August 26, 2013

ATTENTION: Chicago Metropolitan Planning Commission
CMAQ FY14-18 Public Comment
233 S. Wacker Dr., Suite 800
Chicago IL 60606
VIA EMAIL: info@cmap.illinois.gov

On behalf of America's Natural Gas Alliance (ANGA), I applaud the Chicago region for its efforts in pursuing alternative fuel development projects. Representing North America's largest independent natural gas exploration and production companies, ANGA works with industry, government and customer stakeholders to promote increased use of our nation's abundant natural gas resource for a cleaner and more secure energy future and to ensure its continued availability.

The cooperative effort of regional governments in Chicagoland to maximize 2014-2018 CMAQ funding to the benefit of the region is impressive.

Today, we are honored to add ANGA's voice to these efforts by respectfully asking that favorable consideration be given to project DR01143928, CDOT Chicago Area Alternative Fuel Development Project, Phase 3. Specifically, that compressed natural gas (CNG) is considered as a large portion of the project including funding for public natural gas filling stations and/or vehicles.

The CMAQ Program has a legacy of funding natural gas vehicle deployment projects, due in part to the many benefits the vehicles afford, including emission reductions that benefit the community

and taxpayers at lower costs than other clean alternatives. NGVs are a proven technology used in transit agencies and municipalities across the country in everyday operations, allowing for significantly lower operating costs and measurable impacts on the environment. More than 18% of our nation's transit buses now run on domestic natural gas, and major fleets such as Waste Management, Frito Lay, UPS, Ryder Trucks, and AT&T are making significant investments in natural gas operations because natural gas makes economic *and* environmental sense.

Natural gas buses and trucks can provide an extremely cost-effective emission reduction solution for the citizens of the Chicagoland region, offering long-term cost savings compared to many other commercially available alternative and conventional fuel technologies. CNG vehicles and investments in CNG infrastructure also offer the opportunity to transition to other emerging advanced CNG technologies in the near future that have very favorable taxpayer cost-per-mile impacts versus other alternative fuels. The increase in CNG infrastructure, such as growth in access to CNG filling stations, is especially important since the dearth of these in the region is one of the main inhibitors to growth.

The following table shows the emissions from several transit technologies, prepared by the Southern California Gas Company (a Sempra Energy Company) in April 2012. This analysis demonstrates that CNG currently has the lowest lifecycle cost per mile for clean transit fuel operations. While zero emission options like battery electric and fuel cells can offer some emission benefits, these vehicles are all achieving near-zero emissions with widely varying taxpayer cost impacts.

Technologies	NOx (g/mi) (tailpipe)	GHG (g/mi) (WTW)	Cost per ton NOx reduced	Cost per ton GHG reduced	Total cost per mile†
2010 CNG	0.8	2,607	n/a	($555)‡	$1.52
CNG with advanced after-treatment	0.12	2,607	($522K)‡	($526)‡	$1.54
H/CNG	0.8	2,688	n/a	($348)‡	$1.71
Renewable NG	0.8	435	n/a	($43)‡	$1.80
CNG hybrid	0.6	1,955	($538K)‡	($81)‡	$1.82
2010 Diesel – baseline	0.8	3,282	n/a	n/a	$1.94
Diesel hybrid	0.6	2,462	$751K	$183	$2.10
Battery electric	0.0	1,593	$1.1M	$536	$2.93
Fuel cell	0.0	1,793	$4.8M	$2,580	$6.17

† Total cost per mile includes vehicle/station capital, maintenance and fuel cost
‡ Denotes saving money on total cost while still reducing emissions

The cost per ton of emissions reduced assumes a 2010 diesel bus as the baseline. The total cost per mile includes: the capital cost of the bus with a simple amortization over the FTA required 12-year/500,000 miles of the bus, fuel cost over 500,000 miles, and maintenance costs over 500,000 miles. The fuel costs of CNG and hydrogen includes the cost of the fueling station amortized over 12 years. The battery electric emissions reflect the California energy mix (7.5% coal 43.3% natural gas, 15.4% renewables, 9% nuclear, 8.3% hydro, 16.4% other), whereas the Chicago region's energy mix for power-generation would lead to higher impact from electric vehicles' upstream emissions of NOx, GHGs and PM (i.e. greater emissions).

In addition, natural gas engine technology continues to get cleaner. In California, several proposed projects aim to demonstrate a natural gas engine that is 75% - 90% cleaner on NOx emissions than the current EPA 2010 emissions standard. At these levels, natural gas engines will be able to provide emissions that are equivalent to EVs when accounting for the local power generation needed to support EVs. Hence, natural gas provides a very low emission solution today with a potential for even lower emissions in the future.

Industry leaders like Frito Lay and UPS have adopted a diverse portfolio of advanced vehicle technologies including EVs, natural gas, propane, and a variety of hybrid technologies. There are many reasons for this approach, including the recognition that no single technology provides the best solution to all types of operations. By allocating funding to more than one vehicle technology, including CNG, the Chicago region would align its vision with the approach

taken by these industry leaders and offer a more diverse set of options so that fleets can select the technologies that are best suited to their needs. Additionally, current investments in CNG infrastructure will pave the way for integration of cost-effective near-zero emission CNG technologies for the long-term.

Thank you in advance. I know you will give this request to include CNG as part of this CMAQ project due consideration as the Chicagoland region continues to lower emissions and improve transportation and infrastructure options.

Sincerely,

Amy Farrell
Vice President for Market Development