October 22, 2021

Comments on the 2022 Scoping Plan Update
Scenario Inputs Technical Workshop

350 Silicon Valley recommends that the Scoping Plan for 2022 adopt a carbon neutrality target date of 2035. We emphasize, however, that any calculation of "neutral" or "net zero" must not incorporate offsets that rely on activities that are not truly additive or that may be reversed by climate change effects.

We support the assumptions and targets in Alternative 1 in many cases. However, we find them overambitious for transportation but under-ambitious for short-lived climate pollutants (SLCPs). We are concerned that Alternative 2 relies too heavily on unproven carbon dioxide removal (CDR) strategies.

We anticipate that California will still need some energy produced from combustion in 2035 and do not think it is in the interest of the state or nation for the cement or steel industry to leave the state because no combustion is allowed.

Consequently, **we suggest a new Alternative 1.5 that would incorporate some aspects from Alternative 1 and some from 2, and others that appear in neither.**

Most of the following comments focus on SLCPs (Short Lived Climate Pollutants), as 350 Silicon Valley submitted comments earlier focused on other areas. Our organizing principle in developing these recommendations has been that California must accelerate SLCP emission reductions as much as possible in order to reduce the need for future investment in expensive and unproven technologies such as CCS (carbon capture & storage) and DAC (direct air capture).

Progress toward meeting the 2030 target of a 40% reduction in methane emissions has been insufficient, yet California needs to increase these targets to be carbon neutral by 2035. Substantial increases in infrastructure investment and commitment to tightening regulations will be necessary to reduce methane emissions at the needed pace.

1. We recommend **increasing the emission reduction targets for SLCPs** and introducing more incentives or regulations for meeting them:
    a. **Methane**: possibly increase reduction targets to 50% by 2030 and 60-75% by 2035.
        i. **Oil and gas**: possibly 75% reduction target by 2030, 85% by 2035.
            1. Phase out oil and gas extraction by 2030. California oil is heavy and relatively dirty.
            2. Reduce petroleum refining substantially (possibly 80% or more) by 2035.
        ii. **Livestock and Dairies:**
            1. Rapidly increase dairy digesters to capture methane; at the same time, maximize deployment of alternative manure management programs (AMMPs). Set conditions for grants/loans that prevent increasing herd size.

2. Deploy an enteric emissions reduction strategy by 2025. Programs to educate dairies about the effectiveness of 3-NOP in reducing methane emissions and its safety for cows should be introduced soon so farmers can become comfortable with the idea of using it and understand how it should have a positive effect on sales. This would enable implementation of the program as soon as FDA approval is granted. Consider the possibility of large trials in California in advance of FDA approval.

iii. **Landfills**: possibly 50% reduction by 2030 and 75% by 2035

1. Enforce SB 1383 targets to divert 75% of organic waste from landfills by 2025.
2. Enforce SB 619 (Laird, 2021)
3. Rapidly increase digesters to capture methane and composting facilities to prevent methane formation from this diverted organic waste stream.
4. Research and increase new programs to capture methane more efficiently from existing landfills.

iv. **Other**: Include programs to reduce methane emissions from sewage treatment plants and rice cultivation.

b. **HFC refrigerants**: increase reduction targets to at least 75% in 2030 and 85% by 2035 (in line with the Kigali Amendment to the Montreal Protocol and the AIM Act).

i. The F-gas Reduction Incentive Program (FRIP) that is providing grants for converting supermarkets that use HFCs to very low GWP (<50GWP) refrigerators must be expanded by several orders of magnitude. More funds for smaller, independent stores and those in disadvantaged neighborhoods to completely remodel their refrigeration systems are especially needed.

ii. Expand FRIP to include replacing old refrigerators and air conditioning systems in other sectors beside food service and retail, and in residential buildings.

iii. Require recycling or decommissioning of discarded equipment to capture refrigerants and prevent leakage from landfills.

2. Transportation recommendations

a. End the sale of new ICE vehicles as soon as possible, probably difficult to do before 2030. Discontinue PHEV sales also in 2030.

b. Make it more expensive for ICE owners to drive, beginning as soon as possible. e.g. introduce a fee or excise tax on the sale of new ICE vehicles, increase the state sales tax on diesel and gasoline, increase registration fees for ICE vehicles and eliminate them for a few years for EVs.

3. Low carbon fuel recommendations

a. Low carbon fuels that are crop-based (corn, other grains, tree farms) should be phased out as soon as possible. They conflict with US and California goals to increase natural sinks and protect more land (30x30).

b. Investigate electrofuels which use electricity to convert CO_2 emissions into fuels.

4. Industry recommendations

a. Steel

i. Introduce incentives for steel produced from electric arc furnaces or clean energy produced hydrogen, including incentives for producing electrolyzers.

b. Cement

   i. Consider developing a low carbon cement standard (similar to the LCFS) with a sliding scale of incentives based on carbon intensity to encourage development of less carbon intensive cement.

5. Carbon dioxide removal (CDR) from the atmosphere recommendations

a. Greater reliance on implementing 30x30 goals could expand the potential of natural and working lands to sequester carbon.

b. Rapidly increase restoration of wetlands, grasslands, and woodlands.

c. Encourage non-oil industry entrepreneurs to develop CDR projects which employ CCS, rather than enhanced oil recovery (EOR), and direct air capture of CO_2 (DAC).

6. **Infrastructure**: We also recommend that CARB identify the amount of infrastructure investment necessary to attain the 2035 target (e.g., battery and other energy storage, EV chargers, grid expansion, methane digesters, composting facilities, and wetland development/construction). This information will help in crafting legislation to help CARB implement the Scoping Plan.

Thank you for the opportunity to comment on this important matter. We look forward to your selection of a nuanced and comprehensive planning scenario for this all-important Scoping Plan update.

Sincerely,

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