

March 24, 2022

To: CARB

From: Muriel Strand, P.E.

Re: Agenda Item 22-5-2, 2022 Scoping Plan Draft Scenarios

I have been following and commenting on most of the scoping plan workshops. What I have seen so far is mostly the standard idea that we can graft our fossil fuel lifestyles onto PVs, windmills, and batteries. I don't agree. While this may be possible for California, it just can't scale up nationally let alone globally. California can best provide global leadership by also pursuing a back-to-basics alternative scenario such as the one described in part 1 of this paper: https://www.researchgate.net/publication/333581837_Is_it_true_that_'Small_Is_Beautiful'

Fundamental change is in order, and that takes planning. It will probably also require 'social engineering' to avoid a chaotic transition to a sustainable state, and make the inevitable transition as smooth as possible. For example, banning leafblowers outright offers a low-risk way to practice making serious and smart changes: <http://motherearthhome.blogspot.com/>

The EJAC seems to also be asking for another, more affordable option than the high-tech solution. Overall I have done my best to outline a vision that has no model (beyond my simple spreadsheet) but that overlaps quite a bit with what the EJAC seems to be asking for, an affordable alternative that puts conservation and frugality first. (And the EJAC would benefit by adding a representative from the homeless community.)

Collectively, my comments to date have attempted to describe such a grassroots alternative: <https://www.arb.ca.gov/lists/com-attach/8-sp22-publichealth-ws-WyhTNI8WXoHaFQ6.pdf>

A few highlights:

1. About 25 years ago, I calculated that fossil fuel energy is very cheap. It takes about 100 hours, give or take, for a healthy adult to generate the amount of energy available from a gallon of gasoline. That's a huge cost ratio, and very different than evolutionary conditions. And it surely influences consumer economic choices. Can the effects of this economic bias be modeled?

2. Fossil fuel energy is physical energy. Our physical needs are: clean air and water, healthy food, cooking, comfy shelter, and plenty of sleep and exercise. We would be wise to plan how to meet those needs without fossil fuels as soon as possible. That means substituting humanpower and manual tools for engines and motors as much as possible. Current mining and refining technologies for key metals and minerals require fossil fuels for key processes:

<https://www.youtube.com/watch?v=TFyTSiCXWEE>

3. One strategy which I believe would be very effective in inducing substantial and speedy changes would be to require that all goods and services be priced in terms of embedded kwhr & GHG emissions, as well as in dollars. Economic theory posits that perfect consumer information leads to perfect markets and allocation. This kind of market information would support consumers in crowding climate externalities out of the monetary economy, in large part by

making explicit the financial bias enjoyed by fossil fuels that is outlined in #1 above. Can the effects of this strategy on consumer choices be modeled?

4. The sustainable discount rate is zero. From a species and system perspective, the future is as valuable as the present. Fossil fuels that are still in the ground are not stranded assets; they are assets whose real value is now negative but will be positive in a few centuries if we can figure out how to live within our means.

5. There is a black hole in all these climate policy discussions, namely, what exactly are the jobs of the future? We should not assume they are generally the same as current jobs and sectors. And we should not let chambers of commerce and corporations define what they are, or we will get BAU. We should go back to the drawing board:

- * What are the jobs that directly and collectively provide for basic human physical needs, using only natural materials and renewable energy flows?

- * What is the smallest collective that could achieve that goal in relationship with a suitable parcel of land guaranteed in perpetuity?

- * What education and training is needed for efficacy and success in performing those various jobs in this particular place?

Thank you for the opportunity to comment. I look forward to perusing the final draft of the scoping plan in the near future.