



ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 1

1. APPLICABILITY: The Community Microgrid Enablement Tariff (CMET) schedule (Schedule CMET or this Schedule) implements, in part, on an experimental basis the Community Microgrid Enablement Program (CMEP) pursuant to Public Utilities Commission (CPUC) Decision (D.) D.20-06-017 and CPUC Resolution E-5127. This CMET governs the eligibility, engineering studies, development, and island and transitional operation of Community Microgrids, as defined herein. As an experimental tariff, this Schedule is available, on a first-come, first-served basis, to applicants (CMET Applicants) who (i) meet the CMET Eligibility Criteria in Section 3, and (ii) submit a complete CMET Application (Application). This Schedule will close to CMET Applicants on the date set forth in Section 4, below. Capitalized terms specific to this tariff are defined in section 14 below. (T)
2. TERRITORY: This schedule applies throughout PG&E’s electric service area. (T)
3. CMET ELIGIBILITY CRITERIA: A CMET Applicant must meet all of the eligibility criteria outlined below (CMET Eligibility Criteria):
 1. Community Microgrid: The CMET Project must meet the needs of at least two customers or two customer premises connected by PG&E’s distribution infrastructure within the Microgrid Boundary. All customers within the Microgrid Boundary of the CMET Project must be PG&E retail distribution customers; provided that, where PG&E determines in its sole discretion that inclusion of electrical loads or customers which do not take PG&E retail distribution service in a CMET Project will benefit PG&E retail distribution customers, PG&E may agree to the inclusion of such loads and/or customers and will submit a notice of and justification for this determination through a Tier 1 Advice Letter. (T)
 2. Location: The CMET project must be located in an area served, entirely or in part, by PG&E retail distribution service. (T)

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 2

3. CMET
ELIGIBILITY
CRITERIA
(Cont'd.)

- 3. Community Microgrid Parameters: The CMET Project must include interconnected exporting energy producing resources (Project Resources) that do not exceed 20MW in aggregated export capacity within a clearly defined Microgrid in PG&E's Distribution System; the CMET Project must act as a single, controllable entity; the CMET Project must be able to connect to, disconnect from, and run in parallel with larger portions of the electrical grid; and the CMET Project must be capable of maintaining electrical supply and service quality when isolated to connected customers during larger grid disturbances. Project Resources must be interconnected to PG&E's Distribution System pursuant to PG&E's Wholesale Distribution Tariff, Attachment I "Generator Interconnection Procedures" (WDT GIP) and/or Electric Rule 21 as applicable. (T)
(T)
- 4. Pre-Application Report: The CMET Applicant must complete a Community Microgrid Pre-Application Report (CM Pre-Application Report) and consultation with PG&E prior to submitting a CMET Application. (T)
- 5. Applicant Experience: The CMET Applicant must provide to PG&E an attestation that at least one current member of its development team has: (a) completed the development of at least one microgrid project of similar technology and capacity; or (b) begun construction of at least one other project of similar technology and capacity. The CMET Applicant must identify the entity(ies), if not the Applicant, that will be responsible for development of the CMET Project and the entity that will be the CMET Aggregator responsible for coordinated operation with PG&E pursuant to Rule 24 and an executed CMET Microgrid Operating Agreement ("CMET MOA" or "MOA"). (T)

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 3

4. CMET PERIOD CMET Availability Period: The CMET shall begin on the Effective Date and shall continue thereafter until the CPUC directs, approves, or makes effective a request by PG&E that this tariff be closed. At the close of the CMET, this Schedule will close to new Applications and no new CMET MOAs will be offered by PG&E. Applications submitted prior to the close will continue to be processed under this Schedule. Any MOA executed under this Schedule will continue in effect pursuant to the terms of the agreement. (T)
(T)
5. INTERCONNECTION STUDIES
1. Each Project Resource is required to be interconnected to PG&E's Distribution System under PG&E's WDT GIP or Electric Rule 21, according to the applicability of each of those tariffs. (T)
 2. Interconnection Study: A CMET Project will require a separate application for Interconnection Study of a CMET Project's proposed Project Resources pursuant to PG&E's WDT GIP or Electric Rule 21, as applicable for each of the Generating Facilities participating as a Project Resource. (T)
 3. Interconnection Agreement: The Interconnection Study will identify any required Interconnection Facilities, Distribution Upgrades, or Network Upgrades consistent with PG&E's WDT GIP and Electric Rule 21, as applicable. The CMET Project is required to execute an Interconnection Agreement for each Project Resource. (T)
- (D)

(D)
4. Applicant may continue with the interconnection of resources under PG&E's WDT GIP or Rule 21 independent of a withdrawn CMET Application. (T)

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 4

6. MICROGRID ISLANDING STUDY

- 1. In advance of the completion of the Interconnection Study, PG&E and the CMET Applicant may, at each party's discretion, agree to proceed with a Microgrid Islanding Study. (N)
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(N)
- 2. Once it has received an agreement with the Applicant to do so, PG&E will conduct a Microgrid Islanding Study, requiring cooperation of the Applicant, to determine i) the engineering and operational viability of the proposed CMET Project's Microgrid Boundary, ii) protection requirements to ensure faults within the microgrid can be detected when in Island Mode, iii) controls requirements to ensure power quality is maintained when in Island Mode, iv) telemetry and cybersecurity requirements, iv) and the required electrical system upgrades (Special Facilities) to establish the CMET Project Microgrid Boundary and microgrid operational controls, and v) the non-binding preliminary estimated costs and scheduled completion date for such Special Facilities, that will be required to enable the CMET Project. This Microgrid Islanding Study will include a description of operations for the CMET Project that includes a logical architecture for the associated protection, controls, communications, cybersecurity and other system components. One outcome of the Microgrid Islanding Study will be to produce a required Microgrid Special Facilities Agreement, pursuant to Electric Rule 2. Customer owned microgrid controllers and protective relays must be validated by PG&E for the interoperability with PG&E's electric distribution system. PG&E will publish a list of approved equipment and establish open and objective criteria for vendors to seek acceptance by PG&E. (T)
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(T)
- 3. CMET Applicant Review
 - a. CMET Applicant will have up to 30 calendar days to review the Microgrid Islanding Study and sign the Microgrid Special Facilities Agreement (Microgrid SFA). (T)

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(D)
 - b. If, after review of the Microgrid Special Facilities Agreement, the CMET Applicant declines to proceed with the CMET Project, the CMET Applicant will notify PG&E in writing within 5 calendar days and the Application will be deemed withdrawn. (T)
(T)

(Continued)



ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 5

7. COMMUNITY MICROGRID DEVELOPMENT AND OPERATION CMET Project development and operation will be governed by the MOA and/or other similar agreement(s) to carry out this tariff. A CMET Project’s use of PG&E’s Distribution System to form a Community Microgrid requires operational coordination for public safety and overall Distribution System operation. (T)
1. Roles and Responsibilities.
 - a. Distribution Provider. PG&E as utility distribution owner and operator is responsible for Distribution Service under both Blue Sky and Island Modes including the sole determination of Emergency Events.
 - b. Distribution Service. PG&E will provide Distribution Service for the customers and resources within the CMET Project during Blue Sky and Island Modes pursuant to all applicable rules on file with the CPUC.
 - c. Community Microgrid Aggregator (CMG Aggregator). A third-party aggregator that coordinates control of distributed resources, including Project Resources and any demand side management resources, consistent with relevant provisions of Electric Rule 2, PG&E’s WDT GIP, and Electric Rule 21 including frequency and voltage and other power quality requirements within PG&E established control parameters to enable the CMET Project to operate in Island Mode. (T)
 2. Microgrid Operating Agreement. An MOA between the CMG Aggregator and PG&E will govern CMET Project development testing and commercial operations. The MOA will include operational coordination requirements applicable to the unique characteristics of the CMET Project and general requirements consistent with relevant provisions of Electric Rule 2, Electric Rule 21, PG&E’s WDT GIP and associated Interconnection Agreements, Project SFA and operating protocols of the Distribution Provider to ensure operational coordination for public safety and overall system operation. The MOA is dependent upon execution of any required Interconnection Agreements and Special Facilities Agreements. (T)

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 6

- 7. COMMUNITY MICROGRID DEVELOPMENT AND OPERATION (Cont'd.)
 - 2. Microgrid Operating Agreement. (Cont'd.) (T)
 - a. Applicant and PG&E will execute a mutually agreeable MOA within 90 days of execution of the later of any applicable Interconnection or Special Facilities Agreements.
 - b. If the CMET Aggregator and PG&E fail to execute a MOA within the specific time period, the Application will be considered rejected.
 - 3. System Change. A System Change will require re-study of the changes in a new Microgrid Islanding Study. (T)
 - 4. PG&E reserves the right to suspend CMET Project operation, change the Microgrid Islanding Point, or other Distribution System changes required to meet its service obligations pursuant to all applicable rules on file with the CPUC.
- 8. CMET SERVICES AND FEES
 - 1. PG&E services provided under this tariff will be provided pursuant to PG&E's WDT GIP or Electric Rule 21 as applicable, and other applicable tariffs or rules, as may be amended from time to time. (T)
 - 2. CMET Applicant is responsible for all applicable interconnection study fees and, subject to Section 5.3, any required distributed resource interconnection distribution upgrades and service upgrades pursuant to applicable rules including NEM or D.02-03-057 as may pertain to individual Project Resources. (T)
 - 3. CMET Applicant is responsible for the Microgrid Pre-Application Study, Microgrid Islanding Study fees and subsequent Special Facilities costs pursuant to Electric Rule 2. Such study fees and Special Facilities costs may be eligible for credits to offset any applicable costs to Applicant pursuant to the CMEP. (T)

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 7

- 9. PG&E TARIFFS, PROGRAMS AND SERVICE AGREEMENTS
 - 1. PG&E Tariffs During Island and Blue Sky Modes. Billing for PG&E Bundled Customers will continue to occur under their applicable PG&E tariff provisions and rules.
 - 2. Participation in PG&E Programs. Project Resources are eligible to provide distribution services and/or participate in demand side management programs during Blue Sky Mode consistent with applicable PG&E tariffs, programs or procurements. However, participation in PG&E programs shall not impede the ability to enable Island Mode, as determined by the Distribution provider, at any time during which this tariff applies to the CMET Project or the CMET MOA for the CMET Project is in effect. (T)
 - 3. Services Agreements. An existing power purchase agreement or other contract for energy, capacity or distribution services to PG&E, or any other counterparty, is prohibited for a CMET Project, if such power purchase agreement or other contract impedes the ability to enable Island Mode, as determined by Distribution Provider, at any time during which this tariff applies to the CMET Project or the CMET MOA for the CMET Project is in effect. (T)

- 10. CAISO MARKET PARTICIPATION
 - 1. Participation in CAISO Market: Project Resources are eligible to participate in the CAISO markets consistent with applicable tariffs and the governing Interconnection Agreement for each Generating Facility during Blue Sky Mode. During Island Mode, the settlement of energy transactions associated with the Project Resources will continue to occur according to applicable CAISO tariff provisions and rules, as further described in the CMET MOA. (T)

- 11. METERING
 - CMET Project metering requirements are defined in the applicable PG&E Electric Rules including, but not limited to, 2, 15, 16, 17, 18, 21, and PG&E's WDT GIP. (T)

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 8

(N)
(N)

12. TERMINATION

1. Applicant Termination:

- a. Applicant may terminate the application process, including Microgrid Islanding Study, for any reason with 30 days written notice. Applicant will be responsible for any PG&E costs incurred through termination date.
- b. CMET Project development or operation may be terminated pursuant to the terms of the MOA.

2. PG&E Termination: PG&E may terminate a CMET Project pursuant to the terms of the MOA.

13. CMET SPECIAL CONDITIONS

The following Special Conditions apply to PG&E's CMET:

- 1. CMET Suspension: Because this is an experimental tariff, PG&E may file a Tier 2 Advice Letter (AL) with the CPUC to suspend service under this Schedule. The AL will be served on the applicable CPUC service list and will be served on CMET Aggregators, CMET Applicants and any CMET Customers. The AL shall identify the portion of the CMET suspended, the reasons for the suspension, and PG&E's proposal for resolving the issue.

(N)

(N)

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 9

14. CMET DEFINITIONS Capitalized terms in this Schedule have the meaning as defined in this Section.

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(D)

1. Blue Sky Mode. The normal mode of operation when the Community Microgrid is Interconnected to and operating in parallel with the Distribution System, is not operating in Island Mode, and PG&E maintains operational coordination of the delivery of electric service.

2. CMET Applicant. The person or entity who submits an Application for a CMET Project to PG&E to apply to participate on this Schedule.

3. CMET Customer. A customer receiving PG&E Distribution Service within the CMET Project Microgrid Boundary.

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(T)

4. CMET Project. Facilities and equipment needed to create and operate a Community Microgrid, including the CMET Project Resources, breakers, protective and associated equipment, improvements, and other tangible assets, contract rights, easements, rights of way, licenses and other interests or rights in real estate reasonably necessary for the construction, operation, and maintenance of the Community Microgrid subject to this CMET.

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(T)

5. Community Microgrid. For the purposes of this Schedule, a Community Microgrid is defined as a microgrid with distribution system connected Project Resources that supply energy to at least two customers or two customer premises connected by PG&E's distribution infrastructure within a Microgrid Boundary capable of Island Mode.

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(T)

6. Community Microgrid Aggregator (CMG Aggregator). The entity that is providing microgrid forming service to PG&E under an executed CMET MOA pursuant to Rule 24.

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 10

- 14. CMET DEFINITIONS (Cont'd.)
 - 7. Community Microgrid Enablement Program (CMEP). PG&E program to enable community-proposed microgrids that provide enhanced resilience for critical facilities and vulnerable customer groups pursuant to D.20-06-017. (T)
 - 8. Critical Facility. A facility that provides critical services to the surrounding community pursuant to the definition of Critical Facilities in R.18-12-005, aligned with Department of Homeland Security’s Critical Infrastructure Sectors, as may be amended by the CPUC. (T)
 - 9. Distribution Provider. PG&E, which owns, controls, or operates facilities used for the delivery of electric energy and provides Distribution Service under this CMET. (T)
 - 10. Distribution Service. The transporting of electric power over and through various PG&E facilities for delivery to a distribution customer. The Distribution Service provided under this CMET is the distribution of capacity and energy from the point(s) of receipt to the point(s) of delivery under this CMET. (T)
 - 11. Distribution System. PG&E’s distribution system broadly consists of the stepdown substations, the primary distribution circuits, and the secondary distribution system. The secondary distribution system consists of the line transformers that step the primary voltage down to a secondary voltage, and the secondary conductors. The provisions of this CMET apply to service on this Distribution System. (T)
 - 12. Effective Date. The date upon which any CPUC disposition of the CMEP Advice Letter makes that Advice Letter effective. (T)

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 11

14. CMET
DEFINITIONS
(Cont'd.)

- 13. Emergency Events. As determined by PG&E in its reasonable discretion, a condition or situation requiring prompt action by PG&E (a) to maintain the reliable operation of the Distribution System; (b) to prevent or limit the loss of load or generation; (c) to maintain public safety or the safety of PG&E's personnel; (d) to protect PG&E, Customer, or third-party property; or as a scheduled Island Mode operation as a preventative action ahead of impending weather events or natural disasters or in response to other unusual conditions. (T)
- 14. Generating Facility. All generators, electrical wires, equipment, and other facilities, excluding Interconnection Facilities, owned or provided by producer for the purpose of producing electric power, including storage. May also be referred to as a Project Resource. (T)
(N)
(N)
- 15. High Fire Threat District. An area where there is an elevated risk for power line fires igniting and spreading rapidly as identified in the CPUC Fire-Threat Map, as may be amended. (T)
- 16. Interconnection Agreement. An interconnection agreement executed pursuant to PG&E's Wholesale Distribution Tariff or Electric Rule 21. (N)
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(N)
- 17. Interconnection Study. A study to establish the requirements for Interconnection of a Generating Facility with Distribution Provider's Distribution System or Transmission System, pursuant to PG&E's WDT GIP or Rule 21, as applicable. (T)
- 18. Island Mode. A mode of operation when a Microgrid that normally operates in Blue Sky Mode is disconnected from the Distribution System at MIP, and the Microgrid is generating or producing energy to provide electric service within the Microgrid under the operational coordination of the CMET Aggregator and Distribution Provider. (T)
(T)

(D)
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(D)

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 12

14. CMET
DEFINITIONS
(Cont'd.)

- 19. Microgrid. 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. (T)
- 20. Microgrid Boundary. An electrically contiguous area beyond a Microgrid Islanding Point on the Distribution System that defines a microgrid as a single controllable entity.
- 21. Microgrid Islanding Point (MIP). The point on PG&E's Distribution System that establishes the microgrid interface consistent with applicable standards including IEEE 1547-2018 and IEEE 519. (T)
- 22. Microgrid Island Study. An engineering study conducted by the Distribution Provider or its agents to determine the required modifications to the Distribution Provider's Distribution Facilities to support Island Mode, including the cost and scheduled completion date for such modifications, that will be required to provide the requested Microgrid Boundary and island operation capable of maintaining voltage, frequency and power quality within PG&E control parameters in accordance with Rule 2. (T)
- 23. Microgrid Operating Agreement. An agreement between the PG&E and CMG Aggregator that governs CMET Project development and testing, and commercial operations to ensure safety and service quality in compliance with applicable rules. (T)

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 13

- 14. CMET DEFINITIONS (Cont'd.)
 - 24. Microgrid Pre-Application Study. A preliminary study of a proposed Community Microgrid and consultation for the purpose of enabling an Applicant to develop an effective CMET Application. (T)
 - 25. Microgrid Special Facilities. Those Special Facilities described in a Microgrid Special Facilities Agreement. (N)
(N)
 - 26. Microgrid Special Facilities Agreement (Microgrid SFA). The agreement that describes the upgrades on the Distribution System, and at the project site to be installed under the terms and conditions regarding Special Facilities (or added facilities) on file with the Commission, pursuant to Electric Rule 2, and incorporated in the MOA. (N)
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(N)
 - 27. Outage Prone Area. Areas served by the top 1% Worst Performing Circuits excluding Major Event Days as shown in PG&E's Annual Electric Reliability Report, in either the AIDI or AIFI category, in either of the last 2 years.
 - 28. PG&E Bundled Customer. A customer receiving full retail electric service from PG&E under an applicable retail tariff. (D)
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(D)
 - 29. Project Resource. Electric generation and storage technology used to form a microgrid that are interconnected to the Distribution System pursuant to PG&E's WDT GIP or Electric Rule 21 within the Community Microgrid Project Microgrid Boundary that complies with the emissions standards adopted by the State Air Resources Board pursuant to the distributed generation certification program requirements of Section 94203 of Title 17 of the California Code of Regulations, or any successor regulation. (T)
 - 30. Scheduled Island Mode Operation. A Microgrid operating in Island Mode that is scheduled and coordinated between the CMG Aggregator and PG&E.

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ELECTRIC SCHEDULE E-CMET
COMMUNITY MICROGRID ENABLEMENT TARIFF

Sheet 14

14. CMET
DEFINITIONS
(Cont'd.)

- 31. Service Facilities. PG&E's Service Facilities shall consist of (a) primary or secondary underground or overhead service conductors, (b) poles to support overhead service conductors, (c) service transformers, (d) PG&E-owned metering equipment, and (e) other PG&E-owned service-related equipment that extend from PG&E's Distribution Facilities to the Customer's Service Delivery Point as defined in PG&E's Electric Rule 16.
- 32. Special Facilities. Shall have the same meaning as defined in PG&E's Electric Rule 2, as may be modified from time to time. (N)
- 33. Special Facilities Agreement. Special facilities will be installed under the terms and conditions of a contract in the form on file with the Commission, pursuant to Electric Rule 2. (T)
- 34. System Change is a change in Project Resources, non-Project Resources, or customer loads within the Microgrid Boundary, or other affected systems outside the Microgrid Boundary that has a material impact on the ability of a CMET Project to function in Island Mode. (N)
- 35. Unscheduled Island Mode Operation. A Microgrid operating in Island Mode that is not scheduled or coordinated between the CMG Aggregator and PG&E in response to an unplanned event on the Distribution System. (T)

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