

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

IN THE MATTER OF THE APPLICATION OF  
SAN DIEGO GAS & ELECTRIC COMPANY  
(U902M) FOR APPROVAL OF ITS ENERGY  
STORAGE PROCUREMENT FRAMEWORK  
AND PROGRAM AS REQUIRED BY DECISION  
13-10-040.

AND RELATED MATTERS.

Application 14-02-006  
(Filed February 28, 2014)

Application 14-02-007  
Application 14-02-009

**RESPONSE OF THE CALIFORNIA HYDROGEN BUSINESS COUNCIL TO THE  
SCOPING MEMO AND RULING OF THE APPLICATION OF SAN DIEGO GAS &  
ELECTRIC COMPANY (U902M) FOR APPROVAL OF ITS ENERGY STORAGE  
PROCUREMENT FRAMEWORK AND PROGRAM AS REQUIRED BY DECISION 13-  
10-040 AND RELATED MATTERS**

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FRAMEWORK AND PROGRAM AS REQUIRED BY DECISION 13-10-040 AND RELATED  
MATTERS”**

Pursuant to the California Public Utilities Commission’s (“Commission”) Rules of Practice and Procedure and the rulings of the Assigned Commissioner, the California Hydrogen Business Council (CHBC)<sup>1</sup> submits its comments in response to the Scoping Memo and Ruling (CAP/CEK/EK4 5/27/2014) of the application of San Diego Gas & Electric Company for approval of its energy storage procurement framework and program as required by Decision 13-10-040 and related matters.

Considering the significant market opportunity for energy storage technology in California, the members of the CHBC are concerned that CPUC staff is inadvertently limiting the technology options for energy storage, thus reducing pathways for utilities and ratepayers to utilize some of the most cost-

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<sup>1</sup> The California Hydrogen Business Council consists individual members and the following company members: Air Liquide Advanced Technologies U.S., American Honda Motor Co., Ballard Power Systems, Bay Area Air Quality Management District, BMW North America, California Air Resources Board, California Fuel Cell Partnership, Clean Energy Fuels, Community Environmental Services, Freudenberg-NOK, FuelCell Energy, General Motors, Golden State EPC, GrupTelko, GTM Technologies, H2Safe, Humboldt State - Schatz Energy Research Center, Hydrogen Frontier, Hydrogenics Corporation, Hyundai Amercia Technical Center, Intelligent Energy, ITM Power, Johnson Matthey Fuel Cells, Longitude 122 West, National Renewable Energy Laboratory, NEL Hydrogen, Nuvera Fuel Cells, Paramount Energy West, Plug Power, Power+Energy, PowerDisc, Powertech Labs, Proton Onsite, Rio Hondo College, SAFCell Inc, South Coast Air Quality Management District, Southern California Gas Company, Terrella Energy Systems, The Linde Group, Total Transportation Services, Toyota Motor Sales, Trillium Energy Systems, United Hydrogen Group, VNG, Western Hydrogen, Zero Carbon Energy Solutions.

effective and versatile technology options currently commercially available, particularly with regard to bulk storage.

1. CHBC would like to point out that the discussion document makes no reference to energy storage systems (a system capable of storing energy through electrical, mechanical, chemical or thermal processes for use at a later time) that store energy for use in a form other than grid electricity, while both electricity transmission and distribution grids are mentioned several times. For example, there is no reference made to the natural gas grid. The CHBC suggests allowing energy storage options that go beyond the standard grid-storage-grid model.

Therefore, the CHBC recommends that in:

Section 5.2 (4) *An “energy storage system” shall do one or more of the following:*

*(A) Use mechanical, chemical, or thermal processes to store energy that was generated at one time for use at a later time*

of the phrase “for use at a later time” be interpreted to mean use either on the electricity grid, the natural gas grid, for transportation fuels, or other energy uses.

2. *Section 5.2 (4) 1.a Q2* – Interpretation of “generated”: The CHBC considers that any of the three options would permit Hydrogen Energy Storage. However, we encourage including in the examples of the narrowest definition (iii. electrical energy only from the grid) be expanded to include electrolysis from the grid.
3. *Section 5.2 (4) 1.b. Q3* - The CHBC is confident that the broad interpretation of ‘use’ suggests that the stored energy is ‘used to enable any useful activity or function’ includes alternative approaches, like Power-to-Gas, but a clearer definition would create certainty.
4. *Section 5.2 (4) 1.b. Q4* – Interpretation of “use”: The CHBC advocates the “broad interpretation” here (any activity) which includes for example, controlled charging/fueling of any electric vehicles, (including hydrogen fuel cell electric vehicles) from the grid, but the stored energy is used off the grid for transportation.

Also, under the “narrow” interpretation, dispatchable load with storage, such as electrolyzers with hydrogen storage, absorb energy from the grid and impact the later state of the grid by shifting load to match grid requirements.

5. Finally, while the basic definitions of energy storage system do not appear to exclude Hydrogen Energy Storage or Power-to-Gas, none of the use cases include hydrogen. The CHBC strongly recommends that Hydrogen Energy Storage be included in the use cases specified in **Table 1: Broad**

**Interpretations** with specific applications for use of:

- a. Hydrogen as Fuel Cell Electric Vehicle fueling
- b. Biogas methanation for renewable natural gas
- c. Direct injection into the natural gas grid
- d. Fueling fuel cells for power generation
- e. Electrolysis to hydrogen to storage to grid electricity
- f. Hydrogen feedstock for refining

that would qualify under the CHBC’s recommended definitions for Q2 and Q4.

The CHBC appreciates the opportunity to provide feedback to the CPUC’s discussion document and looks forward to work with CPUC on enabling all energy storage technologies to compete in California.

Best regards,



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California Hydrogen Business Council