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Dear fellow ETAAC members,

Thanks to Bob Epstein for suggesting a discussion of possible "game-changing" ideas. I agree with many of those that have been circulated already, and would like to add a few thoughts to the mix. In this note, I will mention them only briefly and look forward to further discussion on Tuesday. Some of these may be controversial, but changing the game always is…

1. Tax reform to enhance productivity and cut greenhouse gases
Recent research suggests that growth-enhancing tax reform may be possible with revenues generated by auctioning of greenhouse gas (GHG) allowances or taxes on GHG emissions (Bento & Jacobsen, 2007; Krause, Decanio, Hoerner, & Baer, 2002; Parry, 2003; Parry & Bento, 2000). Most of this analysis has been framed in a national context, the options for states to undertake such beneficial reforms may be different.

2. Air capture of CO_2
The ability to reduce GHG concentrations in the atmosphere may be the most dramatic opportunity to change the climate policy debate. Several methods are possible for this, including biological and chemical (Azar, Lindgren, Larson, & Mollersten, 2006; Keith, Ha-Duong, & Stolaroff, 2006; Rhodes & Keith, 2005; Stolaroff, Lowry, & Keith, 2005). Air capture assumes there is a way to store the captured CO_2, possibly through mineralization or geological sequestration (Intergovernmental Panel on Climate Change, 2005; Lackner, 2002). Richard Branson has announced a prize for air capture technologies, but there may be opportunities for California to advance the potential of these technologies.

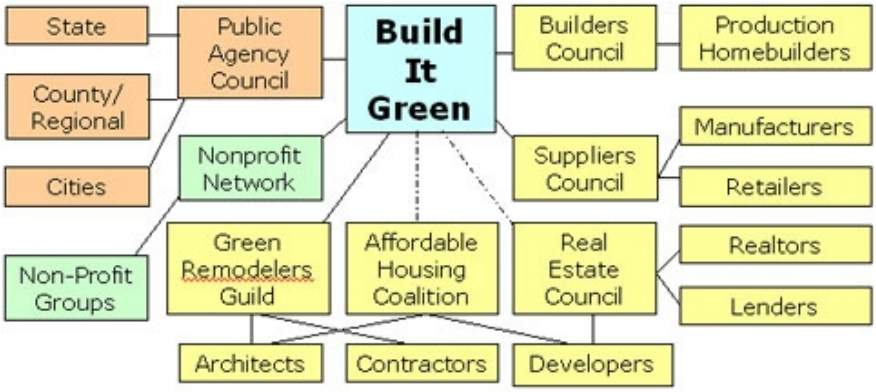
3. Create markets for green fuels.
Currently, consumers cannot choose transportation fuels based on validated environmental performance, although many other consumer products offer such options (e.g. coffee, lumber, clothing, and so forth). It is feasible to establish a green fuels labeling system, which could be either voluntary or mandated (Farrell, Sperling, Arons et al., 2007; Farrell, Sperling, Brandt et al., 2007; Turner, Plevin, O'Hare, & Farrell, 2007). Note that this may be especially important for biofuels because of the potential implications of different feedstocks and cropping methods. International standards for sustainable biofuels are currently being developed and might lead the way.

4. Market California carbon credits
California entrepreneurs or households may find ways to generate GHG emission reduction credits beyond what is necessary for compliance in the state. There may be value in marketing these credits outside of the state. For instance, if California establishes high-quality baselines and accounting procedures, California carbon credits may command a premium. (I know this is the opposite of the conventional wisdom, that regulated entities in California will want to buy credits from outside the state, but the state might want to prepare for a time when larger carbon markets come into existence. In addition, sales out of the state might help in cases where potential in-state purchasers choose not to buy credits for strategic reasons.)

5. Develop a "California Carbon Trust"
The United Kingdom's Carbon Trust is an independent, not-for-profit company set up by the U.K. Government to use government revenues to support low-carbon technologies using a private-sector approach. http://www.carbontrust.co.uk/default.ct California could set up something similar, much in the spirit of the California Institute of Regenerative Medicine.

6. Shift freight shipments to electric rail
Given the increased trans-shipment of freight from our ports to destinations all over the United States, it may be wise to begin to think about the use of new or existing rail corridors for freight shipments that use electricity for locomotion. This could include shifting shipments from truck to rail, as well as from diesel to electric rail. A north-south rail line might be useful, and perhaps easier to implement than an east-west line. Not only would such a shift lower GHG emissions, it would also lower oil imports a well.

7. Create and encourage "Do it Green" industry collaboratives
The transition to a low-carbon economy will require shifts in virtually all industries. As a means to facilitating that change, it may be helpful to establish and/or encourage industry-specific collaborative efforts to help companies understand how to "Do It Green" and remain competitive. One possible model for this activity is the "Build It Green" organization, the structure of which is shown below:



http://www.builditgreen.org/index.cfm?fuseaction=about

8. Create and empower policy collaboratives
A related, but somewhat different idea would be to create a policy collaborative for stakeholders to develop policies (or policy recommendations) that all can come to support (Carpenter & Kennedy, 1985; Gerlak & Heikkila, 2006). An example of such an organization is CalFed, which involves 25 state and federal agencies to improve water supplies in California and the health of the San Francisco Bay/Sacrament-San Joaquin River Delta.

Thanks again for your suggestion, Bob, and I look forward to talking about some of these ideas on Tuesday.

Sincerely Yours,

Alex Farrell

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