

## Biomass Task Group Recommendations

The Task Group consented or stood aside for the good of the group to let this document as a whole move forward to the Climate Council for consideration.

1. New electric-led generation biomass facilities in the State of Vermont should not be used.
2. The Ryegate and McNeil facilities should not be expanded to increase the currently permitted hourly output capacity, physically or otherwise. Furthermore, the facilities should strive to use less biomass overall than they do currently.
3. The Vermont Climate Council recommends that the State plan and prepare for the phase out of wood biomass electricity generation at the McNeil and Ryegate facilities and the phase up of other energy sources, complemented with other important actions such as efficiency and consumption reduction. To inform the phase out, the State must advance an evidence-based study immediately to be completed expeditiously by an independent expert that would be managed within the Climate Action Office in coordination with the Public Service Department. The study(ies) should include:
  - *Option 1*: investigation of when and how, and if, depending on the study results, to phase out Vermont's two existing biomass electricity facilities as compared to available alternatives over different timescales;
  - *Option 2*: investigation of when and how to phase out Vermont's two existing biomass electricity facilities as compared to available alternatives over different timescales;
  - the study should clearly look at the timeline of a phase out and the attendant ramp-up of what kind of clean energy replacements that would be needed to maintain Vermont's electricity reliability;
  - how a phase out or lack thereof could impact Vermont's 2025, 2030, and 2050 GWSA greenhouse gas emission reduction requirements;
  - the health, air quality, climate, cultural resources, and financial costs and benefits that could accrue to different sectors and constituents (*e.g.*, local communities, landowners, ratepayers, etc.);
  - traditional ecological knowledge;
  - Adverse impacts to public health from particulate matter and impacts to quality of life and cultural resources should be assessed and quantified;
  - an investigation of a just transition for Vermont's Forest Economy that plant closures could necessitate, acknowledging the sensitivity around market conditions for the material inputs currently employed at the plants, and the importance of those markets in supporting private landowners maintaining Vermont's forests, ensuring that the management and ultimately the

enhancement of Vermont's forests to support biodiversity, carbon storage and other benefits, and support for the associated enterprises and rural communities that depend on them, remains viable. Investigation shall consider alternate markets for Vermont wood and/or income streams for forest landowners, aligned with climate objectives and how to secure them in conjunction with plant closures; and

- implications for phase out in relation to the long-proposed McNeil plant expansion for co-generation of thermal heat for district heating. This review will need to include as part of that scope reviewing the long-proposed expansion of the McNeil facility to accommodate wood combustion for thermal heat production - whether as co-generation from electricity production or as a thermal-only replacement for a phased-out electricity generating plant. In addition to climate and forest implications, the investigation must examine impacts on air quality, emissions, and the health of residents of the adjacent communities. If a thermal-only alternative is advanced, siting should be considered particularly in relation to over-burdened communities. It must also include a full equity assessment which will involve the Just Transitions Subcommittee and the tools developed in support of the Climate Action Plan. McNeil is on land that is listed on the state historical site for the most highly sensitive archaeology in the state so cultural resources must be addressed as well.
4. The Vermont Climate Council should further explore the role of heat from biomass at a residential and commercial scale as a climate solution, the impact on Vermont's forests, and other impacts such as public health. To do so, the Vermont Climate Council should form a new task group with diverse representation to consider this topic explicitly, the right composition needed to do so, and the right process to ensure a clear directive and the capacity to support the task group. If a new task group is formed, members from this task group should be invited to participate so that the learning done through this process is carried forward into the new work.
  5. The state should assure that Life-Cycle Analysis contract being advanced investigates whether to account for GHG emissions from various technologies for burning biomass at the point of combustion. Carbon sequestration should be assessed so that those different numbers can be compared accurately over time. As part of that contract, the state will also develop a lifecycle GHG assessment that provides a sensitivity analysis around wood biomass GHG emissions to help inform progress in meeting the 2025, 2030, and 2050 targets required by the GWSA.
  6. Engagement must occur with the residents of Burlington's Old North End, Winooski, and other neighborhoods exposed to ambient emissions and other adverse exposures related to the plant for some time. The Just Transition Subcommittee, in partnership with the relevant Subcommittees and Task Groups of the VCC and in conjunction with appropriate Agencies such as the Vermont Department of Health and the State Historic

Preservation Office, should lead such efforts in a respectful, consistent, and ongoing manner and consider the range of issues, previous studies, and needs for these communities that may extend beyond biomass.

7. Relevant state Agencies, such as the Department of Environmental Conservation Air Quality and Climate Division and the Department of Health, and adjacent communities should be engaged immediately in the consideration of the design and implementation of any targeted air monitoring and public health studies<sup>1</sup>. The Inflation Reduction Act makes funds available for such monitoring and should be utilized. Public health impacts should be an indispensable component of informing any future actions taken regarding biomass electricity generation in Vermont.

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<sup>1</sup> Determining whether a particular point source of pollution, like a power plant, is causing illness in people who live nearby can be very difficult. If the exposed population is small, in the low hundreds of people, estimates of disease incidence will be hard to make precisely. If the area of study is enlarged to include more people and thus allow more stable disease incidence estimates, the average intensity of exposure will be less and it may be harder to show an effect. Many American populations are very mobile, so people with significant local exposures in the past may have moved away, and illnesses in people living there now may have their roots in exposures elsewhere. Unfortunately, ill people living near sources of pollution often have multiple past and present adverse exposures, making it hard to determine if the exposure of current interest is responsible for their illness. For all these reasons, it may make more sense to not do an epidemiologic study, but rather measure exposures (e.g. to PM 2.5) in the breathing zone of people living or working near the point source, to determine whether these are hazardous even though pollutant levels measured in air at the plant, consistent with their permits, are within allowed limits.