



# Pacific Gas and Electric Company

## Resilience Planning Guide

### Program

Community Microgrid Enablement Program  
Resilience Planning Guide

V 1.3

7/26/2021

## Document Change History

Version	Date	Description of Changes
1.0	12/17/20	Initial Version Created
1.1	12/21/20	Edits and Revisions for Clarity
1.2	3/18/2021	Updated for program approval by CPUC Resolution E-5127. Edits and Revisions for Clarity
1.3	7/26/21	Broken links for Intake forms (1 & 2 fixed)

## Table of Contents

Introduction .....	5
Process Summary .....	5
Objective of the Process .....	5
Overview of Implementation Workflow (Figure 1).....	7
STAGE 1: VETTING.....	8
Step 1: Community Resilience Project Intake (“I want a Microgrid”).....	8
Step 2: Resilience Solution Evaluation .....	9
STAGE 2: SOLUTION ASSESSMENT .....	10
Step 3: Request for Community Microgrid Technical Consultation (“Consultation Request”) .....	10
Step 4: Community Microgrid Technical Consultation (“Microgrid Consultation”) .....	11
Step 5: CMEP Application .....	13
Step 6: CMEP Application Review .....	13
Step 7: Draft Project Implementation Plan.....	13
Step 8: Microgrid Islanding Study .....	15
STAGE 3: SOLUTION EXECUTION .....	16
Step 9: Project Special Facilities Agreement (Project SFA) .....	16
Step 10: Microgrid Operating Agreement (MOA).....	16
Step 11: CMEP Project Development .....	17
Appendices.....	18

## Acronyms

<b>BTM</b>	Behind-the-Meter
<b>CMG Aggregator</b>	Community Microgrid Aggregator
<b>CMEP</b>	Community Microgrid Enablement Program
<b>CMET</b>	Community Microgrid Enablement Tariff
<b>FTM</b>	Front-of-the-Meter
<b>MIS</b>	Microgrid Islanding Study
<b>MOA</b>	Microgrid Operating Agreement
<b>PIP</b>	Project Implementation Plan
<b>Project SFA</b>	Project Special Facilities Agreement
<b>PSPS</b>	Public Safety Power Shutoff
<b>RC</b>	Resilience Coordinator
<b>RSI</b>	Resilience Solution Integrator

## Introduction

The purpose of this guide is to help local and tribal governments navigate the relevant processes for developing a community resilience project. The guide makes no assumptions from the outset about the specific solution to be pursued. In fact, the initial stage of the process described in this document is intended to equip the community with information necessary to make that decision. Should one or more single customer, “behind-the-meter” or other grid hardening solution be determined as the appropriate path forward, PG&E’s Resilience Coordinators will ensure that the community is directed to the appropriate resources. However, the majority of this guide is geared towards the needs of those communities seeking a multi-customer community microgrid. These solutions are complex, and they require detailed planning, exchanges of information, technical studies, and interconnection agreements. This guide provides an overview of the steps involved from initial inquiry through to final project development.

The guide is a companion to PG&E’s Community Microgrid Enablement Program (CMEP). CMEP provides incremental technical and financial support to communities seeking resilience solutions. You may find more information about CMEP at [www.pge.com/cmep](http://www.pge.com/cmep).

Finally, it must be noted that multi-customer microgrids are new in practice. At this time, the Redwood Coast Airport Microgrid, a partnership among Redwood Coast Energy Authority, the Schatz Energy Research Center, the County of Humboldt, and PG&E, will be the first multi-customer microgrid in PG&E’s service territory. At the time of this writing, it has not yet completed construction. The process flows described herein are informed by the development of the Redwood Coast Airport Microgrid, yet it is also true that every microgrid is unique. PG&E has made its best efforts to describe the process for developing a multi-customer microgrid in this guide. However, as the industry matures and further knowledge is gained about the processes and best practices for developing a microgrid, this guide will be adapted.

## Process Summary

### Objective of the Process

The workflow described in this guide offers a framework for the selection, study, and development of community resilience solutions, with a focus on community microgrids. The guide also helps identify and funnel alternative resilience solutions to other resources and customer support within PG&E.

PG&E’s technical support for community resilience projects is structured in three stages, each with distinct objectives. The stages serve to facilitate the development of a project from initial concept exploration, through solution assessment, and finally, for certain types of resilience solutions, through project completion.

- **Stage 1: Vetting** (*Typically, several weeks up to 2 months*) - In this stage, one or more community representative(s) come to PG&E seeking a resilience solution for their community. PG&E will help the community understand the options available to them and share basic grid characteristics in the area that may impact the extent of likely upgrades needed under different scenarios. This exchange typically takes place through one or more conversations with Resilience Coordinators and Resilience Solution Integrators, who will engage the community representative(s) in a discussion of their goals and needs, and specific characteristics of the desired project. PG&E support in this stage may include the following:

- *Overview of transmission and distribution system characteristics in the area*
- *Hosting and deliverability capacity information*
- *Grid solution conceptualization*
- *Potential isolation points and circuit undergrounding opportunities*
- *Information on PG&E's planned PSPS mitigation activities, as appropriate*
- *Preliminary CMEP eligibility<sup>1</sup>*

The objective of this stage is to help the community discern which resilience approach may best meet the community's specific needs. This will direct the type of support provided in the next stage: Solution Assessment.

- **Stage 2: Solution Assessment** (*estimated 3-9 months*) – In this stage, the Applicant and its technical/engineering partner(s) will proceed through the technical study required to safely integrate the microgrid onto PG&E's distribution system. This technical study is divided into two parts, an initial Community Microgrid Technical Consultation designed to share key information about the electrical conditions of the distribution system at the proposed location and secondly, a Microgrid Islanding Study designed to evaluate the microgrid operations while islanded. The Solution Assessment stage will also include:

- *Information necessary to design a community microgrid project that meets PG&E's eligibility and design standards*
- *Review of the contractual framework needed to complete a Community Microgrid Project*
- *Creation of a draft project implementation plan*

---

<sup>1</sup> See Appendix A

- *Completion of the Microgrid Islanding Study (“MIS”)*

PG&E requires detailed project information from the Applicant and its technical/engineering partner(s) in this stage. The objective of this stage is to support the community and its partners in planning and designing a robust multi-customer Community Microgrid.

It is important to note that the interconnection process for any Distributed Energy Resources (DERs) within the microgrid is a separate process from this workflow. PG&E’s Resilience Coordinator will guide the Applicant to the necessary resources for the interconnection process, as needed. If the DERs envisioned for the microgrid are not already interconnected to PG&E’s grid, the Applicant should file an Interconnection Application as soon as possible.

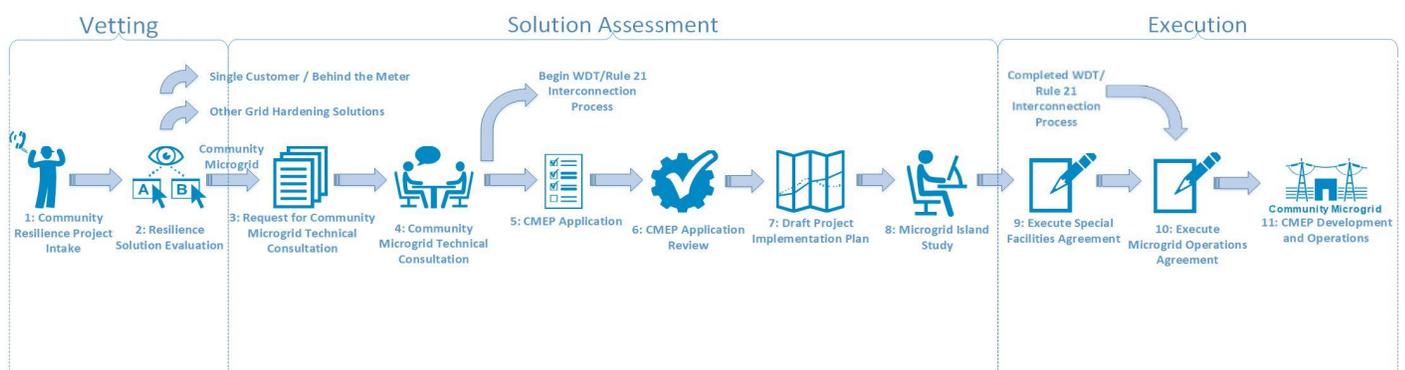
- **Stage 3: Solution Execution** (*estimated 6-12 months*) – In this stage, PG&E provides continuing support for eligible multi-customer microgrid solutions up to project commissioning. PG&E’s Resilience Coordinators will provide ongoing program management and coordination with all relevant PG&E processes and agreements. These may include:

- *Project Special Facilities Agreement (“Project SFA”)*
- *Microgrid Operating Agreement (“MOA”)*
- *Controls and communication integration support*

The objective of this stage is to ensure that the execution of the multi-customer microgrid is coordinated across all PG&E functions and that the community and its technical/engineering partner(s) have a single point of contact for support through the entirety of the process.

Figure 1 below summarizes how CMEP’s implementation workflow facilitates the microgrid and interconnection application, study, and agreement processes involved in developing a multi-customer microgrid. Details of the processes will continue to be refined based on experience and will be updated on PG&E’s CMEP website.

### Overview of Implementation Workflow (Figure 1)<sup>2</sup>



## STAGE 1: VETTING

### Step 1: Community Resilience Project Intake (“I want a Microgrid”)

The primary objective of the Community Resilience Project Intake step is to collect the basic information about the community’s resilience goals, perform research on local site conditions, and screen for initial eligibility for CMEP. A second objective of the Project Intake step is to inform the Applicant of the key issues and questions that will be pertinent to the resilience solution decision. The workflow begins when a community representative (“Applicant”) expresses an interest in a community resilience project to PG&E through their local PG&E representative, or to [communitymicrogrids@pge.com](mailto:communitymicrogrids@pge.com). While requests often come in the form of a request for a community microgrid, the solution ultimately pursued may be different: a behind-the-meter deployment of solar plus battery storage, a single customer or campus microgrid, or some other grid solution. The request will be routed to a PG&E Resilience Coordinator who will shepherd the project to the appropriate channels and will serve as a single point of contact for project management support throughout the development of a community microgrid.

During the intake process, the Resilience Coordinator will collect basic information about the resilience goals to confirm project viability and next steps. These questions may include:

Resilience Coordinator (Intake)
What is the City/Organization's name?
Who is the primary contact for the project (name/phone/email)?
Who is the existing energy service provider (PG&E/CCA)?
What are the community’s resilience needs or objectives?
Are critical facilities included in your resilience goals?
Does the project have local government support?
Do you have an anticipated funding source?
Have you identified a point of interconnection?
Have you identified a project location?
Do you have design work completed?
Are you working with a technical consultant or engineer?
Does this resilience need serve vulnerable or disadvantaged customers?
How many customers will this resilience solution serve?

The Resilience Coordinator will then perform additional research on local site conditions and screen for initial eligibility for the Community Microgrid Enablement Project as applicable.

If a community resilience project is potentially viable based on the results of this initial intake screening the Resilience Coordinator will refer the project to a Resilience Solution Integrator. A meeting will be set up among the Applicant and/or the Applicants' Agents, the Resilience Solution Integrator, and the Resilience Coordinator to evaluate the potential project and the community's objectives. Some of the information shared in this meeting may be confidential and protected. Therefore, PG&E may require the Applicant to sign a Non-Disclosure Agreement prior to scheduling this meeting.

Resource: [Community Microgrid Project Intake Form](#)

## Step 2: Resilience Solution Evaluation

The second step of the Vetting stage is the Resilience Solution Evaluation. The objective of the Resilience Solution Evaluation is to equip the Applicant with the necessary information to determine what type of resilience solution is most likely to meet their needs: a front-of-the meter multi-customer microgrid, a behind-the-meter single customer solution, or some other grid resilience solution.

The specific actions taken by the Resilience Solution Integrator in this step will vary depending on the situation and may include presenting an aerial view of the local distribution system. The Resilience Solution Evaluation is intended to facilitate a discussion with the Applicant on key aspects of the project such as:

- a) Distribution level constraints and opportunities,
- b) A rough sketch of the potential microgrid boundaries and project resources,
- c) Project resource and load characteristics

In this step, the Resilience Solution Integrator will also introduce the Applicant to the appropriate online technical tools and resources for deeper Applicant-driven project evaluation, as needed.

After the Resilience Solution Evaluation, the Applicant should have a better understanding of the local grid topology and grid constraints. Through a discussion of possible alternatives with the Resilience Solution Integrator, the Applicant should also have a better sense as to what type of resilience solution is most likely to meet their needs: a front-of-the meter multi-customer microgrid, a behind-the-meter single customer solution, or some other grid solution. If the Applicant wishes to pursue a multi-customer community microgrid and meets the criteria of the Community Microgrid Enablement Program (see [Appendix A](#)), the Applicant may elect to continue to Stage 2: Solution Assessment where they request a Community Microgrid Technical Consultation. For Applicants seeking other types of resilience solutions, the Resilience Coordinator will direct the Applicant to the appropriate place for those solutions.

## STAGE 2: SOLUTION ASSESSMENT

### Step 3: Request for Community Microgrid Technical Consultation ("Consultation Request")

The first step of the Solution Assessment stage is the Request for Community Microgrid Technical Consultation. The objective of the Request for Community Microgrid Technical Consultation is to help the Applicant prepare all the relevant information needed to establish a formal **Proposed CMEP Project** which can be evaluated during the Community Microgrid Technical Consultation stage.

In this step, the Resilience Coordinator will help the applicant fill out the Community Microgrid Technical Consultation Request Form as needed. This form is largely based on information from the Resilience Solution Evaluation and requires the Applicant to engage with a qualified design engineer ("Applicant Engineer"). This Applicant Engineer helps the Applicant resolve any open issues, guides the Applicant through possible options identified in the Resilience Solution Evaluation, and prepares the technical documents needed to complete the Community Microgrid Technical Consultation Request. At this point there will be a **Proposed CMEP Project**.

The Applicant will complete the Community Microgrid Technical Consultation Request and attach the following:

- Proposed Single Line diagram
- Proposed Site Map, including: True North, location of controls, communication infrastructure, PG&E equipment tag numbers, major roads, streets, highways, etc.
- Engagement letter from the Applicant Engineer
- Applicant Experience Attestation
- Letter of Community Interest

The requests for Community Microgrid Technical Consultation will be processed on a first come, first served basis, though proposed projects will be prioritized to accommodate both a) disadvantaged, vulnerable communities, and b) projects that are most urgent for public health, safety, and public interest.

Reference Material: [Request for Community Microgrid Technical Consultation](#)

## Step 4: Community Microgrid Technical Consultation (“Microgrid Consultation”)

The second step in the Solution Assessment stage is to perform the Community Microgrid Technical Consultation. The objective of the Community Microgrid Technical Consultation is to:

- Exchange technical information needed to further develop the Proposed CMEP Project
- Provide limited microgrid design support
- Provide guidance on Service Planning and Interconnection Processes
- Validate findings and recommendations from Resilience Solution Integrator
- Identify additional constraints or opportunities not found in Resilience Solution Evaluation
- Prepare Applicant for the Interconnection Technical Studies and Microgrid Island Study

This step may be performed by a PG&E engineer or a PG&E engineering representative. After the Community Microgrid Technical Consultation, the Applicant should have all the information required to design a CMEP Project that meets PG&E’s CMEP Eligibility and Design Standards. More information on these Design Standards can be found in the [Community Microgrid Technical Best Practices Guide](#).

The following information may be exchanged during the Community Microgrid Technical Consultation, subject to applicable confidentiality constraints:

- A. A pocket load analysis for the agreed upon electrical boundary of the microgrid
    - a. This is critical for the developer to be able to size the generation system(s)
  - B. Technical specifications for the PG&E and Applicant-owned equipment that will be required for protection, visibility, and control, so that the applicant is informed as to what devices they need to include in their design and provide visibility into costs.
    - a. E.g. Microgrid controller, recloser control relays, protection relays, remote I/O devices, alarm annunciators, as applicable.
  - C. Protection Scheme Guidance
    - a. Informs the applicant about which protection elements are likely going to be required and describes the typical microgrid coordination scheme.
  - D. Communication Protocols and Security Requirements
    - a. Communications protocols
      - i. E.g. Only non-routable serial connections are allowed between customer devices and PG&E devices
    - b. Cyber Security and Physical Security requirements for the location where PG&E’s onsite equipment will be located:
      - i. Switchgear Compartment or control room dedicated to PG&E equipment that only PG&E can access.
  - E. Basic operational requirements
-

- a. The following types of basic requirements can be provided up front so that applicants can begin working with their engineers to design the system and estimate procurement, development, and construction costs earlier in the process:
  - i. Applicant must provide failsafe states, which can be activated automatically for critical hardware and communications failures and manually by PG&E, which will cause the generation equipment to revert to operating as a grid-following asset with grid-forming capability disabled.
  - ii. Applicant must provide provisions for the circuit breakers for all grid forming generators to be tripped by PG&E's onsite microgrid controller
  - iii. Applicant's protective relays must have protection settings groups for both grid-connected and islanded operations and provide visibility for PG&E to see which settings group is active in real time.
  - iv. Applicant's equipment must be capable of following commands from the PG&E system to energize the islanded microgrid and to retransfer back to macro-grid connected state.
  - v. Applicant's equipment must provide real-time visibility into binary variable status values (e.g.: open/closed, true/false) and analog quantities (e.g.: voltage, frequency, current, etc.) related to the grid forming generation equipment.
- F. Standardized Diagrams
  - a. Network, Data Flow, and Single Line Diagrams (SLD)
- G. Standardized Pro Forma CMEP Contracts and Appendices for Applicant Reference
  - a. Microgrid Operating Agreement
  - b. Project Special Facilities Agreement

At the end of this step, the applicant will have the information needed to submit a high quality interconnection application, have a firm understanding of PG&E's general design requirements for Community Microgrids as well as constraints and requirements specific to the proposed project, and PG&E will have the necessary information to evaluate the Proposed CMEP Project with the appropriate standard of care.

The Applicant will also be provided with standardized pro forma contracts and appendices for review, to the extent that such documents are approved by the CPUC for use in this process. The intent of sharing the information at this stage is to manage Applicant expectations of the contractual conditions and process. These documents are typically non-negotiable except under extraordinary circumstances.

Step 4 References:

- [Appendix A – Draft CMEP Eligibility Checklist](#)
- [Community Microgrid Technical Best Practices Guide](#)

- Microgrid Operating Agreement (to be developed)
- Project Special Facilities Agreement (to be developed)

## Step 5: CMEP Application

Within 90 days of the Community Microgrid Technical Consultation the Applicant shall submit a CMEP Application. The CMEP Application is a synthesis of the information developed in previous stages. The objective of the CMEP Application is to provide PG&E the required information to assess the Proposed CMEP Project for CMEP Eligibility and review documentation required to perform the Microgrid Islanding Study pursuant to the CMET.

**IMPORTANT:** the CMEP Application does not take the place of an Interconnection Application for any Distributed Energy Resources (DERs) within the microgrid. If not already begun, the Applicant should file an Interconnection Application at the same time as the CMEP Application.

Reference: [CMEP Application](#)

## Step 6: CMEP Application Review

The objective of the CMEP Application Review is to review the Proposed CMEP Project for CMEP Eligibility and review documentation required to perform the Microgrid Islanding Study.

PG&E will review the application for completeness, eligibility, and feasibility. The Applicant will have the opportunity to amend the CMEP Application to correct for any errors or omissions. The information provided in the prior five steps should support development of high-quality applications which can be processed and approved quickly.

Upon approval of the CMEP Application, the **Proposed CMEP Project** will be formally accepted as a **CMEP Project** and, unless otherwise designated, PG&E will consider the **Applicant** as the **Community Microgrid Aggregator**. Assuming the project and its design remain in compliance with Community Microgrid Enablement Tariff (CMET), including the completion of a Microgrid Islanding Study and execution of Project Special Facilities Agreement, the project will be on track to receive CMEP cost offsets for the distribution upgrades necessary to enable the safe islanding of the community microgrid.

## Step 7: Draft Project Implementation Plan

Within 90 days of the Community Microgrid Technical Consultation, the Community Microgrid Aggregator shall submit a Draft Project Implementation Plan<sup>3</sup>. The objective of the Draft Project Implementation Plan is to provide PG&E with the Community Microgrid Aggregator's best estimate of

---

<sup>3</sup> This draft PIP will be finalized and augmented with the Microgrid Operating Agreement under Step 11 of the Resilience Process Flow

tasks, schedule, and dependencies for the design construction, development of various test plans, operational and maintenance procedures and protocols for the CMEP Project. The Draft Project Implementation Plan may incorporate by reference any implementation plans or documentation associated with CMET Project Resource Interconnections.

The Community Microgrid Aggregator should verify these requirements with the Resilience Solution Integrator, but at this time PG&E envisions that the Draft Project Implementation Plan should contain the following elements:

- A. Project Management Plan
  - a. Applicant project team organizational chart and points of contact
  - b. Implementation Task Descriptions
  - c. Preliminary Project Schedule
  - d. Risk Identification and Mitigation
- B. Documentation of Site Exclusivity for properties where the Applicant's equipment will be installed<sup>4</sup>
- C. A preliminary site plan(s) showing the layout of the applicant's generation and control systems and PG&E equipment including distribution circuit switching devices and control enclosures.
- D. A preliminary SLD showing the point of isolation recloser(s), customer load transformers, distributed grid-following Distributed Energy Resource (DER) connections, grid forming DER connections
  - a. See PG&E's [Community Microgrid Technical Best Practices Guide](#) for more information.
  - b. A PG&E engineer involved in the Microgrid Islanding Study may need to help the applicant complete some of this information such as applicant load transformer sizes.
- E. Preliminary Network and Dataflow Diagrams
- F. Draft Operational Protocols and Procedures
- G. Description of Operations and flow charts for the following states:
  - i. Macro-grid Connected
  - ii. Islanded
  - iii. Transitions from Macrogrid-Connected to Islanded State
  - iv. Transitions from Islanded to Macro-grid Connected State
  - v. Failsafes
- H. CAISO New Resource Implementation Process Plan (if applicable)
- I. Draft Construction, Commissioning, and Testing Schedule for balance of system with dependencies

---

<sup>4</sup> Under the WDT, this is required with the interconnection application. The same documentation required for the WDT shall be satisfactory for CMEP.

---

- J. Comments on Pro forma CMET MOA<sup>5</sup>
- K. Key Project Development Milestones

At the end of this stage, the Draft Project Implementation Plan will serve to inform PG&E's Microgrid Islanding Study and Microgrid Operating Agreement. PG&E will review and provide comments on the Draft Project Implementation Plan during the Microgrid Islanding Study. A final Project Implementation Plan will be submitted as an Appendix to the Microgrid Operating Agreement.

Step 7 Resources:

- [Community Microgrid Technical Best Practices Guide](#)
- Sample Draft Project Implementation Plan (to be developed)

## Step 8: Microgrid Islanding Study

The Microgrid Islanding Study (MIS) is developed to ensure the operational safety of the Microgrid during Islanded Mode. The MIS takes the information developed during the Community Microgrid Technical Consultation, the Technical Studies required for the interconnection of the project resources, and the technical design documents developed by the microgrid design engineers, to study the proposed Islanded Operations and transitions to/from Blue Sky Operations. The MIS is an iterative study taking multiple steps to get to the final approved MIS.

The objective of the Microgrid Islanding Study (MIS) is to:

1. Evaluate the engineering and operational viability of the proposed CMET Project
2. Develop protection settings and control requirements to ensure safe operations under various abnormal scenarios
3. Develop control requirements to ensure power quality is maintained in Islanded Mode and validate the ability to transition to/from Blue Sky Mode
4. Provide telemetry and cybersecurity requirements
5. Study and approve equipment used on the CMET Project
6. Identify the required electrical system upgrades (Project Special Facilities) to establish the Community Microgrid Boundary and microgrid operational controls and,
7. Provide non-binding preliminary estimated costs and scheduled completion date for such special facilities that will be required to enable the Community Microgrid Project.

This Microgrid Islanding Study will include a description of operations for the Community Microgrid project that includes a logical architecture for the associated protection, controls, communications,

---

<sup>5</sup> Community Microgrid Aggregators will be able to negotiate the terms of the MOA and associated documents if and only if there is a compelling reason to do so.

---

cybersecurity and other system components. PG&E will require Applicants to sign an NDA which covers the information shared at this stage.

At the end of the Microgrid Islanding Study, the Applicant will have an operationally safe microgrid design that can integrate within PG&E's distribution system. The Applicant and PG&E will have also developed all the required documentation to execute the Microgrid Operating Agreement and Project Special Facilities Agreement. The latter of which will provide detailed cost estimates of the Applicants financial obligations for PG&E required equipment.

A copy of the completed Microgrid islanding Study and related work papers will be sent to the Applicant upon completion. The Community Microgrid Aggregator will be able to appeal any adverse finding of the MIS and the both parties will work toward a resolution per the CMET. The Solution Assessment Stage is complete when the Community Microgrid Aggregators accepts the results of the Microgrid Islanding Study.

## STAGE 3: SOLUTION EXECUTION

### Step 9: Project Special Facilities Agreement (Project SFA)

The Solution Execution Stage begins with the execution of the Project Special Facilities Agreement (Project SFA). This is a separate and distinct agreement to the Special Facilities which may be covered separately under a Project Resource Interconnection Agreement. The objective of the Project Special Facilities Agreement is to identify the costs and ownership of the facility upgrades specifically required to support the microgrid islanding function as identified in the Microgrid Islanding Study. If the Project is an approved CMEP Project, the CMEP Cost Offsets will cover the material and cost of ownership costs of these facilities. The completion of the Microgrid Islanding Study and execution of the Project Special Facilities Agreement triggers the reservation of Cost Offsets for the project.

The Project Special Facilities Agreement will be attached to the Microgrid Operating Agreement as an Appendix.

### Step 10: Microgrid Operating Agreement (MOA)

The Solution Execution Stage continues with the execution of the Microgrid Operation Agreement and associated appendices. The objective of the Microgrid Operating Agreement is to define the terms and conditions by which the proposed CMEP Project will be designed, developed, commissioned, maintained and its operations coordinated with PG&E. The MOA will be executed between PG&E and the Community Microgrid Aggregator.

An executed MOA will allow the Community Microgrid Aggregator to proceed with project development and construction under contractual certainty and is required for the Community Microgrid to achieve “Permission to Operate”.

Step 10 Resources:

- PG&E’s Pro Forma Microgrid Operating Agreement (to be developed)

## Step 11: CMEP Project Development

In this final stage of the process, the Community Microgrid Aggregator and PG&E will work jointly to implement the community microgrid. The specifics of this Project Development stage will depend on the design and operational decisions made in the Microgrid Islanding Study and Microgrid Operating Agreement. In all cases, the work on PG&E’s distribution system will be planned and scheduled through PG&E’s Electric Operations planning process. The Community Microgrid Aggregator will have a single point of contact to support their interactions with PG&E through this process.

This is the final step in helping the community reach their resilience objectives through the development of a multi-customer microgrid.

## Appendices

### APPENDIX A

#### Community Microgrid Enablement Program

##### Eligibility Checklist

###### Location

- Project must be located within PG&E's electric service territory, with Project Resources interconnected to PG&E's electric distribution system
- At least 1 customer served by the microgrid must be located either:
  - a) In a Tier 2 or 3 HFTD at the time of CMEP application,
  - b) In an area that has been impacted by a PSPS event, or
  - c) In an area prone to outages, defined as the top 1% Worst Performing Circuits excluding Major Event Days, from PG&E's Annual Electric Reliability Report in the AIDI or AIFI category, in either of the last 2 years.

###### Customers Served

- Project must meet the needs of at least 1 Critical Facility<sup>6</sup> and at least 1 additional customer within the electrical boundary of the microgrid

---

<sup>6</sup> See [www.pge.com/cmep](http://www.pge.com/cmep) Frequently Asked Questions for the most current definition of Critical Facility for purposes of this program.

---

Community Microgrid Parameters

- Project must include 1 or more energy producing resources that do not exceed 20 MW in aggregate
- Project must act as a single controllable entity
- Project must be able to connect to, disconnect from, and run in parallel with larger portions of the electrical grid
- 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 WDT and/or Electric Rule 21 as applicable

Community Interest

- Applicant must provide to PG&E a written letter from any local government, Tribe, or CCA, as applicable, with jurisdiction over or service within the proposed project electrical boundary to provide an expression of interest in the project

No prior PSPS mitigation work that excludes area from potential future PSPS events

- Project has not been excluded from all reasonably anticipated potential future PSPS events due to other PSPS mitigation activities.

Additional Requirements for the Community Microgrid Enablement Tariff:

- Pre-Application Report
- Applicant Experience

## APPENDIX B

### CMEP Implementation Workflow

