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On Workshop on Energy Reliability in Southern California

Additional submitted attachment is included below.

Comments of Herbert S. Emmrich

To the State of California Public Utilities Commission and California Energy Commission Workshop on Energy Reliability in Southern California Docket 17-IEPR-11-Southern California Energy Reliability

May 23, 2017

My name is Herbert S. Emmrich and I appreciate the opportunity to comment on the **Workshop on Energy Reliability in Southern California**. **My comments in this proceeding are strictly as a residential gas and electric customer of Southern California Gas Company, Southern California Edison Company and Pacific Gas and Electric Company. My comments are strictly based on my experience in the area of gas and electric demand forecasting and supply planning to assure that all natural gas and electric customers' natural gas and electric requirements are safely and reliably met under a 1-in-35 cold year, dry hydro and a 1-in-35 peak day cold temperature event.**

My comments in no way take a position as to the culpability of Southern California Gas Company in the Aliso Canyon storage well gas leak nor the consternation and distress caused to the residents in the area surrounding Aliso Canyon. Those issues are being litigated by the CPUC and the court system.

Based on my analysis, I believe that the Aliso Canyon Gas Storage Field needs to be made operational and put into service at least at a 20 billion cubic feet (BCF) level to assure peak day reliable gas service to Southern California's gas and electric customers. However, based on the retrofits, safety improvements and testing of refurbished gas wells a full restoration at an 86 BCF level is warranted. With all of the upgrades, retrofits and monitoring devices installed, the Aliso Canyon gas storage facility is probably now the safest gas storage field in the United States and probably the entire world. If the Division of Oil and Gas finds a lower level and lower pressure is warranted due to an abundance of caution the historical Aliso Canyon 67 BCF level should be adopted. Aliso operated at that level for over 30 years without incident.

As to the Aliso Canyon reliability requirements to serve customers on a peak Cold Temperature Day, the CPUC report states that Aliso Canyon inventory and withdrawal capacity is needed to meet gas requirements in a 1-in-35 Cold Year and 1-in-35 Cold Peak Day based on the *2016 California Gas Report* demand forecasts:

> "Winter Reliability The critical role of the Aliso Canyon storage facility is expressed in the independent review conducted by the Los Alamos National Laboratory and Walker & Associates. The report states: "The most critical concern for the winter season is the availability of the reserve in the Aliso Canyon storage facility. Using the gas stored in Aliso Canyon is very important to reducing the risk of gas curtailments and electrical service interruption this coming winter. Because in the past the Aliso Canyon facility has provided a large

reserve supply of gas in the winter, SoCalGas was previously able to supply the LA Basin with that supply while servicing areas outside of the LA Basin with flowing supplies from pipeline interconnections. Without this reserve available, SoCalGas will have to choose whether to maintain service to their peripheral customers or supply those within the basin."

Proponents of Aliso Canyon closure advocate more renewable energy sources such as wind and solar to reduce natural gas demand in California. I support those efforts but renewables' electric supplies are intermittent and do little to help meet peak day natural gas requirements. The sun does not shine at night when gas demand is at its peak and wind is highly variable. Therefore, for each renewable supply source gas-fired electric generation turbines need to be on standby when the sun does not shine or winds are calm. These issues may be resolved in the future with battery storage of electricity but that is not going to be available on the massive scale needed to provide reliable electric supplies to customers in the next ten years or more.

SoCalGas' gas transmission and distribution system is designed based on a system of interstate pipelines and associated flowing supplies and gas storage supplies to meet system requirements during the year especially in cold and dry hydro years. In addition, as shown above, Aliso Canyon is needed to meet peak day and cold winter and dry hydro requirements. In addition, interstate flowing supplies are subject to disruption due to pipeline outages and well freeze-ups in New Mexico and West Texas and Wyoming where most of California gas supplies originate. These sources are more than a thousand miles from the gas demand centers of Lost Angeles and San Diego.

These potential disruptions were realized during the Energy Crisis when the El Paso interstate pipeline experienced a massive pipeline disruption and SoCalGas' storage fields were not at full capacity heading into the winter. The result was rolling electricity brownouts and curtailment of supplies to electric and industrial gas customers. It is true that the gas transmission and distribution system is now more reliable but with the closure or reduction in Aliso Canyon's inventory level it will once again subject California's natural gas and electric customers to potential energy supply disruptions.

Some will argue that with natural gas fracking more natural supply is now available from the interstate pipeline system but gas moves at only 20 miles per hour and if there is a disruption on the interstate pipeline system it would take several days to increase supplies while withdrawal from Aliso Canyon, given there is an adequate reserve margin available, can meet increased requirements due to a pipeline disruption or cloudy and calm days within hours.

Therefore for reliability purposes and price arbitrage gas cost savings Aliso Canyon should be recommissioned at least at a 67 Bcf level. This level would be safe and prudent to meet the gas requirements of California's natural gas customers both core residential and commercial and non-core commercial, industrial and electric generation customers.

ATTACHMENT 1

Statement of Qualifications: Herbert S. Emmrich

My name is Herbert S. Emmrich. **I have recently been an energy consultant for The Utility Reform Network (TURN) and testified on behalf of SoCalGas/SDG&E for various CPUC proceedings but I am not representing TURN or the utilities in this hearing.** I was previously employed by Pacific Gas and Electric Company (PG&E) as a regulation manger in the Regulatory Affairs Department from Dec. 2012 to May 2013, managing the PG&E Gas Transmission and Storage rate case, the PSEP implementation project and the Biomethane proceeding. Before that time, I was employed by Southern California Gas Company (SoCalGas) and San Diego Gas & Electric Company (SDG&E) as Gas Demand Forecasting and Economic Analysis Manager in the Regulatory Affairs Department and held various other positions from 2002 until my retirement in 2012. I also worked for SoCalGas from 1984 until my first retirement from SoCalGas in 1998, in various economic and demand forecasting analyst, manager and director positions in the Regulatory Affairs, Planning, Customer Services, Commercial and Industrial Services, Marketing and Gas Supply departments of SoCalGas.

I earned an undergraduate degree in Economics and Behavioral Sciences from California State University at Dominguez Hills in 1970 and a Master of Arts Degree in Economics from California State University at Long Beach in 1974. I also completed 2 years of post-graduate coursework in Economics at UCLA from 1970 to 1972.

My employment outside of SoCalGas, SDG&E and PG&E has been in the areas of economics, environmental assessment, business planning, and energy sector development. I held the positions of: Economist, Regional Economist and Environmental Assessment Manager at the U.S. Bureau of Land Management's Pacific Outer Continental Shelf Office, in Los Angeles, from 1975 to 1979; Economic Policy Supervisor and Issues and Policy Manager of Getty Oil Company from 1979 to 1984; and, Senior Energy Advisor of the U.S. Agency for International Development's Caucasus Office in Tbilisi, Republic of Georgia, from 1998 to 2002. In addition, I have taught Micro and Macro economic theory at El Camino College, Torrance, CA; Cal State University, Dominguez Hills, CA; and the Georgian Institute of Public Policy in Tbilisi, Republic of Georgia.

I have previously testified before the CPUC and California Energy Commission on issues ranging from cost allocation, cost of capital, gas demand and gas supply and gas price forecasting.