4675 MacArthur Court, Suite 800
Newport Beach, California 92660
(949) 437-1000

www.cleanenergyfuels.com

Ryan Kenny
Senior Public Policy and Regulatory Affairs Advisor

Rajinder Sahota
California Air Resources Board
1001 "I" Street
Sacramento, CA 95812

September 28, 2016

Re: Development of the 2030 Target Scoping Plan Update

Dear Ms. Sahota:

On behalf of Clean Energy, please accept the following comments concerning the Development of the 2030 Target Scoping Plan Update.

Clean Energy strongly supports the state's environmental and public health goals including Governor Brown's Executive Order B-30-15, which reduces greenhouse gas emissions to 40% below the 1990 level by 2030. Our company and industry stakeholders were also leading champions that helped pass SB 32. We find it vitally important that such state policies promote both public health and a strong economy that promotes critical state air quality, energy, and social justice goals. We hope that our comments will help to further improve upon the final document that ultimately will be considered by the agency's Governing Board.

WHO ARE WE?

As North America's largest provider of natural gas transportation fuel with over eighteen years of leading industry experience, Clean Energy provides construction, operation and maintenance services for refueling stations nationwide. We have a deep understanding of the growing marketplace, and our portfolio includes over 589 stations in 43 states, including a significant presence of 165 stations in California.

Already used as a clean, low carbon source of energy around the world, natural gas is abundant and proven to be a cost-saving alternative fuel to diesel and gasoline. Natural gas for transportation fuel strengthens our economy with lower fuel costs, increases our energy security, and significantly benefits our environment by reducing carbon emissions and smog-forming NOx emissions by up to 23% and 90%, respectively, relative to diesel fuel. Carbon emissions are reduced even further – approximately 80% to 90% - when renewable natural gas is used to power our engines compared to diesel.

We believe it is imperative that the final draft of the *Scoping Plan* focus on the most cost-effective measures to reduce climate pollutants, including in-state renewable natural gas (RNG) production and near zero emission vehicles that can run on RNG, which can provide the most significant reductions in climate change and criteria pollutants and provide the most immediate benefits for disadvantaged communities.

BIOFUELS SUPPLY MODULE

After a review and a discussion with ARB staff, we consider the Biofuels Supply Module consistent with the work completed on the LCFS update last year, and as a first step in the long process to establish an LCFS target for 2030. With this process now underway, we ask that our industry be kept abreast of the latest developments and be provided ample opportunity to provide feedback and analysis. We are very concerned

about any changes to the CI values of the various fuels without substantial transparency and public process to provide meaningful input.

LACK OF GGRF INCENTIVE FUNDING FOR BIOFUELS

ARB was not able to secure the initially proposed 2016-17 GGRF funding for biofuels production incentives by the legislature's adjournment. We understand ARB had to make priority funding decisions, however, we are concerned about the long-term commitment by ARB to such incentives and whether they will be pursued in the next funding round as aggressively as many stakeholders believe they should. Moreover, both the State Implementation Plan and regional air quality management plan are increasingly reliant on incentive funding availability to address mobile source pollution. We hope that funding will focus more on deployment of biofuel technologies over demonstration and pilot technologies that remain commercially inviable.

CAN BIOFUELS BE A PRIMARY SOLUTION FOR OUR 2050 GHG TARGETS?

Nearly all of Clean Energy's 165 California stations dispense only RNG. There is demand for the fuel products and we and our competitors are meeting it. We understand RNG is now about 70% of all vehicle fuel going into natural gas vehicles in California under the LCFS. This percentage is likely to go higher as production continues to expand and in-state production barriers (i.e., interconnect costs and overly stringent fuel quality requirements) are resolved. Using conservative ARB scenarios, this amount achieves now the 2030 goals under AB 32 for all NGVs if you assume a blend.

Clean Energy alone delivered over 50 million gallons of RNG into the state in FY 2015. The use of more RNG, particularly in existing transit fleets that have the infrastructure already in place, are in the position to significantly reduce the state's carbon footprint overnight. Applying a low-NOx engine will not only reduce NOx emissions to near zero levels, it will also further reduce methane emissions as these new engines provide a closed crank case system that reduces methane emissions by more than 70 percent. **Bottom-line: the natural gas industry has listened carefully to ARB's concerns and objectives and we are aggressively attempting to provide the agency with solutions through our innovations in fuels and technologies.**

It is worth noting that battery and fuel cell vehicles are often referred to as zero emission vehicles but their capability of being truly zero in emissions largely depends upon whether or not the vehicle's power source is emissions free. Even with a 50 percent renewable portfolio by 2030, the state is still likely to draw at least half of its power from sources of energy that emit some form of carbon and criteria emissions. Meanwhile, low-NOx strategies combined with renewable fuels, as the *Mobile Source Strategy Discussion Draft* points out, can demonstrate far meaningful and much needed emissions benefits for NOx, PM and GHG emissions today for class 7 and 8 trucks where electrification cannot provide an answer.

ADVANCED CLEAN TRANSIT

We remain very concerned by the over-focus and emphasis on zero emission buses at the expense of near-zero technologies. We are very concerned too that cost as an off-ramp has and continues to be ignored by staff as a key determining factor within the proposed ACT rulemaking. Costs and their impacts on transit agencies and ridership are not reflected in the regulation *Draft*, as well as advancement in near-zero technologies and their contribution to the environment. Cost has also been selective. We believe strongly this must be rectified.

For example, on the *APTA Clean Propulsion Committee Webinar* held on Thursday, June 30, LA Metro provided an assessment that they can get more cumulative greenhouse gas emission reductions over the next 40 years with low NOX engines using RNG at a cost that is $3-5 billion lower than zero-emission based alternatives. This is a major declarative finding for the RNG pathway with empirical data from the second largest transit fleet in the country that is absent from our meeting discussions.

We are also distressed that in its January 2016 discussion document on ACT, ARB staff proposed to treat the eligibility for LCFS credits differently for different alternative fuel technologies as we understand it. The staff proposal will allow transit agencies using electric buses to double-count, if not triple-count, between the LCFS and Advanced Clean Transit regulation. However, CNG or RNG fueled buses would not be counted towards the ACT regulation, if they also received LCFS credits. This is a double standard that allows for the picking of winners and losers in a competitive alternative fuels marketplace. If LCFS credits for electric vehicle (EV) buses are part of the calculation of cost parity for EV and conventional buses, we believe the same prohibition should apply to EV buses.

In addition, concerning zero emission airport shuttle buses, it is unclear from the recent workshop if ARB is considering natural gas technology. We believe this should be clarified.

SUSTAINABLE FREIGHT- Game Changer for State and Non-Attainment Regions

We appreciate ARB's support in securing 2016-17 GGRF moneys for heavy duty trucks to switch from dirty diesel to a clean .02 NOx engine using a specific percentage of renewable fuel. However, it is not enough, as funding is limited to 2016-17 demand, and we believe ARB needs to develop a long-term strategy to secure much more funding for long-term business planning and investment.

In May 2016 a groundbreaking report was released entitled ***Game Changer***[1] – sponsored by several stakeholders including the South Coast AQMD – which concluded there should be an immediate start to deploying zero-emission and near-zero-emission heavy-duty vehicle (HDV) technologies on a wide-scale basis in the United States. In sync with many recent documents being produced by the Air Resources Board, the report states that, "(e)expeditious action is needed to reduce smog-forming emissions from HDVs to restore healthful air quality—as is legally required under the federal Clean Air Act—for approximately 166 million Americans who reside in areas with exceedingly poor air quality. At the same time, to combat global climate change, the United States must aggressively reduce greenhouse gas (GHG) emissions from HDVs, which are the fastest growing segment of U.S. transportation for energy use and emissions."

The report further identified that near-zero engines result in 3 to 8 times more NOx reductions and have 5 to 14 times more greenhouse gas emission reductions, and near-zero natural gas trucks are four times more cost-effective compared to fuel cell or electric vehicle options at this time. In addition, these engines help meet Short-lived Climate Pollutant reduction goals by reducing black carbon and methane, especially if renewable natural gas fuel blends are used to power the engine.

For example on cost-effectiveness, on the *APTA Clean Propulsion Committee Webinar* held on Thursday, June 30, LA Metro provided an assessment that they can get more cumulative greenhouse gas emission reductions over the next 40 years with low NOX engines using RNG at a cost that is $3-5 billion lower than zero-emission based alternatives. This is a major declarative finding for the RNG pathway with empirical data from the second largest transit fleet in the country.

California will not reach greenhouse gas emission (GHG) reductions and other goals, including a large reduction in black carbon, without dedicating significant resources to the heavy-duty class 7 and 8 transportation sector to decrease its dependence upon diesel fuel use and increase the use of much cleaner low carbon fuels. To this end, the recent ARB-certified Cummins Westport's 0.01 g/bhp-hr NOx heavy-duty engine will play a significant role as it is a **game changer** for the transportation sector and public health. The 9L engine is now available for deployment and the 12L is expected to be certified by late 2017.

[1] http://ngvgamechanger.com/

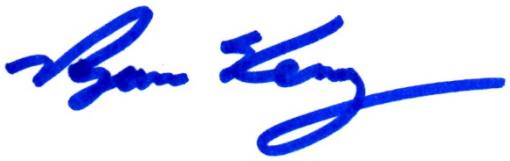
These engines will provide immediate environmental and health benefits, especially to disadvantaged communities. As the ARB *Mobile Source Strategies Discussion Draft* specifically states on page 59, "Based on ARB staff's technology assessment, the most viable approach to meeting the 2031 and 2030 goals is low-NOx trucks." In other words, the only technically feasible way to meet the 2031 federal 8-hour ozone standards and the state's low carbon fuel and petroleum reduction goals is to place approximately 430,000 low-NOx trucks using renewable fuels like renewable natural gas by 2031.

These low-NOx engines set at the 0.02 g/bhp-hr standard, powered by natural gas or renewable natural gas, or a blend of the two, will achieve greater environmental benefits than any electrified system for 1/5th to 1/10th the cost and far fewer operational and logistical challenges, as natural gas technology can be seamlessly integrated into large natural gas fleet operations such as drayage, goods movement, refuse, transit, and airport operations.

Game Changer supports the argument why ARB and her sister agencies must pursue **all** advanced technology choices, not just a focus on zero emission vehicle tailpipe strategies that have yet to be commercialized and are only forecasted to replace 11,000 last mile delivery trucks over the next 15 years. The *Scoping Plan* should take a close look at the success stories that were enjoyed by the San Pedro Bay ports through their implementation of a joint Clean Air Action Plan and Clean Truck Plan. If we are ever to move away from polluting trucks and toward near-zero and zero emission strategies, we need to be able to have the mechanisms in place that can cull out aging trucks and replace those trucks with cleaner options.

We would like to thank the Air Resources Board staff for providing the opportunity to share our views and for considering our comments. We look forward to continuing our participation and partnership with you in this healthy discussion and process.

Sincerely,



Ryan Kenny
Senior Public Policy & Regulatory Affairs Advisor
Clean Energy