



BOARD MEETING AGENDA SUBMITTAL

TO: GCSB Board of Directors

FROM: Peter Kampa, General Manager

DATE: February 13, 2024

SUBJECT: Agenda Item 5A: Staff Update Regarding the Groveland Microgrid Project and Partnership with PG&E and Yosemite Chamber of Commerce

RECOMMENDED ACTION:

Staff recommends the following action:

I move to authorize the General Manager to continue to partner with Highway 120 Chamber of Commerce to conduct additional planning related to the Microgrid Incentive Program Grant Project.

BACKGROUND:

The PG&E Microgrid Incentive Program (MIP) was brought before the Board at the regular meeting on January 9, 2024 and there was a consensus to authorize the General Manager to meet with the Yosemite Highway 120 Chamber of Commerce and PG&E for the purpose of determining the feasibility, risks, benefits and role of the District in funding, installation and operation of facilities related to an electrical Microgrid for the Downtown Groveland area.

Since January's meeting District staff along with the Chamber and Sierra Nevada Communications have met with PG&E's Microgrid Incentive Planning Team on January 9th, January 22nd, and February 5, 2024, for an initial consultation to identify resiliency needs within the community, discuss potential solutions to meet the community's needs, to review the eligibility requirements for MIP funding, and discussed the preparation of the application process and addressed potential design challenges.

It has been determined by the MIP Planning team and partners that the Microgrid Incentive Program has potential to bring benefits to the Groveland Community. Thus far we have determined that we need a technical partner and we have initially been consulting with various qualified firms, who have significant experience in solar and battery storage projects as well as experience working with PG&E. We have also been informed by a PG&E employee, that it's considering upgrades to the existing microgrid to automate its operation. However, a managing engineer subsequently told us on the most recent meeting call that he was unaware of this project to improve the permanent interconnection hub. If PG&E does not automate the microgrid on its own, there is a \$3,000,000 grant opportunity to fund those special facilities as part of the project, if determined necessary in a technical evaluation, which is the next step. We obviously still have more communication on this matter and supervisor Kathleen Haff is working very hard on behalf of the community.

The installation of a large solar field and battery storage system appears on the surface to be feasible to power the microgrid and potentially District facilities and the GCRC. There is also an opportunity to partner with others, and sell power generated through a Community Aggregator.

Staff is seeking Board approval to authorize the General Manager to continue a partnership with Highway 120 Chamber of Commerce for the planning and implementation of the Microgrid Incentive Program Grant Project.

ATTACHMENTS:

1. Groveland Distribution Microgrid Fact Sheet
2. Microgrid Incentive Program (MIP) Presentation



Reducing Public Safety Power Shutoff Impacts in Groveland

To keep our communities and customers safe, PG&E may need to turn off power during severe weather conditions. This is called a Public Safety Power Shutoff (PSPS). We are working year-round and nonstop to **make our system safer and more resilient, and improve PSPS events for our customers and communities.** We continue to test and use new tools and technologies to pinpoint how to best prevent and respond to the risk of wildfires. This includes **installing and operating distribution microgrids to safely mitigate the impacts of a potential PSPS event on our customers and communities.**

What is a distribution microgrid?

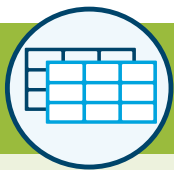
To support our customers during a PSPS event, **we install and prepare distribution microgrids in the areas most likely to experience PSPS events.** If safe to energize during a PSPS event, distribution microgrids are designed to power communities' central corridors (i.e., "Main Street") to help:



Safely provide electricity to critical facilities and shared community resources



Reduce the number of customers impacted by PSPS



When will the Groveland microgrid be used?

When safe to operate, distribution microgrids are used during a PSPS event to support our customers.

However, in some cases we may not be able to use a microgrid due to:



Hazardous conditions that could pose a fire risk if lines were energized.



A large PSPS event or multiple simultaneous emergencies that require prioritizing critical locations first.



Equipment damage or mechanical failure.

What can you expect in your community?



AT THE START OF WILDFIRE SEASON

- **Staged temporary generators, used to energize the microgrid,** at the parking lot of Mary Laveroni Community Park off of Main Street.

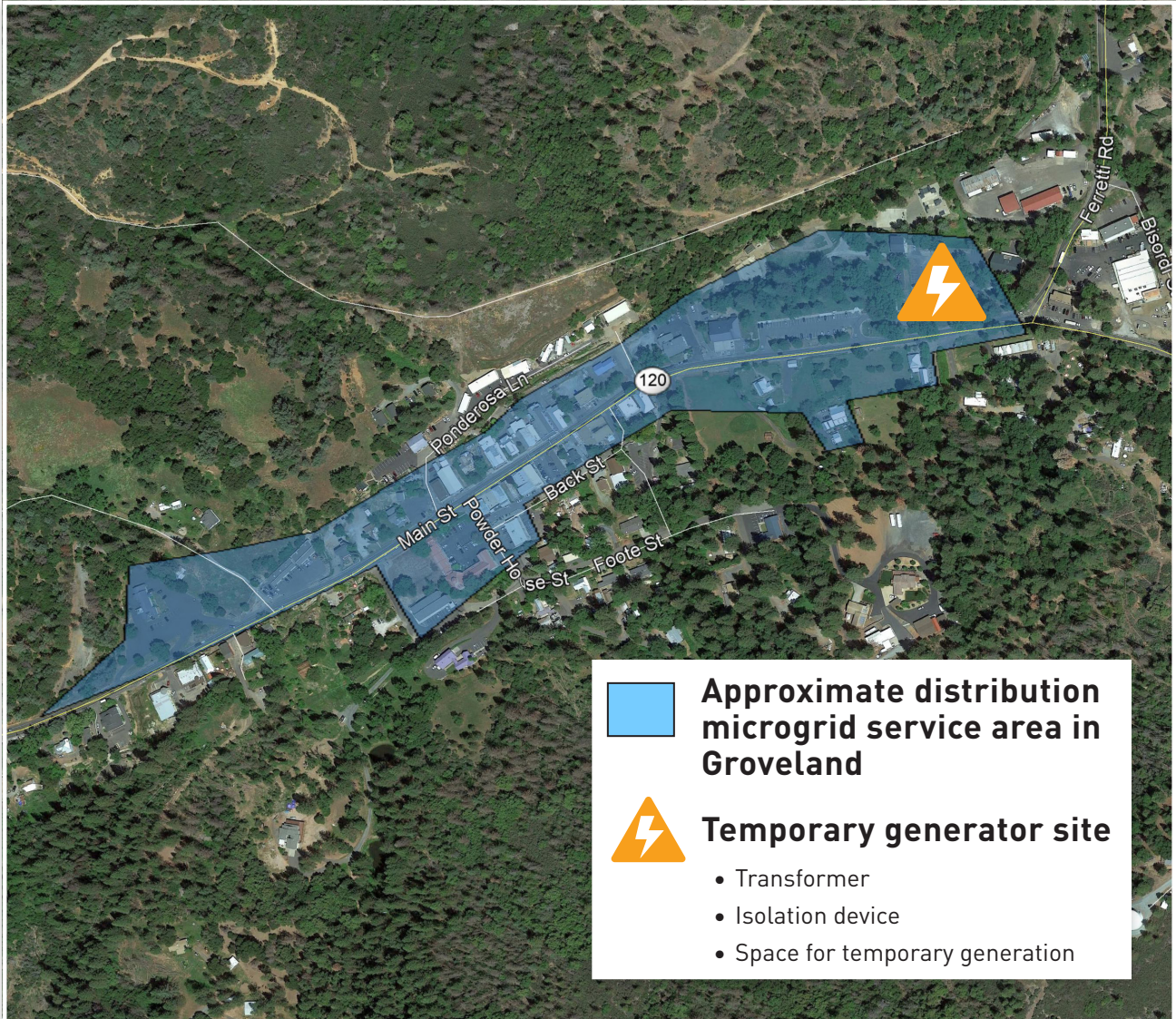
DURING A PSPS EVENT

- PG&E crews and vendors **working on-site** at the Groveland microgrid with temporary generators.
- A **brief temporary outage as portions of the community are disconnected from the larger electric grid** and potential engine noise during a PSPS event.
- Standard ongoing **outage notifications and alerts related to the PSPS event,** including specific updates related to the microgrid.
- A **brief second temporary outage while the microgrid is being reconnected** to the larger electric grid, when safe to re-energize at the end of a PSPS event.

What the Distribution Microgrid Looks Like in Your Community



This map represents the approximate area of Tuolumne County served by PG&E's distribution microgrid in Groveland. **The temporary generator site will be located at the parking lot of Mary Laveroni Park off of Main Street.** Though the distribution microgrid energizes the area shown below, nearby facilities or businesses, may remain energized through private temporary generators.



Learn More

For more information about the Groveland Distribution Microgrid, please email us at wildfiresafety@pge.com. You can also learn more about all our wildfire safety efforts by visiting [pge.com/wildfiresafety](https://www.pge.com/wildfiresafety).

- For translated support in over 200 additional languages, please contact PG&E at **1-866-743-6589**.

Pacific Gas and Electric Company

Microgrid Incentive Program

October 24, 2023



Safety

Preparedness Tips

Always be prepared in case of a natural disaster or an emergency

Build a disaster supply kit for you, your family or your business

Be sure to include food, water, medication, flashlights, first aid kits, a list of emergency contacts and more

Visit safetyactioncenter.pge.com to help prepare for an emergency



Topics For Discussion

- 1** What is a Community Microgrid

- 2** Microgrid Incentive Program (MIP)

- 3** MIP Application Process

- 4** MIP Handbook

- 5** Stage 1: Consultation

- 6** Next Steps

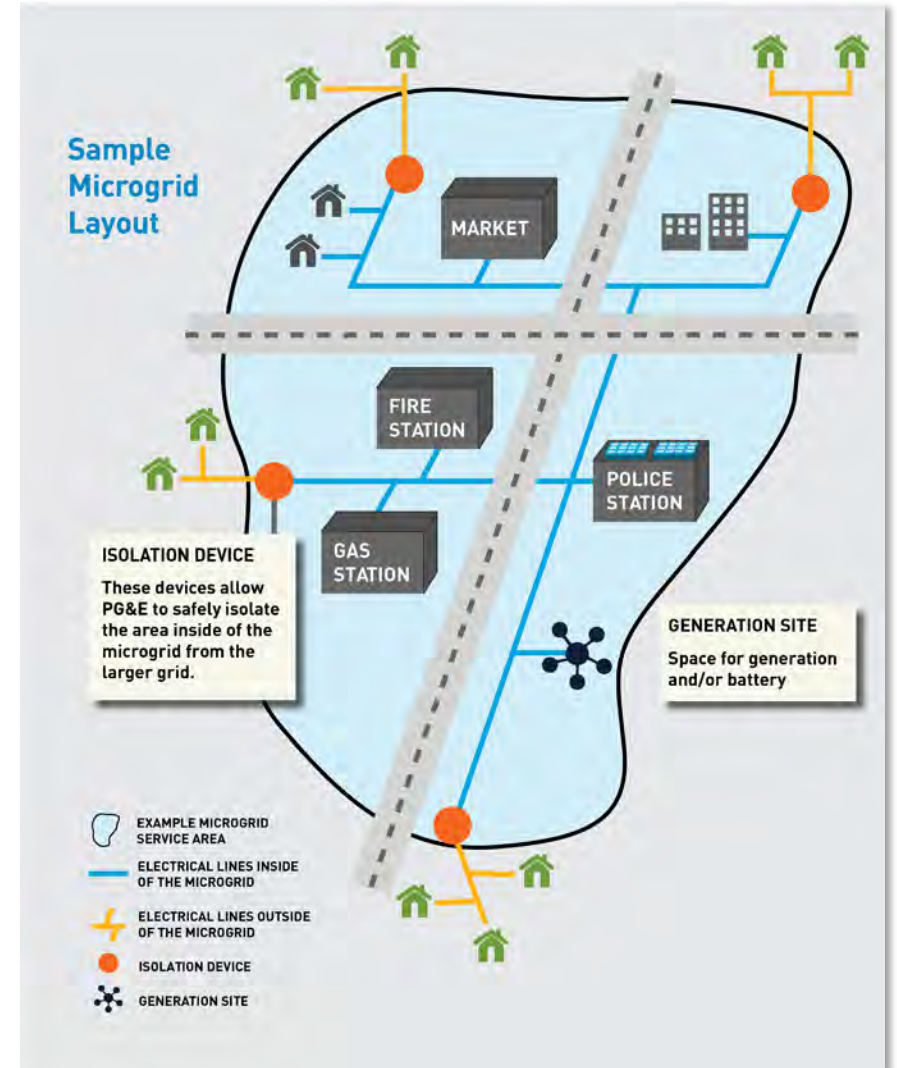


What is a Community Microgrid?

A microgrid consists of a group of interconnected customers and distributed energy resource(s) that can disconnect from and reconnect to the grid to stay energized during an outage.

Community microgrids are typically designed to serve community resources, such as:

- ✓ Hospitals
- ✓ Police and fire stations
- ✓ Gas stations and markets



The diagram above represents an idealized layout of a community microgrid. The layout and dimensions are for illustrative purposes only.

Microgrid Incentive Program Goals

The MIP is designed to fund clean community microgrids that support the critical needs of vulnerable populations most likely to be impacted by outages.

The goals of this program are to:



Increase reliability and resiliency for critical public facilities in communities that are at higher risk of electrical outages



Prioritize communities with higher portions of low-income, access and functional needs, and electricity-dependent residents



Enable communities with lower ability to fund development of backup generation to maintain critical loads during outages



Provide opportunity for testing new technologies or regulatory approaches to inform future action to the benefit of all ratepayers





Up to \$18M in Community Microgrid Incentives Per Award

Individual projects will receive up to **\$15M*** in funding through MIP for engineering and development costs.



Application Incentive Request (AIR)

For eligible **project engineering and development costs**, such as:

- IFOM batteries and generation resources
- Engineering and project management costs
- Property purchase or lease costs

Also includes the Application Development Grant of up to \$25,000.



Microgrid Interconnection Allowance

For eligible **Interconnection Studies and equipment** that would otherwise be the cost responsibility of the Applicant, such as:

- Interconnection Study costs for eligible IFOM Project Resources
- Interconnection Facilities and Distribution Upgrades identified in the Interconnection Study

Projects will receive additional funding through PG&E's Community Microgrid Enablement Program



Microgrid Special Facilities Allowance

For **utility equipment and services** that would otherwise be the cost responsibility of the Applicant, to enable the safe islanding of a Community Microgrid, such as:

- Microgrid Island Study (MIS)
- Equipment to enable safe transition and operation in Island Mode, which may include:
 - Isolation devices
 - Fault protection devices
 - Utility microgrid controller
 - System hardening



For more information visit pge.com/mip

* Up to \$14M for incentive request plus \$1M interconnection allowance for front-of-meter project resources, such as battery or solar pv. Eligibility does not guarantee funding

MIP Provides Support to Communities for Application Development



The development of a MIP Technical Application can be costly. MIP will reimburse the costs of an eligible MIP application, up to \$25,000, whether the Applicant is awarded MIP funding or not.

- Additional project design and application development funding is available for projects that are awarded MIP funding.
- Applicants must detail the technical support costs associated with the grant request in their application.



Who Can Apply for the Microgrid Incentive Program?

Representatives of tribes, governments and community-based organizations in eligible communities are encouraged to apply.

MIP-funded microgrids must serve communities that are considered both:

Susceptible to Frequent Outages

Microgrid is located in any of the following:

1. Tier 2 or 3 High Fire-Threat District
2. Area that experienced prior PSPS outage
3. Elevated earthquake risk zone
4. Locations with lower historical level of reliability

OR: is attested as such by a letter from local government and/or tribal jurisdiction that identifies and justifies forms of outage vulnerability

Disadvantaged and Vulnerable

Eligible community meets any of the following criteria:

1. Census tracts with median household incomes less than 60% of state median
2. California Native American tribal community
3. Community with highest risk as identified in the current version of CalEnviro Screen
4. A rural area

OR: microgrid powers a critical community facility that primarily serves one of these communities

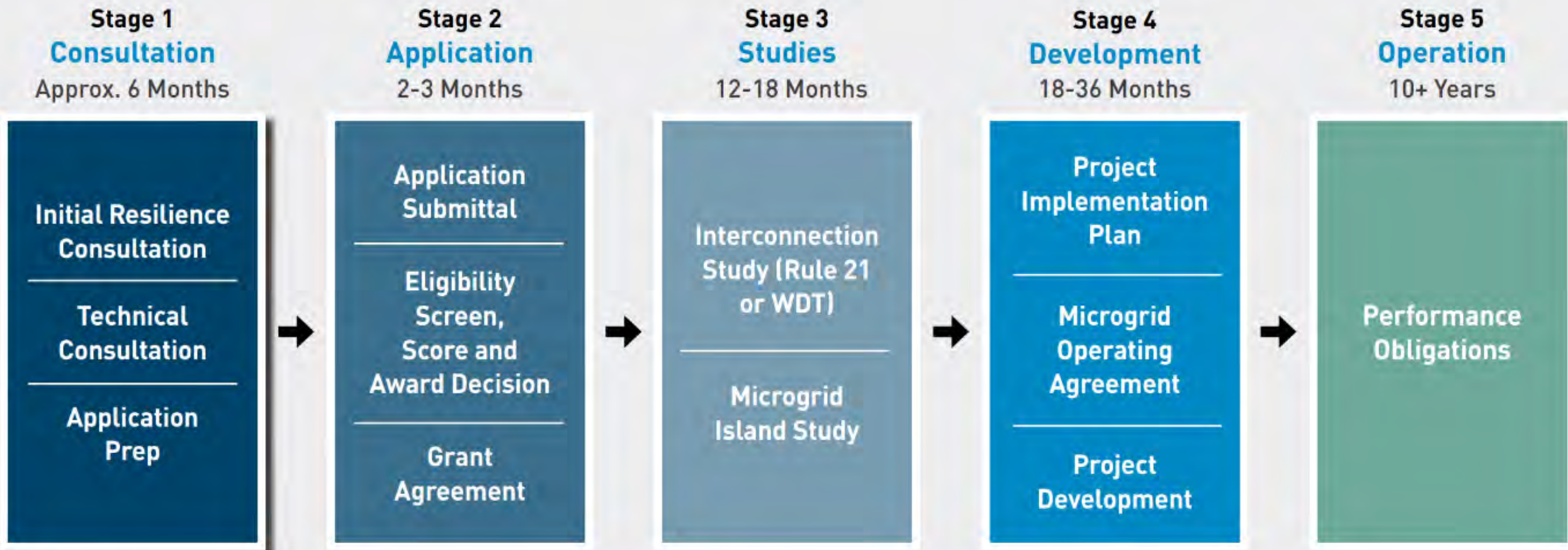
Prioritizing Projects: The MIP Scoring Framework

MIP will prioritize projects that maximize the benefits based on the funding requested through a Project Score*.



*Additional scoring information is provided in the MIP Handbook

Applicant Process, Step-By-Step



NOTE: Each project is unique and will follow different timeframes. These estimates are provided as guidelines only.

A comprehensive MIP Handbook is available at pge.com/mip.*

It guides potential applicants through each stage of the MIP process, from application to development.



The image shows the cover page of the Microgrid Incentive Program (MIP) Handbook. The page has a blue background with a grid pattern and a blurred image of a building. At the top left, it says "DRAFT". At the top right, there is a button that says "Before You Open This PDF" with a plus icon. On the right side, there is a vertical navigation menu with buttons for "TABLE OF CONTENTS", "OVERVIEW", "MICROGRIDS: THE BASICS", "FUNDING", "ELIGIBILITY", "MIP PROJECT LIFECYCLE STAGES", "GLOSSARY", and "FOOTNOTES". The "GLOSSARY" button is highlighted in yellow. The main title is "Microgrid Incentive Program (MIP) Handbook" in large white font, with a yellow underline under "Handbook". Below the title is the subtitle "A guide for developing a multi-customer Community Microgrid". At the bottom left, there is a small PG&E logo, the date "September 2023", and a disclaimer: "PG&E" refers to Pacific Gas and Electric Company, a subsidiary of PG&E Corporation. ©2023 Pacific Gas and Electric Company. All rights reserved. At the bottom center, there is a "Main Menu" button with a house icon. At the bottom right, there is a "NEXT" button with a double arrow icon.

*Additional information is provided in the MIP Handbook

Stage 1: Consultation – Goals



Identify

resiliency needs within the community



Discuss

potential solutions to meet community's needs



Review

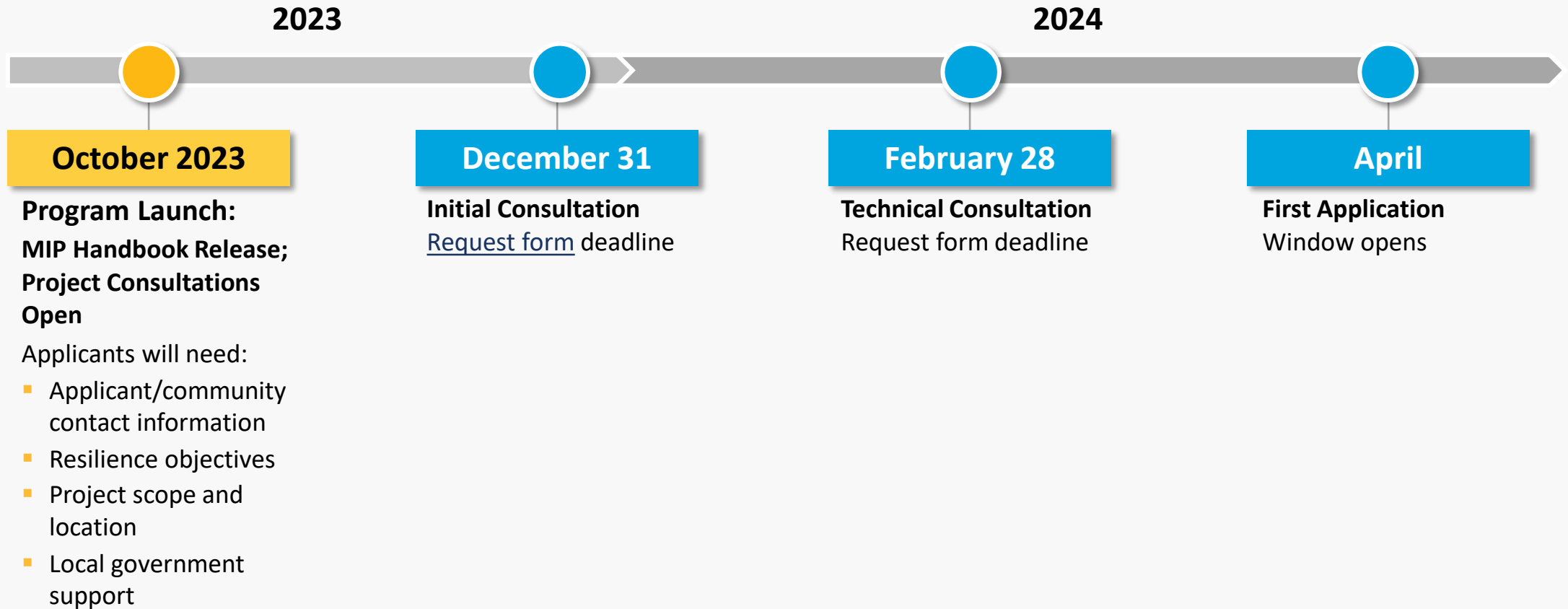
the eligibility requirements for MIP funding



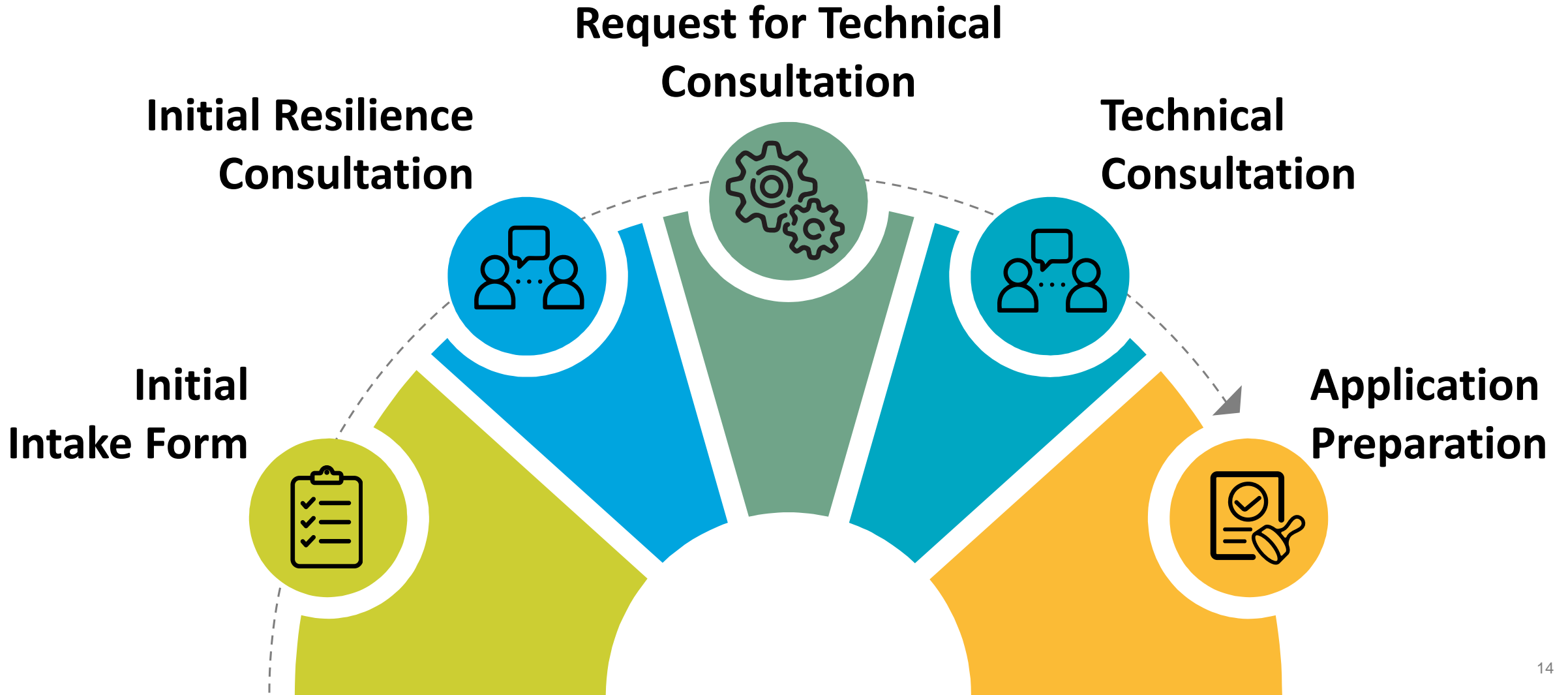
Prepare

application and address any design challenges

Key Upcoming Dates

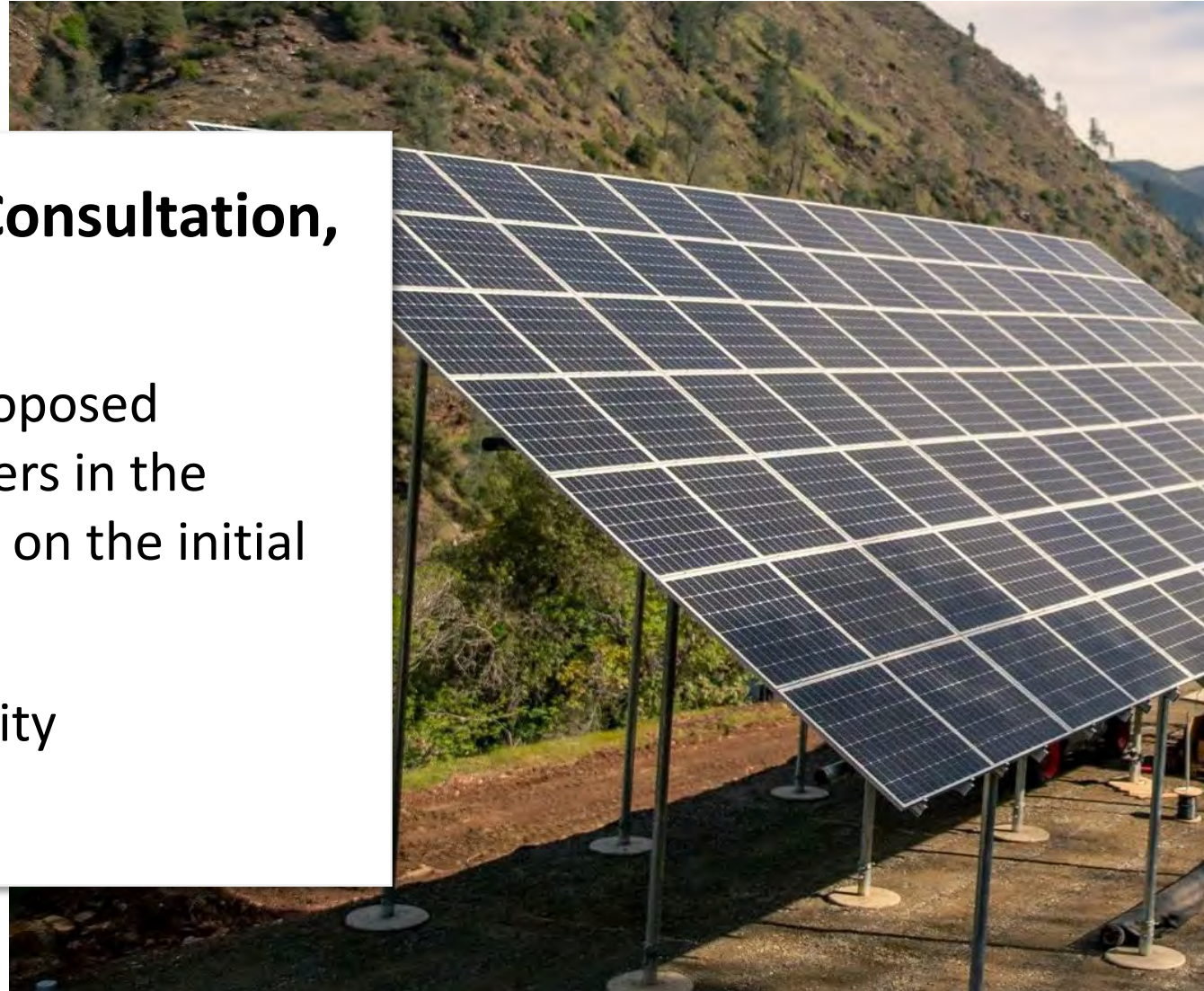


**Additional information is provided in the MIP Handbook*



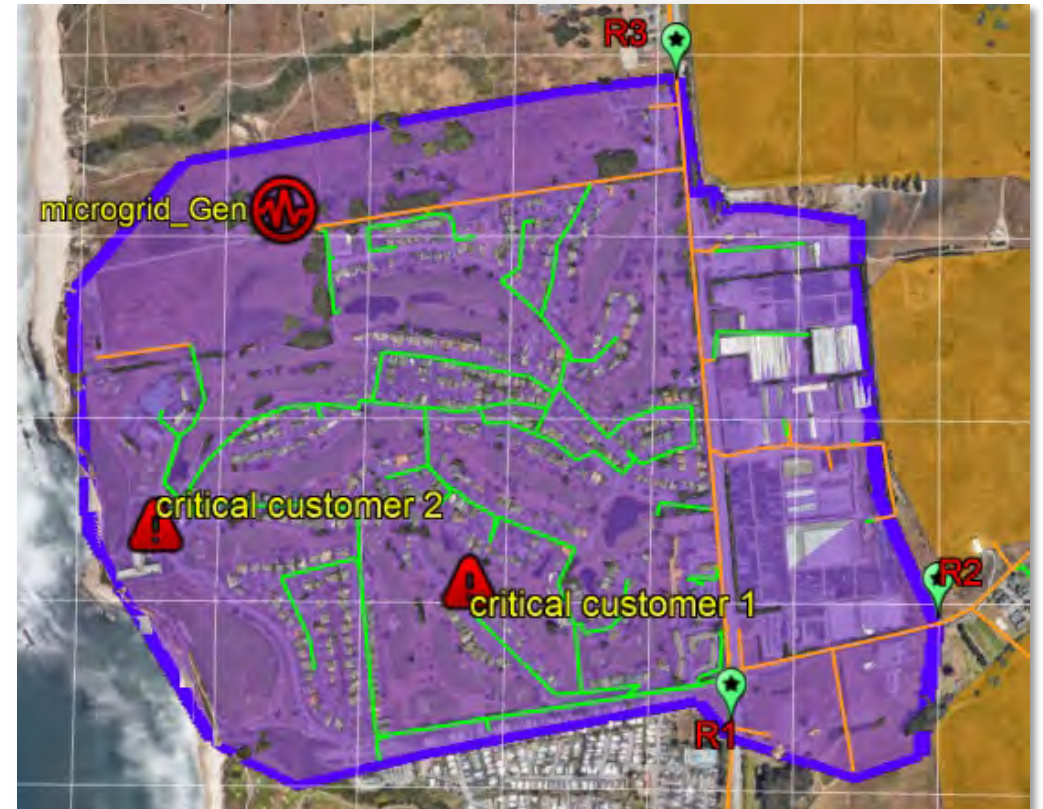
During the Initial Resilience Consultation, a PG&E grid engineer will:

- 1 Review the location of the proposed microgrid and critical customers in the microgrid region as identified on the initial intake form.
- 2 Review the existing PG&E utility infrastructure.



1 Review the location of the proposed microgrid and critical customers in the microgrid region as identified on the initial intake form.

- Map the microgrid site on Google Earth and create a polygon representing the microgrid region.
- Discuss potential locations of the energy resources.
- Review the location of critical customers in the microgrid region from the initial intake form.

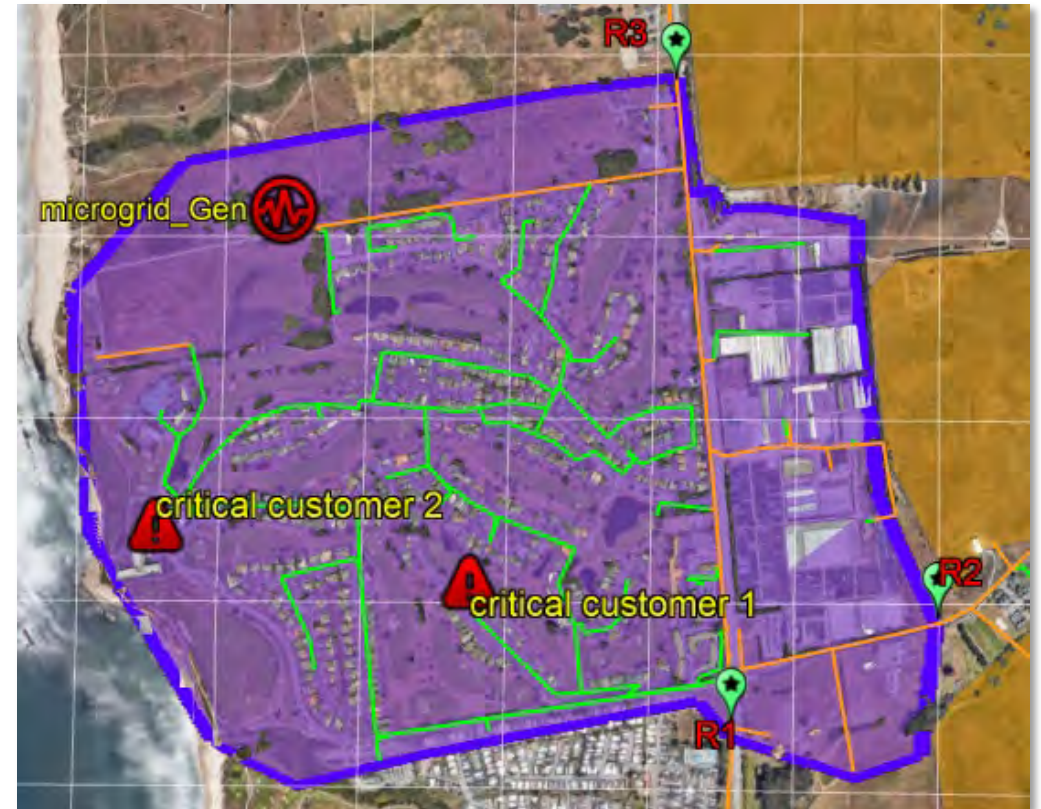


Illustrative microgrid site with identified islanding points and the locations of resources and critical customers

2

Review existing PG&E grid infrastructure

- **Identify microgrid islanding points:**
 - End of the line microgrid (single microgrid islanding point)
 - Mid-feeder microgrid (multiple microgrid islanding points)
- **Review PG&E utility infrastructure** in high fire-threat areas and historical weather patterns that may impact the microgrid
- **Provide a high-level overview of the distribution grid** inside the microgrid boundary, and discuss potential upgrades (e.g., isolation devices or other infrastructure) that may be necessary to support microgrid development



Illustrative microgrid site with identified islanding points and the locations of resources and critical customers



Requirement to Request for Microgrid Technical Consultation

- Non-Disclosure Agreement**
- Proposed Single Line Diagram (30% design)**
- Proposed Site Map**
- List of customers to be served by microgrid,**
including account IDs, if known
- Proposed new generation type and size**
(i.e., Energy Storage – 1MW/2MWh) and manufacturer, if known
- When in Island Mode, the desired minimum
number of consecutive hours of service**
- Technical Representation**
- Community Support**



Proposed Site Map must include:

- Planned Project Resources
- Proposed Microgrid Electrical Boundary
- Proposed Point of Interconnection for planned and existing Project Resources
- Proposed Microgrid Islanding Point, if known
- Location of controls and networking rack, if known



Technical Representation must include:

- Engagement Letter from the Applicant Engineer
- Name and contact for any engineering or development resources assisting the community (one contact per involved party)
- Applicant Experience Attestation



Community Support must include:

A letter of support from the authority with jurisdiction over the area where the microgrid is contemplated if requester is not a local or tribal government

Prior to the Microgrid Technical Consultation, we advise you to familiarize yourself with:

- [Community Microgrid Technical Best Practices Guide](#)
- [MIP handbook](#)

Additional interconnection design resources:

- [PG&E Distribution Interconnection Handbook \(pge.com\)](#)
- [Electric Generation Interconnection and Rule 21 applications \(pge.com\)](#)
- [PG&E's Integration Capacity Analysis \(ICA\) Maps](#)



Technical Consultation – Load Profile Data for sizing microgrid

As possible and available for the area under consideration, and subject to all applicable customer data privacy rules, PG&E will provide:



**5-year historical
load data** for the
microgrid region



**Calculated 24-
hour energy
usage data** for
past five years



**Forecasted
load growth**

Discuss any design challenges, and coordinate on possible solutions

- Review historical outage data and quantify the impact on the microgrid.
- High-level overview of operation and microgrid transitions to and from an island mode.
- Existing PG&E utility infrastructure and necessary PG&E utility upgrades for microgrid development.
- Existing or planned PG&E mitigation activities in the region.





The consultation stage will support your team so that you are better prepared to submit a high-quality MIP application.



If your community is selected for a MIP award, PG&E will partner with your technical team from design to operation.



Questions?

communitymicrogrids@pge.com

**Microgrid Incentive
Program – Initial
Consultation Request**

