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September 21, 2012

California Air Resources Board

1001 I Street

Sacramento, CA 95814

**RE:** Comments for Vision for Clean Air: A Framework for Air Quality and Climate Planning

Dear Board Members:

Southern California Gas Company (SoCalGas) appreciates the opportunity to provide comments on California Air Resources Board’s (CARB) Public Review Draft Vision Framework, published on June 27, 2012. SoCalGas supports CARB efforts to develop a Vision Framework to coordinate local and state agency strategies to address air quality and climate change. The attainment of state climate goals and Clean Air Act standards is important to SoCalGas and the communities in which we provide service. We continue to support CARB and local air districts as participants in regulatory processes, operation of our facilities in compliance with state and local air rules, and by supporting our customers in the clean and energy-efficient operation of their natural gas-fueled equipment.

A primary concern of SoCalGas is how the Vision Framework will be used and its potential incorporation into CARB and local air district planning activities. We support CARB taking a broader view of statewide air quality planning including evaluating the interaction of the state’s mobile source and energy policies; however, we would like clarity on the planned next steps and look forward to working with you going forward. SoCalGas recently concluded a study that evaluates and quantifies what air pollution reductions may be achieved from the mobile source sector, with the specific intent of initiating and fostering dialog among stakeholders. We are concerned that the Vision Framework analysis does not include currently available fuels and technologies (such as natural gas) that are part of the clean energy solution. We look forward to discussing the results of our study and how natural gas and emerging natural gas technologies can make great contributions to reducing criteria and greenhouse gas (GHG) pollution both now and in the future.

The Vision Framework states, “The scenarios presented are not intended to identify a specific course of action to meet each air quality and climate goal. Nor are the scenarios a prediction of the actual mix of vehicle technologies, fuels, and clean energy sources expected to emerge in the long term.” Given that CARB is not specifying details of the future mix of fuels and technologies, SoCalGas provides the following information and comments to broaden the view of the potential mix for the future.

**Hydrogen Pathway**

Compressed natural gas (CNG) and hydrogen are both gaseous fuels and require similar technologies, processes, and technical expertise to rapidly expand adoption and use. However, since natural gas is a clean, abundant, and low cost alternative in use and available today, it makes sense to encourage the use of natural gas in preparation for, and as a pathway to a potential, future hydrogen transportation economy. In fact, the U.S. Department of Energy's National Renewable Energy Lab has stated that "...advancing gaseous fuel technology today can aid the transition to a future transportation network based on hydrogen fuel cells."[[1]](#footnote-1)

EPA recently acknowledged this pathway in its recent (August 28, 2012) greenhouse gas and fuel economy rules for model years 2017–2025 light duty vehicles. In the notice EPA stated:

In addition, in response to public comments persuasively explaining how infrastructure for compressed natural gas (CNG) vehicles could serve as a bridge to use of advanced technologies such as hydrogen fuel cells, EPA is finalizing an incentive multiplier for CNG vehicles sold in MYs 2017 through 2021. (Final Rule, page 13 of 1230) (Also see pages 57 and 341 of 1230.)

NGV America, one of the leading national advocacy group for natural gas vehicles (NGVs), has developed a fact sheet entitled “NGVs and the Hydrogen Transportation Future,” that states the following.

“…Fortunately, tremendous synergy and continuity exists between deployment of today’s NGVs and tomorrow’s hydrogen-fueled FCVs. As further described, NGVs and related technologies are moving America towards commercially sustainable FCV markets – faster and more affordably than would otherwise be possible. Examples include the following:

* Natural gas is the leading feedstock for hydrogen production in the U.S. today.
* The first fueling stations along California’s hydrogen highway will likely produce hydrogen onsite by reforming pipeline natural gas.
* Some of these will be advanced “energy stations” that use hydrogen from natural gas to power fuel cell vehicles, generate electricity for buildings, and produce usable hot water (“tri-generation”).
* Technologies and products developed for NGVs and natural gas stations over many years are now “jumpstarting” fuel cell vehicles and hydrogen stations.
* Many “lessons learned” for NGVs and natural gas directly apply to fuel cell vehicles and hydrogen.”[[2]](#footnote-2)

It should be noted that not only is natural gas a feedstock for hydrogen but it can also be mixed with hydrogen to create HCNG (Hydrogen-CNG) fuel, which has shown the potential to further reduce vehicle emissions, including GHG emissions.[[3]](#footnote-3), [[4]](#footnote-4)

Since the adoption and use of CNG vehicles currently far exceeds that of in-use hydrogen vehicles, leveraging the existing and planned refueling infrastructure for natural gas to encourage the use of gaseous fuels, both CNG and hydrogen, is an effective way to ensure innovation and adoption of low-emission and low-carbon fuels from a variety of fuels and technologies. This is consistent with Executive Order B-16-2012 issued by Governor Brown that directs state agencies to establish benchmarks to ensure “…The State’s zero-emission vehicle infrastructure will be able to support up to one million vehicles…” and “…Californians will have easy access to zero-emission vehicle infrastructure…”

Another benefit of clearly including a path to leverage existing fueling infrastructure and encouraging innovation in technologies for use of multiple low-carbon fuels will dispel the possible impression that CARB is picking one or two fuels as winners over other fuels thus setting fuel providers against one another. It is also clear that more discussion and analysis is needed to avoid the potential of turning existing fuel production and infrastructure into vast numbers of abandoned or stranded assets.

**Vision Scenarios**

The Vision Framework states, “Further, the scenarios do not represent a policy choice that favors certain technologies and fuels over others.” However, only fuel-cell, hybrid-electric and electric vehicles appear prominently in the various scenarios. We understand from recent discussions with CARB staff, that many stakeholders at the three Vision Framework workshops noted that natural gas is not adequately considered. SoCalGas supports a fuel neutral approach to air quality planning, including the development and use of this Vision document. We look forward to providing CARB and the respective air districts with the best information about natural gas use, natural gas technology development of near zero emission transportation options, and the role of natural gas in the path to zero emission transportation options.

**Vision Targets**

The Vision Framework notes that the South Coast and San Joaquin Valley (SJV) air basins are different in terms of the nature of their emission sources, but does not consider other regional differences such as rural versus urban environments and the great differences in socio-economic factors. SoCalGas staff attended all three workshops, and the SJV Air Pollution Control Officer noted at the Fresno workshop that heavy-duty trucks used in the SJV air basin will require at least a 250-mile range to transport agricultural commodities and other products being shipped via northern and southern California ports. This is notable as there are no electric trucks with a range that even approach 250 miles. Additionally, historical per-capita income and unemployment statistics for the San Joaquin Valley suggest residents and businesses will not be able to absorb the expected significant increase in cost for fuel-cell and electric vehicles.

SoCalGas appreciates CARB staff’s time discussing the Vision Framework with us, and we look forward to continued constructive information exchanges and policy discussions.

Sincerely,



1. <http://www.nrel.gov/vehiclesandfuels/npbf/gaseous.html> [↑](#footnote-ref-1)
2. <http://www.ngvc.org/about_ngv/ngv_hydrogenfuture.html> [↑](#footnote-ref-2)
3. “Hydrogen/CNG Blended Fuels Performance Testing in a Ford F-150”, Idaho National Engineering and Environmental Laboratory, November 2003, <http://avt.inel.gov/pdf/hydrogen/30percentf150noattachments.pdf> [↑](#footnote-ref-3)
4. “Hydrogen-­‐Compressed Natural Gas (HCNG) Transport”, National Petroleum Council, August 1, 2012

Fuel, <http://www.npc.org/FTF_Topic_papers/18HCNG.pdf> [↑](#footnote-ref-4)