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Protect public interests and consider foreign policy impacts

I appreciate the efforts so far to include all impacts and effects of the energy transition.

A particularly difficult part of this is to balance public and private interests. The transition cannot happen without industry participation, and of course it needs to be a creator of jobs and education. But it must be done for the benefit of all.

We've seen what can happen when one energy technology gets too dominant--as has happened with fossil fuels interests in the past century. Fossil fuel interests have become so dominant that they control the government, get special tax treatment for themselves, distort environmental policy, receive government subsidies, have even shaped our foreign policy. Nuclear interests also got some sweet deals for themselves such as subsidized insurance. So we can't let any corporate interests become that powerful as to distort the market and government. Public interests have to take precedence over private, and we cannot let private interests warp the marketplace like fossil fuels did.

An example is hydrogen technology. There was significant industry representation for hydrogen at the Dec 4 hearing, and there is a bill now introduced to the CA State government for the 2021-22 session (SB-18) regarding green hydrogen. Reading I have done indicates that hydrogen (and its alternative ammonia), energy carrier and storage technology, will have relatively niche uses, with its main targets being for large transportation (ships, trucks, perhaps trains) and perhaps as a storage medium for â€œcurtailedâ€ (excess) electricity generation from renewable sources. It has the disadvantage of being relatively inefficient compared with battery storage (30% trip efficiency vs 80% for batteries) as well as requiring specialized storage systems. This article is the most detailed summary I have seen:

https://www.carbonbrief.org/in-depth-qa-does-the-world-need-hydrogen-to-solve-climate-change?utm_campaign=Carbon%20Brief%20Weekly%20Briefing&utm_content=20201204&utm_medium=email&utm_source=Revue%

On the other hand, there are factors in hydrogenâ€™s favor vs batteries, notably that the most efficient batteries at present require Lithium, which must be mined, often from environmentally sensitive locations. This points to the need to develop (or monitor development of) future generations of batteries with less reliance on rare materials. Iâ€™ve heard rumors of carbon fiber as a promising technology for batteries, but Iâ€™m not sure this would replace lithium, it might only enhance the performance of lithium batteries.

This is all to say that no technology is free. All factors must be taken into account, including effects outside the borders of California and even the United States. For example, would a hydrogen economy cause international dependence on any regions of the world, particularly politically volatile regions, as oil has done? Similar questions for Lithium.

Another thing Iâ€™d like to mention is the concept of carbon dioxide sequestration in soil. I believe this has great potential, but would require significant changes to our agricultural system. Weâ€™d have to see great increase in the use of cover crops, less tillage and less use of chemicals. There is another Senate Bill on this topic, SB-27, which would institute systems for measuring and bookkeeping the carbon. I was happy to see this, but thereâ€™s room for mischief here. The bill would create a system for registering and tracking soil carbon sequestration. This is good and necessary, but the potential for mischief is that it would lend itself to a carbon offset market, which corporate interests would game for their own benefit (greenwashing), and mainly benefit agribusiness rather than small farmers or the general public. The committee should consider these impacts and help push this legislation in a direction that will achieve the goals of sequestering carbon while benefiting small farmers and the general public.