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Re: 350 Seattle comment on Proposed Program Rules (WAC 174-446), Climate Commitment Act adoption of CARB - US Forestry offset protocol

Dear Mr. Grice,

Thank you for the opportunity to comment on WAC-173-446, Climate Commitment Act Program Rule.

This comment concerns the California Air Resource Board's forestry offset protocol, U.S. Forest Projects - June 25, 2015 (1) (hereafter, "CARB - US Forestry").

Offsets are inherently flawed, allowing polluters to continue polluting (2). By limiting the use of offsets and removing a corresponding quantity of allowances, the Climate Commitment Act is arguably superior to California's cap and trade program. However, Ecology's proposed adoption of California's forestry protocol is premature. CARB - US Forestry should not be adopted as-is.

The protocol's flaws include: inadequate accounting for leakage; ecological and statistical flaws that result in over-crediting; encouragement of industrial forest practices; and crediting of wood products.

In addition to addressing those issues, any forest offset protocol for Washington State should provide a mechanism to aggregate small forest landowner forestlands, and avoid decoupling carbon storage from overall forest health.

Finally, an evaluation of the forest carbon offset buffer pools used by California's cap and trade program has found them to be potentially inadequate. We strongly recommend that the viability of those buffer pools be evaluated before considering any linkage between Washington and California's cap and trade programs.

We expand on those statements below.

Leakage

A 2019 study (3) found that 82% of the credits issued under CARB - US Forestry likely do not represent true emissions reductions due to the protocol's use of lenient leakage accounting methods:

- The protocol uses a 20% leakage rate when a rate of 80% or higher is supported by published studies.
- It assumes the forest would be harvested in the first year for the purpose of giving credit, but assumes harvesting would be spread out over 100 years for the purpose of reducing credits to account for leakage.
- It is unclear whether the protocol requires forestland owners to increase carbon stocks to cover leakage for 25 years or for 100 years.

The study finds that the over-crediting could be avoided by first, applying a leakage rate that is 80% or higher; and second, determining the net benefits of reduced harvesting on an annual basis, by accounting for both the increased carbon storage on site and the decreased carbon storage elsewhere due to leakage at the same time.

Washington State should not adopt CARB - US Forestry until these shortcomings are addressed.

Over-crediting

Anecdotal reports have described the lack of genuine additionality in California's forestry offsets (4), but in 2021 a systematic analysis showed that nearly 30% of California's forestry offsets were over-credited (5). Credits are awarded at the start of an offset project using a "common practice" baseline that is only 5% higher than the minimum common practice number. Offset makers, acting rationally in economic terms, are able to exploit statistical errors in California's protocol, selling offsets for more than their climate benefits are actually worth. This enables additional pollution.

"Rather than improve forest management to store additional carbon, ecological and statistical flaws in California's offsets program create incentives to generate credits that do not reflect real climate benefits." (6)

If the Climate Commitment Act is going to include forestry offset protocols, those protocols need to be as effective as possible. Washington State should not adopt CARB - US Forestry until the shortcomings that allow over-crediting are addressed.

Industrial forestry

CARB - US Forestry favors industrial logging practices. Even when harvest rotation times are extended, this approach fails to prioritize optimal carbon sequestration, produces significant carbon releases and overlooks the ecosystem co-benefits that occur in complex, mature forests.

Timber harvests produce significant emissions. Logging is Oregon's biggest source of emissions (7). A 2019 study found that harvest-related emissions are five to seven times that of the fire emissions in Oregon, and three times that of fire emissions in Washington (8).

Among the 2019 study's findings:

- For state- or region-level carbon budgets, a cradle-to-grave carbon lifecycle analysis should be combined with the ecosystem carbon balance to account for how much the forestry sector is contributing to or offsetting total carbon emissions.
- Emissions have been underestimated by up to 55% in Oregon and 25% in Washington. As of 2019, these emissions were not reported in state GHG reporting guidelines.

Undisturbed forest soils hold 53% of the carbon in the forest (9), while harvesting forests causes soil to lose stored carbon (10).

"...as climate changes and aridity increases, clearcutting is not the treatment of choice if protection of ecosystem C stocks and biodiversity is a high priority." (11)

While the timber industry likes to claim that shorter harvest rotations have a climate benefit, the opposite is true (12). "Most industrial owners west of the Cascades cut their evergreen forests soon after they grow to merchantable size...yet that practice ends the trees' career as photosynthesizers and timber manufacturers just when they're getting good at it." (13). In contrast, extended harvest rotations have been identified as a potentially significant method of achieving Washington's climate goals (14).

As an additional—and much-needed—benefit, the expert modeling that identifies Pacific Northwest forests as one of the world's best carbon sinks also finds that high-carbon storing forests enhance biodiversity: "The forests we identified with the greatest potential to sequester carbon during this century provide multiple ecological co-benefits." (15) For example, doubling harvest rotations for carbon storage enhances summer streamflow by at least 25%, and minimizing clearcuts to pocket-sized areas adds another 25%, thus substantially contributing to salmon recovery (16).

To be most effective, any forestry offset protocol used by Washington State should reward the *avoidance* of industrial forest practices, incentivize longer harvest rotations, and prioritize the protection of old growth and mature forests.

Wood products

CARB - US Forestry also credits the storage of carbon in wood products, even though they store far less carbon than forests. This is because about 45% of harvested carbon is left on site as slag, another 25% is lost at the mill, and the rest continues to decay regardless (17). Some estimates have only 15% of a log's carbon ending up in a wood product (18).

"While milled wood products do store carbon, they do so for far fewer years than the forest itself, and wood products emit carbon as they break down." (19)

"Increasing forest carbon on public lands reduced emissions compared with storage in wood products because the residence time is more than twice that of wood products." (20)

"Washington includes combustion emissions from the current year's harvest [in state greenhouse gas inventories]...but not from wood product decay, resulting in up to a 25% underestimation of state CO2 emissions." (8)

As 200 forest and climate scientists told Congress in June 2020:

"We find no scientific evidence to support increased logging to store more carbon in wood products, such as dimensional lumber or cross-laminated timber (CLT) for tall buildings, as a natural climate solution." (21)

Crediting carbon storage in wood products encourages increased harvests and shorter rotations, both of which are counterproductive to Washington's climate goals.

Aggregation

2.88 million acres of forestland in Washington State were owned by small forest landowners in 2019 (22).

Any Washington State forestry offset protocol should provide mechanisms to enable landowners who would otherwise face barriers to participation in carbon offsets to aggregate their offset offerings—particularly Tribal Nations and small forest landowners—in order to maximize benefits to local communities, tribes, and land owners of all sizes.

Carbon storage vs forest health

Any Washington State forestry offset protocol should avoid decoupling carbon storage from overall forest health.

"In New Zealand, high carbon prices have led to dense plantations of exotic, short-lived tree species (such as radiata pine) that offer poor habitat and that can displace slow-growing native forests." (23)

California's buffer pools

North American forests will come under increasing stress during the decades that Washington State attempts to achieve its climate goals (24). Given the recent increase in mega-fires in California, the buffer pools for the state's forestry offsets may be inadequate (25).

The reversals in the Colville Tribe's carbon offset in California's program offer an in-state example of the risk associated with significant fires (26).

The vulnerability of California's buffer pool to increased fires must be considered before Washington State commits to a linkage with California's cap and trade program.

Conclusion

In June of 2020, 200 forest and climate scientists alerted Congress to the importance of our forests as a response to climate change:

"The growing consensus of scientific findings is that, to effectively mitigate the worst impacts of climate change, we must not only move beyond fossil fuel consumption but must also substantially increase protection of our native forests in order to absorb more CO2 from the atmosphere and store more, not less, carbon in our forests." (21).

CARB - US Forestry does not offer an appropriate way to accomplish this goal. In fact, some forest scientists question the ability of forest offsets to meaningfully address carbon sequestration (27).

Before adopting CARB - US Forestry, Ecology needs to incorporate modifications that will achieve more effective carbon reduction, avoid excess pollution including from industrial forestry practices, ensure confidence in our cap and trade program, and prevent overfunding carbon market profiteers.

Thank you for your work on WAC-173-446, and for considering these concerns,

David Perk
350 Seattle

350 Seattle works toward climate justice by organizing people to make deep system change: resisting fossil fuels; building momentum for healthy alternatives; and fostering resilient, just, and welcoming communities.

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