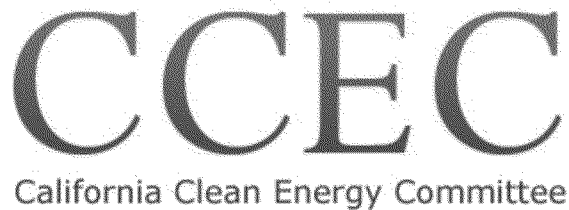


**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking To
Enhance the Role of Demand
Response in Meeting the State's
Resource Planning Needs and
Operational Requirements.

Rulemaking 13-09-011
(Filed September 19, 2013)

**RESPONSE BY THE CALIFORNIA CLEAN ENERGY COMMITTEE TO
PHASE TWO FOUNDATIONAL QUESTIONS**



December 12, 2014

Eugene S. Wilson, Legal Counsel
Chris Marnay, Microgrid Design of Mendocino LLC
Gerry Braun, The IRES Network

CALIFORNIA CLEAN ENERGY COMMITTEE
3502 Tanager Avenue
Davis, California 95616-7531
Voice: 530-756-6141
Fax: 530-756-5930
Email: wilson1224@gmail.com

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RESPONSE BY THE CALIFORNIA CLEAN ENERGY COMMITTEE TO PHASE TWO FOUNDATIONAL QUESTIONS

Pursuant to the November 14, 2013, Joint Assigned Commissioner and Administrative Law Judge Ruling and Scoping Memo (Scoping Memo), setting forth the procedural schedule and addressing the scope of this proceeding, the California Clean Energy Committee (CCEC) respectfully submits this response to the phase two foundational questions.

1. Introduction

We, as members of the Committee, wish to advise the CPUC and parties to this and related proceedings that we will later submit a letter concerning the need to fully integrate all clean resources with the grid, as this objective is central to our concerns. CCEC goes into this proceeding somewhat reluctantly as we are concerned about the stove-piping of this and related energy proceedings, a matter we will address in our letter.

While we are participating in this proceeding, our focus is much more on the broader integration issues involving demand response and other desirable clean energy resources; further, we believe others are interested in contributing to such a broader discussion. Our state seeks major changes in both supply- and demand-side systems to meet AB 32 and other goals; however, the structure of CPUC proceedings is fragmented, *de facto* precluding the scope of dialog and debate that we believe is needed. California seeks methods and processes that enable the integration of all clean energy resources to fully enable its low carbon footprint future.

California has the opportunity to take the initiative in DR and to exert

renewed leadership. With respect to the specific issues raised in the Scoping Memo, the CCEC offers the following comments—

- We recommend that any “bifurcation” between utility/customer side services and CAISO services fully enable provision of demand response services by locally-controlled systems including microgrids and other entities that emerging technology is making feasible.

2. Bifurcation Fails to Recognize the Unique Contribution Microgrids Make to Demand Response

Bifurcation would fail recognize the critical contribution of localized demand response assets. A true microgrid or a building energy management and control system (EMCS) can manage an electrical system locally and present it to the legacy, centralized electricity supply system or *megagrid*, as an integrated and balanced entity or serve local distribution needs, which we loosely call a *microgrid* here. The bifurcation paradigm proposed by the scoping order risks failing to properly recognize, monetize, or compensate for services by such an entity and by other locally-controlled systems.

Under the scoping order concept for bifurcation, demand response programs would be bifurcated into supply-side and demand-side resources. Supply-side resources may include large-customer load reduction or aggregated load reduction that would be sold into CAISO markets and purchased by load serving entities. If a microgrid’s local demand response resource meet relevant requirements (e.g. minimum size), it would be able to participate in such a market at the grid tie. However, where generation and load are intentionally balanced behind a master meter, such a locally-controlled entity’s contribution to overall system balancing would not be compensated, but it would “lean” less on CAISO for related balancing services. For example, when cloud cover reduces

photovoltaic output, the microgrid will reconfigure its assets in accordance with economic and other incentives producing whatever corresponding reduction in load it finds desirable. Such local attenuation of renewable variation is effectively “neutralizing” if it takes on the local balancing obligation freeing CAISO. Alternatively, the microgrid could provide services to the macrogrid, which should be properly compensated.

Entities providing such local (microgrid) and macrogrid services need special recognition in this demand response proceeding, as they may be neither a single traditional customer nor an aggregator in the traditional sense. The demand response and other services microgrids will provide may or may not be bid into a DR market. Microgrids are in fact able to provide a more complex product that should be recognized and rewarded as such. For example, rather than being considered a DR resource, perhaps the microgrid’s controlled interface to the megagrid could be directly incented. The net effect at the microgrid’s meter could be a relatively consistent or even responsive load. Consequently the load served by the microgrid may not sell DR into a CAISO market most productively, but rather provide a more integrated service, e.g. low load variance. Demand-side programs, as conceived in the Scoping Memo, would presumably consist of funding incentives for permanent load shifting or tariffs which would likely not compensate fast-response load balancing or more comprehensive load services within a microgrid.

Bifurcation into supply-side and demand-side DR resources fails to recognize the unique contribution of local systems, EMCS, and microgrids. The issue of bifurcation should encompass the question of how, both technically and business-wise, a decision impacts or enables small resources to be beneficially aggregated and optimized, both at the local level and at larger scales, all the way up to the statewide level. Microgrids need a place in this ecosystem, both in the

DR markets and this proceeding. Microgrids offer an alternative localized path to meeting our State's objectives that should be addressed and enabled.

True microgrids are locally-controlled energy systems that are able to function both as grid-connected entities and as electrical islands. Most importantly here, they locally control resources of multiple types, on both supply and demand sides. The microgrid may then presents itself to the megagrid, as a single controlled, locally integrated, physical and economic entity.

As many current projects throughout the state demonstrate, (e.g. the SCE living pilot, Alameda County's Santa Rita Jail, U.C. San Diego campus, and SDG&E's Borrego Springs project) localized and integrated microgrid solutions offer powerful ways to enable all resources that fit the local context, its customers, and its needs, to provide benefit by local integration and operation of preferred resources. While our focus here is on the grid services microgrids can provide, the driver currently accelerating local/microgrid deployment is both economics and resiliency. The resiliency objective derives from the consequences of multiple recent natural disasters such as Japan's 2011 earthquake and tsunami and Hurricane Sandy.

Failing to provide full flexibility and monetization for demand response services provided by microgrids would create an obstacle for entities and entrepreneurs developing such projects. The environmental and economic benefits that microgrids provide to the grid should be rewarded. Microgrids can be flexible and cost competitive. Revenue streams should be allowed to flow through to microgrids, which are expected to expand exponentially over the next few years. Microgrids are a key pathway for the movement from a vulnerable and unsustainable, centralized power system to a decentralized, locally-integrated system. Microgrids and other localized solutions are a key tool to enable stakeholder buy-in at the local level. However, the business model requires

recognition of economic benefits.

3. Back-Up Generators

We respectfully suggest that it is unwise to declare D.11-10.003 off-limits in this proceeding. While back-up generators (BUGS), especially single-cycle diesels certainly have undesirable properties, excluding them entirely from the asset fleet should not be the role of the CPUC. Local air quality management districts (AQMDs) issue permits to BUGs with conditions that reflect their risk to AQ within their jurisdiction, and the CPUC should respect their determinations. Further limiting BUG use is effectively usurping the jurisdiction of the AQMDs. In general, while BUGS are dirty generation sources compared to California's relatively clean resource mix, they are nonetheless small contributors to urban air pollution compared to mobile sources. The CPUC should not unilaterally ban them from participation in the state's supply mix, but rather trust local AQMDs, which are familiar with local pollution problems, to establish appropriate permit conditions. If these rules allow BUGS to participate in microgrids integrated with other local assets, and these in turn can deliver valuable products to open markets, then the CPUC should not bar their entry.

4. Recommendations

We recommend—

- That the bifurcation scoping order require a determination of what technical, market, and regulatory arrangements are necessary for microgrids to join DR markets and adopt appropriate incentive structures for the most cost-beneficial integration and optimization of preferred resources and microgrids.
- That the stated aim of the proceeding include the free and fair inclusion of

all preferred resources in resource planning and provide for their freedom to participate in all markets in order to maximum cost-effective resource implementation

- That local integrated entities of all preferred resources be explicitly addressed in the bifurcation of this proceeding, whether they are true microgrids or other local organizations as complementary and supplemental opportunities.

Determining the cost allocation is not the central issue in our view. The main question should be how are the products provided to the megagrid defined, e.g. should predictable load at the point of common coupling (PCC) be considered a service?

Respectfully submitted,

CALIFORNIA CLEAN ENERGY COMMITTEE

Dated: December 12, 2013

/s/ Eugene S. Wilson

EUGENE S. WILSON, ESQ.
Attorney for California Clean Energy Committee
3502 Tanager Avenue
Davis, CA 95616
Voice: 530-756-6141
wilson1224@gmail.com