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October 23, 2017

The Hon. Mike Bonin
Chair, Transportation Committee
Los Angeles City Council
200 North Spring Street
Los Angeles, CA 90012

RE: COUNCIL FILE 17-0739 - 100 PERCENT ZERO EMISSION FLEET BY 2030 GOAL

The Hon. Mike Bonin:

We commend the City of Los Angeles for being a leader in clean transit fleets and recognizing the urgency of addressing climate change and improving regional air quality. We support this effort but encourage you to **include the use of ultra-low NOx compressed natural gas (CNG) buses and biomethane fuels as part of a Los Angeles Department of Transportation (LADOT) 2030 zero emissions fleet goal.**

CNG bus technology has been commercially available for several decades and has helped transit operators improve air quality by transitioning from diesel to natural gas fueled buses. While CNG technology is mature, it is not static: there has been a significant leap forward in the technology in the past five years. The ultra-low NOx CNG bus engine certified by the California Air Resources Board (ARB) in 2015 has been commercially available for over one year now and can reduce tailpipe emissions **by up to 98% from current standards**. It can also provide a net negative reduction in life cycle greenhouse gas emissions when fueled by biomethane sourced from organic waste or dairies. In fact, ARB recently awarded the first dairy waste-to-vehicle fuel pathway its lowest carbon intensity score ever—a carbon intensity score of NEGATIVE 254 gCO_{2e}/MJ, more than seven times lower than its electric counterpart.¹

The ultra-low NOx CNG bus fueled by biomethane is the cleanest and most affordable bus technology commercially available today that can meet LADOT's operational needs without jeopardizing reliability of service. Current ultra-low NOx CNG buses are typically half the cost of their electric counterparts, and existing CNG buses can be repowered with ultra-low NOx engines for a fraction of the cost. And

¹ https://www.arb.ca.gov/fuels/lcfs/fuelpathways/comments/tier2/amp_5968_t2n1143_cover.pdf

because ultra-low NOx CNG bus technology is commercially available today, LADOT can begin to immediately improve air quality and reduce greenhouse gases instead of waiting for electric bus technology to develop.

Before the City Council adopts a 2030 electric bus fleet goal, we encourage LADOT staff to report to the City Council on the following critical factors:

- **Timing of Air Quality Benefits:** Eliminating emissions from LADOT's bus fleet is an ambitious and important goal. However, delaying the deployment of technology which is up to 98% cleaner than current standards today, and waiting for a technology that may not be able to meet LADOT's operational needs for at least thirteen years, works against the intent of the motion, which is to address the "urgency of air pollution and climate change crisis." We agree that LADOT should not defer improved air quality and much-needed reduction in GHG emissions, especially in the underserved communities that need them the most. By deploying ultra-low NOx bus technology today, LADOT can also help South Coast Air Quality Management District achieve its goal of attaining federal ambient air quality standards by 2023.
- **Account for Life-Cycle Emissions:** While battery-electric bus technology has nothing emitted from the tailpipe, the electricity used to power an electric bus in the city of LA will be at best 55% renewable by 2030 according to LADWP's 1026 Integrated Resource Plan. The remaining 45% will be generated by other non-renewable sources. In comparison, the ultra-low NOx CNG engine can be fueled by 100% renewable gas today and has tested at zero tailpipe emissions. In some cases, where dairy-to-waste renewable gas is used, LADOT may be able to achieve a net-negative carbon profile by using biomethane that would have otherwise been emitted into the atmosphere.
- **Cost-Effectiveness:** As a public agency funded by taxpayers, the City Council has a fiduciary responsibility to enact policies and programs that provide the greatest benefit for the least cost. Deployment of the ultra-low NOx bus can be implemented for less than half of the overall cost of electric buses and provide similar if not greater air quality benefits. We encourage the Council to review and compare detailed budgets for multiple bus technology scenarios before it commits to any one technology. Converting LADOT's entire bus fleet to electric buses by 2030 will also impose significant capital costs on LADOT. LADOT staff should identify how those costs will be incurred and what impact, if any, those cost would have on the affordability of service. The infrastructure needed to charge an all-electric bus fleet would also be costly. The Los Angeles Department of Water & Power should report to the Council what infrastructure, including emergency back-up

generation equipment, would be needed to serve an all-electric bus fleet, how that infrastructure would be paid for, and the ongoing electricity costs. Further, LADOT should identify what other projects or programs, if any, would be impacted by the cost of the proposed transition.

- **Reliability of Service**: LADOT's core mission is mobility; to move millions of people around hundreds of miles safely, reliably, and with limited maintenance down time. Currently, only CNG buses are capable of meeting LADOT's operational and weight requirements for several of its lines. We support the testing of new technology but encourage the Council not to mandate new technologies until they have proven, based on in-use data and significant trial, that those technologies can meet LADOT's requirements without impacting reliability of service.
- **Review Testing/Demonstration Data**: With multiple demonstrations and testing of buses across our region and State, available data should be reviewed along with results from the testing performed by the LADOT with its electric bus demonstrations since 2014. The data collected for the testing/demonstration period should be shared, further analyzed, and used as the basis for feasible adoption of various technologies.

In summary, we support the City Council's goal of reducing the emissions of its municipal bus fleet. However, we believe the ultra-low NOx bus technology coupled with biomethane fuels can play a critical role in helping LADOT accelerate its emission reduction goals more cost effectively and without jeopardizing reliability of service. We encourage the City Council to include this cutting-edge technology in LADOT's long-term bus procurement strategy.

Again, we thank you for the opportunity to provide input on this important issue. Should you have any questions, please contact Frank Lopez, Government Affairs Manager at flopez5@semprautilities.com or (213) 703-1347.

A handwritten signature in black ink, appearing to read "George Minter". The signature is fluid and cursive, with a large initial "G" and "M".

George Minter
Southern California Gas Company