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10-ALT-01	
DATE	MAR 25 2011
RECD.	MAR 25 2011

March 25, 2011

California Energy Commission
Dockets Office, MS-4
Re: Docket No. 10-ALT-1
1516 Ninth Street
Sacramento, CA 95814-5512

Re: 2011-12 Investment Plan for the Alternative and Renewable Fuel and
Vehicle Technology (AB 118) Program [Docket Number 10-ALT-1]

This letter provides follow-up comments and suggested questions to consider for the revised version of the draft 2011-12 AB 118 Investment Plan presented at the March 7, 2011 Advisory Committee meeting. The California Energy Commission staff has done a tremendous job on what is likely the most comprehensive draft investment plan proposal yet. The following comments are meant to help further improve the draft in two areas: public education and outreach and public fueling stations.

I. Funding for public education

Prior investment plans have allocated funding for public education and outreach, which is part of the mission of the AB 118 program. However, the current draft 2011-12 plan does not allocate resources to public education and outreach, nor does it describe the reason for its exclusion. It would be valuable for the next draft to include either a reinstatement of public education and outreach funding or describe the reasoning behind why Commission staff believes that additional funding is not needed at this time. For example, it would be helpful to know if there are leftover funds from prior years, the success or barriers from current outreach and public education efforts, and how these efforts can be improved.

II. Public fueling stations

Significant and immediate need for public charging stations for BEVs:

While most battery electric vehicle (BEV) owners in California will be expected to charge their vehicles primarily at home, public charging stations still provide additional comfort for prospective BEV owners and will be essential for mainstream market penetration beyond early adopters and multiple vehicle owners. The draft plan does a very thorough job laying out the need for public charging stations, regional readiness, and increased placement in highway

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corridors. Streamlining residential installation and permitting is a pressing need for successful deployment and satisfaction with electric vehicle rollouts. The inclusion of funding to support localities in setting up “one-stop” shops for consumers is excellent and should be expanded as needed.

However, Los Angeles seems very far behind on the number BEV public charging stations in comparison to other regions in the state, which is a noticeable mismatch to deployment estimates of BEVs for this region. Los Angeles residents comprise a large percentage of vehicles owned and vehicle miles traveled, making Los Angeles a region of high impact for fulfilling the goals of the AB 118 program. The next draft should include consideration of the Los Angeles region for AB 118 funding for public charging stations as well as address the barriers facing Los Angeles in deploying public charging stations and identify whether and how AB 118 funding can best help narrow this gap.

Another major hurdle to be overcome in the BEV market is the length of time required to recharge batteries. Even “fast” charging stations for electric vehicles that take 30 minutes are still much too long to make long-range driving practical, especially as batteries increase their capacity. There should be a concerted effort and perhaps AB 118 funding to ensure that fast chargers are developed on a platform that can be upgraded to accommodate faster charging for mainstream deployment so that current investments do not become stranded costs or prematurely outdated.

Significant need for funding of long-range planning for hydrogen fueling station
Public charging stations for both BEVs and hydrogen fuel cell vehicles (FCVs) in California still show a strong need for AB 118 funding. The California Air Resources Board (ARB) noted the significant drop from the 2010-11 investment plan for hydrogen funding and corresponding increase for natural gas stations and recommended \$9 million be reallocated for hydrogen fueling stations from natural gas stations. In addition to ARB’s analysis, the 2011-12 draft investment plan does an excellent job of laying out the long-term potential of renewable hydrogen and FCVs’ outstanding petroleum displacement and greenhouse gas reduction potential, and it makes sense to bolster 2011-12 AB 118 funding for this still developing but high potential payback technology. When derived from renewable sources, electric and hydrogen fuels have the added benefit of distributed generation, which decentralizes market power and will improve competition among fuels, helping mitigate fuel prices for consumers.

Unexplained impact of high funding level for retail natural gas stations:
Although they received considerable funding in the proposed 2011-12 distribution, it was unclear from the draft plan how public natural gas fueling stations will fit into the West Coast Clean Highway initiative and the long-term vision of alternative fuel vehicles and infrastructure in California. The synergy between electric charging and hydrogen fueling stations was carefully laid out in the draft investment plan, but without further clarification, it appears that natural

gas does not have a key role in the broader vision. Addressing the following questions in the next draft would help bridge this gap. What will be the impact of the 30 stations for natural gas? Will these natural gas stations overlap with BEV and FCV stations? Will there be multiple fuel options at stations throughout the Pacific region? How does this investment match the auto manufacturer survey and vehicle commitments and expected deployments of natural gas-powered non-fleet vehicles? How would natural gas fueling stations serve the long-term vision of a clean highway? Applying the following criteria in expanded analysis would be helpful: 1) relation of public stations to vehicle deployment, 2) expected reduction in greenhouse gases, 3) maturity of industry, and 4) long-term role in alt-fuels universe generally.

Several stakeholders posited at the March 7 meeting that it has become more profitable to switch over heavy duty and medium duty vehicles to natural gas, and that light duty vehicles had a greater need for AB 118 funds. In addition, some industry representatives noted that the economics for natural gas fuel stations were fairly favorable in California, but that vehicle purchase price was a greater barrier. In light of these statements and the above-noted needs for electric drive and FCV fueling stations, it seems that there are several better candidates for the funding currently allocated to public natural gas fueling stations.

If the funding allocation is to remain in the “natural gas” category, instead of “public fueling infrastructure,” the great potential and flexibility of biomethane from waste-based feedstocks, as outlined in the draft plan, seems to support the goals of natural gas deployment in addition to its huge potential in broader alternative fuel development. This category already seems well-funded, but perhaps additional funds are warranted. Another investment alternative within the natural gas category would be to consider providing the funding to schools or local communities that may need assistance to invest in natural gas fueling infrastructure for their fleets. A third option to be considered is vehicle incentives in line with expected manufacturer deliveries and price points of light duty natural gas vehicles in California.

In summary, the analysis presented in the 2011-12 draft investment plan suggests that in the public charging station category, public investment in electric drive and fuel cell charging stations best serve California’s short-term and long-term public infrastructure needs and have the greatest long-term potential for game-changing improvements and capacity to clean California’s light duty transportation sector. Fueling station and vehicle technologies are still in early stages of development and deployment, and AB 118 funding will likely have a positive impact on giving these technologies the support they need. In addition, several other investment options within the natural gas category seem to offer superior opportunities to natural gas public fueling stations.

The Commission staff is to be commended for its excellent and extensive research, analysis and stakeholder involvement, as well as its painstaking efforts to improve its competitive grant process. Thank you for your consideration of the above comments and your continuing hard work.

Sincerely,

A handwritten signature in black ink, appearing to read "Shannon M. Baker-Branstetter". The signature is fluid and cursive, with the first name "Shannon" written in a larger, more prominent script than the last name.

Shannon Baker-Branstetter
Policy Counsel, Consumers Union