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SoCalGas Comment letter for IEPR: Climate Adaptation & Resiliency

Additional submitted attachment is included below.



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California Energy Commission
Docket Office
1516 Ninth Street
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Subject: 2016 Joint IEPR Workshop on Climate Adaptation and Resiliency for the Energy Sector, Docket No.16-IEPR-04

Dear Commissioners:

The Southern California Gas Company (SoCalGas) and San Diego Gas and Electric (SDG&E) thank the California Energy Commission (CEC) for hosting the Joint Workshop, as part of the *2016 Integrated Energy Policy Report (IEPR) Update* proceeding, on June 21, 2016.

SoCalGas and SDG&E commend the agencies' urgency in taking climate change into account in planning and decision making to avoid high mitigation costs in the future. We agree that the resilience of the infrastructure and protecting the state's most vulnerable populations involves considering projected climate scenarios, local risks to extreme events, and tools to visualize and analyze the climate impacts.

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.

Weather extremes within California and across the country, including droughts and hurricanes, provide the following lesson: Over reliance on a single energy source can create avoidable and unnecessary risks for the economy and public safety. For example, the Oakland firestorm of 1991 and Hurricane Katrina in 2005 demonstrated why reliance upon electricity-driven water pumps was disastrous.

Hurricane Sandy provided another example where every system dependent on electricity was jeopardized, from the refueling pumps at gasoline stations to the water pumps for putting out fires. Natural gas-powered fuel cells that kept many facilities operating in the midst of surrounding blackouts during the aftermath of Hurricane Sandy provides a real world example of the importance of supply diversification.

Natural gas is a clean solution to manage the risks of climate change.

SoCalGas and SDG&E are committed to maintaining safety for its customers. As such, we are constantly improving upon our operational maintenance and inspection practices to increase the resiliency of our pipelines. It is important to note that since the natural gas system is mostly underground it is very resilient to extreme weather events. The entire natural gas system was essentially intact after Hurricane Sandy, allowing residents with natural gas service to support back-up generators, to cook and to heat their homes-- highlighting the importance of supply diversity.

According to the CEC staff paper on Potential Impacts of Climate Change on California's Energy Infrastructure and Identification of Adaptation Measures (Staff Paper),¹ "Climate change appears to have little impact on natural gas availability since most of the supply comes from basins located in Alberta, the Rockies, and the Southwestern United States. As supply of conventional natural gas declines in some regions, production from shale formations is expected to gradually increase. These sources of shale gas are also located in regions that cannot be affected by rising sea levels."²

Additionally, hydroelectric generation is at risk due to climate change. A dry and warming climate could result in a reduction of hydroelectric generation. Depending on the amount of rainfall in an average year, in-state hydroelectric generation accounts for about 12-20 percent of California's total electricity production.³ Unfortunately, given California's extreme drought conditions, California cannot rely on hydroelectricity to continue contributing to the state's electricity production at historical levels.

Furthermore, Natural Gas Vehicles (NGVs) have the potential to help the state meet both near-term and long-term environmental and petroleum reduction goals, particularly in the heavy-duty vehicles sector. The state can achieve GHG and NOx reductions through medium- and heavy-duty on- and off-road vehicles powered by near-zero emission natural gas engines.⁴ Converting heavy-duty vehicle fleets from diesel to natural gas can provide a way to meet California's air emission goals with a minimum of economic risk.

Distributed generation resources, like combined heat and power (CHP) systems, natural gas microturbines and fuel cells, can help manage electricity use and enhance the resiliency of the state's energy infrastructure.

Distributed generation resources offer a clean, flexible and efficient form of energy supply which should be leveraged to support an increasingly dynamic energy grid. Natural gas technologies, like CHP and fuel cells, are perfectly situated to support those developments.

¹ Potential Impacts of Climate Change on California's Energy Infrastructure and Identification of Adaptation Measures, CEC, Staff Paper, January 2009, CEC-150-2009-001.

² Potential Impacts of Climate Change on California's Energy Infrastructure and Identification of Adaptation Measures, CEC, Staff Paper, January 2009, CEC-150-2009-001, at 11.

³ Potential Impacts of Climate Change on California's Energy Infrastructure and Identification of Adaptation Measures, CEC, Staff Paper, January 2009, CEC-150-2009-001, at 7.

⁴ "Pathways to Near-Zero-Emission Natural Gas Heavy-Duty Vehicles." Gladstein, Neandross & Associates (GNA), dated May 19, 2014, at 1. Available at http://www.gladstein.org/pdfs/On-Road_Pathways.pdf.

The efficiency of using waste heat to provide secondary services to facilities not only reduces the overall costs of energy provision, but depending on the fuel used, can provide energy with a very low overall emissions profile. A CHP unit using Renewable Natural Gas (RNG) at the time of day when renewable electricity sources are not producing, is significantly cleaner than that which would come from the grid today, especially considering the alternative of releasing methane directly into the atmosphere. Finally, the development of smaller and more powerful CHP technologies are increasingly allowing customers more options to control their energy costs and reliability. Neither regulation nor legislation should inhibit these options.

SoCalGas, SDG&E and other natural gas infrastructure stakeholders need to be included in planning and development processes.

While we applaud CEC's efforts to create a broad overview of actions and interventions that can help address the problems associated with climate change, SoCalGas and SDG&E are concerned with the lack of focus in various State planning efforts on Southern California natural gas infrastructure, and the benefits this infrastructure brings to the overall resilience of California. Most noticeably, SoCalGas and SDG&E were largely ignored in the California Natural Resources Agency's Safeguarding California Plan⁵ that detailed their multifaceted response to climate change—including reductions to greenhouse gas emissions and helping protect cities and communities from extreme climate events. In order for such plans to be effective, the every region of California must be considered—it is essential that both Northern and Southern California entities are engaged in planning processes. The CEC and other State agencies need to include SoCalGas, SDG&E and other natural gas infrastructure stakeholders in all aspects of the planning for, and development of, Climate Adaptation and Resiliency measures.

Looking forward, natural gas infrastructure will not only play an integral role in planning efforts to help protect the resiliency of the energy grid—ensuring energy provision to residents vulnerable to climate change impacts—but can also be a foundation for new energy pathways, delivering energy with near-zero emissions sooner and more cost-effectively. These include the use of RNG not only for electric generation, but also for helping grow the state's renewable generation portfolio over the long term. SoCalGas and SDG&E have been a proactive advocate in helping develop and implement such technologies and infrastructure which can significantly help with the measures and policies identified by the 2016 IEPR. With this, SoCalGas and SDG&E encourage the CEC to work closely and collaborate with all utility partners.

We appreciate the opportunity to provide comments on the Joint IEPR Workshop. We shall continue to work diligently to provide the safest, cleanest, most reliable and affordable service to over 21 million Southern Californians.

Please do not hesitate to reach out for more information.

⁵ "Safeguarding California: Implementation Action Plans," California Natural Resources Agency, dated March 2016.

Sincerely,

/s/ Tim Carmichael

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