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Advisory Board Member Formal Comment

CEC Clean Transportation Program Staff

I would like to first thank you all for continuing to drive this program forward. It has been a consistent funding source through the ups and downs of private funding for advanced and low carbon transportation solutions. After a decade on this advisory committee I am glad to see the program continue. It is important for California and the future of clean transportation.

As one of the longest standing advisory board members I would like to renew my request for certain changes to our process to ensure we allocate critical public dollars effectively. The program has two key process steps that impact its effectiveness (1) program allocations (2) funding awards. I would like to request that the program make some changes to improve the transparency, competitiveness, and equity of the program as well as making the advisory committee meetings more productive and valuable.

Establish clear metrics for success

As an investor, any good allocation of investment dollars requires clear goals. In pure financial investing the metrics are simple "return. But even returns are judged over time and against risk. And so you need appropriate goals and timelines. For the ARFTVP the primary goals can also be fairly straight forward but we do need to be clear about what they are and how they are guiding program allocations. We have made progress but the most recent investment plan still is not sufficient in this regard. In my opinion, the major criteria for success are (1) ability to reduce carbon emissions (2) ability to reduce other air quality impacts (3) effectiveness of invested dollars. There are also other criteria such as equity of impacts. Where possible if specific targets can be set for additional criteria then they should be included. At the least, I believe we can easily establish a set of goals for reductions in climate emissions, reductions in criteria pollutants, and cost effectiveness over prescribed timelines (3, 5, 7, and 10 years, etc).

I would ask that in the next investment plan we make clear what our direct goals are for projects funded by the program in terms of tonnes of GHGs mitigated, avoided emissions, and cost effectiveness (ARFTVP dollars invested per MT of GHG reductions unlocked). We could have these targets for each funding year measured 3, 5, 7, 10 years out. We should also have targets for the program as a whole. These KPIs should be specific and core to our effort. This concept sounds more complicated than it is and I am happy to work with staff to clarify how it would work.

Use success metrics to guide program allocations

I am concerned about the continuing practice of allocating dollars to specific technologies rather than specific problem areas. The debates we all have about whether an allocation is appropriate

is arbitrary and depends what you believe is possible. For instance, I do think the recent investment plan makes some strides toward this by focusing on segments like medium and heavy duty vehicles, but by also requiring that the allocation be dedicated to ZEVS or Hydrogen Fueling Infrastructure we are missing the opportunity to define the problem (medium and heavy duty vehicles) the timeline (over the next 10 years) and then allowing open solicitations from any technology or solution that would impact this segment most over that period of time.

Why does this matter? When we dictate technology pathways then it has been shown that more often than not we are wrong, dollars are wasted, and the best solutions are not supported. The original TIAX gap analysis for the program back in 2008 assumed EVs would never be able to compete with FCVs. Yet investment in and deployment of EVs has dwarfed that of Fuel Cells. If we prioritized what problems to solve and let project proposals justify investments in the three criteria mentioned (carbon reductions, criteria pollutants, cost effectiveness) and based the evaluation on forecasted utilization not just capacity created then we would drive solutions with more impact.

Timelines matter because some solutions certainly will take longer to reach tipping points. However, like returns the impact needs to have some discount rate. We could adjust the discount rate based on how much we value immediate reductions vs longer term ones for each allocation. For instance, there may be some areas where we prioritize short term reductions more heavily which is easy to do by weighting reductions by forecasted year of reductions. In the actual award process the criteria and timelines would be used to score more transparently. These scores should be based on projected and actual utilization not capacity. Capacity is not a measure of impact.

"Cost effectiveness" is also a critical measure that I think we do not yet consider sufficiently. As an investment vehicle using public funds it is critical that the program use public dollars effectively. The easiest measure of cost effectiveness that I propose we adopt as a program target as well as award criteria is the program dollars per unit of reductions achieved. This concept can be easily employed in the program allocations and award process. Program allocations should define an area of focus (ex. Reducing emissions in medium and heavy duty vehicles). Each allocation should provide a forecast in terms of number of MT expected to be reduced over 3,5,7 and/or 10 year timeframes (or whatever is the appropriate timeline). Projects that meet the highest \$/MT should receive the awards. This would ensure sufficient co-investment without complicated co-investment criteria.

Without these projections and without some basic assumptions to support these projections it is difficult as an advisory committee to evaluate any proposed allocations and more difficult to justify the investment dollars. This should be applied both in the program allocations (estimating the impact of a proposed allocation or a minimum \$/MT required to secure funding) and the award process (scoring). I certainly believe there should be some discretion for staff in both. But today we do not have enough guidance and clarity on how to prioritize these allocations or how each will be scored in my opinion.

Review program performance and Impact by allocation and year in each investment plan

Measuring performance is absolutely critical to creating accountability and driving improved

performance. An investor who did not provide reports on the performance he or she committed to would not be in business long. We need the same for a public investment program particularly of the scale of the ARFTVP. Each program allocation should have targets and should measure against those targets annually. The CEC is one of the leading energy agencies in the country and transparency and accountability are critically important. It would help the advisory committee and public if the CEC provided a short review of performance by year and allocation rather than just a review of the dollars deployed and the aggregate outcomes.

Lastly, as I said, I am still very supportive of the program and believe it is critically important to the climate and environmental challenges we face in California and Transportation. I am happy to engage with staff on any of these issues.

Thank you,
Will Coleman
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