

Proposed Recommendations on Biomass to Be Adopted by the Vermont Climate Council

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The Vermont Climate Council formed a Biomass Task Group in 2022 to develop recommendations regarding the use of biomass for electricity generation in Vermont. The Council reviewed the recommendations in April 2023 and raised several concerns. This document represents a revised set of recommendations that seeks to address those concerns.

The [15 presenters](#)¹ who spoke with the Biomass Task Group demonstrated the complexity of this issue, which impacts the forestry sector, Vermont's electricity generation and carbon emissions, communities that rely on the forestry economy, people who live near biomass plants, and Tribal communities that may see their cultural heritage impacted.

The presentations to the Task group provided information about the carbon profile of biomass electricity generation, the role of biomass facilities in supporting forestry-based economies, and the role biomass plays in Vermont's electricity portfolio, as well as health studies related to air quality impacts from burning wood.

The recommendations below are primarily oriented towards gathering additional information that will help Vermont make wise decisions on this complex issue. As a starting place, the Council recognizes that electricity from biomass can have positive and negative implications for Vermont. For instance:

Examples of benefits to Vermont²:

1. Generates one of Vermont's few local sources of electricity that provides reliable, non-fossil, affordable, non-intermittent power, supporting grid stability.
2. Supports jobs in forestry, logging, trucking and at biomass plants, which circulates economic activity in the local economy.
3. Provides income to landowners that may in some cases allow the landowners to maintain the forested land as forest, which in turn can help support forest-based carbon sequestration.
4. May potentially provide district heat or other heat recovery opportunities with little additional pollution, and
5. Wood energy biomass harvesting in Vermont must meet responsible forest use standards.

Examples of harms to Vermont:

¹ <https://docs.google.com/document/d/13htG-9UvNcOL7ePMB6faPFLpeHiSKWvZ/edit?usp=sharing&oid=102815267945022977952&rtpof=true&sd=true>

² The examples of benefits and harms reflect input to the Biomass Task Group.

1. Emits meaningful amounts of CO2 into the atmosphere.
2. Emits particulate matter, creating potential health impacts for people living near biomass plants.
3. May impact the forest ecosystem through the removal of trees, treetops & branches.
4. May damage the culture and heritage of Tribal communities through actions such as siting decisions.

The Council urges Vermont to weigh these benefits and harms carefully and think creatively about how to address them. The Council therefore recommends:

1. The State should conduct an evidence-based study, which includes inputs from Traditional Ecological Knowledge, focused on at least the following components:
 - What would be the implications for greenhouse gas reductions if existing biomass facilities were phased out?
 - What would be the likely source(s) of electricity that would provide a similar electricity profile to today's biomass generation?
 - How will these different pathways affect Vermont's 2025, 2030, and 2050 GWSA greenhouse gas emission reduction requirements? How would they impact New England's carbon emissions?
 - If Vermont phased out its biomass facilities, how much of the current harvest would likely be continued to be harvested and used in other biomass facilities?
 - What would be the implications on electricity costs if existing biomass facilities were phased out?
 - What would be the impact on Vermont's electricity resilience if existing biomass facilities were phased out?
 - Would the state find itself relying more on imported energy sources rather than local fuel sources?
 - Would Vermont face new or different risks to electricity resilience?
 - What would be the economic implications of phasing out the existing facilities, including on rural areas of Vermont where the forest economy is an important economic driver?
 - How many jobs would be affected?
 - What might a transition look like for impacted people and communities currently working in forestry/logging/biomass generation? What jobs might replace any lost employment?
 - What actions would Vermont need to take to ensure landowners continue to manage their land as forestland, with the goal of limiting fragmentation and deforestation across the state?
 - What changes if any would be necessary to keep the Current Use program in place and viable for forest landowners participating in the program?

- Can we better understand the impacts on health and cultural resources today, and how these issues would change if biomass facilities were phased out?
 - What are the current impacts to public health (from particulate matter) and quality of life and cultural resources near existing biomass electricity facilities?
 - How can these impacts be assessed and quantified? For instance, through targeted air monitoring and public health studies?
 - Related to this work, engagement with potentially impacted communities should be conducted in a respectful, consistent, and ongoing manner.
 - If we successfully reduce harms to Vermont, are we exporting those same harms to other communities?
 - What would be the implications for forest resilience to a changing climate if Vermont's biomass facilities are phased out?
 - Might there be reduced incentives for active forest management that promotes biodiversity?
 - Might there be other impacts (positive or negative)?
 - What are the alternatives for making existing biomass facilities more efficient, for instance by using waste heat, and how do those alternatives compare to phasing out the facilities?
 - What are the emissions implications for different heating scenarios in the areas that could be supported by district heat?
 - What are other ways to increase the efficiency of existing biomass facilities and their emissions implications?
2. The State should not support new electric-led generation biomass facilities in Vermont while the State is completing this study. The Council will reevaluate the role of biomass based on the results of the study.

Finally, the Biomass Task Group included recommendations about a Life-Cycle Analysis being managed by the Climate Action Office, with input from the Council's Science and Data Sub-Committee. The recommendations are consistent with the way the study is being carried out.