California's ambitious 2030 climate target faces serious obstacles, acknowledges regulator

July 31 2023, by Ari Plachta, The Sacramento Bee

Credit: Pixabay/CC0 Public Domain

For the first time, California's leading air regulator acknowledged major roadblocks to meeting its ambitious carbon emissions target for 2030, a goal the agency set just months ago in a sweeping plan to tackle climate change.

The hurdles revolve around the feasibility of carbon capture technologies and the state's flagship climate program, known as cap-and-trade. It's a tension poised to intensify as the California Air Resources Board navigates a transformation of the energy economy.

Central to the debate is the question of whether California should tighten the reins on industrial emitters by strengthening its cap-and-trade program, which established an emissions trading system aimed at cutting emissions while providing flexibility for industry.

In its 2022 climate change roadmap, the agency placed heavy bets on emerging technologies to remove carbon pollution from the atmosphere, setting a target to reduce emissions across the economy to 48% below 1990 levels by 2030—an increase from the previous 40%.

But Air Board staff now say those technologies may not be widely available in time. As a result, they say relying solely on cap-and-trade could drive carbon prices to unmanageable heights and push industrial polluters out of California.

Dave Clegern, an Air Board spokesman, emphasized the need to overcome carbon removal infrastructure challenges to attain the ambitious 48% reduction goal.

"If those tools are not widely available by 2030 with a 48% target, then prices get very high in the program and that leads to leakage—production moving out of state to reduce emissions in state and comply with the program," Clegern said in a statement.

He asserted that California is still on track to achieve its lower, legally mandated target to reduce emissions 40% below 1990 levels by 2030. Clegern also hinted at the possibility of exploring alternative approaches to achieve the higher target.

These obstacles come as no surprise to climate experts who have long warned that California is at risk of missing its 2030 climate goals. In the past, the Air Board agency faced criticism for lacking a clear implementation strategy of its climate plan and relying on optimistic assumptions.

The cap-and-trade program itself has faced sustained criticism for not effectively curbing industrial emissions and burdening communities already plagued by high pollution levels. Under this program, the state sets a limit on emissions allowed from power plants, refineries and factories, which are then issued permits that can be bought, sold or traded.

Danny Cullenward, a climate economist who serves as an advisor to the state, said the Air Board appears to be "laying the groundwork for a blame shift" by conditioning the program's strengthening on carbon removal technologies.

"This is how you begin to say, 'It's not our fault that we can't get there,'" Cullenward said. "'We are unable to do the things we want to do because somebody else didn't follow through.'"

Critics including environmental justice advocates have voiced opposition to the Air Board's heavy reliance on nascent technologies such as carbon capture and storage and green hydrogen, expressing skepticism about their feasibility.

But Air Board staff expressed confidence it could meet the ambitious 2030 target in its scoping plan until last week.

At a Thursday workshop, deputy executive officer Rajinder Sahota questioned the viability of those exact technologies. According to attendees of the meeting, Sahota indicated that achieving the 2030 scoping plan target would necessitate several extraordinary, unlikely feats.

They include a significant expansion of green hydrogen (462 times current levels) and removing 20 million tons of carbon dioxide from the atmosphere, amounting to an annual emissions reduction of 5%. For context, emissions only fell 9% during pandemic lockdowns.

The carbon capture and storage industry must also overcome significant pipeline permit challenges.

"Implicit in (Sahota's) comments was the possibility that we will not achieve it," said Michael Wara, a Stanford University climate policy expert who participated in the workshop.

Wara said it was the first time he saw agency staff appear to wrestle with implementation of their own climate goals. He raised the concern that inflated carbon prices would drive up costs for both industries and consumers, particularly Californians still driving gas vehicles who can't afford to buy electric.

The agency plans to make decisions on the future of cap-and-trade quickly, with members of the public having only three weeks to submit comments with full calculations of economic costs and benefits.

"Today was a day when ARB acknowledged how hard it will be to achieve the 2030 target. The target is really science based, and ARB is tasked with making that possible in the real world. That is hard."

Citation: California's ambitious 2030 climate target faces serious obstacles, acknowledges regulator (2023, July 31) retrieved 21 May 2024 from https://phys.org/news/2023-07-california-ambitious-climate-obstacles-acknowledges.html