STATE OF CALIFORNIA — Public Utilities Commission
San Francisco

M e m o r a n d u m

Date: May 15, 2009

To: The Commission
(Meeting of June 18, 2009)

From: Pamela Loomis, Director
Office of Governmental Affairs (OGA) — Sacramento

Subject: **AB 1110 (Fuentes) – Cogeneration.**
As Introduced February 27, 2009

LEGISLATIVE SUBCOMMITTEE RECOMMENDATION: OPPOSE UNLESS AMENDED

SUMMARY OF BILL:

This bill would modify the definition of "cogeneration" to apply more widely to fuel cell technologies by changing the term "power production" to "generation of electricity." The bill would also reduce the minimum thermal efficiency requirements to be considered cogeneration from 42.5% to 40%, specifically for fuel cells.

SUMMARY OF SUPPORTING ARGUMENTS FOR RECOMMENDATION:

The CPUC recognizes the author's and sponsor's intent to encourage the development of the state's fuel cell market. However, the CPUC is concerned the bill would have unintended consequences to the state's policy direction related to greenhouse (GHG) emissions reduction goals, the Self-Generation Incentive Program (SGIP), and the qualifying facility (QF) Program. This bill would also create administrative and regulatory complexities related to the definition of cogeneration for non-fuel cell applications. In addition, the bill's combination of changing the definition of cogeneration and lowering the thermal efficiency requirements would allow lower efficiency fuel cells to access the gas schedule designed for high efficiency cogeneration.

SUMMARY OF SUGGESTED AMENDMENTS:

If the goal is to promote more fuel cell adoption for California, the CPUC believes there are two approaches that might be more appropriate than changing the statutory definition of cogeneration. The first would be to modify Public Utilities Code Section

454.4 to allow fuel cells' simultaneous production at lower efficiency to qualify for that rate. It is already within the CPUC's authority to create a fuel cell tariff under this code section. The second would be to adjust the upfront incentive to fuel cells through the SGIP program in order to compensate manufacturers. The CPUC would likely only take either of these steps if presented with a compelling showing by fuel cell proponents that there would be significant benefits of these approaches.

DIVISION ANALYSIS (Energy Division):

- Lowering the minimum efficiency level to 40% for fuel cells runs counter to the goals of the California Air Resources Board (ARB) Scoping Plan under AB 32 for cogeneration. The ARB Scoping Plan for AB 32 requires 6.8 million metric tons (MMT) of reductions from cogeneration; the lower efficiency requirement proposed in this bill would make it harder to accomplish this goal. One of the CPUC's GHG reduction strategies is to encourage highly efficient cogeneration. Lowering the efficiency threshold means that more technologies would be able to participate, but at the cost of failing to achieve the level of GHG reductions per unit of cogeneration that the CPUC is counting on new cogeneration to deliver. In fact, the CPUC and the California Energy Commission (CEC) are currently engaged in the process of considering an increase in the minimum efficiency requirements for cogeneration, and the state would be sending mixed or negative signals with the exception proposed in this bill.

- The state's existing definition of cogeneration is consistent with the federal standards as defined under the Public Utility Regulatory Policy Act (PURPA). This bill would result in an inconsistency between the CPUC and the Federal Energy Regulatory Commission (FERC) definitions of cogeneration. This would result in confusion amongst parties who participate currently or in the future in the state's Qualifying Facility (QF) Program, but are unable to qualify as a QF at FERC because of the difference in definition or efficiency standards. Implementing this change in efficiency may also result in uncertainty associated with the CPUC's most recent QF Decision (D. 07-09-040) which could result in a further delay of the release of the QF standard offer contracts.

- The changes in the definition of cogeneration that are intended to make it more fuel-cell friendly would have minimal practical benefit and create needless subdivisions within the term "cogeneration." There are multiple cogeneration technologies, but currently they all must meet the same basic definition and efficiency requirements. However, the proposed definition change, would essentially allow fuel cells to qualify for a preferable cogeneration gas schedule/tariff (Public Utilities Code Section 454.4) without modifying that actual section of the code.

- The proposed definition change would encourage the development of less efficient power on the grid, contrary to the state's GHG reduction goals. The lower efficiency levels would result in more natural gas being catalyzed by fuel cells or combusted by non-fuel cell technologies, which would lead to an increase of GHG emissions. This

is contrary to the goals set forth in the CARB Scoping Plan under AB 32 and the CPUC/CEC joint GHG Decision recommending policies for the electricity and natural gas sectors.

- The bill would add administrative and regulatory complexity to SGIP. The CPUC currently provides up front incentives for fuel cells via the SGIP program. If the efficiency requirements were lowered, then less efficient fuel cells would be eligible to participate in the program at the current incentive levels. The CPUC would then need to determine if the less efficient technologies warrant the same level of incentives as the more efficient units, creating additional administrative and regulatory burdens on this program.

- The proposed efficiency change would create confusion and compliance problems for facilities that achieve the California efficiency standard and attempt to qualify as QFs. California's QF program uses the state's definition of cogeneration for its contracts, which is currently the same definition under PURPA. Thus, the bill would result in a different (lower) California definition than the PURPA definition, and this difference would need to be reconciled.

- The bill's combination changing the definition of cogeneration and lowering thermal energy efficiency will allow lower efficiency fuel cells to access the gas schedule designed for high efficiency cogeneration. Under Public Utilities Code Section 454.4, a cogeneration facility can receive a special gas schedule based on the quantity of gas actually consumed by the technology in the sequential production of electricity and steam/heat/useful work. Fuel cells are currently not eligible for this schedule; this bill would appear to be an attempt to allow lower efficiency fuel cells to access the gas schedule designed for high-efficiency cogeneration.

PROGRAM BACKGROUND:

- The ARB's Scoping Plan assumes significant emissions reductions resulting from increased penetration of efficient combined heat and power (CHP). In the plan, cogeneration (or CHP) is tasked with 6.7 MMT of reductions by 2020. This reduction will be very dependent upon how the state defines cogeneration and the efficiencies achieved from these resources given the fixed amount of industrial hosts that exist in California. Currently, the state has approximately 6,000 MW of generation from CHP. The different fuel cell efficiency standard will run counter to two different active efforts to achieve the Scoping Plan target. The CPUC and the CEC are developing a feed-in tariff under AB 1613 (Blakeslee, Chapter 713, Statutes of 2007) for small new CHP, including fuel cells. This feed-in tariff will create a simplified process to deliver excess generation to the grid from a CHP facility; the CPUC and the CEC are examining how to increase these efficiency levels under this program. Separately, the CPUC is designing a policy framework update for CHP (including fuel cells) to be launched this summer; the topic of GHG and efficiency of systems will be a major point of consideration.

- The CPUC currently provides up front incentives for fuel cells via the SGIP program. As created by AB 2778 (Lieber, Chapter 617, Statutes of 2006), SGIP provides incentives to support existing, new, and emerging distributed energy resources. SGIP functions as a peak-load reduction program; it provides rebates for qualifying distributed energy systems installed on the customer's side of the utility meter. As of January 1, 2008, qualifying technologies include wind turbines and fuel cells; prior to this change, SGIP included other CHP technologies.

- The proposed reduction in thermal energy efficiency could adversely impact the QF contract process. There are several pending issues in the QF standard offer contract about what product is being delivered. The proposed definitional change could potentially result in the need for clarification for the release of a new standard offer contract. The QF program currently has approximately 6,000 small (less than 1MW) facilities participating.

LEGISLATIVE HISTORY:

None

STATUS:

AB 1110 is currently pending on the Assembly Floor.

SUPPORT/OPPOSITION:

Support: Technet (sponsor)
Silverman & Light
Bloom Energy
California Manufacturers & Technology Association (CMTA)

Opposition: Southern California Edison (Oppose unless amended)
Pacific Gas & Electric (Oppose unless amended)

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Date: May 27, 2009

BILL LANGUAGE:

BILL NUMBER: AB 1110 INTRODUCED
BILL TEXT

INTRODUCED BY Assembly Member Fuentes

FEBRUARY 27, 2009

An act to amend Section 216.6 of the Public Utilities Code, relating to energy.

LEGISLATIVE COUNSEL'S DIGEST

AB 1110, as introduced, Fuentes. Cogeneration.

Under existing law, the Public Utilities Commission has regulatory authority over public utilities, including electrical corporations, as defined. The existing definition of an electrical corporation excludes a corporation or person employing cogeneration, as defined, technology or producing electricity from other than a conventional power source for certain purposes.

This bill would revise the existing definition of cogeneration where the use of thermal energy follows the generation of electricity, to allow technologies that utilize thermal energy internally to increase overall electrical efficiency to not less than 40% high heat value, as established by the commission.

Vote: majority. Appropriation: no. Fiscal committee: no. State-mandated local program: no.

THE PEOPLE OF THE STATE OF CALIFORNIA DO ENACT AS FOLLOWS:

SECTION 1. Section 216.6 of the Public Utilities Code is amended to read:

216.6. "Cogeneration" means the sequential use of energy for the production of electrical and useful thermal energy. The sequence can be thermal use followed by ~~power production~~ *generation of electricity* or the reverse, subject to the following standards:

(a) At least 5 percent of the facility's total annual energy output shall be in the form of useful thermal energy.

(b) Where useful thermal energy follows ~~power production, the~~ *the generation of electricity, either of the following are true:*

(1) The useful annual ~~power~~ *electrical* output plus one-half the useful annual thermal energy output equals not less than 42.5 percent of any natural gas and oil energy input.

(2) The internal thermal use increases overall electrical efficiency to not less than 40 percent high heat value, as established by the commission.