

DOCKETED

Docket Number:	22-RENEW-01
Project Title:	Demand Side Grid Support Program
TN #:	244248
Document Title:	National Fuel Cell Research Center Comments - on the proposed Demand Side Grid Support Program Guidelines
Description:	N/A
Filer:	System
Organization:	National Fuel Cell Research Center
Submitter Role:	Public Agency
Submission Date:	7/29/2022 1:17:09 PM
Docketed Date:	7/29/2022

*Comment Received From: National Fuel Cell Research Center
Submitted On: 7/29/2022
Docket Number: 22-RENEW-01*

NFCRC comments on the proposed Demand Side Grid Support Program Guidelines

Additional submitted attachment is included below.



July 29, 2022

VIA ELECTRONIC FILING

California Energy Commission
Docket Unit, MS-4
Docket No. 22-RENEW-01
715 P Street
Sacramento, CA 95814-5512

**Subject: DOCKET NO. 22-RENEW-01: Staff Workshop for the Demand Side Grid
Support Program Draft Guidelines**

The National Fuel Cell Research Center (NFCRC) respectfully submits comments on the proposed Demand Side Grid Support Program Guidelines (“Guidelines”) to the California Energy Commission (“Commission”), in response to the request for feedback from the July 25, 2022 workshop.

I. Introduction

The NFCRC facilitates and accelerates the development and deployment of fuel cell technology and systems; promotes strategic alliances to address the market challenges associated with the installation and integration of fuel cell systems; and educates and develops resources for the power and energy storage sectors. The NFCRC was established in 1998 at the University of California, Irvine by the U.S. Department of Energy and the Commission in order to develop advanced sources of power generation, transportation and fuels and has overseen and reviewed thousands of commercial fuel cell applications.

II. Comments on the Demand Side Grid Support Program and Guidelines

The Commission should ensure that the Guidelines differentiate between low- and zero-emission resources and diesel generators.

The NFCRC applauds the Commission's urgency in releasing the Guidelines to address California's energy reliability needs. We ask that the Guidelines for procurement of resources in the Demand Side Grid Resources Program ("Program") include provisions to ensure that cleaner technologies - that can provide reliability during extreme events and permanent load reduction throughout the year - be procured before traditional generation resources, such as back up diesel generators. Operating diesel backup generators for even short periods can have significant impacts on human health and the environment. The Program addresses extended grid outages that can be caused by increased extreme weather events, wildfires and other circumstances, making it especially important for the State to procure resources that can provide reliable, resilient power for as long as needed without causing these harmful effects. Fuel cell systems can support the state's efforts to safely enhance the energy supply and address extreme outage events, no matter their duration, through this Program.

The effects of climate change have taken a toll on energy system planning. And, due to the effects of climate change, the list of events that might cause an energy disruption has expanded to include Public Safety Power Shutoffs; heat-related grid events that might impact transmission and simultaneously increase demand; limited water availability which impacts hydroelectric output; wildfires that disrupt service; and smoke from wildfires that might impact output from solar arrays.

This Program can result in bold actions that meet the challenges described above if procurement priority and higher incentive levels are given to clean distributed energy resources, like fuel cells, that provide permanent reliability as well as resilience. Cleaner technologies are not yet cost competitive with older, combustion resources like diesel generators that have a well-established first mover advantage in the power markets and more than a century of cost-reduction investment advantage. By modifying the Guidelines to support the deployment of clean firm power sources,

such as fuel cell systems, the State’s energy planners will be able to ensure that they are able to address heatwaves, extreme fire conditions, and diminishing output from either hydroelectric resources or smoke-covered solar arrays.

We recognize the importance of ensuring that the State can keep the lights on during net peak periods when the electric grid might be significantly strained due to a combination of factors. While an “all of the above” approach may be necessary at this juncture, the State would best serve its residents and businesses by first calling upon resources that align with our long-term climate and air quality goals and provide load reduction. The resilient and reliable nature of fuel cells will enable the State to add capacity in a meaningful way that also aligns with the state’s most ambitious emissions and air quality targets.

By adjusting the Guidelines to incentivize permanent load reduction by simply adding a requirement that prioritizes low emission, cleaner solutions for extreme events and throughout the year, before relying upon diesel generators, the State will still be able to protect the health and safety of its citizens from criteria pollutants, better preserve the environment from diesel pollution of its air and water and remain on its current trajectory towards a zero-carbon energy sector by 2045. The inherent fuel flexibility of fuel cells allows for a non-disruptive energy transition (e.g., from low GHG emissions with natural gas to zero GHG emissions with renewable hydrogen and biogas) while also addressing air quality issues throughout the entire transition.

III. Closing Comments

The NFRC appreciates the opportunity to comment on the Guidelines and seeks modifications that will keep Californians safe during extreme events, while supporting our climate and clean energy goals every day. Thank you for consideration of this important request.

Respectfully submitted,

_____/s/_____

Dr. Jack Brouwer
Director
National Fuel Cell Research Center
University of California, Irvine
Irvine, CA 92697-3550
Tel: 949-824-1999 Ext. 11221
E-mail: jb@nfcrc.uci.edu