

November 21, 2014

California Energy Commission

Re: Docket No. 14-ALT-01

*Submitted via e-mail***Re: 2015-2016 Investment Plan Update for the Alternative and Renewable Fuel and Vehicle Technology Program (Docket No. 14-ALT-01)**

Dear Energy Commission, Staff, and Advisory Committee Members:

Thank you for the opportunity to comment on this draft of the 2015-2016 Investment Plan Update (Docket 14-ALT-01). VNG builds compressed natural gas (CNG) refueling stations to serve light-duty natural gas vehicles (NGVs) – including cars, vans, and pickups operated by fleets as well as everyday drivers. While we are developing our initial station networks in Pennsylvania, Massachusetts, and Texas, VNG is strongly interested in bringing consumer-friendly NGV fueling to the California market as well, and is a member of the California Natural Gas Vehicle Coalition (CNGVC).

The AB 118 funding program for alternative fuels is the most important and widest-ranging program of its kind in the U.S. and we were very pleased to see its funding extended through 2024, and we are similarly happy with the continued overall direction for the program laid out in the draft investment plan. In particular, it is encouraging to see Energy Commission (CEC) staff recognize and quantify the large and cost-effective near-term benefits from funding NGVs and CNG refueling infrastructure, as well as the potential for even deeper emissions reductions through increased use of biomethane and efforts to reduce methane leakage that are currently underway.

In addition to the widely-recognized role NGVs are playing in reducing emissions and petroleum use in medium- and heavy-duty vehicles, natural gas is an indispensable clean fuel alternative for light trucks such as pickup trucks and vans. Light trucks make up over half of vehicle sales nationwide, possess cargo hauling and towing capabilities that are irreplaceable for many large commercial fleets, and suffer from low fuel economy, making them an essential target for any comprehensive strategy to transition the transportation sector to low-emission, non-petroleum fuels. Due to the weight and space requirements of light trucks, they are unlikely to have electric-drive alternatives for the foreseeable future – but CNG alternatives are available today from major automakers.

CEC should consider the importance of NGVs to the light truck segment in the development of this investment plan as well as future updates. VNG's recommendations below are made with these light trucks in mind, but would help increase the adoption of NGVs as well as the continued reduction in their emissions across all segments of the market.

Natural Gas Vehicle Incentives

A strategic use of CEC funds could play a critical role in putting light-duty NGVs on a path to unsubsidized, large-scale adoption, as per CEC's long-term goal of "[increasing] consumer familiarity and supplier production to a point where various natural gas vehicle types can grow in the market without further subsidy." Because they do not depend on high-cost materials like lithium-ion batteries or platinum fuel cell catalysts, NGVs can achieve reductions in incremental costs of two thirds or more in the near term from simple economies of scale if automakers invest in the high-volume production of these vehicles.¹

Moreover, greater automaker investments in NGVs will be accompanied by the development of engine designs that will be optimized for the use of this high-octane, inherently low-emission fuel. Because of currently-low production volumes, NGVs today generally use engines that were designed for use with petroleum fuels, resulting in a loss in efficiency when fueled on natural gas. Increased automaker commitment to NGV development will allow for NGVs to increase their fuel economy to equal or even surpass conventional vehicles, significantly reducing all types of emissions as well as fuel use.

CEC can ensure that the AB 118 funding for NGVs works most effectively towards its long-term goals in several ways:

Fleet Focus: Commercial fleets of light trucks (such as pickups and cargo vans) are ideal targets for NGV adoption, with large numbers of low-MPG vehicles that travel considerably more miles per year than consumer vehicles. The purchase of NGVs by these fleets is a win-win-win-win: fleets save money, CEC realizes greater per-vehicle emissions and petroleum reduction benefits, automakers achieve rapid growth in sales volumes, and fueling infrastructure developers (like VNG) have sufficient demand to justify investments in more CNG stations.

¹ National Petroleum Council. Advancing Technology for America's Transportation Future. August 2012. http://www.npc.org/reports/FTF-report-080112/Chapter_14-Natural_Gas.pdf

- CEC must ensure that its NGV incentives continue to allow the full participation of fleets, and are not limited to residential consumers, as the language on a “consumer-oriented” incentive (p. 49) might suggest.
- The cap on the number of vehicle incentives per end-user should be increased from the 20 vehicles currently allowed to at least 50 vehicles, or even removed altogether for light trucks. Alternately, since fleets of light trucks are much larger (in terms of number of vehicles) but use much less incentive funding per vehicle compared to heavy-duty fleets, caps on incentives per end-user could be changed to a cap on total incentive funding in dollars, instead of numbers of vehicles.

Bi-Fuel Support: Many automakers are making their initial NGV product offerings bi-fuels (able to operate on natural gas or gasoline) in order to eliminate “range anxiety,” in the same way that the Chevy Volt has helped to expand the market for plug-in electric vehicles – particularly in Southern California. These NGV bi-fuels include pickups such as the Chevy Silverado and Dodge Ram as well as the new Chevy Impala sedan.

Just as state incentives are playing an important role in supporting the sales of the Chevy Volt and other PHEVs, CEC should support these bi-fuel NGV product offerings. Due to the continued price advantage of natural gas over petroleum-based fuels, drivers will seek to fuel on natural gas as often as possible, especially since payback for these vehicles’ higher incremental costs is dependent on these fuel cost savings. However, if CEC is wary of funding vehicles that can fuel on both CNG and gasoline, this concern could potentially be addressed in one of two ways:

- Requiring applicants for bi-fuel incentives to indicate a plan for CNG fueling, including infrastructure providers, that will result in a high proportion (for instance, at least 75%) of miles driven on CNG. This could be potentially be verified by requiring incentive recipients to provide fueling and driving reporting for the first several years of vehicle operation.
- Providing an incentive for the purchase of CNG fuel, instead of the vehicle itself – thus, CEC funds would be guaranteed to support only the use of natural gas, not petroleum-based fuels.

CEC may have other ideas on how to incorporate bi-fuels into the AB 118 program. Regardless of how this is accomplished, it is important for CEC to

support this critical early-adopter segment of the market in the same way that PHEVs have been supported.

Restore Previous Incentive Amounts: In its last funding round, CEC reduced the per-vehicle incentives for light-duty vehicles – from \$3,000 to \$1,000 for vehicles weighing 8,500 lbs or less, and from \$8,000 to \$6,000 for light trucks. While incremental costs for some NGVs are already beginning to decline, they are still a significant barrier to adoption, particularly given falling gasoline and diesel prices that have temporarily eroded the fuel cost advantage of NGVs. Restoring per-vehicle funding to previous levels would help maintain growth in these light-duty segments as new NGV products begin to reach the market.

Natural Gas Fueling Infrastructure and Biomethane Incentives

VNG strongly supports CEC's proposed increase in funding for NGV fueling infrastructure, based on the very high benefit-cost ratio detailed in the draft investment plan, as well as continued funding for biomethane production, based on its unsurpassed GHG reduction benefits. The sale of credits from biomethane use under the state LCFS as well as the federal RFS make transportation a highly appealing end-use market for this ultra-low carbon fuel, and CEC's proposal to link increased AB 118 funding for natural gas fueling infrastructure to the use of biomethane feedstock will further reinforce this connection.

The effectiveness of this proposal would benefit from greater specificity in several areas:

- CEC should *guarantee* that a portion of natural gas fueling infrastructure incentives be reserved for stations using biomethane, regardless of demand from schools and municipalities for the development of conventional fossil natural gas fueling stations. While these users are certainly important, the development of biomethane delivers significantly greater greenhouse gas reductions and represents an important strategy for achieving long-term emissions goals.
- CEC funding for natural gas fueling infrastructure should be linked to contracts for a specific level of biomethane feedstock use at a proposed station. The 33% renewable content threshold used by CEC for its hydrogen fueling infrastructure funding would be appropriate here as well.
- CEC should ensure that funding is available not only for stations that directly use biomethane generated onsite, but stations that use biomethane transported via pipeline as well. This type of biomethane

application relies on offtake agreements between biomethane producers and fueling station operators, and has been recognized by ARB as a pathway under the LCFS program.

- Stations receiving CEC funding should be required to offer full public access. As CEC notes, private fleet fueling stations can reliably recoup costs and thus usually need no incentive support. Public-access stations generally do not have the same level of guaranteed demand and are thus riskier and have greater need for incentives. At the same time, public access stations also offer greater benefits thanks to increased visibility of NGVs as well as biomethane to everyday drivers.

An Indispensable Low-Emission Fuel for Light Trucks

As recognized by the Energy Commission, natural gas vehicles and fueling infrastructure offer unsurpassed opportunities for near-term, cost-effective emission reductions. Moreover, they are likely to be the only commercially-available clean fuel alternative for light trucks such as pickups and cargo vans for the foreseeable future, making it critical for CEC to provide support for this segment on par with its support for medium- and heavy-duty NGV fleets.

VNG looks forward to working with CEC as well as CARB to help achieve their goals of reducing the petroleum dependency and carbon intensity of the transportation sector in California.

Sincerely,

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