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TO: California Energy Commission Commissioners and Staff

FROM: John Boesel, President and CEO

RE: Docket Number 08-ALT-1 – Advisory Committee for AB 118

The California Energy Commission's draft investment plan represents an important step toward the successful implementation of the CEC's Alternative and Renewable Fuel and Vehicle Technology Program, referred to as "AB 118" in this document. We recognize and appreciate the rigorous analytical work that has gone into the production of this plan. We would like to provide comments and suggestions on both the plan itself and the recommendations made at the January 8th Advisory Committee meeting. In short, we agree with staff that flexibility, balance, and a focus on 2020 goals and near-term opportunities as pathways to the future are vitally important. Given the state's budget situation and the timeline of AB 118 implementation, it is important to move quickly. We have identified a number of "no-regrets" projects that could provide early successes for the program, generating economic benefits and demonstrating the need for full funding for AB 118 in future years. We also offer some additional recommendations with regard to the document itself. If fully funded and successfully implemented, AB 118 will be a powerful and important investment in California's future.

Funding Categories and the Need for Flexibility and Balance

Using the 2050 Vision as a starting point, the investment plan works backwards to determine funding categories and allocations. Technologies and projects are therefore divided into four categories: super-ultra-low-carbon, ultra-low-carbon, low-carbon, and additional fuel economy improvements. While this is a useful intellectual exercise, we would urge the commission to remain flexible. Analyses and predictions of this sort are inherently imprecise, and we cannot be sure how technologies and circumstances will change over the next 40 years. Furthermore, the past several months have made clear the fact that we are living in a very dynamic period. Opportunities and needs in the transportation sector are constantly and rapidly changing due to economic, technological, and political factors. In order to successfully implement the most economically and environmentally beneficial projects for the state, AB 118 program managers will need to be nimble, flexible, and able to quickly adapt to changing conditions.

The successful transformation of California's transportation sector requires balance as well as flexibility. As always, it is important to avoid "picking winners" by pursuing a balanced portfolio of technologies and fuels. Additionally, the state must take a balanced approach across short, medium, and long-term investments. While the 2050 goals provide necessary long-term direction, the state should move now to deploy existing technologies that can drive emissions reductions and economic growth in the short to medium term.

2020 Targets and Near-Term Opportunities are an Important Step Toward 2050

There was considerable disagreement at the January 8th Advisory Committee meeting regarding the relative focus on 2020 and 2050 goals. CEC staff advocated a balanced approach, with a focus on achieving the 2020 goals and funding practical near-term opportunities that offer a pathway to future 2050 priorities. However, several Advisory Committee members suggested that the Commission

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should look past the 2020 targets, focusing instead on 2050 and dedicating a greater share of funding to super-ultra-low-carbon fuels.

We agree with staff that practical near term opportunities and achieving the 2020 goals are important and necessary steps toward 2050. At this early stage in the program, it is important to generate significant emissions reductions through the deployment of practical near term solutions, thereby building momentum toward the state's GHG emissions targets. Achieving the 2050 targets will require new technologies that do not yet exist. Some funding for research, development, and demonstration (RD&D) of these new technologies is necessary, but it should not take the place of funding for the deployment of beneficial near term projects and technologies at this early stage of program implementation. As noted above, a balanced approach is best.

We note that proposed funding for super-ultra-low-carbon technologies already exceeds the emissions reductions expected from that category through 2020 (see table). While we do not necessarily endorse the allocations exactly as proposed and would hope that the allocation "buckets" are flexible based on needs and circumstances, we believe that this generally represents a practical and reasonable approach. The proposed allocations recognize the need for both long-term investments in RD&D for super-ultra-low-carbon technologies and near-term deployment of cleaner technologies available today. With super-ultra-low-carbon technologies already accounting for nearly a quarter of all investments in the first two years of the program, we believe that dedicating a greater share to these "2050 technologies" would be premature at this stage.

CEC's Draft Investment Plan Funding Allocations		
Project / Technology Category	Percent GHG Reduction (2009-2020)	Proposed 2 Year Funding Allocation
Super-Ultra-Low-Carbon	16%	23%
Ultra-Low-Carbon	12%	13%
Low-Carbon	33%	35%
Improved Vehicle Efficiency	39%	13%
Non-GHG Categories	n/a	11%
Production Incentives	n/a	6%
TOTAL	**100%**	**100%**

In the near term, opportunities exist to commercialize and deploy clean transportation technologies, setting the state on the right path for emissions reductions in both the short and the long term. Actually achieving the 2020 goals is an important first step, *and one that is set out in statute*. Given that the state has yet to reverse the trend and actual greenhouse gas emissions are increasing each year, we hardly consider meeting the 2020 goals to be a "slam dunk". A focus on 2020 goals can help the state lay the foundation for 2050 while generating quick environmental and economic benefits. See the "No Regrets Projects" section, below, for thoughts on project categories.

We were pleased to hear Commissioner Douglas speak at the CALSTART Target 2030 conference in Sacramento (Jan. 14-15, 2009) and refer to the allocations as guidelines. Developing theoretical allocations is interesting, but the CEC staff should have the ability to respond and support the best of the actual proposals that are submitted. Thus, if a two-year funding allocation is actually developed, we recommend that ranges be provided and that the staff have the ability to change the actual levels based on funding opportunities.

Need for Timely Implementation and Quick Successes

Given California's current fiscal crisis, it is imperative that the Commission move quickly to implement AB 118 and fund some beneficial and visible projects. If the Commission can point to some early program successes, this should help to protect AB 118 funding in future years. If, on the other hand, the desire for perfection holds up implementation, the Commission will have a much more difficult time convincing deficit-conscious legislators that the program is worthy of ongoing funding. We urge the Commission to move quickly in order to protect this vitally important program.

Timely implementation is also important for the economic and environmental health of the state. We cannot afford significant delays in addressing transportation-related emissions. Furthermore, many of the deployment projects that might be funded under AB 118 can help to stimulate the California economy through the creation of new jobs, tax revenues, and fuel savings. Given the current economic downturn, these co-benefits are another argument for accelerated deployment.

The current economic downturn and drop in the price of oil also poses a major threat to clean transportation technologies currently under development. For example, hybrid truck technology is poised for commercial scale technology, but the realities of today's economy could serve to delay or prevent the deployment of this technology. This is a crucial time for clean transportation, and AB 118 has the potential to provide much-needed funding to usher these technologies through this difficult period.

Leveraging Public and Private Funds to Accelerate Change

We encourage the state to leverage private capital and existing state funds in order to accelerate the transition toward cleaner transportation. As appropriate, the Energy Commission should seek to extend the reach of the program through the use of loans, loan guarantees, and other alternatives that permit revenue recycling. Furthermore, the state should take advantage of other state, regional, and local funds that may be able to complement AB 118 funding. For example, the South Coast Air Quality Management District could provide co-funding for certain projects. At the statewide level, opportunities exist to leverage existing air quality programs, including Carl Moyer, Prop 1B, and AB 2766.

AB 118 is an Investment in California's Future

Transportation-related emissions are the largest single source of GHG emissions in California, and also a major contributor to air pollution problems. Furthermore, reliance on petroleum-based fuels poses economic risks for the state's residents and businesses. AB 118 offers an opportunity for the state to address these problems and move California toward a more sustainable and profitable future. While those who are close to this industry know and understand both the scale of the problem and the value of this program, many of the state's legislators and other stakeholders may not. Many members of the advisory committee suggested adding some language to the beginning of the plan that stresses the need for and potential of this program. We agree that this slight modification may have some value in positioning this program as an investment in the state's future and a program that deserves full funding in the face of a budget crisis.

Suggested "No Regrets" Project Categories

Given the urgency of the AB 118 timeline, the state's budget crisis, and the environmental issues that AB 118 was designed to address, we would like to provide suggestions for "no regrets" projects that the Commission could fund in the first year or two of the program. These are projects that are likely to be successful, reduce emissions, benefit the state's economy, and serve as proof that we can make progress toward our ambitious goals through programs such as AB 118. In each of these cases, AB 118 funding could lead to the successful near-term deployment of technologies with multiple economic and environmental benefits.

- **Hybrid Trucks:** hybrid truck technology, both on- and off-road, has the potential to improve fuel economy by 20-50% and to reduce GHG and criteria emissions by similar amounts. Funding is needed to deploy these trucks in the near term, and we urge staff to continue working with CARB to ensure that sufficient deployment incentives exist. Because CARB does not have any funds available until FY 2009-2010, CEC funding could fill a gap by going to deployment incentives in the near term. Furthermore, there may be a need to supplement CARB funds in order to provide larger per-vehicle incentives to encourage hybrid truck purchases during a severe economic recession. Top priority for deployment incentives should go to Environmental Justice communities. Additionally, RD&D funding for next generation hybrid truck technology can help the state develop, assess and reach its longer-term goals. We encourage the state to leverage its separate Prop 1B port investments to also encourage carbon reduction, petroleum reduction and efficiency gains by allowing Prop 1B to pay for upgrading the core trucks and AB 118 to pay for the incremental costs of incorporating clean fuel and/or efficiency systems.

- **Alternative Fuel, Low-Carbon Trucks:** advanced alternative fuel trucks can reduce petroleum consumption, improve air quality, and reduce GHG emissions by 15-20%. Natural gas trucks can be deployed now, particularly in ports and other compact and highly impacted areas. Renewable natural gas from landfills or wastewater treatment plants could offer additional benefits. We were pleased to see that the proposed funding recommendations include purchase incentives and development assistance for these technologies. Focusing on Environmental Justice communities could help the state meet other pressing goals. Again, we encourage the state to leverage Prop 1B port investments to accelerate the development and deployment of these technologies.

- **Next-Gen Very Low Carbon Fuels:** There are several next-generation biofuel producers in California that could benefit from AB 118 funding for in-state demonstration and pilot plant construction. We support staff's proposed inclusion of manufacturing and production incentives. The need for innovative public financing is greater now than in recent years due to the credit crunch, and the economic development benefits of these types of projects is more important now than ever. Interestingly, of the very low carbon fuel investment opportunities, many of the best ones do not involve hydrogen or plug-in vehicles. For example, AB 118 funding could help launch a number of key biomethane demonstration programs that would put California on a path similar to Sweden where they expect more than 15% of their transportation energy to come from this source.

- **Testing and Certification:** One potential roadblock to the deployment of new technologies is testing and certification requirements. We applaud staff for recognizing this issue and suggesting that some AB 118 funding be directed toward removing these barriers. The need to certify the emissions of hybrid vehicles is one example, and some sort of cost-sharing on certifications should accelerate deployment. Testing for gas quality and vehicle performance in biomethane applications is another example, as is development of duty cycles.

- **Low Carbon Retail Networks:** the proposed investment plan includes funding for low carbon refueling infrastructure development, which we agree is a vitally important near-term opportunity. The creation of retail refueling networks for alternative fuels would accelerate the development and deployment of alternative fuels while also creating jobs and economic growth in California. We recommend a portfolio approach that does not pick a single "winning" technology. In particular, we see immediate opportunities where state funds are needed to build more E85, hydrogen, and renewable/biodiesel refueling stations. Planning also needs to be done to prepare for recharging the next generation of plug-in vehicles.
- **Ultra Clean and Low Carbon Transit Buses:** providing funding for the development, demonstration, and deployment of advanced buses would help the state's transit properties meet existing regulations while also expanding the low-carbon transportation alternatives in California. Transit properties are struggling to find affordable technologies that can meet the CARB Zero Emission Bus rule. The state can play a valuable role as an early adopter of these technologies, providing real-world demonstration of the viability of advanced technologies. Such a program would not only help the state meet the AB 32 goals, but also improve air quality in our urban areas where pollution is often the worst.