

CLCPA Draft Scoping Plan Comments

Collin Miller, Certified Forester – Hobart, Delaware County, NY

Chapter 4: Current Emissions

(p. 22) Add a definition/clarification for biogenic fuel...

Biogenic fuels – those that are plant-derived and part of the global carbon cycle – represent less than 4% of statewide CO₂ emissions. It is also critical to note that many of the biogenic materials, if not used for energy, would have an alternative fate that is poor with respect to GHG emissions.

Chapter 6: Achieving Climate Justice

(p. 37) Singling out biomass as a less desirable means for mitigating GHG emissions and the comments made in Appendix B (pp. B-7, B-14, B-16) that reference biomass as a “false solution,” to climate change signals a need for improved understanding of the strategic role of biomass in meeting CLCPA goals while addressing co-pollutants.

First, the “NY Renews False Solutions Report” as referenced by the CJWG was refuted by a coalition of 57 scientists from across the U.S. that specialize in the study of low-carbon fuels’ environmental, economic, and technical impacts including several academics from SUNY ESF and Cornell. They concluded that the report “is not representative of the full state of scientific knowledge on low-carbon fuels” and that “many low-carbon fuels provide important and broad ecosystem, economic, and human health benefits to the communities in which they are produced and used¹”.

Considering the “communities in which they are produced and used,” one can view the mostly rural NYC watershed in the Catskills to understand the beneficial role that responsible biomass *thermal* applications (advanced wood heating systems (AWH)) have to play in the circular economy. Roughly, half of land area in the Catskill/Delaware system of the NYC watershed that provides 90% of drinking water to nearly half the state’s population is located in Delaware County where farming and forestry are preferred land-uses (over residential development) to protect the watershed while supporting economic viability. According to 2020 US Census Bureau data, the median household income in Delaware County is 26% less than the national average and 12.8% of residents live in poverty². Considering that roughly 78 cents of every dollar spent on fossil fuel heating leaves the region³, locally harvested wood provides a stable-priced alternative and promotes community wealth retention.

Furthermore, in a 2020 review of the NYC DEP Watershed Protection Program prepared by the National Academy of Sciences, Engineering & Medicine (NASEM), the authors recommend that forest management in the upstate watershed could be improved by “developing local markets for small and intermediate-scale wood chip or wood pellet heating with gasification boilers”⁴. Therefore, it will be critical for some of these facilities to continue using or develop new pathways for the strategic use of wood as a low-carbon fuel while adhering to all state and federal regulations in place to address PM_{2.5} and other co-pollutants.

Lastly, there are several examples in upstate New York of businesses and institutions (including public schools) that are benefiting from AWH as an intentional strategy to curb GHG emissions and reduce dependence on fossil fuels. Educational tours of such facilities for members of the

CJWG could facilitate a productive dialogue going forward and build a bridge of understanding between rural forested communities and environmental justice advocates focused mostly on urban EJ issues.

Chapter 8. Public Health

(p. 68) I agree that public health benefits will be achieved through the statewide reduction of combustion devices – particularly poor performing ones. However, I caution the notion that all PM_{2.5} is created equal. Thurston et al in *Environmental Health Perspectives* found that PM_{2.5} from wind-blown soil and the efficient combustion of biomass, such as wood, were “non-significant contributors” to mortality risk related to PM_{2.5}.

- NYSERDA should continue to focus on improving emissions of co-pollutants resultant from incomplete combustion of wood residues.
- Add language to note that “wood smoke” (referring to particulate matter) is an emission from poor performing or inappropriately managed systems, nearly all of which are residential and in rural areas. Emissions from institutional CHP or district heating systems that comply with recently passed air quality law 6 NYCRR Subpart 227-1 for Stationary Combustion Installations will meet or exceed PM_{2.5} standards for institutional heating. Therefore, emissions from compliant systems should not be classified as “wood smoke.”
- Implement recommendations put forth by the International Energy Agency Bioenergy Task 32 “Aerosols from Biomass Combustion⁶” to be at the core of strategies that enable the continued use of advanced wood heating appliances outside urban areas as a means to reducing GHG emissions while addressing PM_{2.5}.

Chapter 12. Buildings

(B10 p.145-147) I suggest specifically calling out mass-timber or cross-laminated timber construction as a means to reduce the carbon intensity (CI) of building construction statewide. NYC building code has recently been updated to allow for mass timber construction⁷. A statewide standard for mass timber in concert with the International Building Code – allowing buildings up to 270 feet tall to be constructed with mass timber – should be considered.

WPDC, ESD and/or SUNY ESF will be “well-positioned to provide and coordinate assistance” for expanding in-State manufacturing of low-carbon products *if* they are provided full-time staff to set, meet and track goals for increasing wood and other sustainable building materials manufacturing across the state. Furthermore, Dept. of Agriculture and Markets should fund a full-time staff position to function as a “circuit-rider” to focus solely on the wood products sector as it relates to lowering CI of buildings and related goals of the Climate Act.

New York is the second largest producer of hardwood lumber in the US and wood flows freely across most state and political boundaries. Therefore, the plan should direct resources to forming a regional purchasing consortium that includes neighboring forested states too. Taking a regional approach would incorporate a large collective customer bank for New York-grown wood without discrediting products from neighboring states (i.e. LEED offers points for products from within a 500-mile radius). Coordinating with multi-state groups such as the Northern Forest Center and

regional Manufacturing Extension Partnerships will be also be necessary to engage the secondary wood manufacturers and improve supply-chain management in a sector that is diffuse, comprised of many small to mid-sized firms and sometimes not as closely linked to primary producers (NY mills) as in the past.

Suggestion to support advanced wood heating while continuing to reduce PM_{2.5} from the residential wood heating sector in rural areas...

When wood is substituted for products with a higher carbon intensity (CI), greater carbon sequestration benefits are realized when the manufacturing byproducts are used to replace fossil fuel heating. Therefore, providing opportunities for advanced wood heating systems in this context makes sense. Wood pellets and wood chips represent a stable-priced solution that keep energy dollars circulating in the local economy, reduce waste by diverting this material from landfills, and lessens risks from the large price fluctuations of imported energy as is being witnessed currently.

Certainly much can be learned and improved upon from the \$10 million NYSERDA invested into the Renewable Heat NY program from 2017-2021 and the millions in research dollars spent to understand and improve residential and small-commercial wood heating. The recently defunct program should be left on the table as a potential strategy that offers assistance as a low-carbon conversion opportunity for replacing fossil fuel boilers and poorly performing wood stoves while supporting rural forested economies. Perhaps a more targeted approach via the Home Energy Assistance Program at the County-level would help deliver AWH to the most in-need while addressing the most poorly performing systems.

Chapter 13. Electricity

(p. 177) The “strong concern” expressed by CJWG for the adverse effects to environmental justice communities as it pertains to this usage of biomass electricity is a moot point. Biomass-to-electric plants were categorically excluded as a renewable source of energy under the CLCPA. Therefore, I suggest removing “biomass” from this section.

Chapter 14. Industry

(p. 185) Typo in the last paragraph I2...cement, steel and aluminum are not low carbon materials...Suggest replacing “such as” with “as opposed to.”

Chapter 15. Agriculture & Forestry

According to NYSERDA’S 2010 Renewable Fuels Roadmap: Appendix P, residential heating markets accounted for 26% of annual wood harvests in NY⁹. This figure has likely not changed much since then. With wood heating representing such a significant component of the forest economy, the A/F panel has a responsibility to explain and encourage an improved understanding of advanced wood heating (AWH) as an integrated strategy that compliments the expanded role of harvested wood products in reducing emissions.

AWH should remain a critically important alternative to fossil fuel heating and the reduction of GHG primarily in rural communities in upstate New York. I suggest adding language in the Climate Focused Bioeconomy (p.224) and other sections of CLCPA that acknowledge the regulatory improvements and continued advancements in wood heating technology (much of which were funded by NYSERDA over the last 10-15 years).

(AF20. p. 227-228) Directly address the CJWG concerns with respect to wood combustion PM_{2.5} and other co-pollutants by adding an additional bullet:

- **Expand advanced wood heating (AWH):** DFA, DOH, ESD, DEC should capitalize on the substantial body of research NYSERDA has invested in AWH that has resulted in regulatory improvements to enable AWH to continue as a strategic use of low-carbon fuel delivering benefits to homeowners and institutions while mitigating risks to public health in rural areas and dis-advantaged communities.

Lastly, not all biomass projects are equal in scale and impact. Therefore, the A/F panel should seek common ground with the CJWG around matters of concern such as “wood smoke” and resolve the apparent misunderstandings around biomass thermal, CHP and campus district energy. There are several dozen examples in upstate New York of businesses and institutions benefiting from AWH while reducing GHG without adverse effects to human health due to proper use and following NY’s strict air quality laws. Learning exchanges including tours of wood chip heated schools and other facilities could build a bridge of understanding between rural forested communities less familiar to the CJWG and environmental justice advocates concerned about public health impacts of wood heating.

Chapter 16. Waste

(W1. Organic Waste Reduction and Recycling, p.241)

Suggest explanation surrounding alternate fate of wood residues:

Alternate fates of forest management, urban tree care and wood manufacturing residues are discussed by Unnasch and Buchan¹⁰. Wood pellets and wood chips are made from various waste sources such as lumber mill waste, forest residue, fire hazard reduction and salvaged material including insect-killed standing dead trees, and urban wood waste that would otherwise generate GHGs either through the process of decomposition (methane)¹¹ or open, uncontrolled burning¹². Life Cycle Analysis (LCA) results showed that the Carbon Intensity (CI) of wood pellets/chips from all biomass sources considered in this study was drastically lower than that of fossil heating oil and natural gas (without considering the alternate fates in the LCA), indicating that wood pellets/chips are a promising alternative for heating oil and natural gas. Carbon Intensity is the amount of carbon by weight emitted per unit of energy consumed. With consideration of alternate fates, many of the LCA results would show zero or negative CI scores.

Chapter 22. Essential Elements

(p.321) General comment regarding process for Draft Scoping Plan Comment Review:

More work is needed to bridge knowledge and understanding across all sectors and stakeholders. Solutions cannot be applied in a vacuum and siloes of knowledge not spread across the entire economy or those affected can hinder progress toward the immense objective of major decarbonization and a net-zero future. Therefore, it will be critical to employ a systems perspective here. Where comments in the Draft Scoping Plan toward one sector affect other components and/or sector, I suggest that they should be reviewed by that other sector/group so that each component can view how they fit in to the whole solution. Avoid the narrow-focused process of having *only* the advisory panels of the section that received a comment to review and consider the comments.

This action can be taken in the spirit of cooperation articulated with the following statement in the draft "...the threat of climate change is great and can only be fully addressed when stakeholders are in alignment and coordinate mitigation efforts."

Citations

¹ Brown, Tristan R. et al. "Scientific Community Response to NY Renews "False Solutions" Report." 8 March 2021. <http://www.cleanfuelsny.org/news/scientific-community-response-letter-to-ny-renews-false-solutions-report>

² United States Census Bureau. "Quick Facts: Delaware County, New York" 11 July 2021. Web 6 May 2022. <https://www.census.gov/quickfacts/delawarecountynewyork>

³ BTEC, (2010). Heating the Northeast with Renewable Biomass: A Bold Vision for 2025.

⁴ National Academies of Sciences, Engineering, and Medicine. 2020. Review of the New York City Watershed Protection Program. Pp. 267-268. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25851>.

⁵ Thurston, George D. et. al, "Ischemic Heart Disease Mortality and Long-Term Exposure to Source-Related Components of U.S. Fine Particle Air Pollution." *Environmental Health Perspectives*. Volume 124, Number 6. 2016. Pp 785-794.

⁶ Nussbaumer, T. International Energy Agency Bioenergy Task 32:07 2017 "Aerosols from Biomass Combustion" <https://www.ieabioenergy.com/blog/publications/aerosols-from-biomass-combustion/>

⁷ Ravenscroft, T. "New York approves use of cross-laminated timber for six-story buildings." 13 October 2021. Web 16 May 2022. <https://www.dezeen.com/2021/10/13/new-york-timber-buildings/>

⁸ During the 2021-2022 heating season, 14 firewood vendors participated in the Home Energy Assistance Program (HEAP) administered by the Delaware County Department of Family Assistance delivering 90 benefits (180 cords of seasoned hardwood) valued at \$59,286.

⁹ Renewable Fuels Roadmap & Sustainable Biomass Feedstock Supply for New York, Appendix P: Competition for Biomass Resources. Page 3. NYSERDA Report 10-05, March 2010. Web 16 June 2022. <https://www.nyserda.ny.gov/-/media/Files/Publications/Renewable-Fuels-Roadmap/Renewable-Fuels-Roadmap-Appendix-P.pdf>

¹⁰ Unnasch, Stefan and Lucy Buchan, 2021, "Life Cycle Analysis of Renewable Fuel Standard Implementation for Thermal Pathways for Wood Pellets and Chips" Lifecycle Associates and Biomass Thermal Energy Council. <https://www.lifecycleassociates.com/wood-pellets-chips-reduce-ghg-emissions-by-65-100/>

¹¹ Pier, P.A., J.M. Kelly. 1997. Measured and estimated methane and carbon dioxide emissions from sawdust waste in the Tennessee Valley under alternative management strategies. *Biosource Technology* 61:213-220.

¹² Springsteen, B., Christofk, T., Eubanks, S., Mason, T., Clavin, C., & Storey, B. 2011. Emission reductions from woody biomass waste for energy as an alternative to open burning. *Journal of the Air & Waste Management Association*, 61(1), 63-68.