



**Comment on Soliciting and Selecting Proposals for Centers for Alternative Fuels  
Submission to the California Energy Commission  
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December 11, 2012**

During the December 4, 2012 meeting of the Alternative and Renewable Fuel and Vehicle Technology Program Advisory Committee, the following question was raised: How to objectively solicit and select proposals for Centers for alternative fuels and advanced vehicle technology? This note offers perspectives derived from the experience of the Clinton Climate Initiative in evaluating and promoting breakthrough energy-related technologies.

We support the criteria enumerated in the current draft of the 2013-2014 Investment Plan Update. In slight paraphrase, the criteria address how well a proposed Center would be able to:

- Identify strategic opportunities to develop and demonstrate advanced technology vehicles
- Centralize the attention of fleet managers interested in alternative fuels and advanced vehicles
- Integrate vehicle technology development with workforce training efforts
- Provide a cohesive platform for seeking outside funds

Implicit in this list are three important themes. First, it is critical for the State to invest in the tangible and intangible assets of a sustainable energy economy NOW and not in some imagined future when the outlines of that economy will have taken shape – AND to allow the agenda for investment to change and evolve as research identifies new strategic opportunities.

Second, practical implementation will happen more effectively and with greater benefit to the State if private-sector and institutional entities can be informally gathered into communities of aligned players rather than left to work in relative isolation.

Third, the limited availability of early-stage capital is arguably the most important current constraint on the development of the energy economy of the future. The key factor is not capital scarcity overall – the present era is characterized by abundance – but the scarcity of solid investment cases that can attract public- and/or private-sector investors. This puts a premium on entities that can help channel and increase the flow of investment funds into high-potential pursuits.

With these themes acknowledged and endorsed, we would like to offer an additional set of criteria for Center evaluation. These criteria involve the capacity of proposed Centers to foster integration across dimensions of science/technology and economics/business. On the science/technology dimension, the key is not a proponent institution's commitment to a specific technology but rather the cogency of its system-level perspective. Ideally the proponent would recognize the potential synergies and dissynergies that would accrue across technologies as much as the relative benefits and challenges of individual technologies. For example, a particular energy vector will have its pros and cons when viewed

in isolation. Its true potential, however, can only be assessed in terms of its range of feedstocks, production techniques, and distribution methods, and how these concepts strengthen or detract from the robustness of the complete energy system.

On the economics/business dimension, the key is for Centers to recognize that the future energy economy we will end up with is not the one that engineers might design on a blank sheet of paper but the one that will come into being through a long series of incremental business-driven decisions. There are many technologies on both the fuel and vehicle sides of the market that could meet common-sense criteria of a sustainable energy economy. The ones that are likeliest to win are those that have a near-term point of economic superiority in a distinct market (for example, the market for alternative and renewable fuels created by the Low-Carbon Fuel Standard).

The Centers idea is important – perhaps more so now than ever, given critical questions in play regarding a larger role for alternative fossil fuels (natural gas and propane), development of a parallel fueling infrastructure for gaseous fuels, uncertainty about how to best harness biomass as a transportation fuel feedstock, and how to achieve GHG-reduction targets past the point of full exploitation of appropriate sources of biomass. California's reputation in clean fuels and technology innovation is widely recognized, and its support of Centers (such as the proposed Cal Poly Renewable Fuels Institute) would attract significant investment from the clean tech sector which places a high priority on leveraging CEC and CARB programs, projects and policies. The right Centers, charged and commissioned in the right way, could make irreplaceable contributions to the State's ultimate success in creating a vibrant and sustainable energy economy.