025 and continuing each year that the Fuel Cell Electrical Generating Facility takes service on this Schedule. This fee may be adjusted through an advice letter approved by the CPUC.

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(N)  
(D)  
(D)

<sup>1</sup> Customers may find the standards in the link below for dates that may go beyond those shown here: Stationary Fuel Cell Net Energy Metering: Emission Standards | California Air Resources Board, <https://ww2.arb.ca.gov/our-work/programs/fuel-cell-nem/emission-standards>.

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**ELECTRIC SCHEDULE NEMFC** Sheet 12  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

SPECIAL  
CONDITIONS:  
(Cont'd.)

9. GHG EMISSION REQUIREMENTS PURSUANT TO D.23-11-068 (Cont'd.)
- b. **Initial Certification:** Fuel Cell Customer-Generator must certify/demonstrate compliance with PG&E that the generator meets the current GHG emission standard no later than February 1, 2025.
- 1) All required data and documentation must be submitted on or before February 1, 2025.
- 2) The Fuel Cell Customer-Generator must use performance test code ASME PTC 50-2002 or, as allowed under the circumstances described below, equipment specification sheets, to determine the first-year emission rate, which must then be adjusted by a model-specific performance degradation assumption to yield the system's emission rate in that year.
- a) An exception is made for NEMFC systems utilizing waste heat whose emission rate cannot feasibly be calculated using only test code ASME PTC 50-2002.
- i. A Fuel Cell Customer-Generator with such a system may use equipment specification sheets to demonstrate the system's fuel input rate and net electrical power output; and for a CHP system, the useful heat rate, in the calculation of its emission rate. A customer-generator with a NEMFC system utilizing waste heat must certify any waste heat usage included in the calculation of the emission rate.
- b) The Fuel Cell Customer-Generator must submit documentation on the generator's projected annual degradation rate.
- c. **Contract Performance Data Provider (PDP):** For the purpose of NEMFC compliance, the Fuel Cell Customer-Generator must contract with a performance data provider by no later than February 1, 2025, and continue under contact with a performance data provider for the duration that the customer-generator takes service on the NEMFC tariff. Performance data providers will be tasked with recording performance data from the installed metering and monitoring equipment and submitting it to PG&E.
- d. **Annual Certification:**
- 1) Each year after the initial certification, before the anniversary of the Fuel Cell Customer-Generator's original PTO date, the Fuel Cell Customer-Generator must recertify compliance with the current year's GHG emission standard according to the procedures described in the then-current Self-Generation Incentive Program (SGIP) handbook.
- 2) As part of the annual recertification, the Fuel Cell Customer-Generator or performance data provider must submit all required data and documentation.

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**ELECTRIC SCHEDULE NEMFC** Sheet 13  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

SPECIAL  
CONDITIONS:  
(Cont'd.)

9. GHG EMISSION REQUIREMENTS PURSUANT TO D.23-11-068 (Cont'd.)

(N)

- e. **Documentation:** All data and documentation for recertification must be submitted annually at least 60 days before the anniversary of Customer's PTO date.
- 1) The Fuel Cell Customer-Generator (or performance data provider), must submit documentation on the fuel cell system's GHG emissions based on its real-time monitoring data, using metering and monitoring equipment that complies with SGIP handbook requirements<sup>2</sup> and measures net electrical output from the system, fuel input metering into the system, and for combined heat and power (CHP) technologies, useful thermal energy delivered to the site from the CHP system.
  - 2) The Fuel Cell Customer-Generator or performance data provider must submit:
    - a) **Minimum Operating Efficiency Worksheet**
    - b) **Directed Renewable Fuel Verification Form**
    - c) **Monthly data, along with any necessary supporting documentation in the format required by PG&E pursuant to applicable SGIP requirements.**
  - 3) The Fuel Cell Customer-Generators that choose the Optional Compliance Pathways detailed below may have additional documentation requirements stated under their chosen option.
- f. **Self-Generation Incentive Program (SGIP):** All applicable fuel cell SGIP requirements must be followed, including that system owners must install and maintain metering and monitoring equipment at their own cost, all AC electric meters must be listed on the California Energy Commission's list of Eligible System Performance and Revenue Grade Meters, and it is the responsibility of the System Owners to contract with a performance data provider.

**Optional Compliance Pathways:** The next three sections propose methods for calculating the GHG emissions of fuel cell systems that use CHP; renewable fuels; and/or carbon capture, use, and storage (CCUS). The renewable fuel blending section also provides information on eligibility and reporting requirements for renewable fuels to qualify for use with the NEMFC tariff.

A Fuel Cell Customer-Generator may use multiple pathways simultaneously to calculate their fuel cell system's effective GHG emission rate for the purpose of compliance with the NEMFC GHG emission standards.

<sup>2</sup> <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/self-generation-incentive-program/2022-sgip-handbook-v4.pdf>

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**ELECTRIC SCHEDULE NEMFC** Sheet 14  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

SPECIAL  
CONDITIONS:  
(Cont'd.)

9. GHG EMISSION REQUIREMENTS PURSUANT TO D.23-11-068 (Cont'd.)

**Optional Compliance Pathways: (Cont'd.)**

a. **Waste Heat Utilization:** Fuel Cell Customer-Generators may account for NEMFC systems' use of CHP in meeting the GHG emission standards<sup>3</sup>. The GHG savings from waste heat recovery are calculated by dividing the annual waste heat recovered in MMBtu by 80 percent, which represents nominal boiler efficiency, and then multiplying by the 53.07 kg CO<sub>2</sub>e/MMBtu emission factor for the conversion of natural gas to CO<sub>2</sub>. The net GHG output of the generator is calculated by subtracting the GHG savings due to waste heat recovery from the gross GHG output. The GHG emission rate for the generator is found by dividing the net annual GHG emission by the annual electrical output of the generator in MWh.

b. **Renewable Fuel Blending:**

1) Fuel Cell Customer-Generators may account for NEMFC systems' use of renewable fuels in meeting the GHG emission standards. The generator's effective emission rate may be decreased to account for NEMFC-eligible renewable fuel utilized. A Fuel Cell Customer-Generator or performance data provider shall calculate the carbon intensity of renewable fuel utilized using the simplified carbon intensity calculators of the current California Greenhouse Gases, Regulated Emissions and Energy Use in Transportation (GREET)<sup>4</sup> model. The current version of the GREET model is 3.0 and can be found on California Air Resources Board with the link below. Fuel Cell Customer-Generator must utilize the appropriate calculator under the 3.0 version based on the fuel source used for the fuel cell facility.

a) LCFS Life Cycle Analysis Models and Documentation | California Air Resources Board<sup>5</sup>

2) All environmental attributes associated with renewable fuels used in a NEMFC system, including Renewable Energy Credits, if any, must be obtained and exclusively owned and retained by the NEMFC customer-generator.

3) The Fuel Cell Customer-Generator must not sell, trade, or transfer any environmental attributes of the contracted fuel sources.

4) **For directed renewable fuel**, the Fuel Cell Customer-Generator or performance provider must provide documentation of the renewable fuel seller's contractual obligation to provide all environmental attributes to the NEMFC customer-generator, except if using renewable fuel purchased from a utility as allowed below.

<sup>3</sup> As part of CARB's Distributed Generation (DG) Certification Program, CHP fuel cells must meet a minimum efficiency of 60 percent at 100 percent load. More information can be found at: <https://ww2.arb.ca.gov/our-work/programs/distributed-generation-certification-program/>.

<sup>4</sup> Within 90 days after a modified GREET model is first approved, pursuant to D.22-02-025, PG&E shall submit an advice letter to revise the instructions in this tariff to reference the modified model.

<sup>5</sup> <https://ww2.arb.ca.gov/resources/documents/lcfs-life-cycle-analysis-models-and-documentation>

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**ELECTRIC SCHEDULE NEMFC** Sheet 15  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

SPECIAL  
CONDITIONS:  
(Cont'd.)

9. GHG EMISSION REQUIREMENTS PURSUANT TO D.23-11-068 (Cont'd.)

(N)

b. **Renewable Fuel Blending:** (Cont'd.)

- 5) For directed renewable fuel, the renewable fuel must be injected into a common carrier pipeline system in alignment with the requirements in Pub. Util. Code § 651 (b)(3)(B) and the SGIP.
- 6) The Fuel Cell Customer-Generator or performance data provider must provide PG&E with monthly data on the amount of directed renewable fuel consumed on a monthly basis.
- 7) The Fuel Cell Customer-Generator or performance data provider must provide the source, path, and destination of the renewable fuel. Data reporting will commence one month after directed renewable fuel use begins.
- 8) The Fuel Cell Customer-Generator or performance data provider must provide the following information and documentation to PG&E on a monthly basis:
  - a) **Transportation Path and Energy Accounting:** The Fuel Cell Customer-Generator or performance data provider must upload invoices reporting the amount of renewable fuel that appears on the Directed Renewable Fuel Verification Form. Invoices and other supporting documentation must include:
    - i. Documentation from the source showing the amount of directed biogas moved into the pipeline. The documentation must identify any non-renewable gas added at the source.
    - ii. Documentation from the gas transmission system showing:
      - Receipt of directed biogas from source, storage, or other pipelines;
      - Pipeline losses or fees paid in gas not carried over;
      - Positive or negative imbalances carried over; and
      - Delivery of directed biogas to either another pipeline, storage facility, or California utility receipt point.
  - b) **Gas Fuel Consumption:** The Fuel Cell Customer-Generator or performance data provider must provide gas fuel consumption documentation from PG&E matching the directed renewable fuel receipts reporting the metered total energy input to the generator. The Fuel Cell Customer-Generator or performance data provider must report PG&E gas fuel consumption receipts on a monthly basis. It is the responsibility of the Fuel Cell Customer-Generator or performance data provider to supply the renewable fuel cell documentation and to ensure that the renewable fuel is reported to PG&E on a monthly basis.

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**ELECTRIC SCHEDULE NEMFC** Sheet 16  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

SPECIAL  
CONDITIONS:  
(Cont'd.)

9. GHG EMISSION REQUIREMENTS PURSUANT TO D.23-11-068 (Cont'd.)
- b. **Renewable Fuel Blending:** (Cont'd.)
- 8) The Fuel Cell Customer-Generator or performance data provider must provide the following information and documentation to PG&E on a monthly basis: (Cont'd.)
- b) **Gas Fuel Consumption: (Cont'd.)** Alternatively, a bundled core Fuel Cell Customer-Generator can demonstrate compliance through use of eligible utility-supplied renewable natural gas (RNG) supplied to all bundled core gas customers and/or through participation in a voluntary tariff program that allows the customer-generator to offset fossil natural gas consumption with RNG through a special billing arrangement. Utility-supplied RNG will be considered eligible for GHG emissions reductions in NEMFC if it complies with all requirements in Pub. Util. Code § 651 (b)(3)(B) and the SGIP, but the environmental attributes of this RNG will remain with the utility
- i. **For onsite renewable fuel**, which includes fuel delivered to the generating facility through a dedicated pipeline, all Fuel Cell Customer-Generators must install a fuel metering system that reports use of both renewable and non-renewable fuel.
- ii. The Fuel Cell Customer-Generator must provide PG&E with the make, model, specifications, and serial numbers of installed revenue grade gas meters.
- iii. The Fuel Cell Customer-Generator must contract with a performance data provider, and the performance data provider must submit both renewable and non-renewable fuel data to PG&E on a monthly basis. NEMFC systems using onsite renewable fuels must comply with any applicable requirements of Pub. Util. Code § 651 (b)(3)(B) and the SGIP for directed renewable fuel.
- c) **Carbon Capture, Use, and Storage (CCUS):** CCUS is not currently allowed for compliance with the NEMFC GHG emission standards. A Fuel Cell Customer-Generator may notify PG&E if desiring to perform CCUS in compliance with CARB's carbon capture and storage protocol. Then, within 12 months of such notice, PG&E shall submit an advice letter to the CPUC proposing rules for the use of CCUS in NEMFC GHG emissions calculations.

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**ELECTRIC SCHEDULE NEMFC** Sheet 17  
**NET ENERGY METERING SERVICE FOR FUEL CELL CUSTOMER-GENERATORS**

SPECIAL  
CONDITIONS:  
(Cont'd.)

9. GHG EMISSION REQUIREMENTS PURSUANT TO D.23-11-068 (Cont'd.)

**Verification and Penalties**

PG&E will use the Minimum Operating Efficiency Worksheet, Directed Renewable Fuel Verification Form, supporting documentation, and monthly data to evaluate a generator's technical ability to meet the NEMFC GHG emission standards. PG&E will conduct an annual audit of the renewable fuel invoices for the life of any renewable fuel contract to verify renewable fuel consumption. Finally, PG&E reserves the right to conduct field inspections to verify compliance with the standard.

Following any PG&E discovery of a lack of system compliance with the NEMFC GHG emission standards, PG&E will allow a six-month window in which to come into compliance. If the customer-generator fails to bring the NEMFC system into compliance within six months, the interconnection agreement will be terminated, and the system will be served under a Rule 21 non-export agreement or another agreement for which the NEMFC system is eligible. After NEMFC Customers are removed the Customer will not be able to regain access to the NEMFC tariff.

PG&E will conduct random no-warning spot-checks of directed renewable fuel sources and 30-day warnings in the case of noncompliance with the requirements described above. If NEMFC compliance does not occur within 30 days, and if recalculation of the fuel cell system's greenhouse gas emissions without the purported renewable fuel results in the system emitting more than CARB's GHG emission standards, the interconnection agreement will be terminated and the system will be served under a Rule 21 non-export agreement or another agreement for which the NEMFC system is eligible. After NEMFC Customers are removed the Customer will not be able to regain access to the NEMFC tariff.

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