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SoCalGas' Comments on Scoping Order

Additional submitted attachment is included below.



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January 25, 2017

California Energy Commission Dockets Office, MS-4 1516 Ninth Street Sacramento, CA 95814-5512

Subject: Comments on the Scoping Order for the 2017 Integrated Energy Policy Report, Docket Number: 17-IEPR-01

Dear Chairman Weisenmiller and fellow Commissioners:

Southern California Gas Company (SoCalGas) appreciates the opportunity to submit comments on the California Energy Commission's Draft (CEC) 2017 Integrated Energy Policy Report (IEPR) Scoping Order (Docket Number: 17-IEPR-01) dated January 2017. The CEC has the important task of implementing the goals of increased renewable energy and energy efficiency under SB 350, as well as providing recommendations for the development and use of renewable natural gas under SB 1383. We offer for your consideration the following comments and specific recommendations that we believe should be incorporated as appropriate into the 2017 IEPR and the public workshops on specific sectors. Our sections are numbered as in the Scoping Order:

3. Address Climate Adaptation and Resiliency

SoCalGas commends the IEPR's continuing commitment to considering climate change as a routine part of the energy planning process. We agree that increasing the resiliency of the state's infrastructure involves considering projected climate scenarios, local risks to extreme events, and tools to visualize and analyze the climate impacts. To that end, SoCalGas encourages the CEC to consider the benefits that natural gas infrastructure offers as a clean solution to manage the risks of climate change.

The vast majority of natural gas pipelines are underground, and so the infrastructure tends to be more resilient to extreme weather events. The natural gas system can also operate without electricity, continuing to serve customers even when other energy sources fail. The entire natural gas system was essentially intact after Hurricane Sandy, allowing residents with natural gas service to cook, heat their homes and use back-up generators, even in the midst of widespread blackouts. Distributed generation resources, including CHP systems, natural gas microturbines and fuel cells, can enhance the resiliency of the state's energy infrastructure. In the aftermath of Hurricane Sandy, natural gas-powered fuel cells kept many facilities operating by generating onsite power.

Weather extremes within California and across the country, including droughts and hurricanes, have shown that overreliance on a single energy source can create avoidable and unnecessary risks for the economy and public safety. Diversity in the state's energy portfolio is important for prudent risk management to support resiliency in the energy infrastructure as a climate adaptation strategy. SoCalGas encourages the CEC to work closely with natural gas infrastructure stakeholders in all aspects of the planning for, and development of, Climate Adaptation and Resiliency measures.

4. Develop Recommendations on Renewable Natural Gas

SoCalGas looks forward to working with the CEC to help develop recommendations for renewable gas in the transportation sector, the industrial sector and other potential applications.

As part of this work SoCalGas recommends that the CEC include an evaluation of renewable gas from electrolysis, known as Power-to-Gas (P2G). 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 run through water to produce hydrogen gas. This hydrogen can be used in transportation via fuel cells, or methanated and injected into the pipeline for traditional uses.

SoCalGas is currently demonstrating P2G projects at the National Renewable Energy (NREL) Laboratory 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 being planned, constructed, or operated². 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.

Decarbonized gas in the form of P2G can play an important role in integrating variable renewable generation by producing gas, and then storing it in the existing infrastructure for when it is needed to serve residential and commercial customers, or for electricity generation. As California is faced with an increasingly urgent need to deploy utility-scale energy storage solutions to support intermittent renewable power generation, P2G should be evaluated rigorously by the CEC for its potential as a large-scale storage option.

In addition, SoCalGas encourages the CEC to consider near-zero natural gas engines powered by renewable natural gas, as a way to reduce transportation sector GHG emissions. The California Air Resources Board's (ARB) Low Carbon Fuel Standard (LCFS) Program has identified renewable gas from existing organic sources as the lowest carbon intensity standard pathway

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

² http://www.europeanpowertogas.com

available, even lower than the current electricity mix or hydrogen. When sourced from dairies and organic waste diverted from landfills, renewable gas is rated as "carbon-negative" due to avoided methane emissions from dairies and landfills.

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. This will also enable climate change adaptation efforts to help protect the reliability of California's energy systems. Natural gas infrastructure supports resiliency in the energy sector and will continue to be instrumental in maintaining electric grid reliability, safety and security, especially as California continues to integrate an increased percentage of renewable electric energy. In addition, development and utilization of renewable gas and its use in ultra-low emission technologies can help further GHG reductions.

SoCalGas appreciates the CEC's consideration of these comments in the 2017 IEPR and look forward to continuing to work on advancing California's energy policy goals and objectives.

Sincerely,

/s/ Tim Carmichael

Tim Carmichael Agency Relations Manager Southern California Gas Company