

DOCKETED

Docket Number:	19-ERDD-01
Project Title:	Research Idea Exchange
TN #:	236771
Document Title:	Microgrid Resources Coalition Comments on Diesel Alternatives Workshop
Description:	N/A
Filer:	System
Organization:	Microgrid Resources Coalition
Submitter Role:	Public
Submission Date:	2/12/2021 4:39:06 PM
Docketed Date:	2/12/2021

*Comment Received From: Microgrid Resources Coalition
Submitted On: 2/12/2021
Docket Number: 19-ERDD-01*

MRC Comments on Diesel Alternatives Workshop

See attached document

Additional submitted attachment is included below.

February 12, 2021

Honorable David Hochschild, Chair
California Energy Commission
1516 9th Street
Sacramento, CA 95814



RE: Docket 19-ERDD-01 Microgrid Resources Coalition Comments on Workshop to Discuss Research into Clean Energy Alternatives to Diesel Backup Generator Systems

Dear Chair Hochschild,

The Microgrid Resources Coalition (MRC) commends the California Energy Commission for its leadership in recognizing the crucial role that distributed generation and alternative fuels will play in the state's clean energy economy. Microgrids and clean generation technologies will allow California to achieve multiple public policy goals, including increased equity, resiliency, and sustainability.

Formed in 2013, the Microgrid Resources Coalition (MRC) is a non-profit organization comprised of owners, operators, developers, suppliers, and investors in the microgrid industry working together to promote the widespread implementation of microgrids through laws, regulations, and tariffs that support microgrid access to the market, compensation for services, and a level playing field for deployment and operation.

The MRC appreciates the opportunity to provide comments on the workshop as the Commission develops the scope of future research efforts under the Electric Program Investment Charge (EPIC) program to commercialize clean energy alternatives to diesel backup generator systems. Based on the commentary and presentations from the workshop, the MRC shares the following observations and recommendations with the Commission:

- There is a multitude of clean technology alternatives to diesel generation from a variety of solutions providers that are available today
- More progressive energy policy and regulation is needed to develop robust market signals and provide pathways for third parties to monetize and commercialize these clean technologies
- The Commission should provide specific recommendations on the record to the Public Utilities Commission on how to commercialize microgrids
- EPIC research should focus on how to modernize and decarbonize California's gas infrastructure
- The Commission should consider the creation of an EPIC-funded diesel generator replacement program to jumpstart the mass retirement of inefficient and polluting generators across the state in favor of cleaner alternatives

There is a multitude of clean technology alternatives to diesel generation from a variety of solutions providers that are available today

As Helia pointed out, a diverse vendor ecosystem is key to growth. From microgrid developers to linear generator and fuel cell manufacturers utilizing bioenergy, hydrogen and alternative fuels, the diversity and innovation of California cleantech companies was on full display at the workshop. There is a

multitude of clean technology alternatives to diesel generation that are available on the market today from a variety of solutions providers that can meet the unique needs of different customers around the state.

Onsite generation and microgrids with diverse resources can provide a number of benefits to customers and the grid during “blue sky” conditions when the grid is operating normally, as well as during “black sky” conditions when the grid is stressed from extreme conditions. Multiple presenters highlighted the need for hybrid architecture and fuel flexibility in microgrid innovation. Microgrids with a mix of renewables and clean fuel resources can provide dispatchable capacity to serve load with clean, efficient, local generation that reduces the amount of load needed to be served by faraway power plants and vulnerable transmission lines that may be de-energized in hazardous conditions. Local microgrids and onsite generation will ensure California constituents maintain reliable power and communities are made more resilient in the face of outages and climate change.

More progressive energy policy and regulation is needed to develop robust market signals to monetize and commercialize microgrids and clean generation

Multiple speakers highlighted the importance of progressive policy and regulation in overcoming the barriers and challenges of developing microgrids. As Form Energy, Schneider Electric, and Microsoft all emphasized, the bankability and commercialization pathway for microgrids and clean generation should be made as smooth as possible. The ability to monetize microgrids and clean generation assets is crucial to the successful deployment of these resources and will bring significant private capital to bear if a clear monetization pathway is prioritized, reducing costs for all ratepayers.

Commercializing microgrids can be achieved by developing robust tariffs and rate schedules for microgrids that properly value and compensate grid services, reliability, and public resiliency benefits. Financial risk can be mitigated by providing dependable revenue streams for these assets in the form of tariffs, capacity payments and other replicable contracting mechanisms that provide certainty to the market. That is the key to scaling these beneficial technologies and monetizing them so they can be deployed widely across the state with ratepayers reaping the benefits of private capital investment to help share and reduce the cost of clean energy resources. Tariffs promote cost sharing, not cost shifting.

The MRC recommends that the Commission provide a thorough report to the Public Utilities Commission that is entered into the formal record outlining all the case studies and demonstration projects the Energy Commission has already funded and studied through EPIC. The Commission should provide data validation and neutral verification that microgrid technologies are safe and provide the clear value to ratepayers and communities that was demonstrated in the EPIC pilots to de-risk these technologies and give the Public Utilities Commission confidence that they can be safely deployed at scale.

Additionally, the Energy Commission should provide specific recommendations on the record to the Public Utilities Commission in Track 3 and 4 of the microgrids rulemaking R.19-09-009 on what regulatory reforms are necessary to commercialize microgrids. This should include a waiver of departing load and standby charges for microgrids and a clear allowance for microgrid customers to share power with connected neighbors, even if it crosses a right-of-way, without triggering public utility status or Rule 18 limitations. These regulations were designed for the grid of the past and serve as major barriers to the commercialization of microgrids and clean generation technologies that are needed to modernize and decarbonize our grid for the 21st century.

The Energy Commission could also help advance the progress of several EPIC-funded pilot projects like Oakland’s EcoBlock project and the Lancaster Advanced Energy Community microgrid that are currently struggling to move forward as originally designed by providing clear direction to the IOUs and Public

Utilities Commission that ratepayer funded pilots approved by the Energy Commission should not face the same legal and regulatory barriers as regular projects.

The MRC appreciates that the Energy Commission and Public Utilities Commission coordinate on some efforts but feel that a formal record must be established to foster stronger communication between the agencies and a better understanding of what has already been funded and piloted by the Energy Commission so as to avoid reinventing the wheel and wasting valuable implementation time. A record should be developed that demonstrates the viability and safety of microgrids so that they can achieve full commercialization and provide the complete suite of benefits to ratepayers and the grid that they are technically capable of providing.

EPIC research should focus on how to modernize and decarbonize California's gas infrastructure

As demonstrated in the workshop by multiple presenters, low and zero emission fuels, such as hydrogen and bioenergy resources, will supplant the use of fossil fuels that are used today to help integrate higher penetrations of intermittent renewables. The strategic decentralization of the state's power system through the proliferation of microgrids and onsite generation with clean energy and flexible fuel resources will allow California to make forward progress on its aggressive decarbonization goals, instead of going backwards by continuing the proliferation of diesel for resilience or delaying the retirement of old centralized gas plants for reliability.

Modernizing and decarbonizing the already existing gas infrastructure with cleaner fuels will enable the development of cost-effective, reliable generation and energy storage. It will not replace intermittent renewables, but as Mainspring Energy points out, it will complement these resources by firming capacity to increase their reliability. It is possible to achieve deep decarbonization and meet the state's 2045 clean energy goals while ensuring grid reliability and resiliency today.

The path forward for California requires a diverse set of technologies to enable a clean, reliable, and affordable transition. Schneider Electric outlined the pathway for this transition to shift from diesel to natural gas to biogas and hydrogen as technology advances and costs fall over time. The MRC strongly agrees with this transition plan as it represents a logical progression forward towards meeting California's goals without compromising grid reliability and other benefits that thermal energy resources can provide.

The MRC agrees with One Grid Energy Solutions, Bloom Energy, Jack Brouwer of the University of California Irvine, and others that recommended the Commission leverage the EPIC program to innovate new ways of utilizing the gas infrastructure instead of rendering it a stranded asset and cost burden for ratepayers by abandoning or banning the use of it. The gas system can be utilized for energy storage, as well as the integration of bioenergy, hydrogen, and other fuels to decarbonize the system. The MRC believes that California can and should decarbonize the gas grid in the same aggressive manner the state has sought to decarbonize the electric grid. Further research would be beneficial in understanding how the electric and gas grids can be harmonized and work together to achieve our clean energy and reliability goals in an affordable, equitable and consumer-friendly manner.

The Commission should consider the creation of an EPIC-funded diesel generator replacement program

Commissioner Douglas and Commissioner Scott asked two great questions during the Q&A session: What are some of the actions that could unlock greater innovation to meet the state's clean energy standard and to the extent that the state can unlock non-diesel opportunity, what could be done by this summer?

The MRC respectfully recommends that the Commission create an EPIC-funded diesel generator replacement program to jumpstart the mass retirement of inefficient and polluting generators across the state in favor of cleaner alternatives to diesel. The program could function similarly to the successful federal initiative, Cash for Clunkers, to retire old automobiles after the Great Recession as a means of economic stimulus and reducing air pollution from the transportation sector.

Given the EPIC program plan for the next 5 years is being developed now, earmarking a percentage of funds to be dispersed each year for clean generation alternatives would be a powerful motivation for customers in all sectors to swap old diesel generators for cleaner alternatives. The program could be launched this year as a 5-year pilot to offer a meaningful runway for technology providers and customers to work together to evaluate different clean generation options. A 5-year pilot will provide certainty that program funding will be available over a longer period of time and avoid a “gold rush” that often ensues when a one-time incentive is offered, resulting in only those with the means to apply early receiving funds.

If the goal is not to perpetuate a long-term reliance on backup diesel, which the MRC strongly agrees with, the Commission must take meaningful action and commit to developing programs that will yield long-term results. PSPS events are going to be utilized by the IOUs indefinitely. The state cannot and should not wait for them to upgrade their poorly maintained infrastructure. Customers are not waiting. Generator use has skyrocketed in California. The Commission should acknowledge the reality of consumer actions and respond accordingly. A diesel generator replacement program would be a worthy investment for the state in its quest to achieve its clean energy and carbon reduction goals.

Conclusion

The MRC appreciates the opportunity to provide comments on the workshop and looks forward to collaborating with the Commission to reduce the state’s reliance on diesel generation and accelerate the adoption of clean generation technologies that will allow California to meet its aggressive decarbonization, equity and resiliency goals in an affordable and cost-effective manner.

Respectfully submitted,



Allie Detrio

Senior Advisor
Microgrid Resources Coalition
allie@reimagine-power.com