

March 3, 2022

To: California Air Resources Board
From: Muriel Strand, P.E.
Re: 2022 Scoping Plan: Public Health Workshop

Some workshop panelists hope that California's plans for reducing GHG emissions can serve as a role model for other states and countries. However, **the role model we really need is a model that shifts society off of its fossil fuel basis and reestablishes our system directly on the foundation of the natural world, of the ground we must stand on.** Such a shift must be far more fundamental and radical than grafting our fossil fuel lifestyles onto PVs, windmills, and batteries. Sadly, much of the mining and refining needed for manufacturing these devices requires fossil fuels, and recycling is unlikely to be practical if limited to the leftover electricity generated by replacement equipment.

Clearly, such a radical shift can't happen overnight. It took us at least 2 centuries to get addicted to fossil fuels; nonetheless we would be wise to compress our reverse course to be 5 or 10 times faster. Now history, like entropy, is path dependent, so we should not just aim to end up where we were in 1700 or so. But **we do need a vision, a plan, that puts basic needs first.**

Since fossil fuel energy is physical energy, our physical needs are the primary design goal: clean air and water, healthy food, cooking, comfy shelter, and plenty of sleep and exercise. **It's a question of consumption (not just production) efficiency.** Deep conservation measures are the most cost-effective way to begin this shift. Before installing heat pumps, replacing gas appliances with electrical ones, etc., we should first reduce energy demands as much as possible. Shrinking supply chains is a first step, and replacing motors with humanpower is another one.

Food waste has become a hot topic; yet it seems that the real problem with food waste is actually wasted energy. At the same time, cooking is obligate human behavior that we have evolved to require. Granular analysis of the whole food supply chain, from farm to fork, is in order.

Healthy food comes from healthy farms;

https://www.researchgate.net/publication/352223522_The_Farm_Bill_IS_Health_Care_Reform
just as a healthy planet comes from healthy farms:

https://www.researchgate.net/publication/350327927_The_Farm_Bill_IS_Climate_Change_Legislation

Manufacturing of packaged ultra-processed 'food' that travels long distances to consumers is certainly not the most efficient and healthy way to prepare food. For example, how much energy is required to produce the newly fashionable fake vegan 'meat' compared to real meat? As well, there are substantial differences in food management and preparation in restaurants and other commercial kitchens, as opposed to residential kitchens. Close analysis of these differences is likely to lead to increased energy conservation. Which way of cooking real meat takes less energy—barbecue or braising? Experts in consumer science (formerly known as home ec) can be helpful here.

We have been living very differently than we were evolved to live, especially us WEIRD (Western, Educated, Industrialized, Rich, Democratic) people. Hypnotized by financial profits, European settlers displaced preexisting networks of ecological relationships and ended up working hard instead of smart. **If we want 'high-road,' good quality jobs, we must work to live, not live to work. Health-informed climate strategies will be simple, thrifty, and unprofitable.**

It is no obvious task to describe in detail a future system that doesn't yet exist. We can't model something we can't quantify, and we can't quantify something we can't describe. However, there's a **standard rule of thumb: if you want a complex system, it's best to start with a simple system and evolve it.** Taking our whole complex fossil fuel system and re-placing it on a foundation of nonrenewable harvesters of renewable energy is a very complex prospect.

Some panelists mentioned the importance of green jobs, and a jobs-housing balance. I have been hearing about the holy grail of jobs-housing balance since I came to Sacramento 34 years ago, and especially when I was on the Sacramento Environmental Commission soon after the passage of the 1990 Clean Air Act.

Here are a few design guidelines for a real balance and for truly sustainable work:

- * What are the jobs that directly and collectively provide for basic human physical needs?
- * What is the smallest collective that could achieve that goal in relationship with a suitable parcel of land guaranteed in perpetuity? (This may be a form of granularity.)
- * What education and training is needed for efficacy and success in performing those various jobs in this particular place?

Happily, various sources offer perspectives and parameters that pertain. One example is Charles Eisenstein's book, "Climate – A New Story" wherein he poetically and scientifically explains that **all the things we have used fossil fuels to do are at least as harmful as CO2 by itself.**

<https://charleseisenstein.org/books/climate-a-new-story/>

Every time we use fossil energy in our daily lives we are reducing the carrying capacity of the planet by another smidgen, especially if we are using the energy for fracking, paving the soil, clearcutting, or manufacturing and releasing pesticides and industrial toxics.

Another valuable source is Allan Savory's research, described in "Holistic Management: A Commonsense Revolution to Restore Our Environment."

<https://islandpress.org/books/holistic-management-third-edition>

Among other things, I learned that during dry seasons, ruminants are a key part of the water cycle when grazing as they were evolved to graze. But when they are in CAFOs, that water cycle is broken, as well as the natural soil restoration cycle.

Not surprisingly, there is no shortage of information about what not to do:

Metabological: The Lure and the Lies of Processed Food, Nutrition, and modern Medicine, by Robert H. Lustig, MD, MSL

<https://www.harpercollins.com/pages/metabological>

The Poison Squad: One Chemist's Single-Minded Crusade for Food Safety at the Turn of the Twentieth Century, by Deborah Blum

<https://www.penguinrandomhouse.com/books/312067/the-poison-squad-by-deborah-blum/9780143111122/>

Poison Spring: The Secret History of Pollution and the EPA, by EG Vallianatos w/ McKay Jenkins

<https://www.bloomsbury.com/us/poison-spring-9781608199259/>

Toxic Legacy: How the Weedkiller Glyphosate Is Destroying Our Health and the Environment, by Stephanie Seneff

<https://www.chelseagreen.com/product/toxic-legacy/>

An American Sickness: How Healthcare Became Big Business and How You Can Take It Back,
by Elisabeth Rosenthal
<https://www.penguinrandomhouse.com/books/318776/an-american-sickness-by-elisabeth-rosenthal/>

From a positive perspective, I have also made various efforts to describe at least some of the details of the path to, and structure of, what society might look like when re-placed onto our inevitable dependence on the natural world. Specifically, please find below links to my comments pursuant to the various 2022 scoping plan workshops. While the list may seem daunting, rest assured that few of the texts that the reader may encounter exceed a few pages. **Collectively, they contain the perspectives and parameters that I have accumulated.**

Climate Investments - Fourth Investment Plan

<https://ww2.arb.ca.gov/resources/documents/california-climate-investments-investment-plan>

Workshop on the Draft Cap-and-Trade Auction Proceeds Fourth Investment Plan

<https://ww2.arb.ca.gov/events/workshop-draft-cap-and-trade-auction-proceeds-fourth-investment-plan>

My comments on the Draft Cap-and-Trade Auction Proceeds Fourth Investment Plan

<https://www.arb.ca.gov/lists/com-attach/9-4thinvestmentplan-ws-VDVWIMwWFQGYwRo.pdf>

Scoping Plan Meetings & Workshops & My Comments

<https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/scoping-plan-meetings-workshops>

Public Workshop Series to Commence Development of the 2022 Scoping Plan Update to Achieve Carbon Neutrality by 2045. June 8-10

<https://www.arb.ca.gov/lists/com-attach/19-sp22-kickoff-ws-AmFUMwZ1AjNWDwIw.pdf>

Public Workshops: 2022 Scoping Plan Update:

Scenario Concepts Technical Workshop

<https://www.arb.ca.gov/lists/com-attach/5-sp22-concepts-ws-AHMBZFc5AyACbQln.pdf>

Short-Lived Climate Pollutants Workshop

<https://www.arb.ca.gov/lists/com-attach/26-sp22-slcp-ws-B3RVPwFjV3RSCwZl.pdf>

Scenario Inputs Technical Workshop

<https://www.arb.ca.gov/lists/com-attach/24-sp22-inputs-ws-UTJWP10xU20DYARq.pdf>

Electricity Sector Technical Workshop

<https://www.arb.ca.gov/lists/com-attach/5-sp22-electricity-ws-VCdVMFQ6UXIAbwVr.pdf>

Natural and Working Lands Scenarios Technical Workshop

<https://www.arb.ca.gov/lists/com-attach/4-nwl-2021-scen-ws-AG4BcFQ5WVUBdFIx.pdf>

Building Decarbonization Workshop

<https://www.arb.ca.gov/lists/com-attach/13-sp22-buildings-ws-VTYBaAZqBDpWNQhm.pdf>