Meeting Minutes
Tuesday, September 5, 2023

Carbon Life-Cycle Analysis (CLCA)
House Bill (HB) 2026
Virginia Department of Forestry (DOF) Board Room

Stakeholders in Attendance: Rob Farrell, (DOF); David Carr, Southern Environmental Law Center (SELC); Martha Moore, Virginia Farm Bureau (VAFB); Corey Conners, Virginia Forestry Association (VFA); Judy Dunscomb, The Nature Conservancy (TNC); Kyle Shreve (VFA/Advantus Strategies); Terry Lasher (DOF); Ed Zimmer (DOF); Ember Jenison (DOF); Jennifer Leach (DOF)

Others in Attendance: Brad Coppenhaver, Virginia AgriBusiness Council

Stakeholder Representative Virtual Attendees: Brent Hughes, Department of Energy (DOE); Larry Corkey (DOE); Liz Willoughby (Dominion Energy); Ron Jenkins, Virginia Loggers Association (VLA); Mike Davis, Northern Virginia Electric Cooperative (NOVEC); Elizabeth Gayne (Dominion Energy); Susan Seward, Virginia Forest Products Association (VFPA); Nikki Rovner (TNC); Thomas Ballou, Department of Environmental Quality (DEQ)

Other Virtual Attendees: Jonah Fogel; Anna Lovain (DEQ); Zach LeMaster

The meeting convened at 1 p.m. and adjourned at 3:45 p.m.

Welcome

Rob Farrell (State Forester, DOF) welcomed the stakeholders back for the fourth Carbon Life-Cycle Analysis (CLCA) meeting. Everyone in attendance introduced themselves and Farrell proceeded with the meeting.

Round Robin – opening remarks

No one in attendance had any opening remarks.

Review of Minutes from Previous Meeting (8/17/2023)

The minutes of the previous meeting were approved as corrected. The corrected copy will be reposted on Virginia Regulatory Town Hall and sent to the stakeholders.

Follow-up Items

Farrell contacted Scott Barrett, Professor at Virginia Tech College of Natural Resources and Environment. Barrett's work is related to timber harvesting and biomass in particular. Scott provided documents from his work relating to timber harvesting and biomass harvesting. These documents have been uploaded to the group's SharePoint folder.

Brad Coppenhaver's follow-up with WestRock's retirement of RECs potential impacts on biomass consumption found that the biomass burning is the byproduct of the mill residues on site. This will not have an impact on biomass consumption or WestRock operations.

Dominion provided information on biomass consumption that included a broad range from about .2 million to 1.5 million tons of biomass per year from three facilities. For the group's planning purposes going forward, Dominion indicated they anticipate the mills will use more than 1 million tons per year. Dominion will work on providing the proportion of forest residuals compared with mill residuals to the group as well as recent annual biomass usage of each facility.

Farrell followed up with Ron Jenkins and VLA regarding the logger survey. A draft has been sent to VLA for review. Barrett provided Farrell with some guidance on how to make the survey more effective.

Judy Dunscomb compiled a list of variables that the group might need as inputs to a life cycle assessment. This list has been provided to the Sharepoint folders.

Discussion of Scenarios and Resulting Data Needs

Current Scenario: With HB2026/SB1231
Alternative Scenario: Without HB2026/SB1231

The current LCA discussion is intended to help the group determine what types of input goes into the BMPs. The focus right now is on the current scenario, with HB2026/SB1231. BMPs are not needed for the alternative scenario because no one will be operating under that scenario. Farrell suggested the group focus the LCA data gathering and the LCA on just the current scenario in order to help develop the BMPs. Next year, with larger, longer LCA work, the group can focus on alternative scenarios as the group develops. Farrell opened the floor up for discussion on focusing the group's efforts on the current scenario.

A member recalled from the presentation that proper life cycle carbon analysis involves looking at both a biomass scenario and a non-biomass scenario and comparing the two to get the difference in atmospheric carbon. This approach helps provide a sense of the impacts of the continuing to run the plants, compared with not running the plants. The member shared the belief that there is no way of getting meaningful results without comparing biomass scenario to non-biomass scenario. The LCA does not just look at the emissions in the stack, it looks at what is happening with the carbon in the forest. In most LCAs there is a difference in the carbon stock between the biomass scenario and the non-biomass scenario, a key component of an LCA.

Another member agreed and also recalled one of the presenters indicating it was much more complicated when it came to a biomass facility running or not. The biomass facility and forest dynamics have to be considered, which is a lot more complicated. The member recalled that the presenter also emphasized it would take a long time and would not be possible to get the job completed in the time the group has left. The member stated that the group should avoid jumping to conclusions, which may not be helpful to any of the parties at the table. The member underscored the importance of having a group leader that knows LCA and can lead the group through each step.

Another member brought up "LCA Light" that was mentioned at the previous meeting on Aug. 17, 2023, and how there is no such thing. The member explained that there are different levels of LCAs, including a screening LCA, which aligns with an ISO standard and follows all of the different elements that both presenters talked about. The member thought with the situation the group is in, in terms of deadlines, this may be something to look into. The group would be looking at one specific component, and in this instance that would be carbon, per the legislation (not necessarily quantifying and including all the other ecosystem service benefits and impacts, limited scope of data, publicly available, readily available information, etc.). Since the Biomass Advisory Group is to report by December of 2024, it would provide more time, and an opportunity to ensure sufficient funding in the budget in order to support a thorough LCA third-party contract. In the interim, a screening level analysis might be something the group could consider in order to meet the Dec. 1, 2023, deadline.

A member brought up the question about funding the project. In order to meet the Dec. 24, 2023, deadline, it would have to be provided by DOF or one of the other stakeholders. Right now, there is no additional money included for an additional LCA. Would have to wait until the next General Assembly to ask for more money in the budget unless provided in the caboose.

A member brought up the concern that no matter what type of LCA, whether full blown or a screening LCA, one way or another, there is a modeling software that needs to be run in order to conduct the LCA. With the conversation about budget and lack thereof, how will the group hire someone to access the software and run the modeling software? One possibility is to do a spreadsheet. Farrell said this is something that will need to be addressed.

Current Scenario – This is the list of questions the group needs to answer to complete a minimum LCA for the three Dominion biomass plants to continue to operate. If these questions can get answered, the group will have a good handle on how much carbon is resulting from biomass burning going forward.

1. Are there significant/relevant differences in how the three facilities operate?
   Dominion provided information on the amount of biomass used at the three facilities. This information may show that the facilities are very similar. If the material is unloaded, stacked, piled and moved in the same way, the group can have one amount of carbon that comes from moving materials on the site.
   -Ask Dominion to share the data on the amount of wood that comes to the three facilities.
   -Ask Dominion if there is any difference in how the three mills operate, store the material, push the material, etc.

2. How many tons are being utilized currently at each facility? (annually?)
   Dominion has shared information on the collective usage.

   a. How many tons are from forest residuals/mill residuals/other?
      Dominion is working on getting this information to the group. Question was raised by Dominion regarding waste from trees taken down in residential areas. Ferrell indicated the group would like to know forest residuals, what proportion comes from the forest, what proportion comes from manufacturing facilities, and an "other" category that would capture arborists or municipal waste, etc.

3. How do we anticipate this changing in years ahead? (2022 cap)
   The group does need to estimate/anticipate how the utilization will change going forward. Dominion clarified that the data they provided of .2 to 1.5 million biomass consumption considered variables outside of their control. However, on average they would expect 1 to 1.5 million tons of biomass consumption, which is a much more refined estimation.

   a. How many years ahead are we looking in this analysis?
      An expert will be needed to evaluate. One member suggested the group look to the Virginia Clean Economy Act as a source to assess carbon emissions and timeframe.

4. How much carbon gets added to atmosphere from combustion at the facilities? Per ton?
   The data that DEQ uses comes the EPA and DEQ's emissions monitoring site.

   a. What are the units for carbon emissions?
      A representative from DEQ stated carbon emission is not just CO2, but also methane and other compounds that are climate enabling. However, for the most part, from combustion sources like biomass, it is all CO2.

5. How much carbon results from waste materials, ash?
   Dominion will be checking to see if there is any processing of materials at its facilities.

6. How much carbon results from yarding/storing biomass on the lot? (per year or per ton?)
   Will need to determine if Dominion has equipment at the facilities to move and manage material piles.

7. Are there significant/relevant differences in biomass procurement for the three facilities?

8. How much carbon results from hauling biomass from the woods to the facility? (per ton)
   Logger survey will help determine this as well as DOF data on harvest locations. It will have to be determined if the radius of all three facilities can be combined or if the radius of the three facilities may need to be separated.

   a. How many tons per truck?
   b. How many miles per trip?

9. Use logger survey to estimate the proportion of the total biomass utilized that comes from various types of timber harvesting.
   Only asking the loggers how much biomass comes from the stand and where it goes, not asking what proportion is solid timber, what proportion is chipped and sawed, or what proportion is pulpwood.

   a. Clearcut – managed pine
   b. Thinning – managed pine
   c. Clearcut – natural pine, mixed pine hardwood
   d. Clearcut – hardwood
   e. Thinning – hardwood
   f. Land conversion?

For each harvest type:

10. How much carbon comes from skidding / harvesting / chipping?
11. Need to determine average acres per tons produced.
12. Estimate change in forest carbon storage resulting from biomass utilization. (per acre)
13. Estimate change in forest carbon sequestration resulting from biomass utilization. (per acre)

The group will have to consider the counterfactuals using the same information of how much carbon comes from using biomass and if the three facilities were not burning biomass, and how the world would be different.

Alternative Scenario

1. Predict how the three facilities would wind down production w/o HB2026.
   Dominion would give their best estimate of how the facilities would have to be wound down. Would they run until Dec. 31, 2028, at full capacity, or would they slowly shut down over time?

   The group discussed where the wood from land conversion is going, how much solar conversion is occurring and landfill material. Questions were raised as to whether the materials were being burned, taken to landfill sites, taken to biomass plants, or left on site. Farrell intends to ask the loggers how much land conversion (solar specifically) is generating the biomass they are sending to the mills. Aaron Berryhill's (DOE) updated data on solar development may provide information the group needs to determine how relevant solar is to the study.

   a. Annual decrease in tons utilized.
      An estimate of how much biomass would continue to be utilized even if the legislation was not passed.

2. Predict where replacement electricity would come from and carbon produced / KWH.
   EPA has data for kWh for natural gas, coal, solar and wind.

3. Predict alternative outcomes for material that would not be used for biomass.
   For each timber harvest type, these questions will be asked. Loggers will know what they would and would not cut. Landowners would know how they would react to the lack of a biomass market.

   a. Residuals burned in the field.
   b. Residuals rot in the field, over what period?
   c. Trees not cut.

4. Predict change in forest carbon storage resulting from decreased biomass utilization.
   Predict change in forest carbon sequestration/capture resulting from decreased biomass utilization.

Farrell determined that once the group identifies the data needs, then it can be determined how that data will be analyzed, which will assist the group in getting the job completed and closing in on the expertise needed.

Group Homework

- Consider the potential of a screening LCA to meet the group's needs for this year.
- Give further thought to the discussion had today, focusing on the questions the group went through and referring to the notes after the questions.
    - Be prepared with additional questions/suggestions at the next meeting.
    - Changes/additions to what was discussed.
    - Data Sources for the various elements.
- Identify items that are not being captured by the questions discussed and questions that are needed in order to answer these questions.
- Continue thoughts on potential contractors and expertise to get the work done.

Next meeting is scheduled for October 5, 2023, from 1:00 – 4:00 p.m. in the DOF Boardroom.

Meeting Adjourned