

October 2, 2026

PUC Commissioners,

From the very get-go, Petitioner's statements, claims, and data have been inaccurate, misleading, erroneous, or absent. Petitioner now asks you to adopt a Findings of Facts that memorialize these errors and absences. Please don't. Petitioner has not provided evidence that it meets §248 criteria. Please deny a Certificate of Public Good based on the evidence and data on the record, and, more importantly, based on the data missing from the record. At the very least, require the Petitioner to provide additional and more accurate data so you can make an informed decision.

The Proposed Findings of Fact Are Inaccurate, Incomplete, and Misleading

On the central carbon neutrality claim (FOF ¶¶ 73-74)

The Proposed FOF states that "under ANR's greenhouse gas inventory methodology, which treats biogenic carbon dioxide as carbon neutral, the Project's electricity is assigned no net carbon dioxide emissions." This statement rests on a false assertion. ANR does not treat burning wood as carbon neutral. ANR explicitly acknowledges the result "can reach levels greater than that of fossil fuels." Petitioner's statement misrepresents ANR's position in three distinct ways.

First, ANR's 2025 Greenhouse Gas Emissions Inventory and Forecast states directly and unambiguously: "The values [for biogenic carbon from wood combustion] have a large range depending on the various factors but can be close to zero (carbon neutrality) or reach levels greater than that of fossil fuels." (*Vermont Agency of Natural Resources, Vermont Greenhouse Gas Emissions Inventory and Forecast: 1990-2022, July 2025, at 26.*) ANR does not treat burning wood as carbon neutral. ANR explicitly acknowledges the result "can reach levels greater than that of fossil fuels."

Second, ANR's own inventory report states: "How to appropriately account for biogenic CO₂ remains challenging given the complexity of the systems involved and there is currently no consensus within scientific literature as to the best approach." (*Id. at 25.*) VRG has substituted a definitive carbon neutrality claim for a position ANR describes as scientifically unresolved. Setting aside the misleading claim that "currently no consensus within scientific literature as to the best approach," ANR deliberately ignores the fact that climate scientists overwhelmingly agree, as demonstrated in the peer-reviewed literature and in IPCC Assessment Reports, that biogenic CO₂ emissions contribute to atmospheric CO₂ concentrations and to the resulting warming of the climate system including surface temperatures, ocean temperatures, and ocean acidification. ANR's inventory methodology excludes biogenic CO₂ from gross totals as a political accounting convention; it does not reflect a scientific finding that these emissions are carbon neutral. In fact, ANR tracked then excluded from the gross total **approximately 2.19 MMTCO₂e of biogenic CO₂ from wood combustion in 2022**. For context, Vermont's total gross emissions in 2022 were 8.09 MMTCO₂e. The excluded biogenic CO₂ from wood combustion represents approximately **27% of Vermont's total reported gross emissions**. If it were included in the gross total, Vermont's reported emissions would be roughly 10.28 MMTCO₂e rather than 8.09 MMTCO₂e.

Third, the ANR inventory's exclusion of biogenic CO₂ from gross totals is described by ANR as following IPCC accounting convention. This claim by ANR is inaccurate. IPCC does not prescribe excluding biogenic CO₂ from *gross* totals. The IPCC convention excludes biogenic CO₂ from *energy sector* totals because the carbon is assumed to be tracked in the *LULUCF sector* as forest carbon stock changes. ANR's own 2025 Inventory report discloses that the convention's foundational assumption cannot be verified by ANR: "there are currently [no] accurate data on the total amount of wood cut, imported, or combusted annually in Vermont to compare the LULUCF carbon flux estimates against." (*Vermont Agency of Natural Resources, Vermont Greenhouse Gas Emissions Inventory and Forecast: 1990-2022, July 2025, at 25.*) The IPCC convention does not treat biogenic CO₂ as carbon neutral. It excludes biogenic CO₂ from energy sector totals only because the carbon is assumed to be tracked in the LULUCF sector as forest carbon stock changes. ANR acknowledges it cannot confirm this tracking is occurring for wood combusted at electricity generation facilities. VRG cites the inventory exclusion as a finding of carbon neutrality when ANR has disclosed it cannot verify whether the accounting is complete.

On the efficiency certification (FOF ¶ 15, VRG-AS-8)

The FOF finds that use of waste heat "assures that VRG is maximizing the facility's efficiency to the greatest extent possible." VRG-AS-8 shows electrical output of 2,340 kWh against biomass input of 6,175 kWh, yielding an electrical efficiency of 37.9%. The 62.38% figure is only reached by adding 1,512 kWh of internal heat use. VRG has not identified any regulatory standard, FERC definition, or Vermont statutory provision that authorizes counting internally consumed process heat as qualifying output under Act 179 or 30 V.S.A. §248(b)(11)(B). Under FERC's binding definition of "useful thermal energy output" at 18 C.F.R. §292.202(h), qualifying thermal output must be made available to an external industrial or commercial process, or used in a heating or cooling application. VRG's heat is used entirely within the facility to dry its own feedstock and to drive its own internal generator.

The FOF further finds VRG is "maximizing" efficiency. Under 30 V.S.A. §248(b)(11)(B), the Commission must find a facility achieves the highest design system efficiency that is commercially available, feasible, and cost-effective. Published monitoring data from comparable commercial biomass gasification CHP systems show total efficiencies of 53.5% to 78.5% in actual operation when recovered heat is delivered to external beneficial uses. "State-of-the-art of small-scale biomass gasification systems: An extensive and unique monitoring review," (*Patuzzi et al. Energy, Vol. 223 (2021)*). VRG's record contains no analysis showing it considered and rejected external heat delivery on grounds of infeasibility or cost. Maximization has not been demonstrated.

On the GHG lifecycle analysis (FOF ¶¶ 73-75)

The FOF relies on INRS's avoided emissions analysis (VRG-EK-1) as the basis for finding the project provides measurable greenhouse gas benefits. VRG's own witness Eric Kingsley testified that VRG has not completed a greenhouse gas lifecycle analysis. (*Hearing transcript, 0:23:01*). VRG's own witness Evan Dell'Olio testified the same. (*Hearing transcript, 27:25-28:00*). The INRS analysis was prepared in April 2024 when the project was still described as a farm methane facility and before the July 2024 Renewable Energy Standard amendments. The analysis assumes at least 51% farm residue feedstock,

which is no longer the project's feedstock composition. The analysis has never been updated to reflect the current project design.

On the selective quotation of ANR (FOF ¶ 73, VRG-EK-1)

The INRS analysis quoted in FOF ¶73 states that "biogenic CO₂ is considered carbon neutral because the emissions are assumed to be re-sequestered by the regrowth of new biogenic material." The INRS analysis achieves this by selectively quoting the ANR methodology document while omitting the immediately following sentence in the same ANR publication acknowledging that CH₄ and N₂O emissions from biomass combustion are included in ANR's emissions totals. (*Intervenors' Post-Hearing Brief at 30-31, citing Vermont Greenhouse Gas Emissions Inventory and Forecast: Methodology, p. 17.*)

On biochar (FOF ¶ 10, 46-47, 75)

The FOF describes biochar as a "carbon-negative soil amendment" and finds it will sequester between 2,700 and 3,450 metric tons of CO₂ equivalent annually. No evidence in the record establishes that biochar produced by VRG's HTAP process will be stable in soil over the time frames required for permanent carbon sequestration. VRG has provided no information need to assess the stability of the biochar it will produce, which may degrade and emit CO₂ into the atmosphere in as little as a few years depending on the pyrolysis variables. The AAFM Stipulation simultaneously entered into in this proceeding requires extensive testing for PAHs, dioxins, PFAS, and heavy metals before any biochar can be distributed for agricultural use, reflecting documented concern about VRG's biochar containing these contaminants. The FOF asserts climate benefits from biochar while the AAFM Stipulation addresses risks from the same material without reconciling the two positions.

On the European reference facilities (FOF ¶ 3)

The FOF describes the technology as modular and highly efficient based on Skorokhodov's testimony. Testimony at the evidentiary hearing establishes that CETY's six European HTAP facilities are not all used for electricity production, that Petitioner's witnesses are unaware of the distance of those facilities from the nearest residences, that the engineer who certified the facility's efficiency has never visited the project site (*hearing timestamp 1:36:49*), and that no operating American HTAP electricity generation facility exists. No operating reference facility for this specific technology configuration has been identified anywhere in the record. Petitioners recently posed this question in response to Burlington Electric Department RFP No. 012-27 (Wood Pyrolysis, deadline September 30, 2026), which evaluated whether to incorporate a pyrolysis system at McNeil:

Will BED accept a technology whose full-scale reference project is still under development if the respondent provides appropriate completion security, performance guarantees, warranties and credit support?

Petitioner's question suggests that there is no completed and running full-scale project anywhere, Europe or otherwise, and this project will be the first full-scale project Petitioner will develop.

On orderly development and traffic (FOF ¶¶ 22-33)

The FOF finds no interference with orderly development, relying on NVDA's letter of support. NVDA is the landowner for the project site and has a direct financial interest in approval. The Lyndon Planning Commission's letter does not express support for the project; it admonishes VRG to comply with the Town Plan. The Town Plan's transportation chapter specifically expresses concern about truck traffic on Route 5. VRG submitted no traffic study. VRG's witnesses could not identify which of the two Route 5 access points trucks would use, what size trucks would arrive, or how many daily truck trips would occur for feedstock delivery and biochar removal. (*Intervenors' Post-Hearing Brief at 12.*)

On aesthetics and noise (FOF ¶¶ 110-120)

The FOF finds no undue adverse aesthetic effect without any acoustics study in the record. The facility will operate 24 hours per day, 365 days per year with three Guascor engines each rated at 100 dBA. VRG's witnesses acknowledged that similar facilities in Europe are required to undergo acoustic studies before approval (*hearing transcript, 1:43:34*), yet submitted none here. The facility's proposed height of approximately 40 feet appears to exceed the 35-foot limit in NVDA's deed covenants without any evidence of the required prior approval. (*Intervenors' Post-Hearing Brief at 21-22.*)

On public health and safety (FOF ¶¶ 131-134)

The FOF finds no undue adverse effect on public health and safety. Skorokhodov testified that VRG cannot guarantee a zero risk of fire or explosion (*hearing timestamp 2:00:37*), that VRG has prepared no fire suppression plan, and that VRG has prepared no emergency response plan. (*Intervenors' Post-Hearing Brief at 27-28.*) The record contains no coordination with local first responders. Fires and explosions in oxygen-limited biomass storage silos are a documented hazard.

The air permit acknowledges that after all controls are applied, the facility will continue to emit formaldehyde, acetaldehyde, and 1,3-butadiene above Vermont's Action Levels, yet ANR waived the required health impact evaluation without documenting its reasoning, identifying sensitive receptors, or analyzing cumulative exposure at the Hastings residence 300 feet away or the Dolgin apartment building at the Route 5 access point. The permit also accepts VRG's unsupported assertion that biochar handling produces zero air emissions, despite the EBC v10.5 standard, the European benchmark, explicitly classifying biochar dust as an inhalation health hazard requiring written worker warnings, moisture controls to prevent dust generation, and respiratory protection. No dust management plan, PM2.5 fugitive emission analysis, or worker safety protocol appears in the record. VRG has produced no permitting, operational, or health and safety records from any of the six European CETY facilities. Where are the documents from the European facilities?

The AAFM Stipulation simultaneously negotiated in this proceeding requires extensive testing of VRG's biochar for benzo[a]pyrene (a Group 1 human carcinogen), dioxins, PCBs, PFAS, and heavy metals including cadmium and chromium — yet the FOF presents this same biochar as a beneficial soil amendment without acknowledging that two of the AAFM contaminant limits are substantially more permissive than current European agricultural standards: the AAFM cadmium limit is 6.7 times higher than the EBC-Agro limit of 1.5 mg/kg, and the AAFM chromium limit is 33 times higher than the

EBC-Agro limit of 90 mg/kg total chromium. (*European Biochar Certificate, Version 10.5 (August 14, 2025), Table 2.*) Again, VRG has produced no permitting, operational, or health and safety records from any of the six European CETY facilities. Where are the documents from the European facilities?

Information the Commission Does Not Yet Have to Make a Decision

On greenhouse gas emissions:

A lifecycle GHG analysis satisfying Act 179's requirement of at least 50% net lifecycle GHG reduction compared to a new combined-cycle natural gas plant. VRG's own witnesses testified this analysis has not been completed.

The actual syngas composition including benzene, naphthalene, and other HAPs produced by the HTAP process at the operating temperature range proposed. The air permit limits only sulfur content in the syngas.

An analysis of GHG emissions from feedstock transportation, chipping operations, and emergency flaring, none of which appear in VRG-EK-1.

On efficiency:

The underlying CETY technical documentation dated September 29, 2023, referenced in VRG-AS-8 but not filed in the public record. Without it, no party can evaluate the assumptions behind the 62.38% efficiency figure.

A breakdown of the 1,512 kWh thermal credit showing how waste heat is allocated between biomass drying and ORC turbine input, with confirmation that no energy stream appears in more than one output category.

The efficiency calculation on a net basis after deducting all parasitic electrical loads, which averaged 12.7% of gross generation in comparable commercial biomass gasification systems. (*Patuzzi et al., supra.*)

Identification of the specific efficiency standard or regulatory methodology under which VRG's internal heat use qualifies as useful thermal output and not a sham thermal energy output claim, with reference to 18 C.F.R. §292.202(h) (FERC) or an equivalent authority. Federal Energy Regulatory Commission (FERC) finds that *productive and beneficial* is nearly synonymous with *useful*, and uses a *productive and beneficial* test to weed out “sham” (the term FERC uses) thermal energy output claims. (FERC Order 671, 71 Fed. Reg. 7868 (Feb. 15, 2006).)

Analysis demonstrating that the current design achieves the highest commercially available, feasible, and cost-effective efficiency under 30 V.S.A. §248(b)(11)(B), or documentation explaining why external heat delivery was considered and rejected.

On air quality:

A current AERMOD dispersion analysis demonstrating that the facility's emissions will not cause or contribute to violations of the 2024 revised PM_{2.5} NAAQS of 9 µg/m³ at nearby receptors, including the Hastings residence and the Dolgin apartment building.

Documentation of the basis for ANR's waiver of the required air quality impact evaluation under Vermont Air Pollution Control Regulations §5-261(3), given that the facility will continue to exceed Action Levels for formaldehyde, acetaldehyde, and 1,3-butadiene after controls.

An acoustics study quantifying noise at the property line and at nearby residences from continuous 24/7 operations, including all three engines, vehicular traffic, and emergency flaring events.

On technology:

Licensing, permitting, and operational performance records for each of the six European CETY HTAP facilities, including their distance from residences, their operating hours, and any history of fire, explosion, or process upset.

Confirmation from Lyndon Electric Department that the System Impact Study remains valid following rescission of the Standard Offer contract and the resulting change in project characterization.

On economic viability:

A marketing study or commercial agreements for biochar demonstrating that a viable market exists for the volumes VRG will produce.

Identification of a buyer for the project's electricity, which VRG does not currently have, along with analysis of whether the project is economically viable without a Standard Offer contract.

On renewable energy standard compliance:

An analysis demonstrating the project satisfies 30 V.S.A. §8005(c)(1)'s requirement that the majority of energy recovered from the plant be thermal energy. VRG-AS-8 shows electrical output (2,340 kWh) exceeds thermal output (1,512 kWh), the inverse of what the statute requires.

On orderly development:

A traffic study quantifying vehicle trips associated with feedstock delivery and biochar removal, identifying the access point to be used, and addressing the Town Plan's expressed concern about truck traffic on Route 5.

On decommissioning:

Updated financial assurance adequate for decommissioning in the absence of a Standard Offer contract revenue stream, given that the \$285,000 estimate was based on a 20-year operating life under contract terms that no longer exist.

The CPG Should Be Denied

The Commission cannot make the affirmative findings required under 30 V.S.A. §248 on the record before it. The burden of proof rests with VRG, and VRG has not met its burden on several independent criteria, any one of which is sufficient for denial.

On greenhouse gas impacts:

The Commission cannot find the project will not have an undue adverse effect on greenhouse gas impacts under 30 V.S.A. §248(b)(5) because VRG has submitted no lifecycle GHG analysis. The Vermont Supreme Court's decision in *In re UPC Vermont Wind, LLC*, 2009 VT 19, requires the Commission to conduct its own independent analysis of GHG impacts and not simply adopt an agency's findings. (CLF Post-Hearing Brief at 3) The Vermont PSB's 2014 decision denying a CPG for the North Springfield biomass project found that a petitioner fails to meet its burden when it cannot identify when, if ever, the project would have a beneficial carbon outcome. (*In re North Springfield Sustainable Energy Project*, Docket No. 7833 (Vt. PSB Feb. 11, 2014). VRG's own witness has made the same admission that NSSEP's witness made in that case.

On efficiency and Act 179 compliance:

The Commission cannot find the project achieves 60% overall efficiency under Act 179 because VRG has provided no regulatory basis for counting internally consumed process heat as qualifying output, the underlying CETY documentation supporting the 62.38% figure has never been produced, and potential double-counting of the ORC heat stream has never been resolved. Even accepting VRG's framework, the project fails the separate Act 179 requirement that the majority of energy recovered be thermal. VRG-AS-8 shows thermal output (1,512 kWh) is less than electrical output (2,340 kWh), failing the majority-thermal test of 30 V.S.A. §8005(c)(1). The Commission cannot find §248(b)(11)(B)'s highest-efficiency standard has been met when VRG has never analyzed whether external heat delivery was feasible.

On public health and safety:

The Commission cannot find no undue adverse effect on public health and safety when VRG has acknowledged a non-zero fire and explosion risk, has prepared no fire suppression plan, has prepared no emergency response plan, and has not coordinated with local first responders. The Hastings residence adjoins the project site. The Dolgin apartment building with nine residential units is located at the primary access point.

On aesthetics and noise:

The Commission cannot make a positive finding on aesthetics and noise without an acoustics study. VRG's witnesses acknowledged that comparable European facilities are required to undergo such studies. Three engines each rated at 100 dBA operating continuously at a facility exceeding the NVDA deed covenant height limit presents an undue adverse aesthetic impact under the Quechee test, and the record contains no quantifiable evidence to the contrary. (*Intervenors' Post-Hearing Brief at 19-25.*)

On economic benefit:

The Commission cannot find economic benefit to the state when VRG has no identified buyer for its electricity, has submitted no marketing analysis for its biochar, cannot identify the wholesale vendors to whom biochar will be shipped or whether they are in-state, and has provided no economic model demonstrating project viability without a Standard Offer contract.

On orderly development:

The Commission cannot find no undue interference with orderly development when VRG submitted no traffic study addressing the concerns expressly identified in the Lyndon Town Plan's transportation chapter, when the NVDA's letter of support comes from the project site's landowner with a financial interest in approval, and when the Lyndon Planning Commission's letter conveyed a directive to comply with the Town Plan rather than support for the project.

On renewable energy status:

Even if the Commission were inclined to approve the project on other grounds, the project fails the threshold eligibility requirements for renewable energy under 30 V.S.A. §8002(21) and §8005(c)(1). The project's feedstock must be silvicultural waste consumed at or below its natural regeneration rate, which VRG has not demonstrated following rescission of the farm methane status. Crucially, the majority-thermal requirement of §8005(c)(1) is not satisfied on VRG's own submitted numbers.

The Commission should deny the CPG or, in the alternative, reopen the evidentiary record and require VRG to submit permitting, technical, health, regulatory, and scoping data related to the six European facilities; a complete lifecycle GHG analysis, the CETY technical documentation, an acoustics study, a traffic study, updated feedstock and emissions analyses reflecting the current project design, and a marketing analysis for biochar before the Commission considers the application further.

Thanks in advance for making the correct and honest decision.

Pike Porter