



March 23, 2007

California Energy Commission
Docket Office
Attn: Docket 06-AFP-1
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

RE: Comments on TIAX Draft Full Fuel Cycle Assessment for AB 1007
(Pavley) Alternative Transportation Fuels Plan Proceeding

The California Electric Transportation Coalition (CaETC) is pleased to present comments on the three TIAX Draft Consultant Reports on Full Fuel Cycle Assessment, as prepared for the AB 1007 (Pavley) Alternative Transportation Fuels Plan Proceeding. The TIAX reports generally do an impressive job of accurately and equitably assessing various gasoline and diesel alternatives. However, in an effort to make the report as accurate as possible in its treatment of electricity as a transportation fuel (for purposes of this Report in compliance with the requirements of AB 1007), we respectfully offer the attached comments.

Our detailed comments are attached for review, and are summarized below:

1. References to a requirement for additional generation as a result of EV and PHEV load should be removed. Due to the substantial overnight idle capacity of the grid, time-of-use rates, and advanced metering, existing generation along with otherwise planned generation will meet the demand from EVs and PHEVs.
2. In the initial year of the study (2012), electric transportation load should be assumed to be served by 100% natural gas-fired combined cycle combustion turbines because renewable contracts require long-term planning. The associated value for greenhouse gas emissions from electric vehicles should therefore be increased. Additional ongoing work will be required to accurately assess the emissions associated with electric transportation load and the long-term planning, which will allow us to add required renewables to serve this load, thereby decreasing the greenhouse gas emissions associated with electric transportation.
3. Criteria pollutant emissions (NO_x, VOC, CO, PM and SO_x) from electric vehicles should be reported as zero. Since offsets have been required in California for new plants built since 1980, any additional emissions caused by the electric vehicle and plug-in hybrid EV load have been or will be offset because the load is coming from these new plants (mostly combined cycle natural gas). Additional work is required in characterizing PM emissions, as prior studies by CEC, CARB and others have not found PM to be a problem for pure EVs.

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A non-profit association
promoting cleaner, healthier air
through the development and use of
zero-emission electric vehicles,
hybrid electric vehicles,
electric mass transit buses and rail.

4. Daytime charging should not be assumed due to the significant price incentive electric vehicle owners will have to charge overnight when rates are lowest. The TIAX nighttime charging scenario (30% daytime charging) should be regarded as a worst-case scenario.
5. The CEC should consider further including the non-road sector in this analysis by incorporating a 2005 TIAX report that evaluated non-road electric transportation and goods movement technologies.
6. The energy economy ratios for PHEVs should be increased 4.20 for charge depleting mode, 1.58 for charge sustaining mode, and 2.64 combined. The energy economy ratio for EVs should be increased to 5.0. These figures take into account real-world side-by-side tests and advanced batteries. Additionally, improvements in battery technology between 2012 and 2030 will increase the all-electric range of PHEVs, and the assumed percentage of electric miles should therefore increase through the study timeframe.
7. We encourage the CEC to compare this report with previous reports done by CEC, CARB and others analyzing conventional vehicles, EVs and PHEVs, especially in terms of criteria pollutant emissions.
8. The possibility of vehicle-to-grid technology within the timeframe of the report should be noted. This has the possibility to reduce the need for standby generation capacity to back up intermittent renewable generation.

Further, we strongly encourage the CEC to work closely with ARB, CPUC and others to ensure rulemaking processes regarding AB 1007, AB 32, and the Low-Carbon Fuel Standard are well coordinated due to the many intertwining factors. The assumptions in this report should be reviewed after the AB 32 implementation rules have been established.

Thank you for allowing us the opportunity to present these comments. We would be happy to sit down with CEC staff at a future date to further discuss and clarify our comments. If there are any questions I can be reached at (916) 441-0702.

Sincerely,

A handwritten signature in black ink, appearing to read "David L. Modisette". The signature is stylized and cursive.

David L. Modisette
Executive Director
California Electric Transportation Coalition