

DOCKETED

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SoCalGas Comments on the 2018 – 2020 EPIC Investment Plan Draft Funding Initiatives

Additional submitted attachment is included below.



A  Sempra Energy utility

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California Energy Commission
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1516 Ninth Street
Sacramento, CA 95814-5512

**Subject: Comments on the 2018 – 2020 EPIC Investment Plan Draft Funding Initiatives,
Docket Number: 17-EPIC-01**

Dear Chairman Weisenmiller and fellow Commissioners:

Southern California Gas Company (SoCalGas) appreciates the opportunity to submit comments on the California Energy Commission's 2018 – 2020 EPIC Investment Plan Draft Funding Initiatives. We offer for your consideration the following comments and recommendations that we believe should be incorporated as appropriate into the EPIC Triennial Investment Plan.

Push Low-Carbon Microgrids Closer to Commercial Viability

SoCalGas recommends that, as part of its goal to establish commercial opportunities for microgrids, the CEC consider investment in demonstration projects of renewable gas from electrolysis, known as Power-to-Gas (P2G). Specifically, as part of "S2.2 Push Low-Carbon Microgrids Closer to Commercial Viability" under Theme 2 of the Investment Plan, there is an opportunity to include P2G demonstration projects for funding consideration.

P2G technology has the potential to provide a large-scale, cost-effective solution for storing excess energy produced from renewable sources. In the P2G process, excess renewable energy is used to electrolyze water to produce hydrogen gas. Like batteries, P2G technologies have excellent load-following capabilities, which are necessary to manage the intermittency of solar and wind resources. Unlike battery storage, however, P2G can store utility-scale quantities of energy indefinitely, without self-discharge. For example, wind power generated in March can be delivered into the high-value energy markets of August and September. These unique attributes have the potential to enable very high levels of renewable energy use while maximizing economic value.

Using P2G, energy from renewable sources, such as solar photovoltaic and wind generators, can be generated during periods of low demand for use in high demand periods. This can be effective in alleviating the "ramping" problem experienced by electric utilities in the afternoon and evening periods. Thus, P2G RD&D, including pre-commercial pilots and system modeling, could represent an important, high-value addition to the EPIC portfolio.

SoCalGas is currently demonstrating P2G projects at the National Renewable Energy Laboratory (NREL) in Golden, Colorado, and at the University of California, Irvine (UCI).¹ These demonstrations will assess the feasibility and potential benefits of using the natural gas pipeline system to store photovoltaic and wind-produced energy. In the European Union, more than 35 P2G facilities are already being planned, constructed, or operated.² These are referred to collectively as a “system solution” because of the added benefits of helping balance the grid and providing substantial energy storage capacity.

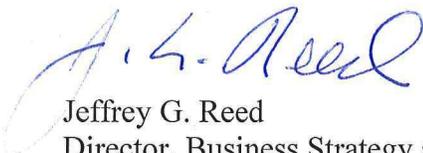
Conclusion and Supporting Comments

SoCalGas strongly believes that a diverse energy portfolio which includes multiple fuels and technologies is needed to meet California’s energy needs and environmental policies in a cost-effective manner. P2G provides an opportunity to enable long-term storage of large amounts of carbon-free power—which is critical for California to meet its ambitious climate goals. Investing in advancing the commercialization of P2G now will help move this technology to market, accelerating its adoption and its related benefits.

P2G can play an important role in integrating variable renewable generation. California is faced with an increasingly urgent need to deploy utility-scale energy storage solutions to support intermittent renewable power generation. As highlighted in a recent news article, CAISO reports that over 300,000 MWh of solar and wind electricity were curtailed in 2016, and that number will increase as additional rooftop solar is deployed.³ Battery storage technology alone is not sufficient to provide the energy storage California needs to meet its climate goals. As such, SoCalGas believes P2G should be evaluated rigorously by the CEC for its potential as a large-scale storage option, as well as its potential applications to microgrids.

SoCalGas appreciates the CEC’s consideration of these comments and looks forward to continuing to work on advancing California’s energy policy goals and objectives.

Sincerely,



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¹ <http://www.prnewswire.com/news-releases/socalgas-launches-first-power-to-gas-project-in-us-300064534.html>

² <http://www.europeanpowertogas.com>

³ <http://www.dailynews.com/environment-and-nature/20170318/heres-how-california-ended-up-with-too-much-solar-power>