BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill 1339 and Resiliency Strategies.	Rulemaking 19-09-009

CLEAN COALITION OPENING COMMENTS IN RESPONSE TO TRACK 2 MICROGRID AND RESILIENCY STRATEGIES STAFF PROPOSAL, FACILITATING THE COMMERCIALIZATION OF MICRGRIDS PURSUANT TO SENATE BILL 1339

/s/ BEN SCHWARTZ
Ben Schwartz
Policy Associate
Clean Coalition
1800 Garden Street
Santa Barbara, CA 93101
Phone: 626-232-7573
ben@clean-coalition.org

August 14, 2020

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill 1339 and Resiliency Strategies.	Rulemaking 19-09-009 (Filed September 12, 2019)

CLEAN COALITION OPENING COMMENTS IN RESPONSE TO TRACK 2 MICROGRID AND RESILIENCY STRATEGIES STAFF PROPOSAL, FACILITATING THE COMMERCIALIZATION OF MICRGRIDS PURSUANT TO SENATE BILL 1339

I. INTRODUCTION

Pursuant to Rule 14.3 of the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission") the Clean Coalition submits these opening comments in response to the ALJ ruling requesting comment on the Track 2 Microgrid and Resiliency Strategies Staff Proposal, Facilitating the Commercialization of Microgrids Pursuant to Senate Bill 1339 issued in the above captioned proceeding on July 23, 2020. The Clean Coalition appreciates the opportunity to comment on such a thought-out Staff Proposal and Concept Paper. That being said, this proceeding is about facilitating the commercialization of microgrids by ascribing the proper value microgrids can provide and identifying potential revenue streams to make the economics pencil out. The Clean Coalition raises this point for two reasons.

One, regulation should aim to unleash the true potential of microgrids, not to create undue limitations that extend the status quo. In the August 5 microgrid workshop, Energy Division staff repeatedly argued that many of the listed options in the Staff Proposal (and options that staff recommended) were chosen with the intention of limiting unintended consequences. When pressed in multiple questions to expand on what "unintended consequences" were considered during the drafting of the Staff Proposal, staff responded: distribution-level technology that might start fires, consumer price gouging, and other unintended consequences (that could become evident later). While it is reasonable that such unintended consequences be considered, it is an unfortunate mistake to include less ambitious solutions in Track 2 because of unproven theories. This reasoning is being uniquely applied to this proceeding, rather than the same approach that is taken in other proceedings in the jurisdiction of the Commission. Net Energy Metering ("NEM") was not limited because some solar providers were taking advantage of customers — a signature was required, and a Consumer Protection Guide was developed. Taking baby steps to make sure things are done well is important, but the ultimate goal is facilitating the

commercialization of microgrids and prioritizing resilience. The most effective way to achieve this is through removing the barriers to Community Microgrids, a complex process further delayed by current approach in the proceeding of taking small, conservative steps and pushing other issues further down the road, rather than resolving them. Chief among those is the lack of any discussion of creating a microgrid tariff (or any tariff at all). SB 1339 provided the Commission with a statutory deadline for achieving these goals due to the essential role of microgrids in California's clean energy future and as a provider of local resilience.

Two, it is at cross purposes to release a Concept Paper along with the Staff Proposal and request comments on both, but limit parties by disallowing any comments on the Concept Paper from the record. The ALJ ruling mentions that party comments related to the Concept Paper will be used for information gathering for Track 3 and beyond, but, "will not be considered as part of the record for Track 2 or any of the final outcomes for Track 2."[1] This comment leaves no possible alternate interpretation. In the August 5 workshop, staff responded to many questions by requesting written comments and specific counterproposals that better solve the problems listed in the Staff Proposal. In multiple cases, parties were specifically encouraged to reference ideas in the Concept Paper as a basis for comments. If Staff is counting on comments about the Concept Paper to inform proposals in party comments, all comments should be considered part of the official record. Moreover, since the Concept Paper covers the basic principles of microgrids, it is exactly the type of discussion material that should be central in any debate about the creation of policy. Refusing to include such comments only defers action to further down the road by failing to consider essential issues to the commercialization of microgrids in the current track.

One such issue, valuing resilience, is a central value proposition of any microgrid, especially Community Microgrids. The Concept Paper is first time this proceeding has discussed the value of resilience; due to the limitations imposed by the ALJ ruling, resilience will not be considered as part of Track 2. In a proceeding focused on cost-effective pilot programs, rate recovery, and preventing cost-shifting, the lack of focus on a value of resilience is inexplicable. The Assigned Commissioner's Scoping Memo for R. 19-09-009 states that as part of Track 2, the Commission will, "develop separate rates and tariffs, that are just and reasonable, to support microgrids, pursuant to Section 8371(d)." The scope for Track 2 is the specified location where such a tariff

[1] ALJ Ruling, Page 12

The full set of Clean Coalition comments and proposals will be listed below. Here is a summary of recommendations.

- Proposal 1: The Clean Coalition supports Option 1 to ensure that each IOU takes the time to specify the technology ratepayers (and third parties) can use to deploy microgrids under Rule 2. Though the process is seldom used, the lack of a clear definition will only make it less likely to be utilized. Since this proceeding is about commercialization of microgrids, creating clear options through which a microgrid might be deployed is essential.
- Proposal 2: Option 1 is the only one of the three that actually makes a substantial contribution to commercializing microgrids and enabling Community Microgrids. Option 2 suggests a random number of pilot programs not explained in the Staff Proposal and which went unanswered by Staff when asked directly during the August 5 workshop. Option 3, continuing with the status quo, leaves a problem clearly identified by parties unchanged and must not be considered.
- Proposal 3: Option 1, which would create a non-capped new rate schedule that allows export and NEM eligibility, is the most effective encompassing solution to encourage widespread deployment and commercialization of microgrids. Of equal, if not greater importance, is that Option 1 creates the conditions necessary to enable true Community Microgrids through exemptions from cost responsibility surcharges. The Clean Coalition also supports Option 5 to create a working group to determine an alternate rate schedule; this could include a value of resilience and would be the best location to consider changing the cost responsibility surcharge exemptions listed in table 3.3.
- Proposal 4: The Clean Coalition urges the Commission to limit pilot projects
    - Section A: Option 2 ensures that projects will be selected fairly with no bias.
    - Section B: Option 2 will create the least possible cost shifting and creates a fair methodology for pilot projects to be deployed, not just in wealthy locations.
    - Section C: Option 2 is most representative of a Feed-In Tariff (FIT), which the Clean Coalition knows to be the most effective mechanism to effectively

deploy DER and microgrids.

- Section D: Option 2 allows the market to determine which project are chosen through the stratification of projects with realistic deployment timelines. Along with Section C, Option 2, the combination creates FIT-like conditions.
- Section E: Option 1 demonstrates utility support for the commercialization of microgrids, rather than burdening the project developer with the entire cost. If the purpose of this proposal is identifying the most effective ways to deploy microgrids, limiting participants will only stifle the results, skewing the data. It also levels the playing field with PG&E, who has the CMEP to provide funds for microgrid deployment.

- Proposal 5: Option 2 is the most wholistic approach to determine the most effective methods of electrical isolation. This option is what is needed to effectively commercialize microgrids across the state and will enable Community Microgrids.

II. DESCRIPTION OF PARTY

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement and interconnection of distributed energy resources ("DER") — such as local renewables, demand response, and energy storage — and we establish market mechanisms that realize the full potential of integrating these solutions for optimized economic, environmental, and resilience benefits. The Clean Coalition also collaborates with utilities, municipalities, property owners, and other stakeholders to create near-term deployment opportunities that prove the technical and financial viability of local renewables and other DER.

III. COMMENTS

a. Proposal 1: Direct the Utilities to Revise Rule 2 to Explicitly Allow the Installation of Microgrids as Special Facilities.

1. *In response to Proposal 1 to direct the utilities to revise Rule 2 to explicitly allow the installation of microgrids as special facilities, please indicate support or opposition to Option 1, Option 2, or Option 3 and explain your support or opposition.*

The Clean Coalition supports Option 1, which proactively removes all inhibitions for the creation of microgrids as special facilities and openly informs prospective customers exactly what qualifies. Transparency is necessary for the commercialization of microgrids even if — as the Staff Proposal indicates — Rule 2 is seldom used. It is quite reasonable to argue that with each of the IOUs creating a specified list of generation control devices, the Rule 2 process will be used more often for the deployment of microgrids. The Clean Coalition has firsthand experience in the process of deploying the Montecito Community Microgrid that the deployment of any microgrid, especially a Community Microgrid, already requires extensive interface with the relevant IOU.[2] Moreover, just interfacing with an IOU does not mean a question will be answered or a solution will become abundantly clear. The more upfront information an interested party can obtain, the greater the chance for a microgrid to be deployed, especially in a timely fashion. And since that is the goal outlined in SB 1339, Option 1 is the only ***real solution*** of the three.

Part of the rational for Option 2 delineated in the Staff Proposal concludes, "Pacific Gas and Electric (PG&E) and San Diego Gas and Electric (SDG&E) do not currently cite the added/special facilities section of Rule 2 as a barrier to microgrid development."[3] The Clean Coalition counters that just because the IOUs do not actively view this as a barrier does not mean that it cannot and should not be improved for the most efficient deployment of microgrids under Rule 2. A specified list of generation control devices for each IOU as part of their special facilities electric rule makes it abundantly clear to ratepayers or interested third parties exactly what is necessary to deploy a microgrid via a special facilities agreement. In this aspect, SCE has currently positioned itself ahead of PG&E and SDG&E; if the other two create their own lists and collaborate, the regulatory process can be considered a success (so long as there is additional stakeholder participation to verify the comprehensive nature of the lists).

The result of implementing Option 1 throughout the IOU service territory is that including additional added/special facilities owned by the electric utility sets the stage for Community Microgrids. The same questions about microgrid controls and IOU-ownership of assets in a multi -parcel microgrid will need to be answered for microgrids covering large swathes of the

[2] Montecito Community Microgrid Initiative, https://clean-coalition.org/community-microgrids/montecito-community-microgrid-initiative/
[3] Staff Proposal, Page 6

distribution grid. Beginning that process during Track 2 will only facilitate a much-needed conversation that will certainly be continued during future tracks of this proceeding.

2. *In response to the Staff Proposal's recommendation, should the Commission adopt Option 2? If not, what modifications should the Commission consider?*

The Commission should not adopt Option 2 based on the Staff recommendation. Instead the Electric Rule should be modified to include an addendum with a list of microgrid controls (including DERMS and ADMS)[4] and requirements for paired storage. Importantly, since SB 1339 specifies there shall be no subsidies for fossil fuel generation, an electric utility should not be allowed cost recovery for the purchase of fossil fuel assets, even if those assets will be controlled as part of the microgrid.

3. *Is Option 2 reasonably tailored to support the broader statutory goal of SB 1339 to facilitate the commercialization of microgrids?*

No, it is not reasonably tailored. Explanation above.

a. *Would adoption of Option 2 prevent utilities from developing microgrids per Section 8371.5?*

It would inhibit the development of Community Microgrids. As mentioned in the Staff Proposal, the City of Berkeley was unable to create their own Community Microgrid, despite extensive effort and resources because of limitations in Rule 2. Adoption of Option 2 — asking PG&E to make no changes — would extend the status quo and leave an existing impediment in place. Doing so would cater to the IOUs while ignoring the tangible evidence about the difficulties of deploying microgrids that require utility participation.

b. *Would adoption of Option 2 cause unintended barriers to construction of other types of microgrids? If so, please discuss.*

Yes, requiring SCE to amend their Electric Rule 2 would inhibit the creation of any sort of Community Microgrid. With the current over-the-fence rule (PUC §218), the most likely iteration of a Community Microgrid is one where the relevant IOU owns the electrical

[4] Distributed Energy Resource Management System & Advanced Distribution Management System

infrastructure and operates the microgrid.

c. *Would adoption of Option 2 prevent cost shifting per the requirements of Section 8371(b) and (d).*

No comment.

4. *Is there anything more the Commission should consider about revising Rule 2 to allow the installation of microgrids as added/special facilities? Should the Commission consider alternative approach to ease barriers to the development of added/special facility microgrids?*

As part of Option 1 the Commission might consider an addendum adding rules for specific types of microgrids for behind the meter (BTM) microgrids, front of the meter (FOM) microgrids, multi-customer microgrids, and master metered microgrids.

5. *Do Pacific Gas & Electric Company (PG&E) and San Diego Gas & Electric Company's (SDG&E) respective Rule 2 added/special facilities sections present barriers to development of these types of microgrids as written? If so, how would they need to be amended to support construction of these types of microgrids?*

No comment.

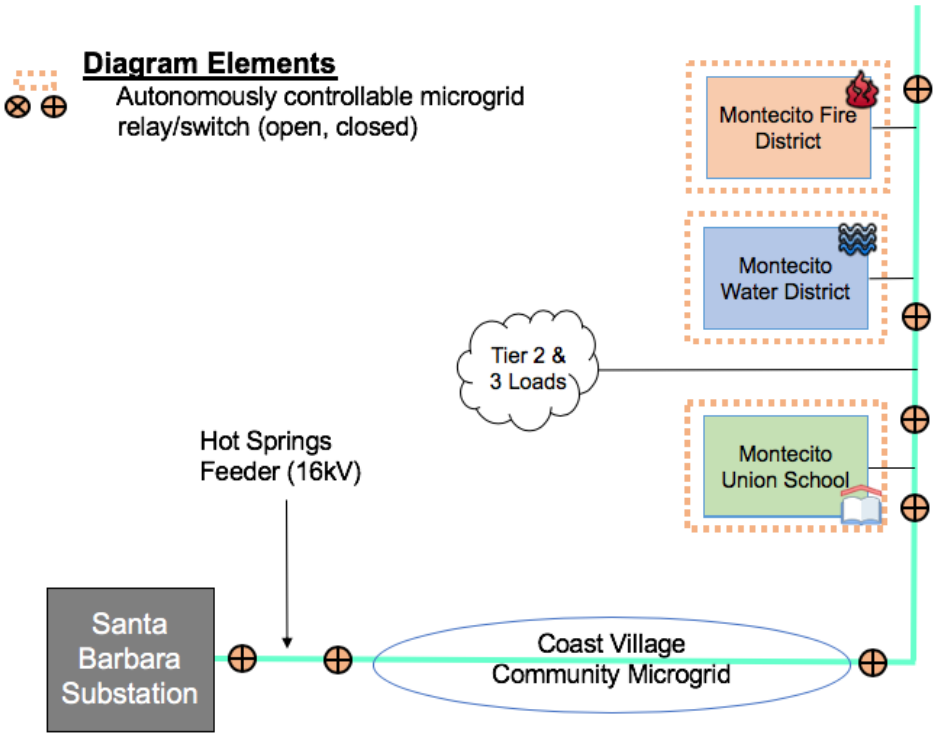
6. *What other considerations should the Commission give toward revising Rule 2, to explicitly allow the installation of microgrids as special facilities?*

Adding a specific section for microgrids would add the most clarity.

b. Proposal 2: Direct the Utilities to Revise PG&E Rule 18, SCE Rule 18 and SDG&E Rule 19 to Allow Microgrids to Serve Critical Customers on Adjacent Parcels

1. *In response to Proposal 2 to revise PG&E Rule 18, SCE Rule 18 and SDG&E Rule 19, please indicate support or opposition to Option 1, Option 2, or Option 3 and explain your support or opposition.*

Clean Coalition supports Option 1 exempting critical facilities owned by municipal corporations from Rule 18 (and SDG&E Rule 19) as an important step towards reducing the stranglehold that the over-the-fence rule creates on multi-parcel microgrids. Such a change would unlock the true potential of the Montecito Community Microgrid Initiative (MCMI). As demonstrated by the block diagram below, the three sites for the MCMI are all located on the same feeder, making them a perfect site for a Community Microgrid. Due to the over-the-fence rule, the only way to create achieve resilience for all three sites is with BTM microgrids.



Block diagram for the Montecito Community Microgrid

Because the site of the Montecito Fire District and the Montecito Water District are adjacent properties, the Rule 18 exemption would allow the two facilities to supply each other with energy during an outage, leading to increased resilience for both sites. If one site does not have the capacity to procure sufficient energy onsite to sustain 100% of the load, the adjacent site can pick up the slack. Importantly, Option 1 does not require either critical facility to become an electric cooperative, which would place an undue burden on agencies not created or intended for the distribution of energy to shareholders/members.[5] Option 1 increases the case for resilience,

[5] California Public Utilities Code § 2776

while setting the stage for Community Microgrids. If implemented, all that is needed to achieve a true Community Microgrid is IOU participation and reclosers to allow the Montecito Union School (down the feeder) to island with the two other critical facilities.

Considering the definite benefits from exempting critical facilities from Rule 18/19, there is no reason to set limits, especially not arbitrary limits like those in Option 2. During the August 5 workshop, staff clarified that the initial limit of 10 microgrid projects "within the three IOU's territory," mentioned in Option 2 applies to all of the IOUs (combined), not ten projects in each IOU's service territory. When asked for clarification about how this number was chosen, staff could provide no reasoned answer and instead asked participants to opine in written comments. The number ten appears to be completely random; it is not evenly divisible among the IOUs and there is no apparent link between the proportion of expected projects and the number of critical facilities in each IOU service territory. It is also unclear whether the proposed cap has anything to do with the number of critical facilities in California or the number or critical facilities located in high fire threat areas. Considering that staff is recommending this option, the apparent selection of a number chosen at random for a project cap and the lack of clarity as to what that number represents is surprising. That alone overwhelmingly makes Option 2 the wrong choice.

Even more so, the suggestion that once the project cap is reached the onus returns to the Commission to change the limit defies logic. The entire purpose of this proposal is taking decisive regulatory action in a safe and limited fashion, knowing that the intent of the Commission will not be perverted in any way. The proposal **only** applies to municipal corporations, not even extending to all critical facilities. Clean Coalition understands the reasoning behind this; the Commission intends to take verify that a small step works — one where there is no chance of skirting the rules for profit — before considering any widespread changes. But if that was indeed the intention behind the proposal then why create a seemingly random number for a project cap? And why is there no timeframe for the Commission to increase or remove the limit after it is met? In a world where the Commission adopts Option 2, it is a reasonable outcome that the project cap will be met and the Commission chooses not to increase the limit or waits six months before even considering the issue again. In all fairness, the Clean Coalition is willing to hazard a guess that neither of those proposed scenarios would actually come to fruition. However, Option 2 imposes multiple safety measures — created in a

seemingly arbitrary fashion — when the Proposal itself is a built-in safety mechanism that will prevent any result that strays from the original intent with which it was created. Thus, Option 1 is the premier choice of the three.

2. *In response to the Staff Proposal's recommendation, should the Commission adopt Option 2? If not, what modifications should the Commission consider?*

The Commission should most certainly not adopt Option 2. If the Commission wishes to review the results of Option 1, the Clean Coalition suggests an addition of a mandatory report by each IOU at the end of six months (or a year).

3. *Is Option 2 reasonably tailored to support the broader statutory goal of SB 1339 to facilitate the commercialization of microgrids?*

No. It creates random limits that do not facilitate the commercialization of microgrids and restricts the resilience benefits for critical facilities.

4. *What other considerations should the Commission give toward revising Rule(s) 18 and 19?*

The Commission should consider extending the exemption beyond one parcel. Currently, as soon as a Qualifying Facility delivers electricity beyond one parcel, the generator is required to become an electric corporation.

5. *Is a subscription limit of 10 microgrid projects within the three IOU's territory sufficient? If not, what should the limit be? Discuss your reasoning for the new number. Alternatively, if 10 microgrid projects is sufficient, please discuss support.*

The proposed subscription limit is not sufficient nor is it necessary. There should not be a limit, there should be a review process to verify that the lack of a project cap is working without flaw.

6. *Currently, the subscription of projects is limited by the number of projects. Is there another unit to consider and if so, what amount of unit? Please justify your answer.*

Answered above. A period of time following a review process should be implemented, not a cap that would disallow future projects from deploying until the limit is raised.

7. *Would the adoption of Option 1 or 2 cause unintended barriers? If so, what are they and how should the proposal be amended to avoid such unintended barriers? Please provide justification for your answer.*

No comment.

8. *Critical information facilities are included in the list the IOUs are required to develop and maintain pursuant to D.19-05-042.2 Are there other critical facilities or facilities that should be considered but are not part of D.19-05-042's list? Please justify your response.*

In the age of the COVID-19 pandemic, food banks should be considered critical facilities.

9. *Do you agree with the Staff Proposal's recommendation that the utilities should file a Tier 2 advice letter to implement the changes to Rule(s) 18 and 19? Please justify your response.*

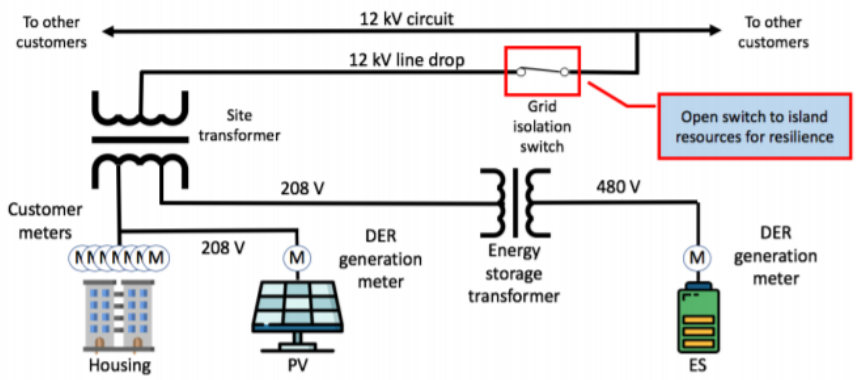
The Clean Coalition supports this. Increased accountability is a good practice and gives the parties in this proceeding an opportunity to determine how effectively a decision is being carried out.

c. Proposal 3: Direct the Utilities to Develop a Standardized Tariff for Combinations of Rule 21 Compliant Technologies

Proposal 3 is a good start but does not approach the requirements of SB 1339 or the priorities detailed in the scoping memo. To achieve those goals, there should be a conversation about the creation about a standard tariff for microgrids in California as well as a Value of Resilience tariff. The Proposal 3 options only extend to BTM solar+storage microgrids not any type of FOM Community Microgrid. A standard tariffs for all types of microgrids is the only true way to facilitate the commercialization of microgrids.

1. *In response to Proposal 3 to develop a standardized rate schedule for combinations of technologies that are eligible for interconnection under Rule 21 and together comprise a microgrid, please indicate support of or opposition to Option 1, Option 2, Option 3, Option 4, and/or Option 5. Explain your support or opposition.*

Clean Coalition supports Option 1, which creates a new rate schedule with the least restrictions, creating a rate schedule that sets the stage for Community Microgrids. A Community Microgrid requires the aggregation of DER, of which NEM resources are an essential portion. Adopting an option that caps enrollment or limits export would be accepting a wolf in sheep's clothing; it would lead to short term benefits but would actually create more impediments to the long-term future of microgrids in California. Both export and an increasing number of small microgrids are essential pieces for sectionalizing the distribution grid to increase resilience, while setting the stage for Community Microgrids. That leaves three Options: Option 1, Option 4, and Option 5. Of the three, Option 4 most closely retains the status quo by leaving the responsibility surcharges allocated to microgrid owners, which is problematic because those charges are one of the main barriers to widespread deployment of microgrids. BTM solar+storage microgrids are often not deployed because responsibility charges destroy the economics, when the microgrids provide the same benefits as a FOM Community Microgrid would. The diagram below, of the Clean Coalition's Valencia Gardens Energy Storage project, is a FOM energy storage system that increases the hosting capacity of the feeder it is interconnected to.



Potential long-term VGES resilience design

With a grid isolation switch, the VGES project becomes a FOM microgrid, providing tremendous benefit to the distribution grid. A BTM solar+storage microgrid providing the same benefits would not succeed due to the burden of responsibility charges. To incentivize the commercialization of microgrids that must change and BTM microgrids need to be valued for the services they provide. With that in mind, Clean Coalition is not opposed to Option 5, creating a Working Group. In fact, the Clean Coalition is of the opinion that Option 1 and Option 5 are complementary options, since Option 5 will take time and would benefit from reviewing

progress made while Option 1 is in effect.

2. *In response to the Staff Proposal's recommendation, should the Commission adopt Option 4? If not, what modifications should the Commission consider?*

Of the options for Proposal 3, Option 4 is the fourth best option; Option 1 and 5 should be implemented rather than Option 4. The Commission should consider the addition of a Value of Resilience tariff or some kind of bonus for critical facilities exempt from Rule 18/19 via Proposal 2 that share electricity with a neighboring parcel in the case of an emergency. Page 36 of the Concept Paper includes a discussion of resilience, including the Clean Coalition VOR123 initiative. It uses the phrase:

> The determination and prioritization of what is included in each tiered category of load to be powered for what duration of time will vary from microgrid to microgrid depending on local needs (Clean Coalition n.d.). An example of such a prioritization schedule is below:
> • Tier 1 - Critical load, for example 10-15% of total load: Life-sustaining or crucial to keep operational during a grid outage
> • Tier 2 - Priority load, for example 15-20% of total load: Important but not crucial to keep operational during an outage
> • Tier 3 - Discretionary load, for example 65-75% of total load: Remainder of the total load.[6]

Indefinite renewables-driven backup power, whether that power sustains just the critical load, or the critical load and the priority load is extremely valuable. The diagram below demonstrates the Clean Coalition's precise methodology used to determine an exact price for the suitable amount of electricity needed to be considered resilient.

[6] Concept Paper, Page 36

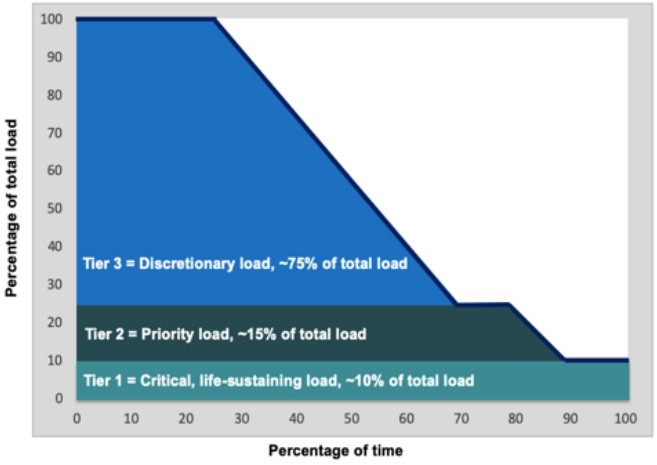
Load tiering and valuing resilience ("VOR123" methodology)

Clean Coalition

With respect to valuing resilience, there are different VOR levels for each of the three load tiers. The following valuation ranges are typical for most sites:

- **Tier 1**: 100% resilience is worth approximately 3 to 5 times the normal price paid for electricity. In other words, indefinite energy resilience for critical loads is worth 3 to 4 times the normal price paid for electricity. Given that the typical facility has a Tier 1 load that is about 10% of the total load, applying the low side of the Tier 1 VOR multiplier typically yields a 20% adder to the pre-resilience electricity rate.
- **Tier 2**: 80% resilience is worth approximately 1.5 to 3 times the normal price paid for electricity. In other words, energy resilience that is provisioned at least 80% of the time for priority loads is worth 1.5 to 2.5 times the total, so applying the low side of the Tier 2 VOR multiplier yields a 7.5% adder on top of the pre-resilience electricity rate.
- **Tier 3**: Although a standard-size solar microgrid can provide backup power to Tier 3 loads a substantial percentage of the time, Tier 3 loads are by definition discretionary, and therefore, a Tier 3 VOR multiplier is negligible and assumed to be zero.

Taken together, the Tier 1 and Tier 2 premiums for a standard load tiering allocation yields an effective VOR of between 25% and 30%. Hence, **the Clean Coalition uses 25% as the typical premium that a site should be willing to pay for indefinite renewables-driven backup power to critical loads** — along with renewables-driven backup for the rest of the loads for significant percentages of time.



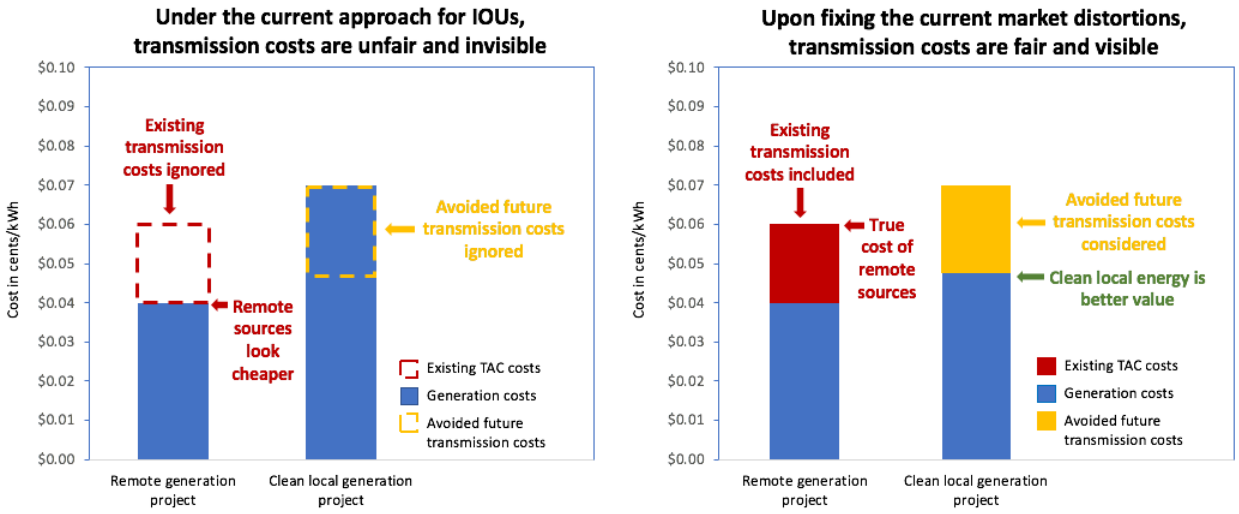
Average anticipated resilience, in terms of percentage of time online:
- Tier 1: 100%
- Tier 2: 80% (at least)
- Tier 3: 25% (at least)

In the Clean Coalition's experience, the total premium a facility is willing to pay for renewables-driven backup power to critical loads 100% of the time (and backup for other loads a significant percentage of the time) is 25% on top of the normal rate of energy. A 25% adder is a very substantial number, especially when resilience is not even being discussed as part of the CPUC proposal for a new microgrid rate schedule. As has been noted throughout Clean Coalition comments in this proceeding, as well as the comments of other parties (namely GPI), resilience is a central value proposition of microgrids and must be considered in order to reduce barriers to commercialization of microgrids.

3. *What other considerations should the Commission give in its consideration of developing a single, standardized rate schedule to govern microgrids and all their component technologies?*

Clean energy distribution level projects have inherently added costs via Transmission Access Charges (TAC), which are metered at the customer meter rather than at the transmission-distribution substations. The result is that all energy is charged for using the transmission grid,

even when it is produced BTM and never leaves the distribution grid.



Existing transmission costs, currently averaging 2¢/kWh, should be added to the cost of remote generation that requires use of the transmission grid to get energy from where it is generated to where it is used. Future transmission investments, currently averaging 2.5¢/kWh in the evenings, can be avoided via dispatchable local generation, and that value should reduce the evaluated cost of local generation. When correctly considering ratepayer impacts of transmission costs, dispatchable local generation provides an average of 4.5¢/kWh of better value to ratepayers than is currently assumed in the majority of instances.

This proceeding is about facilitating the commercialization of microgrids, which requires an accurate assessment of the costs allocated to microgrids. Like other aspects of this Track and the greater proceeding, failing to consider important issues here only increases the challenge of deploying Community Microgrids in an efficient manner.

4. *Should the Commission require that projects eligible for a single, standardized microgrid rate schedule meet any specific performance standards when operating as a microgrid, such as a minimum duration of islanding capability? If so, which specific performance standards should the Commission require and how should they be evaluated for the purpose of determining eligibility for the rate schedule?*

Microgrids eligible for the new rate schedule should be required to have at least one renewable component. The goal of SB 1339 is to facilitate renewables-driven microgrids, not subsidizing fossil fuel in any way. Allowing all microgrids to use the new rate schedule, regardless of their greenhouse gas emissions would be a mistake that perpetuates the exact type of future California is striving to avoid.

5. *Are Options 1-5 reasonably tailored to support the broader statutory goal of SB 1339 to facilitate the commercialization of microgrids while meeting other statutory requirements, including the requirement to avoid cost shifting?*

There should be a discussion of eliminating — or at the very least reducing — standby charges and nonbypassable charges, especially for microgrid owners only using the power for emergency backup power. Similarly to the way the federal government incentivized the sale of electric vehicles offered a $7,500 tax credit for the first 200,000 EVs an automaker sells (which then tapers off as more are sold), the CPUC should exempt all BTM microgrids in each IOU service territory for a year after this decision.[7] Alternately, the first hundred projects in each service territory could be exempt from these charges — a necessary step to stimulate the market and post a sign that microgrids are the future.

6. *For Options 1-5, is adequate time allowed to accomplish tasks?*

Yes, there is adequate time, especially if the Commission adopts Option 1 in the interim while the study period for Option 5 is taking place.

7. *For Options 1-4, is the proposed individual project size cap of 10 megawatts in Options 1-4 appropriate? If not, what amount would be appropriate and why?*

Yes, this is a reasonable cap since the microgrids in question will generally be smaller-sized projects interconnected via the distribution grid. However, a new tariff needs to be created to achieve the commercialization of microgrids and enable Community Microgrids.

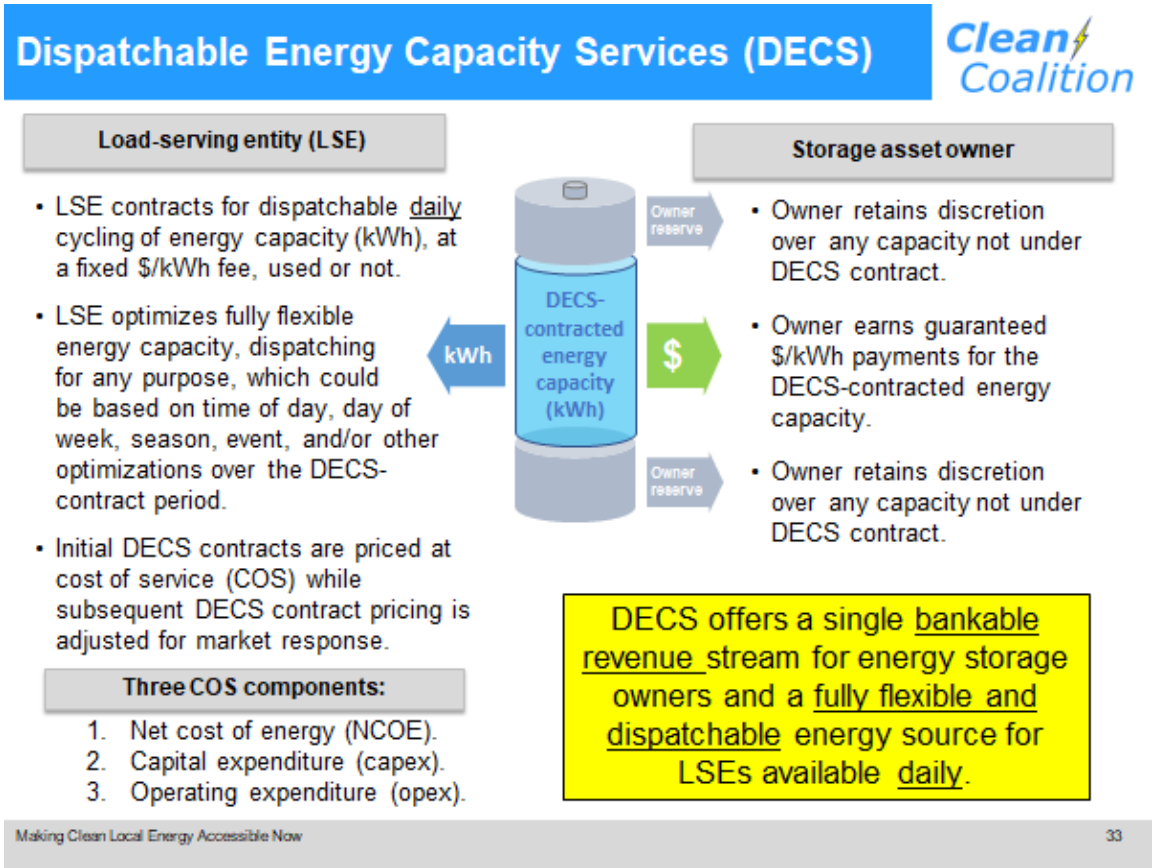
8. *For Options 1-3, would allowing exemptions from cost responsibility surcharges, represent cost shifting prohibited by SB 1339?*

No, it does not represent cost shifting if the resilience created by the microgrid is a public good, especially if it helps procure backup power for a critical community facility. In that case, it is reasonable to be ratebased, with exemptions from cost responsibility surcharges.

9. *For Options 1-3, is it reasonable to allow a microgrid facility to be exempt from non-bypassable charges in return for providing resiliency services to critical facilities?*

[7] https://www.reuters.com/article/us-tesla-results-subsidies-factbox/factbox-electric-vehicle-subsidies-under-pressure-in-some-tesla-core-markets-idUSKBN1ZS1H9

Yes, this is a reasonable option and should be expanded further to providing resilience to the utility or an entire feeder through a contract for resilience. The Clean Coalition initiative, Dispatchable Energy Capacity Services (DECS) is a market mechanism that will allow a load serving entity (LSE) to offtake clean, local, renewable energy when they need it. An LSE contracts with an energy storage system owner to reserve a certain portion of the daily SOC for use, whether that is for demand response, resilience, or another purpose. For the project owner, DECS improves the internal rate of return ("IRR") by offering a guaranteed method of economic benefit, while also retaining the freedom to use the rest of the capacity not contracted for under DECS.



In the long term, DECS is exactly the type of market mechanism needed to unleash the untapped value that Community Microgrids (and other two-parcel microgrids) can provide in the form of fully dispatchable renewable energy. Improving the IRR can transform CMs from financially feasible projects to financially attractive projects.

10. *For Options 1-3, would allowing an interim period in the early commercialization of microgrids during which critical resilience projects can be exempted from specific cost responsibility surcharges be in the public interest? Explain your answer.*

Yes, this would be an effective method to incentivize the widespread deployment of microgrids throughout the state. Moreover, should the Commission choose to adopt the combination of Option 1 and Option 5, the working group could use the results of this period to determine a long-term rate schedule with exemptions from cost responsibility surcharges.

11. *For Options 1-3, should there be a different method for accounting for the public benefit provided by microgrids when they support critical facilities, other than exempting them from non-bypassable charges?*

No comment.

12. *For Options 1-3, are the criteria for determining cost responsibility surcharge exemptions presented in Table 3-3 reasonable? Please justify your answer.*

No comment.

13. *For Options 1-3, are the definitions and requirements presented in Table 3-4 reasonable? Please justify your answer.*

There should be an option for microgrids only used for emergency backup power. Those microgrids should be exempted from all three indefinitely.

14. *For Option 3, is the statewide enrollment cap of 1,200 megawatts an appropriate amount? If not, what amount would be appropriate and why?*

There should be evidence of a need for a cap before creating one — a key reason Option 3 is should not be adopted. The combination of Option 1 and Option 5 should not require a cap. It seems more appropriate to use a fact-finding period to determine if there is a need for a cap rather than imposing one at the onset of the proposal. Moreover, if the Commission adopts the Clean Coalition proposal to use Option 1 and Option 5 as complementary, it would be most effective to begin the period of Option 1 without any cap and determine if one is necessary by the time that Option 5 is fully implemented.

15. *For Option 3, is the method for allocating a statewide enrollment cap of 1,200 megawatts according to load share appropriate? If not, what alternative allocation method should be used?*

N/A

d. Proposal 4: Direct the Utilities to Develop a Microgrid Pilot Program.

The ideal microgrid pilot program is a critical community facility Feed-In Tariff (FIT), similar to the FIT the Clean Coalition designed for the City of San Diego.[8] If widespread deployment and commercialization of microgrids that meet the criteria of the pilot program is the goal, a FIT is the best method to achieve that at the proper market rate.

1. *In response to Proposal 4 to direct the utilities to develop a microgrid pilot program, please indicate support or opposition to each of the options. Explain your support or opposition.*
   a. LSEs: Clean Coalition supports Option 2, a competitive process to select a program administrator to oversee the program to all customers. While it is imperative to have IOU input in the process and the design/implementation of each project, having a fair and neutral third party to guide the process is surely the most effective method to achieve success with the pilot programs.
   b. Funding source: Option 2 will ensure less cost shifting. Since these pilot projects are creating a public benefit, it is reasonable to suggest cost recovery. If only limited to the specific county, as specified in Option 1, it is likely projects developed in low-income areas would create a greater burden on the community compared to all distribution customers shouldering the burden.
   c. Project Eligibility: Option 2 creates a setting similar to a FIT, not limiting a project due to different configurations or resources. It is likely that Option 1 would result in pilot projects being deployed that are very similar in nature, diverging from the SB 1339 goal of commercializing microgrids.

[8] https://clean-coalition.org/san-diego/feed-in-tariff/

d. Project Subscription Limit: Of the two options, Option 2 pressures the market for the best solutions rather than setting a cap. The Staff rational for Option 1 is that it might encourage projects to deploy early (and is sufficient for analysis). Like Proposal 2, there is no explanation for the decision to choose 15 projects for the cap and it appears that the number applies to all three IOU territories. The number was apparently chosen without any forecast of potential demand or the reality of a timeline for a project to be deployed. More importantly, not having a cap on the number of projects does not limit review from occurring; if anything, it encourages review on a more diverse number of projects. Thus Option 2 is a superior choice. In combination with Proposal 4, section c (Option 2), Option 2 of this section creates conditions that are very similar to a FIT — just one without the market responsive pricing that the Clean Coalition favors. While the Clean Coalition primarily favors a FIT (as mentioned above), the combination of these two options is certainly the second be options.

e. Utility Infrastructure: Option 1 allows for a more diverse range of pilot projects, including FOM microgrid pilots, which are important for setting the stage for Community Microgrids. Moreover, since PG&E already offers funding via the CMEP program, Option 1 levels the playing field among the three IOUs.

2. *Should the Commission adopt Staff's recommended options? If not, what modifications to Staff's recommended options should the Commission consider?*

The Commission should adopt section b, Option 2, rather than the Staff recommendation of Option 1. Staff rational suggests that Option 1 will reduce cost shifting from one county to another, but in reality, there will always be some amount of cost shifting due to rate recovery. The fact remains that Option 1 actually favors counties with wealthy communities that will have less trouble shouldering a slight increase in rates due to pilots being developed compared to the burden low-income and disadvantaged communities will face. The result is that less projects will be developed in socio-economically disadvantaged communities. Option 2 makes the total cost increase less and incentivizes development in low and disadvantaged communities since the public good will benefit the residents locally.

3. *Is Proposal 4 reasonably tailored to support the broader statutory goal of SB 1339 to facilitate the commercialization of microgrids?*

Yes, it is.

4. *To support the public health and welfare for disaster response mitigation and resiliency efforts, should the Commission authorize rate recovery for such a pilot program?*

Since the pilot programs will provide a reasonable public good, it is reasonable to ratebase it and authorize rate recovery.

5. *What other considerations should the Commission give to support the development of a utility microgrid pilot program?*

The Commission should look for variety in projects, including FOM microgrids in addition to BTM critical facility microgrids as well as projects that deploy different types of energy storage systems.

6. *How should the utilities track costs associated with the actions the Commission orders utilities to undertake pursuant to the staff proposal?*

No comment.

7. *Are there other options that have not been listed and should be? If so, please discuss the option(s) that should be considered. Include as much detail as possible.*

Existing projects not finished with interconnection or deployment should be allowed to participate in the pilot program. Under Option 2 of Section C, these projects would be approved quickly. Furthermore, a critical facility Community Microgrid (e.g. the MCM) should be allowed as a pilot program with utility ownership and operation of infrastructure assets.

8. *Are there any other objectives and goals that should be included? Alternatively, are there any that should be excluded? Please provide justification.*

No comment.

9. *Are there any other project criteria that should be included? Alternatively, are there any that should be excluded? Please provide justification.*

No comment.

10. *Are there any other community criteria that should be included? Alternatively, are there any that should be excluded? Please provide justification.*

No comment.

11. *Are there any technology performance criteria that should be included? Alternatively, are there any that should be excluded? Please provide justification.*

No comment.

12. *Is the cost cap per project of $15 million reasonable? If not, please provide another amount estimate and justification for that amount.*

This amount is reasonable.

13. *Is the requirement to reach commercial operation by January 31, 2022 reasonable? If not please provide another deadline and justification for that date.*

This date is only reasonable with a significant amount of utility participation, which is another reason why a neutral third party needs to be in charge of the program. Importantly, said third party must have the necessary power in order to compel an IOU to cooperate; if an electric utility is not actively involved in the process of deploying a microgrid, especially a Community Microgrid or a FOM microgrid, it will not be deployed in a timely manner (or at all).

14. *There is a milestone of June 1, 2022 or six months after the commercial operation date of the last project to conduct a cost-effectiveness analysis. Is this date reasonable? Please provide justification.*

This is a reasonable date.

15. *Do you agree with staff's proposal that the IOUs file a Tier 3 Advice Letter to implement this program? Please justify your response.*

This is a reasonable requirement.

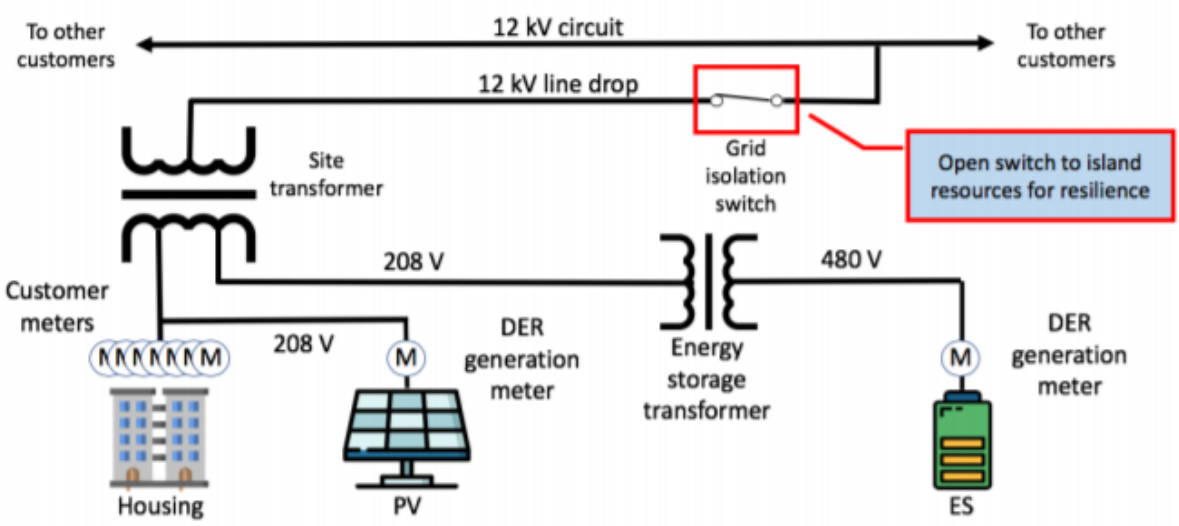
e. Proposal 5: Direct the Utilities to Conduct Pilot Studies of Low Cost Reliable Electrical Isolation Methods

1. *In response to Proposal 5 to direct the utilities to conduct pilot studies of low cost reliable electrical isolation methods, please indicate support or opposition to Option 1 or Option 2. Explain your support or opposition.*

Clean Coalition strongly supports Option 2, which requires the electric utilities to consider all types of islanding technology, including grid isolation switches and other line-segment sectionalizing equipment. Smart meters are a proven technology and are rapidly being introduced via the Rule 21 proceeding; the IOUs should be a part of the transition, verifying that AMI can indeed be used effectively for islanding capabilities while considering the greater grid. Setting the stage for Community Microgrids requires seamless control of the entire distribution grid, will undoubtedly require sectionalizing of certain feeders and the creation of alternate pathways. Since the IOUs are already researching and improving their capabilities in these areas for better outage and PSPS management, Option 2 is the optimal option.

Option 2 not only encompasses the use grid isolation technology for BTM microgrids, but also how grid isolation technology can be used to create microgrids. In the Clean Coalition's VGES project, the installation of FOM energy storage creates the necessary conditions for a FOM microgrid.[9]

[9] https://clean-coalition.org/community-microgrids/valencia-gardens-energy-storage-project/



Potential long-term VGES resilience design

As the diagram demonstrates, in addition to the BTM solar sited on the Valencia Gardens Apartment Complex, there is also FOM PV and a newly installed energy storage system on the 12 kV line drop. With one grid isolation switch at the location demarked by the red square, the entire area would be turned into a FOM microgrid, potentially increasing the hosting capacity of the entire feeder in the process.[10] Even as a partner with the Clean Coalition in this project, PG&E was not overly eager to consider the idea of grid isolation and islanding capabilities; Option 2 would ensure that the best interests of the grid and the ratepayers are considered, which is a necessity. In addition, the possibility of reducing the cost of energy storage where generation is present is an important step towards broad deployment of microgrids throughout the state.

2. *Should the Commission adopt Option 2 under Proposal 5? If not, what modifications should the Commission consider?*

Yes, the Commission should adopt Option 2.

3. *Is Proposal 5 reasonably tailored to support the broader statutory goal of SB 1339 to facilitate the commercialization of microgrids?*

Proposal 5 is mostly reasonable tailored to support the statutory goals listed in SB 1339, though in the interest of time, the Commission should consider existing pilot programs to glean lessons learned rather than trying to reinvent the wheel.

[10] When the Clean Coalition identified the location for the VGES project, the entire feeder had about 35 kW of hosting capacity (it was red on the ICA maps). The VGES energy storage system increases the hosting capacity of the feeder; an islandable microgrid has the potential to further increase that hosting capacity.

4. *To support the public health and welfare for disaster response mitigation and resiliency efforts, should the Commission authorize rate recovery for such a pilot study?*

No comment.

5. *What other considerations should the Commission give to support the development of a utility pilot program to evaluate low-cost, reliable electrical isolation methods?*

For some of the islanding technology, the necessary pilots already exist and should be used. VGES is a good example, as is RCAM, the Redwood Coast Airport Microgrid.

6. *Are the proposed expenditure cap and proposed program criteria reasonable? Are there additional program criteria that should be included?*

No comment.

7. *Are there additional approaches, beyond those discussed in Option 1 and Option 2, to provide low-cost, reliable electrical isolation that should be considered for the proposed pilot program?*

Electrical isolation should be considered for large grid areas, including entire feeders, to set the stage for Community Microgrids.

IV. CONCLUSION

The Clean Coalition appreciates the opportunity to submit these comments in response to the Staff Proposal and Concept Paper. However, just as in Track 1, there is too much business-as-usual small steps that will not achieve the goals in SB 1339, nor will it suitably enable Community Microgrids. Refusing to allow the basic principles in the Concept Paper to guide the creation of policy and regulation without any explanation is unreasonable and stifles progress needlessly. Hopefully the Commission will change this and take more ambitious steps.

/s/ BEN SCHWARTZ
Ben Schwartz
Policy Associate
Clean Coalition
1800 Garden Street
Santa Barbara, CA 93101
Phone: 626-232-7573
ben@clean-coalition.org

Dated: August 14, 2020