

DOCKETED

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**SoCalGas Comments on Title 20 Data Collection Pre-Rulemaking Staff Workshop,
Docket No.16-OIR-03**

Additional submitted attachment is included below.



A  Sempra Energy utility

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February 26, 2016

Ms. Pilar Magaña
Associate Energy Specialist
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814-5512
Submitted via email to pilar.magana@energy.ca.gov

RE: February 2016 Workshops - Natural Gas Off-road Vehicles Solicitation

Dear Ms. Magaña:

Southern California Gas Company (SoCalGas) appreciates the opportunity to comment on the California Energy Commission's (CEC) planned funding solicitation for research proposals to support development, integration and demonstration of advanced natural gas engines in off-road vehicle applications (natural gas solicitation). Thank you for holding the two staff workshops in the San Joaquin Valley (Fresno) and the South Coast (Long Beach) air basins, the only two extreme ozone nonattainment-areas in the country. We agree wholeheartedly with staff that extensive deployment of zero- and near-zero-emissions technologies are needed in these air basins to meet current and future clean air standards, especially for ozone. We also appreciate the recognition of the many, and cross-agency policy drivers such as the California Air Resources Board's (ARB) Low Carbon Fuel Standard that guide CEC's natural gas transportation research.

While we understand that the solicitation is focused on natural gas vehicles, staff encouraged stakeholders to also consider CEC's Natural Gas Vehicle Research Roadmap that recommends initiatives for fueling infrastructure and on-board storage as well as technical and strategic studies.

Please consider the suggestions outlined in the following bullet points as you continue toward development of the natural gas solicitation and its planned release in July of this year:

- SoCalGas supports research and development of all off-road equipment using compressed and liquid natural gas (CNG and LNG) including ocean going vessels and locomotives especially the possibilities for implementation of intermodal and close proximity CNG and LNG fueling opportunities.

- SoCalGas supports research and development for renewable natural gas for transportation uses especially given the prospect for reduction of both criteria pollutants and greenhouse gases.
- Considering the new Cummins Westport Innovations, Inc. 8.9 liter CNG/LNG engine that was certified in 2015 by both ARB and USEPA to ARB's optional low-oxides of nitrogen (NOx) standard of 0.02 grams NOx/bhp-hr, and their upcoming 11.9 liter engine to be certified to the same standard, SoCalGas believes CEC should look for technology transfer of such near-zero emission on-road engines to off-road applications.
- SoCalGas agrees with staff that successful deployment of natural gas off-road vehicles presents the quintessential chicken or the egg dilemma as one cannot exist without the other. Therefore, we believe it would be appropriate to consider projects that demonstrate advanced natural-gas fueling options such as lower-cost conforming or low-pressure storage tanks as well as innovative onsite storage for refueling.
- Given limited natural-gas fueling infrastructure might present a barrier for adoption of natural gas off-road equipment, SoCalGas believes that industries that have commodity yards that require movement and/or mixing such as feed mills and large dairy operations, such as those in the San Joaquin Valley or the South Coast air basins, might be the perfect demonstration opportunity. Captive fleets such as front end loaders for commodity movement along with daily transport trucks that return to the same home facility could be a cost-effective option for fueling infrastructure and fleet conversion investment.
- SoCalGas suggests consideration of engine technologies including bi-fuels such as compression ignition engines that use diesel fuel for start-up then switch to natural gas. We understand that a critical parameter for bi-fuel operation is the substitution rate—the portion of total fuel energy provided by natural gas, but believe research and development could be appropriate of engines that use greater than 70 percent natural gas due to lower NOx emissions and higher torque.

SoCalGas looks forward to continuing collaborative research and development work with CEC staff. We believe natural gas continues to offer an affordable, clean and practical way to meet California's goals. If you would like to discuss more information on SoCalGas suggested research and development, please do not hesitate to call Cherif Youssef at (213) 244-5325.

Sincerely,

A handwritten signature in black ink that reads "Tim Carmichael". The signature is written in a cursive, flowing style.

Tim Carmichael
Agency Relations Manager