

Resiliency & Microgrids Working Group

Multi Property Tariff Phase: Member Proposal from AMRC and Phase Input

Resiliency and Microgrids Team, Energy Division

April 27, 2021



California Public
Utilities Commission

WebEx and Call-In Information

Join by Computer:

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Event Password: RMWG

Join by Phone:

- Please register using WebEx link to view phone number.
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Notes:

- Today's presentations are available in the meeting invite (follow link above) and are available at <https://www.cpuc.ca.gov/resiliencyandmicrogrids>.
- This meeting will not be recorded and there will not be meeting minutes.

WebEx Logistics

- All attendees are muted on entry by default.
- Questions can be asked verbally during Q&A segments using the “raise hand” function.
 - The host will unmute you during Q&A portions and you will have a maximum of 2 minutes to ask your question.
 - Please lower your hand after you’ve asked your question.
 - If you have another question, please “re-raise your hand” by clicking on the “raise hand” button twice.
- Questions can also be written in the Q&A box and will be answered verbally during Q&A

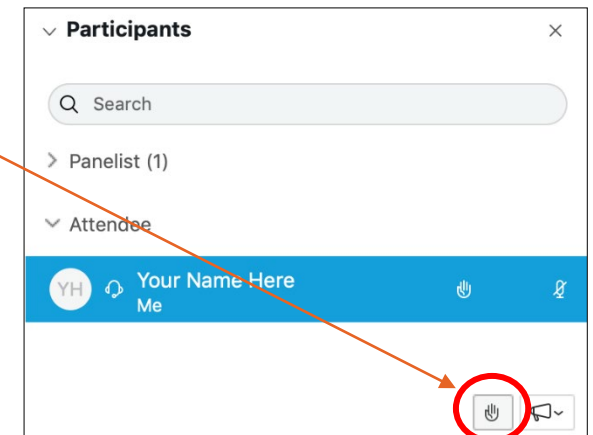
WebEx Tip

1. Click here to access the attendee list to raise and lower your hand.

Access the written Q&A panel here

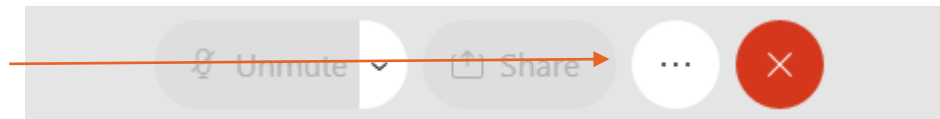


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WebEx Event Materials

Event Information: Resiliency and Microgrids Working Group Meeting


Registration is required to join this event. If you have not registered, please do so now. [English](#) : [San Francisco Time](#)

Event status: Not started ([Register](#))

Date and time: Tuesday, March 2, 2021 9:30 am
Pacific Standard Time (San Francisco, GMT-08:00)
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Duration: 1 hour

Description:



Event material: [RMWG Meeting Material_EXAMPLE.docx](#) (31.7 KB)

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Agenda

- | | |
|---|-------------|
| I. Introductions | 2:00 – 2:05 |
| <ul style="list-style-type: none">• WebEx Logistics• Review agenda | |
| II. Proposal: Interconnecting Multi-Property, Non-Export, BTM Microgrids in CA | 2:05 – 3:00 |
| <ul style="list-style-type: none">• Presenters: AMR and SoCalGas• Q&A and Discussion | |
| III. Multi-Property Phase Recap and Input | 3:00 – 3:55 |
| <ul style="list-style-type: none">• Open Discussion | |
| V. Next Steps | 3:55 – 4:00 |

**Please note that the proposal represent the presenter's view and ideas and are not representative of Energy Division's position.*

Interconnecting Multi-Property, Non-Export, Behind-the-Meter Microgrids in California





Interconnecting Multi-Property, Non-Export, Behind-the-Meter Microgrids in California

Presenters

- Jeff Malin, Manager, Applied Medical Resources Corporation (AMR)
- Steve Jensen, Attorney, Knobbe Martens
- Mark Kachner, Attorney, Knobbe Martens
- Blaine Waymire, Senior Advisor, Southern California Gas Company, a Sempra Energy utility (SoCalGas)

Agenda

1. Introduction to Applied Medical
2. Recommendation 1: Develop Reliable Roadmap for Interconnecting Microgrids
3. Recommendation 2: Natural Gas Should Be a Permitted Energy Source for Microgrids
4. What's At Stake



LAPAROSCOPIC DEVICES



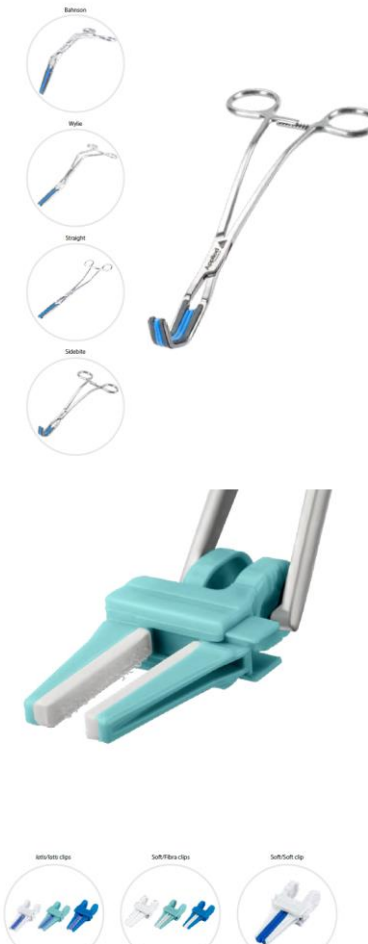
PROTECTION SYSTEMS



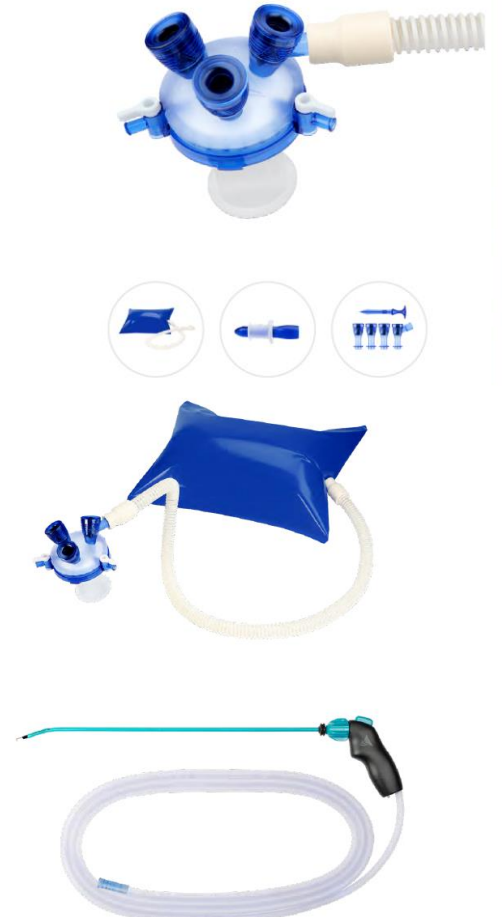
ENDOUROLOGY



VASCULAR/ CARDIOVASCULAR



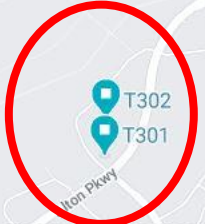
GeSeal TECHNOLOGY



ENERGY GENERATION



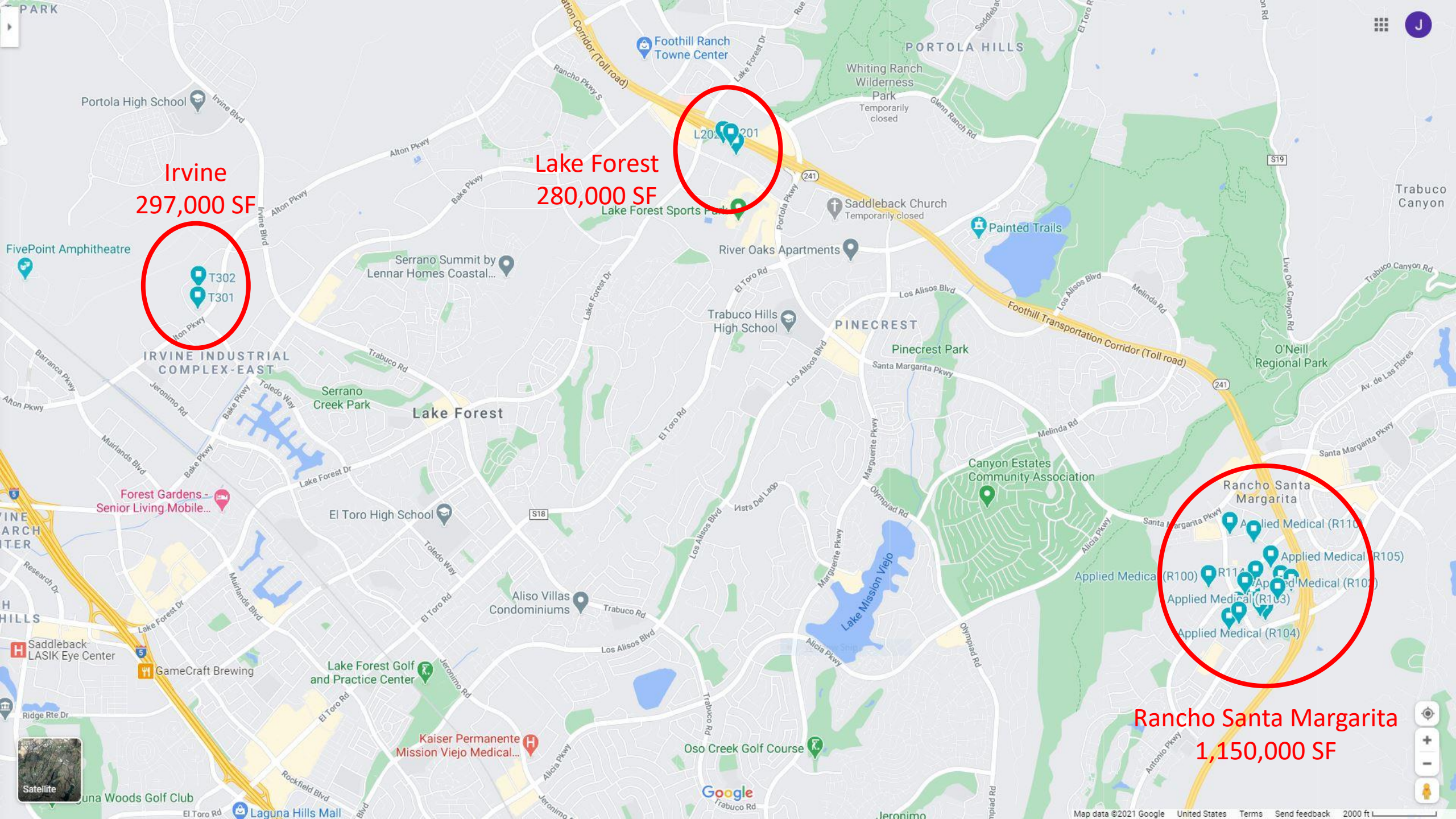
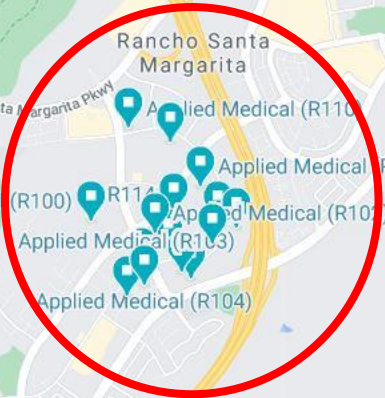
Irvine
297,000 SF



Lake Forest
280,000 SF



Rancho Santa Margarita
1,150,000 SF



12kV-2

Provide new 12kV campus-west services

SCE 12kV Campus Service

12kV-3

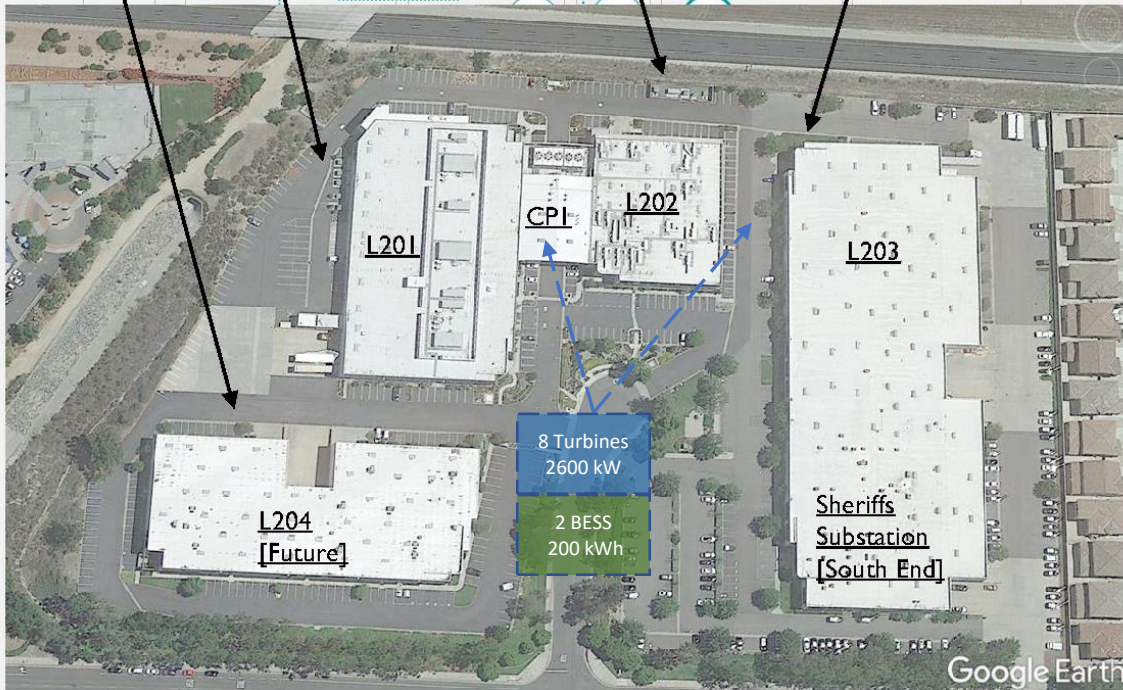
Provide new 12kV campus-east services

12kV-4






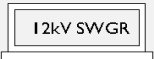
Provide new services to L203 and L203 Bridge



12kV-1

Provide new services to L204



Legend

-  Facility switchboard, 480V,
-  Service transformer [GB = Grounding Bank]
-  SCE 12kV selector switch, PME-type
-  AMR power generation
MT = Microturbine
BESS = Battery Energy Storage System
-  SCE primary metering cabinet ("PMC") or instrument transformer cabinet ("PT/CT")
-  AMR medium-voltage 12kV switchgear

-  12kV circuit conduit/wiring
-  480V circuit conduit/wiring

Applied Medical Owned Facilities
SCE Owned Facilities

Exhibit 3A

Campus Plan - 12kV Power Distribution Option Applied Medical Lake Forest



RSM CAMPUS BUILDINGS:

- **R100**
29977 AVENIDA DE LAS BANDERAS
- ▲ **R101**
22872 AVENIDA EMPRESA
- **R102**
22822 AVENIDA EMPRESA
- **R103**
22982 ARROYO VISTA
- **R104**
22942 ARROYO VISTA
- **R105**
30200 AVENIDA DE LAS BANDERAS
- **R107**
30331 ESPERANZA
- **R108**
30152 AVENTURA
- **R109**
30152 ESPERANZA
- **R110**
22432 EMPRESA
- **R111**
30322 ESPERANZA
- **R113**
22931 ARROYO VISTA
- **R114**
30142 AVENIDA DE LAS BANDERAS



Quick Services ▲

Your Home ▲

Your Business ▲

Customer Support ▲

Partners & Vendors —

Partnerships —

Direct Access Overview

Community Choice Aggregation
Overview

Distributed Energy Resource
Provider

Access Energy Usage Data

Third-Party Demand Response
Services

Microgrids for Developers

Buying and Selling ▲

Consulting Services ▲

Real Estate and Locations ▲

Trade Professional

EE Solicitation

Outage Center ▲

Safety ▲

Microgrids for Developers

[Home](#) > [Partners & Vendors](#) > [Partnerships](#) > [Microgrids for Developers](#)



Understand Your Microgrid Options

Are you interested in deploying a microgrid in SCE territory? Find out what types of interconnections SCE supports and what's required to properly install and establish your microgrid.

Interconnection Options for SCE Territories

Based on the current California Public Utilities Commission (CPUC) approved rules and regulations, customers and third parties can develop Behind-The-Meter (BTM) microgrids. The way your microgrid interconnects to the SCE electric grid will depend on your preferred method of operation and your project's complexity, type of generation, and applicable tariffs.

Rule 21 Applications

Non-Export

This microgrid normally operates in parallel with the SCE grid and **does not continuously export power back to the grid.**

Isolated Operations

Composed of backup generation, **this system operates on "isolated operation mode" and is not connected to the SCE grid.** This system always requires an open transition to and from the grid and may include energy storage.

Momentary Parallel Operations

This system is composed of backup generation and may include energy storage, but the backup generation is not normally operational. **When its backup generation function or energy storage is activated, it may connect in parallel with the grid for less than one second.** After connecting, it then separates to provide backup service only to the facility.



Recommendation 1: Develop Reliable Roadmap for Interconnecting Microgrids

a. Implementation:

1. Add mandatory language to microgrid tariff, making interconnection mandatory based on objective criteria. Remove utility discretion to deny interconnection.
2. Add interconnection roadmap with mandatory deadlines for each process milestone. Deadlines must be business focused, to facilitate microgrid deployment.



Recommendation 1 (Cont.):

Develop Reliable Roadmap for Interconnecting Microgrids

- b. AMR is currently developing microgrids to self serve load at multiple adjacent properties, all owned by AMR.
- c. AMR experienced issues when interconnecting its microgrids:
 - i. Inherent conflicts of interest with IOU
 - ii. Operational obstruction
 - iii. Led to unnecessary delay
- d. No change to PUC 218 required. Code does not prohibit connections across public streets for non-export microgrids.



Recommendation 2: Permit Natural Gas as Microgrid Energy Source

- a. **Implementation:** Amend *DECISION 21-01-018* to permit natural gas as a microgrid energy source.
- b. AMR's microgrid, which includes natural gas as an energy source, is reliable, efficient, economical and clean.
- c. The only stated basis for restriction is to deny export credits for non-renewable generation. But by importing NG restriction to microgrids, the CPUC expanded the credit restriction to non-export microgrids.
 - i. Effectively limits microgrid tariff to export-only microgrids.
 - ii. NG restriction seemingly impacts existing interconnected microgrids that depend on natural gas.



"SoCalGas disclaims any express or implied warranty as to the accuracy of Applied Medical's presentation and recommends any information be independently evaluated and validated."

SoCalGas serves 14 AMR accounts across 3 campuses supporting manufacturing, building heating/cooling, and power generation (including microgrids).



Serves as educational resource. Provides support and recommendations on engineering, installation, equipment supply, and permitting to support AMR's microgrids.



Clean: SoCalGas recently committed to be Carbon Neutral by 2045.

Efficient: Onsite generation much more efficient than energy from the electric grid.

Flexible: Increase or decrease power generation quickly to support solar or storage assets.

Affordable: Gas is affordable. Customers can manage energy profiles to remain globally competitive.

RESILIENT! Gas infrastructure is less prone to weather/seismic events and can deliver 24/7 continuous fuel for power generation.



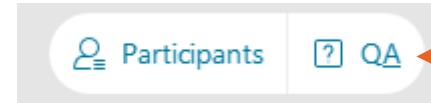
What's At Stake

1. Commercialization of microgrids in California
2. Achieving statewide environmental goals
3. Statewide economic development, jobs, and new capital investment

Discussion and Q&A

WebEx Tip

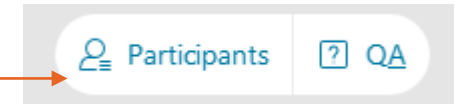
Option 1:



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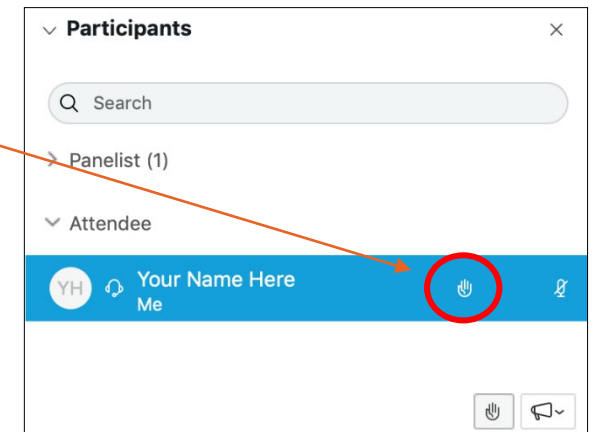
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Multi-Property Tariff Phase - Recap

Nov –

- Reviewed **current projects and work** related to multi-property tariffs.
- Shared stakeholder and utility **perspectives on opportunities and challenges** related to standardization of multi-property tariffs.
- Learned about microgrid **standards** that are **in development**.

Feb -

- Shared tariff components and the associated **discussion prompts** to help guide discussions and proposals.
- Discussed **alternatives** to a multi-property tariff that would enable multi-property, multi-customer microgrid projects. This included micro-utilities, cooperatives, and the own use doctrine.

Mar -

- Provide a high-level overview of foundational **safety elements**.
- Examined ways in which microgrid customers and non-participating ratepayers are protected (or not protected) from unjust or unreasonable rates (i.e. **consumer protection**).

Apr –

- Learned how **Community Microgrid Enablement Tariff** (CMET) is able to address requirements for the Redwood Coast Airport Project, discussed how the CMET model applies to multi-customer microgrids more generally, and highlighted future topics **still requiring exploration**.

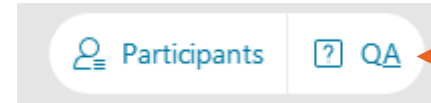
Open Discussion

- If we were to revisit the multi-tariff topic, are there any other topics we should discuss?
- If we were to revisit the multi-tariff topic, Any topics we should spend more time on?
- Are there any other/general comments?

Discussion and Q&A

WebEx Tip

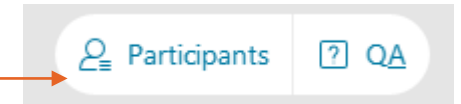
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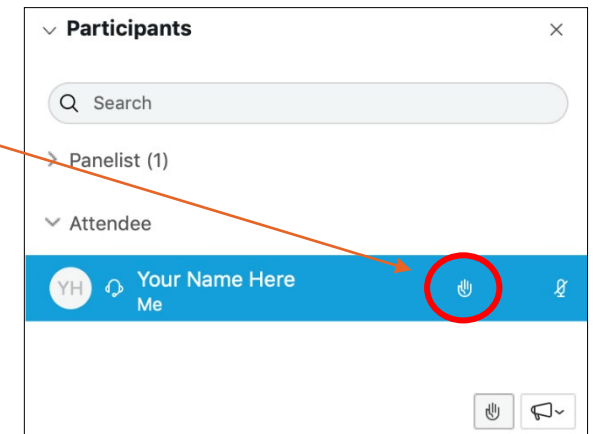
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Next Phase: Value of Resiliency

Preliminary RMWG Schedule				
Month	Resiliency and Microgrids Working Group Topics			
February	Standby Charges	Multi-Property Microgrid Tariff		
March				
April				
May				
June			Value of Resiliency	
July				
August				Microgrid Interconnection
September				
October				
November				
December	Customer-Facing Microgrid Tariff Revisit			
January				
February				

Value of Resiliency: Working group participants to discuss resiliency valuation through an all-hazard approach to disruptions and mitigations by examining metrics, methodologies, and policy applications.

Upcoming RMWG Meetings

Wednesday May 5, 2021

2:00 pm – 4:00 pm

Wednesday May 12, 2021

3:00 pm – 4:30 pm

Wednesday May 19, 2021

2:00 pm – 4:00 pm
(tentative)

For more information:

Jessica.Tse@cpuc.ca.gov

<https://www.cpuc.ca.gov/resiliencyandmicrogrids/>

