



**California Air Resources Board**  
**Short-Lived Climate Pollutants Concept Paper**

**Comments of VNG**

**June 12, 2015**

VNG is a developer of compressed natural gas (CNG) refueling infrastructure geared towards the medium- and light-duty natural gas vehicle (NGV) market, including pickups, cargo vans, and other vehicles commonly used in fleets. We believe that CNG is an important low-emission fuel for medium- and light-duty trucks in particular, as they are generally low-MPG vehicles that will lack ZEV alternatives for the foreseeable future. The importance of developing the near-term market for these commercially-available alternatives has only become more important in light of proposed targets for reducing the state's petroleum consumption – and, now, the present goals for reducing SLCPs.

ARB should be commended for its initiative in developing a plan to tackle SLCPs, which have been too long overlooked in the fight against climate change. If left unchecked, SLCPs could end up tipping global climate towards chaos while the world waits for longer-term efforts to reduce carbon dioxide to take effect. While the state's 2050 goals for GHG reductions are admirable, they tend to focus attention on very long-term solutions for a problem that demands *immediate* action. By developing comprehensive, near-term regulations to reduce SLCP pollution, ARB will continue its unique history of setting an example that the rest of the world can – and will – follow.

These efforts to reduce SLCPs also represent a long-overdue opportunity to make a thorough reevaluation of the role that gaseous fuels and natural gas vehicles (NGVs) can play in combating climate change in both the short term and the long term. As ARB is aware, since the 1990s NGVs have played the largest role of any alternative fuel in providing emission reductions across a wide range of pollutants, including local pollutants as well as greenhouse gases – both carbon dioxide and the black carbon emitted by diesel-fueled vehicles that will be targeted by the SLCP regulation.

However, in recent years, growing concern about the potential global warming impacts of methane leaks in the natural gas system have led some environmental groups to question the value of NGVs for combatting climate change. This has led to scrutiny of NGVs that has been necessary, yet also unfair – natural gas is and will be a necessary feedstock for decades to come for *all* alternative fuels, including electricity, hydrogen, and biofuels. Even renewable electricity generation drives greater natural gas use, given the increased need for backup power that results from intermittent solar and wind resources.

**Thus, methane emissions from the natural gas system are an issue for *all* of our potential climate solutions – and isolated efforts to curtail the growth of NGVs will have negligible impact on the SLCP problem, given that natural gas use is concentrated overwhelmingly in electricity and heating.**

Conversely, NGVs have *unique* potential to make major contributions to California's SLCP reduction strategy. Fueling NGVs with methane captured from landfills, livestock operations, wastewater treatment plants, and agriculture and forestry residues is a potent weapon against SLCPs, yielding overall GHG emission reductions of 90% or more – including some renewable natural gas (RNG) pathways that have been recognized by ARB as having *negative* GHG emissions under the Low Carbon Fuel Standard (LCFS). Moreover, NGVs fueled by RNG meet key criteria of ARB's "Framing Strategy" in important ways.



**Multiple Benefits:** In addition to reducing SLCPs, the capture and use of RNG as a vehicle fuel reduces carbon dioxide and local pollutants compared to petroleum-based fuels, as well as benefitting the state's economy by replacing imported fossil fuels with in-state renewable resources. Moreover, depending on the RNG source, there are a host of associated upstream environmental benefits associated with RNG, including the creation of valuable soil amendments, reducing fuel for forest fires (a major source of SLCPs as well), and reducing odors.

**Practical Solutions:** The combination of NGVs and RNG fueling is well-established and is already seeing growing commercial deployment, thanks in part to an expanding network of CNG fueling infrastructure and growing availability of commercial CNG vehicles across all vehicle classes. ARB has already acknowledged that it will take decades for ZEV technologies to penetrate heavy-duty trucking, and this is also likely true for most medium-duty vehicles and even larger light-duty vehicles like SUVs and minivans, which make up almost half of the light-duty market. We believe that "decades" is too long to wait for reducing carbon dioxide emissions from these vehicles, let alone to take action on SLCPs.

CNG's status as an established, commercial, low-tech alternative fuel is only part of the "practical" equation, however. A major reason that RNG as a fuel for NGVs has grown increasingly rapidly is because of the economic incentives established by the federal Renewable Fuel Standard (RFS), which recognizes landfill-derived RNG as a cellulosic biofuel, and California's Low Carbon Fuel Standard (LCFS), which recognizes various RNG pathways as the lowest-carbon vehicle fuel on the market.

Projects to capture and process raw renewable methane are capital intensive, and the sale of credits generated by these programs is absolutely essential to making them economically viable. NGVs have a proven track record of leveraging these existing policies to support RNG development, making them exceedingly "practical" compared to virtually any other SLCP solution.

**No end use has greater potential to incentivize the development of new RNG supplies than the transportation sector – and no transportation technology is capable of providing more near-term market 'pull' than NGVs.**

As part of its SLCP plan, ARB should thus consider ways to support the growth of the NGV market while firmly guiding it towards the steadily-increasing use of RNG. Potential actions that could be taken by ARB – and/or other branches of the state government – to maximize the SLCP benefits of California's growing NGV industry are numerous, and include:

- **Enhancing LCFS program:** While the LCFS is already playing a critical role in making RNG-to-NGV projects economically viable, the program's current 2020 targets are too near-term, and credit values have been too volatile, to fully realize the potential benefits of this policy. The LCFS should be reauthorized through at least 2030, and ARB should consider ways to establish a price floor for credit values to make the LCFS credits generated by RNG projects more bankable.
- **Grants for RNG Projects:** In addition to providing incentives for RNG fuel sales via the LCFS, California should substantially increase grant funding for RNG projects to reduce up front costs, particularly for the equipment needed to process raw renewable methane to pipeline quality. Existing funding from the Energy Commission AB118 program is important, but it should be supplemented with additional funds from cap and trade revenues or other sources.



- **Practical Pipeline Injection Specifications:** AB1900 required CPUC to develop standards to allow and encourage the injection of pipeline-derived RNG into California’s natural gas system; however, the proposed standards are regarded by RNG stakeholders as overly stringent, or even cost-prohibitive. While pipeline safety is paramount, the example of other states safely allowing RNG injection with significantly lower standards suggests that these specifications should be revisited to encourage more in-state RNG production and use.
- **RNG-Fueled NGV Eligibility Under ZEV Initiatives:** ARB’s programs to require the use of zero emission solutions for trucking, buses, and cars are hugely important, but may take decades to yield results – particularly for heavy-duty vehicles as well as medium-duty and light trucks. ARB should consider expanding program eligibility to include NGVs that are fueled exclusively by RNG, which may meet or even exceed the “zero” emission standard on a lifecycle basis for GHGs overall, and would yield much greater benefits than “traditional” ZEVs in terms of SLCP reductions.
- **RNG Mandates:** The state legislature has required that all hydrogen fueling stations in the state use at least 33% renewable hydrogen feedstocks (including RNG in many cases). A similar law could be applied to CNG fueling stations to create a guaranteed market and ensure that CNG fueling growth is a net positive for SLCP reduction efforts. Alternately, a Renewable Gas Standard (RGS) policy akin to the state Renewable Portfolio Standard (RPS), as proposed in this year’s SB687, would assure a minimum RNG content for all the state’s gas supplies, which would also help reduce the SLCP impacts of the electric vehicles, hydrogen fuel cell vehicles, and biofuels that also depend on this feedstock.

Like every other natural gas end user, we recognize that NGVs are a part of the methane emissions problem – but we believe that NGVs have unsurpassed potential to play a big part of the solution. And by embracing and enhancing the unique ability of NGVs to leverage existing policies to incentivize RNG development, ARB can play a central role in writing the next chapter of the industry’s long history as California’s alternative transportation workhorse. We look forward to reading future iterations of the SLCP strategy and hope that VNG and the natural gas vehicle industry as a whole have an opportunity to play a significant role in addressing this critical issue.

Respectfully submitted,

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