Public Comment

for August 26, 2021
RCEA Board of Directors
Regular Meeting

Agenda item #2
Public Comment on matters not on the agenda

RCEA Board Members
County of Humboldt – Mike Wilson
City of Trinidad – Dave Grover
City of Arcata – Sarah Schaefer
City of Blue Lake – Chris Curran
City of Eureka – Scott Bauer
City of Ferndale – Stephen Avis, Vice Chair
City of Fortuna – Mike Losey
City of Rio Dell – Frank Wilson
Humboldt Municipal Water District – Sheri Woo, Chair

Dear Dave Grover and other RCEA Board Members:

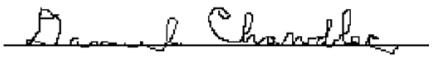
I know that many of you were uneasy about approving the ten-year contract with Humboldt Sawmill. I thought that when it comes time to review the contract, which you agreed to do annually, you should have the benefit of some new research on the mortality consequences of CO2 emissions. "Mortality consequences" in this case means person who in the future die because of extreme heat attributable to global warming. The study calculates that each 4,434 metric tons of carbon dioxide will result in one heat-related death during this century. Since Humboldt Sawmill emitted 284,000 metric tons of CO2 in 2019, it can be expected to emit 2,840,000 metric tons of carbon during the ten years of the contract, which equates to 641 deaths.

I bring this to your attention in hopes that you will ask RCEA administrators to more actively pursue the alternatives to burning mill waste in inefficient equipment. There were several possibilities in Michael Furniss' presentation that would bring jobs and industry to Humboldt and sequester most of the carbon now emitted by sawmill waste. This is unlikely to happen, however, unless RCEA takes the lead –which it should as the leading advocate for renewable energy and reduced CO2 emissions in Humboldt County.

A Vox article describing the study is below, and it links to the study itself. The article concludes: "Understanding the mortality cost of carbon marks an important stride in environmental research, giving scientists and economists a new tool to measure the true cost of climate change. The next stride will be when policymakers actually use it to shape climate strategy."

Thank you very much for your continued attention to this issue. It seems especially important as climate-exacerbated drought and fire turn our forests into carbon emitters rather than carbon sinks.

Your constituent,



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This summer's record-shattering temperatures, which led to hundreds of deaths in the Pacific Northwest and Canada, made it painfully obvious that climate change isn't a far-off threat — it's already killing people.

So you might think that the social cost of carbon — a common measure among scientists and policymakers of how much economic damage results from emitting one ton of carbon dioxide — would also include a decent estimate as to the number of climate-related deaths per ton.

But due to a lack of reliable data, it didn't. Deaths barely factored into the calculation — until now.

Danny Bressler, a PhD candidate in sustainable development at Columbia University, has published a study in the journal *Nature Communications* that updates the social cost of carbon (SCC) based on findings that have emerged in the last few years about heat-related deaths. He calls it the mortality cost of carbon.

Adding 4,434 metric tons of carbon dioxide into the atmosphere, Bressler found, would result in one heat-related death this century. That's equivalent to the lifetime emissions of 3.5 Americans — which means that **3.5 Americans generate enough carbon to kill one person over the century**.

People in other nations emit much less. For example, it would take the combined lifetime emissions of 146.2 Nigerians to kill one person.

This highlights one of the injustices of climate change: **On a per-capita basis, people in richer, cooler countries produce far more emissions than people in poorer, hotter countries, who suffer most of the damage.**

It's worth pointing out that Bressler's estimate is only taking into account the deaths caused by extreme heat. But we know there are a lot of other climate-related events that can lead to death, like flooding, crop failures, disease transmission, and wars. Bressler told me he couldn't factor these in due to a lack of rigorous data on them.

“But if you add in those other pathways,” Bressler told me, “yeah, that would probably make the number go up.”

Your choices as an individual factor into this dynamic (after all, every time you hop on a plane, that’s adding carbon dioxide into the atmosphere). But we stand to make a much greater impact by focusing on what governments and businesses do. For instance, taking a single coal-fired power plant offline for a single year would save 904 lives this century, per Bressler’s calculations.

“That has a huge impact — larger than something you could achieve as an individual,” he told me. “If you want to make as large-scale change as possible, do things at the level of policy or the level of business.”

Now that we have some sense of the mortality cost of carbon, such change might be more possible to achieve.

Putting a price tag on the mortality cost of carbon

In the early ’90s, the American economist William Nordhaus first figured out how to attach a price tag to the long-term damage caused by one ton of carbon dioxide, a contribution deemed so valuable that he won a Nobel Prize for it. His model was dubbed the “Dynamic Integrated Climate-Economy,” or DICE (to emphasize that we’re playing dice with the planet’s future).

Being able to discuss the social cost of carbon in terms of a precise dollar amount is important because it allows scientists and policymakers to show when the benefits of averting global warming are greater than the costs. (At some point it just becomes cheaper to switch to sustainable systems rather than coping with all the wildfires, floods, droughts, and heat waves that result from unsustainable systems!) The SCC underpins a lot of US climate policy, including the Clean Power Plan.

But new data is always coming to light, which means successive administrations have had to redetermine an SCC that’s updated to the latest science. That’s where things get tricky. The Obama administration put the SCC at $50 a ton, while the Trump administration put it as low as $1. The Biden administration is expected to announce its determination early next year. In the meantime, the latest version of Nordhaus’s DICE model puts the SCC at $37 per metric ton.

Yet these figures don’t incorporate the mortality costs of carbon. **Bressler found that when we incorporate mortality costs, the social cost of carbon jumps to a whopping $258.**

That means it’s extremely worthwhile — not just morally, but even just in purely economic terms — to reduce emissions fast. **More specifically, the main policy implication of the revamped model is that we should commit to full decarbonization by 2050.**

If we fully decarbonize by 2050 rather than letting emissions grow in line with Nordhaus’s baseline emissions scenario (which sees our emissions plateau close to the end of the century), we can bring down the number of heat-related deaths expected this century from 83 million to 9

million, according to Bressler. **In other words, we can save 74 million lives.** For comparison, that's roughly the number of people who died in World War II, the deadliest conflict in history.

Understanding the mortality cost of carbon marks an important stride in environmental research, giving scientists and economists a new tool to measure the true cost of climate change. The next stride will be when policymakers actually use it to shape climate strategy.

—Sigal Samuel, @SigalSamuel