VIA ELECTRONIC MAIL

October 11, 2022

Hon. Michelle L. Phillips
Secretary to the Commission
New York State Public Service Commission
Empire State Plaza, Agency Building 3
Albany, NY 12223-1350
Secretary@dps.ny.gov

RE: Case 15-E-0302: Response of PFPI and Sierra Club to Petition of ReEnergy Holdings LLC for Policy Support for Bioenergy Generation

Dear Secretary Phillips:

The Partnership for Policy Integrity (PFPI) and the Sierra Club submit the following comments in response to the Petition of ReEnergy Holdings LLC ("ReEnergy") for Policy Support for Bioenergy Generation ("Petition").[1] For the reasons set forth below, we request that the Public Service Commission ("Commission") deny ReEnergy's petition for compensation through New York's Clean Energy Standard (CES) for the "environmental benefits" it claims are provided by its 60 MW Black River generating facility, located in Fort Drum, New York.

The Black River biomass power facility, which is permitted to burn wood, wood wastes, treated wood, and other materials, emits large quantities of both carbon dioxide and conventional air pollutants.[2] Incentivizing the energy from this facility as either "clean" or "zero emission" is inconsistent with New York's landmark Climate Leadership and Community Protection Act ("CLCPA") and would set a dangerous precedent for how the state implements a zero emissions program pursuant to that statute.

1) Biomass power plants are not zero emission sources

ReEnergy's petition lacks an explanation for why this facility should be provided incentives as "zero emission" when it is obviously a major carbon emitter. The Black River biomass power plant is permitted to emit up to 658,951 tons per year CO_2,[3] which is more than 2,500 pounds CO_2 per MWh if operating continuously. By comparison, coal plants—which New York has phased out through regulation due to their climate impacts--emit 2,180 pounds CO_2 per MWh.[4]

[1] Petition of ReEnergy Holdings LLC for Policy Support for Bioenergy Generation, Case 15-E-0302 (July 20, 2022)
[2] NYS Department of Environmental Conservation (NYSDEC) Air Title V Permit issued to ReEnergy Black River, LLC, https://www.dec.ny.gov/dardata/boss/afs/permits/622400000900007_r2_3.pdf?req=366
[3] *Ibid*.
[4] US Environmental Protection Agency (USEPA), Greenhouse Gas Reporting Program Industrial Profile: Power Plants Sector September 2019, at https://www.epa.gov/sites/default/files/2020-12/documents/power_plants_2017_industrial_profile_updated_2020.pdf

Presumably, ReEnergy's claim is based on the false assumption that biomass energy is carbon neutral, and thus the facility generates "net zero" emissions. The theory behind carbon neutrality is that forests will regrow and eventually re-sequester the carbon emissions from burning wood fuels. However, combustion releases carbon into the atmosphere instantaneously, while forest regrowth can take decades to centuries – time that we do not have to address the climate emergency or comply with the strict 2030 and 2050 emission reduction mandates of the CLCPA.

Recognizing the urgency of reducing climate-harming emissions, the CLCPA mandates that the statewide electrical demand system be zero emissions by year 2040. New York has not yet established a zero emission program pursuant to the CLCPA, so this petition is premature and, if approved, could set a damaging precedent. However, whether the state law is ultimately interpreted as mandating truly zero emission energy or "net zero" emissions, the ReEnergy Black River facility cannot meet this climate mandate.

The only scenario in which a biomass power plant could achieve "net zero" emissions would be if the material it burns would otherwise have been burned anyway, such as for waste or slash disposal. Numerous models have shown that, even in scenarios where all or most of the fuel is truly comprised of wood waste and logging residues, it will take many decades or longer of forest regrowth to re-sequester the emissions from bioenergy production, well past the 2040 deadline.[5] When the wood fuel is sourced from whole trees, this can take well over a century.

Further, to guarantee these future emissions offsets, there must be a mechanism to ensure that the land where the wood was harvested remains in a forested state for a time period sufficient to re-sequester the carbon dioxide released through the generation of biomass energy. The NYS Department of Environmental Conservation uses 100 years for the carbon re-sequestration period as a default for the purpose of determining "eligible biomass" under its CO_2 Budget Trading Program ("RGGI").[6]

2) Replacing woody biomass with other energy sources will reduce carbon emissions

While numerous studies have documented that carbon emissions from wood-burning power plants are greater even than coal-fired power plants per unit of energy, such comparison is

[5] Mary S. Booth, Not carbon neutral: Assessing the net emissions impact of residues burned for bioenergy. *Environmental Research Letters*, Feb. 21, 2018, at https://iopscience.iop.org/article/10.1088/1748-9326/aaac88 ; Walker, T., P. Cardellichio, J. S. Gunn, D. S. Saah and J. M. Hagan (2013). "Carbon Accounting for Woody Biomass from Massachusetts (USA) Managed Forests: A Framework for Determining the Temporal Impacts of Wood Biomass Energy on Atmospheric Greenhouse Gas Levels." *Journal of Sustainable Forestry* 32(1-2): 130-158 at https://www.researchgate.net/publication/241746647_Carbon_Accounting_for_Woody_Biomass_from_Massachusetts_USA_Managed_Forests_A_Framework_for_Determining_the_Temporal_Impacts_of_Wood_Biomass_Energy_on_Atmospheric_Greenhouse_Gas_Levels; Jerome Laganiere, David Pare, Evelyne Thiffault, and Pierre Y. Bernier, Range and uncertainties in estimating delays in greenhouse gas mitigation potential of forest bioenergy sourced from Canadian forests, *GCB Bioenergy* (2017)9, 358–369, at https://onlinelibrary.wiley.com/doi/epdf/10.1111/gcbb.12327

[6] NYSDEC, DAR-12 / "Sustainably Harvested" Determination for Purposes of "Eligible Biomass," Part 242, available at https://www.dec.ny.gov/docs/air_pdf/dar12.pdf

irrelevant in New York, where the state has already closed its coal plants.[7] A more appropriate comparison would be to non-emitting renewable energy sources, such as wind or solar power, which are a key part of the transformation that New York is striving to achieve in the power sector. The Climate Action Council's Draft Scoping Plan states:

> *"With natural gas currently being the principal fossil fuel source for electricity generation in the State, a significant transformation of the power sector is necessary to meet the Climate Act's requirements of 70% renewable electricity by 2030 and 100% emissions-free electricity by 2040. To decrease the use of emitting fuels in the electricity sector, New York must deploy clean energy resources such as land-based wind and solar, offshore wind, hydropower, fuel cells that use renewable fuels, and energy storage."*[8]

ReEnergy contends that "if the Black River Facility ceases operations…history shows it will in all likelihood be replaced with fossil fuel-fired generation." This is not credible. What happened in Germany as a result of their nuclear plant closures can hardly be predictive of a 60 MW biomass power plant in upstate New York.[9] In fact, 91% of the energy generated in upstate New York is zero-emission[10], and new renewable sources are currently working to come on line in New York.[11] Any gap created by a theoretical retirement of the Black River facility could easily be filled by zero emissions resources. Moreover, the New York State Department of Environmental Conservation (DEC) has recently denied air permits to the two proposed new fossil fuel generation facilities in New York—Astoria Gas Turbine Project[12] and Danskammer Energy Center[13]--and denied an air permit renewal to a fossil fuel facility that proposed to increase its operations—Greenidge Generation.[14] It does not follow that the project's power will simply be replaced by fossil fuels.

However, even if some or all of the power were to be replaced with natural gas, ReEnergy's claim that "this will increase the carbon-intensity of New York's electricity grid" is untrue. Replacing the Black River facility's power with natural gas would result in significantly *reduced* carbon emissions. The Manomet Study commissioned in 2010 by the Massachusetts Department of Energy Resources found that it would take more than 90 years for net emissions from a biomass power plant burning mixed wood (a combination of whole trees and logging

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[7] M.S. Booth, *Trees, Trash, and Toxics: How Biomass Energy Has Become the New Coal,* (PFPI), April 2014, at https://www.pfpi.net/wp-content/uploads/2014/04/PFPI-Biomass-is-the-New-Coal-April-2-2014.pdf ; Ter-Mikaelian M T, Colombo S J and Chen J, 2015, The burning question: does forest bioenergy reduce carbon emissions? A review of common misconceptions about forest carbon accounting *J. Forest* 113 57-68 at https://doi.org/10.5849/jof.14-016; John D Sterman, Lori Siegel, and Juliette N Rooney-Varga, Does Replacing Coal with Wood Lower CO_2 Emissions? Dynamic Lifecycle Analysis of Wood Bioenergy, *Environmental Research Letters*, Jan 18, 2018, at https://iopscience.iop.org/article/10.1088/1748-9326/aaa512/meta

[8] NYS Climate Action Council, Draft Scoping Plan, December 30, 2021, p. 154.

[9] Note 3 of ReEnergy's petition cites Germany's experience as a "lesson on the unintended consequences of losing zero emissions attributes."

[10] New York ISO, Power Trends 2022, p. 25, Fig. 12: Energy Production by Fuel Source (GWh) - Statewide, Upstate and Downstate New York: 2021 at https://www.nyiso.com/power-trends

[11] NYSERDA website, Clean Energy Standard Progress to Date, at https://www.nyserda.ny.gov/All-Programs/clean-energy-standard.

[12] Notice of Denial of Title V Air Permit, DEC ID: 2-6301-00191/00014, Astoria Gas Turbine Power (Oct. 27, 2021).

[13] Notice of Denial of Title V Air Permit, DEC ID: 3-3346-00011/00017, Danskammer Energy Center (Oct. 27, 2021).

[14] Notice of Denial of Title V Permit, DEC ID: 8-5736-00004/00017, Greenidge Generation (June 30, 2022).

residues) to reach parity with a natural gas plant, and 30 years if burning logging residues only, as shown in column 4 of the following table:[15]

TABLE 7 Years for Biomass Energy Emissions to Reach Equal Flux with Fossil Fuel Energy Emissions

	Fossil fuel technology			
Harvest scenario	Oil (#6), thermal	Coal, electric	Gas, thermal	Gas, electric
Mixed wood	15–30	45–75	60–90	>90
Logging residues only	<5	10	10	30

Laganiere, *et al.* (2017), with the Canadian Forest Service, found that under all scenarios except for harvest residues that are burned instead of left to decompose, burning wood instead of natural gas to generate electricity would result in a carbon debt of over a century, as shown in the lower right grid of the following chart:[16]

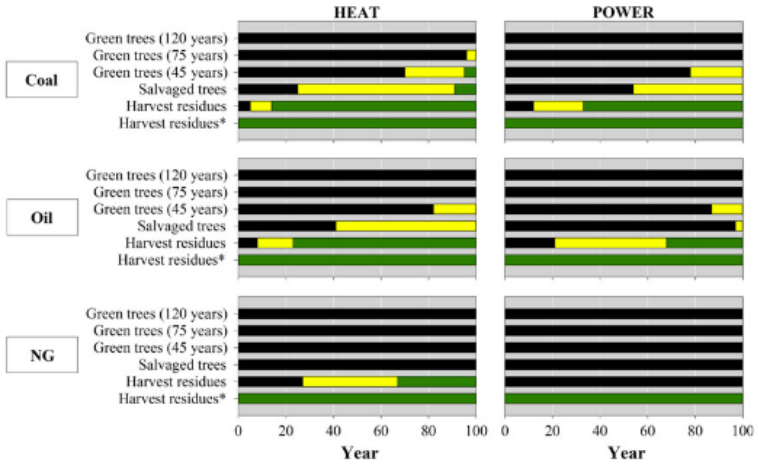

Fig. 3 Length of the C debt (black), uncertainty (yellow), and C benefit (green) phases for scenarios using different bioenergy feedstock to replace different fossil fuels for heat and power production. The asterisk indicates that harvest residues are burned by the roadside instead of left to decompose on the harvest site in the counterfactual scenario. NG: natural gas.

3) "Sustainable" timber harvesting does not protect forest carbon sinks

ReEnergy asserts that because the Black River facility's biomass procurement program is certified to the Sustainable Forestry Initiative (SFI) standard, the facility "promotes land stewardship and responsible forestry practices, which will maintain the regional forests' value as carbon sinks." The petition provides no evidence to support this assertion.

[15] Walker, *et al., supra* note 5, p. 151, Table 7. Note that achieving parity with carbon emissions produced by a fossil fuel facility does not represent "carbon neutrality" or "net zero" emissions.
[16] Laganiere, *et al*., *supra* note 5, p. 362, Figure 3.

Sustainable forestry programs are not designed to ensure carbon sequestration. Furthermore, voluntary forestry certification programs are notoriously lax in monitoring and enforcement.[17] In particular, the SFI, which was created and is administered by the forest products industry, has been widely criticized by forest conservationists. Even SFI's much-touted 2022 standards,[18] which include a new "Climate Smart Forestry Objective," have been called out by major environmental groups such as the Sierra Club and Natural Resources Defense Council as industry greenwashing.[19]

According to the Sierra Club's analysis:

> *"The revised SFI Forest Management (FM) Standard's new climate related Objectives and Performance Measures (PMs) sound relatively good on the surface. However, their Indicators do not actually require meaningful actions to limit the climate impacts of intensive commercial forestry, or to adopt alternative practices that can reduce logging-related emissions and sequester and store more carbon. Rather, the Standard still allows the same widespread short-rotation clearcuts and other industrial practices that have reduced many forests' carbon stocks to a fraction of natural levels and that keep them there. Nor does the Standard prohibit the logging of high carbon sites, including old growth and other primary forests, which results in substantial net greenhouse gas emissions. The Standard does not even require genuinely sustainable timber harvests (i.e., harvest rates that maintain net standing timber volumes), despite how timber volumes are a rough, partial metric for carbon stores."*[20]

In Europe, where there has been a steep increase in the use of biomass energy due to renewable energy subsidies, logging for biomass is causing some countries to lose their land carbon sinks altogether.[21]

While it is common for the timber lobby to claim that "sustainable forest management" protects forest carbon sinks and enhances carbon sequestration, voluntary certification programs provide no such guarantees. The SFI guidance states that it "is not a carbon quantification protocol, nor does it require Certified Organizations to additionally sequester carbon in managed forests."[22] Relying on voluntary certifications to assure carbon benefits is inconsistent with the CLCPA, which directs the state to develop regulations that "ensure that greenhouse gas emissions reductions achieved are real, permanent, quantifiable, verifiable, and enforceable by the department."

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[17] Richard Conniff, Greenwashed Timber: How Sustainable Forest Certification has Failed, Yale Environment 360 (Feb. 20, 2018) at https://e360.yale.edu/features/greenwashed-timber-how-sustainable-forest-certification-has-failed

[18] Sustainable Forestry Initiative News Release, *SFI Announces New Standards Focused on Solving some of the World's Biggest Sustainability Challenges*, Apr. 22, 2021, at https://forests.org/sfi-announces-new-standards-focused-on-solving-some-of-the-worlds-biggest-sustainability-challenges/

[19] Sierra Club, The SFI 2022 Forest Certification Standards Select Issues Review (Dec. 2021), at https://www.sierraclub.org/sites/www.sierraclub.org/files/SFI%202022%20Standards%20Analysis.pdf; Courtenay Lewis, NRDC, SFI Offers Greenwashing of Unsustainable Logging (Jan. 20, 2022) at https://www.nrdc.org/experts/courtenay-lewis/sfi-offers-more-greenwashing-unsustainable-logging-0

[20] Sierra Club, *supra* note 19, p. 3.

[21] PFPI, *Loss of land carbon sink in certain EU Member States, and relationship to biomass harvesting* (Sept. 13, 2022) at https://www.pfpi.net/wp-content/uploads/2022/09/Loss-of-forest-carbon-sink-Estonia-Latvia-Finland.pdf

[22] Sierra Club, *supra* note 19, p. 7.

4) Biomass power plants are a major source of co-pollutants that are harmful to human health

The CLCPA requires the state to identify and prioritize measures to maximize reductions of both greenhouse gas emissions and co-pollutants produced by GHG emissions sources in disadvantaged communities. The ReEnergy petition refers to the potential local economic impacts that closure of the Black River facility would have on "multiple census tracts identified as Disadvantaged Communities," but makes no reference to potential health impacts on those communities due to the plant's operation. According to its DEC permit, the Black River facility is a major source for nitrogen oxides, carbon monoxide, carbon dioxide, sulfur dioxide, hazardous air pollutants (HAPs), hydrogen chloride, and benzene based on its potential to emit large quantities of these pollutants (see chart below).[23] In addition, the facility has the potential to emit more than 47 tons per year of particulate matter (PM_{10}).[24]

Pollutant	Major Source Threshold	ReEnergy Emission Levels
NOx	100 tons per year	538 tons per year
CO	100 tons per year	234 tons per year
CO2	100,000 tons per year	658,951 tons per year
SO2	100 tons per year	379 tons per year
HAPs	25 tons per year	122 tons per year
HCl	10 tons per year	> 10 tons per year
Benzene	10 tons per year	> 10 tons per year

5) Conclusion: Supporting a Just Transition

As the Commission has affirmed, biomass energy is not consistent with the plain language of the CLCPA statute.[25] To further the state's goals of achieving 70% renewable energy by 2030 and 100% zero emissions electricity by 2040, the New York State Legislature excluded biomass from the definition of "renewable energy systems" in the CLCPA. If the Legislature had wanted to make an exception for the Black River biomass facility, it would have passed legislation introduced this year that would have extended ReEnergy's existing REC contract with NYSERDA until 2034.[26]

The old ways of looking at biomass energy – as a climate-friendly, renewable fuel source – are finally being pushed aside as the mounting body of evidence shows that woody biomass energy is harmful to our forests, our climate and our health, and is diverting resources away from truly clean renewable energy. In parts of the world where forests are being overharvested to meet the increased demand for biomass fuels, biodiversity and forest impacts have been severe.[27] In

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[23] NYSDEC, Permit Review Report, Permit ID: 6-2240-00009/00007, 09/11/2017, p. 5, at https://www.dec.ny.gov/dardata/boss/afs/permits/prr_622400000900007_r2_3.pdf?req=85357

[24] *Ibid*., p. 8.

[25] NYS Public Service Commission, *Order Adopting Modifications to the Clean Energy Standard*, Case 15-E-0302, Oct. 15, 2020, p. 17.

[26] NYS Legislature, Bill A9127 (Cusick, et al.); Bill S8360 (Parker, et al.), introduced 2022.

[27] Sarah Hurtes and Weiyi Cai, "Europe is Sacrificing its Ancient Forests for Energy," *The New York Times*, Sept. 7, 2022 at https://www.nytimes.com/interactive/2022/09/07/world/europe/eu-logging-wood-pellets.html; Michael Grunwald, "The 'Green Energy' that Might Be Ruining the Planet," Politico, March 26, 2021 at https://www.politico.com/news/magazine/2021/03/26/biomass-carbon-climate-politics-477620; see also PFPI, *Loss of land carbon sink in certain EU Member States*, *supra*, note 21.

response, a growing number of states and nations have modified their climate policies to scale back subsidies for forest biomass energy or eliminate them altogether.

However, just as with the fossil fuel industry, policies that result in workforce disruption due to the transition to a low-carbon economy can have negative impacts on local communities. As part of a "just transition" to cleaner, more sustainable energy, the state should examine ways to improve economic opportunities in the North Country. Continuing to subsidize biomass energy production through the state's clean energy programs is not the answer. We respectfully request that the Commission deny ReEnergy's petition.

Respectfully submitted,

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