

Climate Impact Advisory Committee



FINAL Meeting Minutes

Date: August 18, 2022

Location: Hybrid Meeting: In-person location at Civic Center, 322 N. Commercial, Bellingham – come to main door at 5:30PM for access. Remote access via Zoom (details below) strongly encouraged due in-person capacity limitations

QUORUM	Y
Members Present	
Charles Bailey	x
William Bethel	
Sue Gunn	x
Steve Harrel	x
Ray Kamada	x
David Kershner	x
Katherine Kissinger	x
Ellyn Murphy	x
Imran Sheikh	x
Phil Thompson	x
Eddy Ury	x
STAFF Chris Elder	x

1) Call to Order/Roll Call

2) Review and approval of minutes from June and July Meeting(s)

June 2nd minutes:

Dave moved to approve minutes. With suggestion to add “Whatcom County” in front of the lost Silfab contract.

Phil Seconded

Motion passed

July 21st minutes:

Dave motioned to approve minutes with removal of his name as a priority lead.

Kaylee said that her name was misspelled in the minutes as well.

Ellyn suggested that a bit more detail could be added to the minutes going forward.

Dave said that could be helpful

Sue seconded

Motion passed

3) Public Comment

4) Update on Climate-Related Issues Before the Council – Kaylee, Chris

Comp plan resolution passed with a bipartisan vote of 5-2.

Co-managers Nooksack, WDFW raised concerns about recreation on the South fork of the Nooksack to help preserve Salmon habitat. This failed to get a majority vote from the council

Chris asked how we will determine if the resolution is successful

Kaylee said that the resolution provides a good framework to help us get state funding and sets us ahead of other counties that are working on their plans.

Steve asked about the letter to legislators regarding electrification and the passing vote on that

Kaylee said that there has been a push in the state for using heat pumps and the 6-1 vote was likely a response to acknowledging severe weather risk and the need for backup energy solutions for natural disasters

Charles asked about getting state funding and if there is anything our committee can do to help get funding for our county

Kaylee said that there have been talks in the legislature to offer incentives, but the grants do not become available until 2023 for us. Keeping up momentum on the comp plan or offering letters of support could be great options for the CIAC to take.

5) Forest Carbon Accounting in ClearPath Model – Ellyn & Chris (30 min)

- Whatcom county was one of three sites chosen to develop a protocol for assessing the net GHG flux from forests and trees outside of forests.
- Forest ecosystem carbon is significantly impacted by region, forest type, and management practices.
- Net GHG flux equals total emissions minus total sequestration. In the ClearPath model negative numbers indicate more carbon uptake than release. Young forests actually have the lowest GHG flux due to their smaller mass despite their high uptake levels. Mature forests 20-100 years old have the highest GHG flux meaning they have the highest annual carbon removal from the atmosphere per acre.
- Whatcom county forest baseline results indicate that our forests are a net carbon sink.
- CAP goal for forests is to ensure a long-term equitable and resilient forest resource in the county by acknowledging, educating, and preserving the benefits from current forest resources, addressing the impacts of climate change on forest management practices to this new reality.
- The overall results from ClearPath modeling show that the most productive approach to store more carbon in forests is to increase rotation ages in the 40-80 year range. This is the focus behind creating a carbon market in the CAP. Increasing rotation ages has numerous benefits for forest and ecosystem health and improves the hydrologic system. Larger diameter logs have less “wastage” during lumber production.

Atul Deshmane (zoom chat): Does ClearPath include GHG equivalents like the impact of logging on NOx and Methane emissions? An area which I assume does not get addressed in ClearPath is the impact of older trees on the watershed and health of the forest.

Steve Harrell (zoom chat): ClearPath is exclusively a GHG model, doesn't address other ecosystem elements.

Chris (zoom chat): I will need to double check on NOx and Methane, my memory says no, it was focused on carbon - you are correct that ClearPath only tracks emissions and doesn't capture the impact of older trees on watershed and forest health

Atul Deshmane (zoom chat): Certainly, our public policy should do both and therefore we should not rely exclusively on ClearPath.

Ellyn said that she could reach out to the ICLEI team and ask if those were included in the study. She also said that the goals and actions in the CAP address these other forest ecosystem concerns.

Sue wanted to comment that logging puts 80% of carbon stored back into the atmosphere.

Ellyn said that from her research on lifecycle analysis that the figure should be lower than that, around 30%. About 50% of the carbon in a forest is stored in the soil.

Eddy asked how much research we have on biodiversity impacts on carbon sequestration. And what impacts does the loss of storage have on our forests in Whatcom, and if Clear path has any data on that.

Chris said that this is a more general study and that we could benefit from having a higher resolution study of that nature done for our forests.

6) Biochar Presentation – Steve Hollenhorst, Kulshan Carbon Trust (30 min)

- The mission of Kulshan Carbon Trust is to conserve and sequester carbon through collaborative natural climate solutions in Whatcom and Skagit counties.
- They are currently working on a project with biochar.
- Biochar is made from waste biomass; it then undergoes pyrolysis to be converted into a stable form of carbon.
- Their plan is to partner with local producers to turn their biomass into biochar, then issue carbon credits and create a scalable model for a biochar carbon credit market.
- Valorization helps to incentivize this solution through carbon monetization. Phase one of their plan is to focus on Carbon credits and Phase two is to create a carbon plus credit class to quantify ecosystem service co-benefits.

Ellyn asked where the supply of forest residues comes from

Steve Hollenhorst: said that it is coming from existing forest operations on Galbraith. There is another source on the San Juan Islands Conservation District and their fuel reduction projects.

Phil asked about how this will fit in the CCA offset program and if these will be available in that program

Steve Hollenhorst: said that he has been working with CCA and plans for these credits to be available here. The CCA will start with the largest companies. Steve said that his idea is to work as a co-op similar to the model that Dairygold uses.

Dave asked about the Carbon Conservation Easement program and asked if it is possible to add on to existing conservation easements?

Steve Hollenhorst: said that there are some parcels of land that have been credited on private lands that were not at risk of being developed. He thinks that these kinds of problems will become less common as this market grows and regulation is created. He thinks that it is likely that add ons could become a part of the Conservation Easement Market

Sue asked about the burning process and how they are going to ensure there are no CO2 leaks.

Steve Hollenhorst: said that some emissions do occur with Biochar production, however it is a reduction of CO2 emissions because the burn process is stopped prematurely. He said that the emissions in a high-tech biochar operation are even lower.

Atul Deshmane (zoom chat): What are the co-products from production of biochar? What kind of biochar machine are you using?

Ava Stone (zoom chat): Thanks for the question, **Atul**. We will be using conservation burns and low-tech biochar kilns. With low tech burns, there are no other co-products produced. High tech pyrolysis techniques produce syngas and other biproducts

Ava Stone (zoom chat): There are some CO₂e emissions associated with producing biochar, and these will be accounted for in our carbon measurements

Atul Deshmane (zoom chat): **Ava**, there will be air emissions then? and of course, some ash.

Ava Stone (zoom chat): Yes. There are some CO₂e emissions. The amount of ash produced is minimal when a burn is properly quenched.

Atul Deshmane (zoom chat): FYI. When pyrolysis occurs there are volatile organic compounds that are condensed when quenching occurs. These compounds include aldehydes, acetic acid, and complex sugars.

Ava Stone (zoom chat): Yes, thanks for that information! Those are all included in the total accounting methods used as well.

Steve Harrell (zoom chat): **Ava** I'd like to follow this a little further and ask what proportion of the carbon in slash is emitted and what proportion is saved when you do these conservation burns? And how do you decrease the proportion emitted?

Atul Deshmane (zoom chat): In a demonstration project this may not be of concern. However, in larger scale continuous operation this presents a challenge that has insofar limited biochar production. In certain jurisdictions the regulatory emissions impacts of biochar production have not been addressed. I think in Whatcom County it is something to consider more seriously. There are certainly ways to address the co-products and valorize them as well.

Ava said that in terms of carbon conservation from biochar production varies based on the feedstock you're using and if you are using a high or low-tech process.

Ellyn asked if there are any high-tech facilities in Washington state

Steve Hollenhorst: said yes and there are smaller scale ones here too.

7) CIAC Advisory Role to the Executive and Council

a) Wind Energy Code Revisions – **Eddy Ury** (30 min)

Proposed amendments:

- Definition of Small Energy Wind Systems (SEWS) up to 100kw capacity, and Wind Energy Systems (WES)
- Allow for SWES to be permitted in all zones
- WES permits in industrial zones and conditional permits in AG & Forestry
- Height limit set by FAA or local airport protection zones
- Sound limits set by the zoning district they are located in
- Clarifying language in some sections

- Including wildlife protections, avian and bat studies and mitigation. This is to help ensure protection of at-risk species. The permits would require studies pre- application, appoint an advisory committee and require mitigations as appropriate.
- Additionally, recommendations will be made to the county to fund a study and consider identifying an overlay zone for WES permitting where impacts would be minimized., continue consultations to improve wildlife protection, and take input from a public review process.

Eddy said that he would send the updated version of the Wind Energy Code and his presentation with the committee.

Atul said that the director of planning and development services is not a fan of updating the code. He asked how Eddy plans to deal with opposition to wind resources of energy in the community.

Eddy said that outreach is a big step to addressing the concerns of the community so that they can address both valid concerns and ones based on misinformation.

8) Update: Working Groups for 1st Year Priorities – All (if time permits)

-- no updates offered at this time --

9) Old/New Business

- **Ellyn/Chris** had a meeting on the 2023/2024 budget request. The feedback is that the new Climate action manager should be involved in the process.
- **Steve** applied to host an event for the All in for Climate Week and suggested having a webinar on heat pumps
- **Dave** offered a new business item and asked **Charles** to provide an update on the Lummi Island Ferry project.

Charles said that there was a grant that has been approved for the Ferry. They are going to conduct a shore power study and he thinks that an onshore solar array as the primary charging source for the ferry. He said that a letter of support from the committee would be helpful.

Dave motioned that we send a letter of support for a solar array add on study to Council and the Executive stating the following: The electrification of the new Lummi Island ferry will reduce greenhouse gas emissions and add to resiliency to climate change, both priorities of the County's Climate Action Plan. CIAC therefore recommends that Public Works supplement the current Shore Power Study with an assessment of a solar array or solar arrays combined with onshore battery storage as the principal power supply for the new ferry.

Ellyn seconded

Chris asked if we should look at more broad renewable energy opportunities for this proposal

Charles said that solar was selected because it is the most advanced renewable energy source. And that the best wind spot on the island would be not very accessible.

Phil asked why the power facilities needed to be located near the terminal

Charles said that it doesn't necessarily need to be near the terminal and that PSE is conducting a study about that.

Motion passed.

10) Adjourn

Next meeting scheduled for **Sept 15, 2022**

Recorded by **Katherine Kissinger**

Staff contact, **Chris Elder**