

Docket No. 14-24816

**UNITED STATES COURT OF
APPEALS**

for the

**TWELFTH
CIRCUIT**

Sylvanergy, L.L.C.,

-v.-

Petitioner

Save Our Climate, Inc.,

Petitioner

-v.-

Shaney Granger, in her official capacity as Regional Administrator
for Region XIII of the United States Environmental Protection Agency

Respondent

*On Consolidated Petitions for Review of a Final
Order of the Regional Administrator*

**BRIEF OF
RESPONDENT**

*Attorney for Respondent
Shaney Granger*

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STATEMENT OF JURISDICTION

Petitioners bring suit seeking appellate review following an order of the Environmental Appeals Board (“EAB”) denying petitions for review filed by petitioners. Subject matter jurisdiction is a contested issue in this case. Federal appellate jurisdiction is improper, because petitioners failed to first file in federal district court.

QUESTIONS PRESENTED

1. Does this Court have jurisdiction to review the New Union Air Resources Board’s (“NUARB”) denial of Sylvanergy’s request for a Non-Applicability Determination (“NAD”)?
2. If this court has jurisdiction to review the denial of the NAD, did NUARB properly determine that the Sylvanergy facility is a “major emitting facility” subject to Prevention of Significant Deterioration (“PSD”) review?
 - (A). Is the Sylvanergy facility a “fossil-fuel fired” source subject to the 100-ton-per-year threshold under section 169(1) of the Clean Air Act (“CAA”)?
 - (B). Does the Sylvanergy facility otherwise have the “potential to emit” more than 250 tons-per-year of carbon monoxide despite the limitations imposed by the Village of Forestdale site plan approval?
3. Is a biomass-fueled facility subject to PSD review as an emitter of greenhouse gases?
4. Was NUARB proper in rejecting consideration of a wood gasification and partial carbon capture and storage plant as Best Available Control Technology (“BACT”) for the Sylvanergy facility?

5. Did NUARB permissibly impose the Sustainable Forest Plan as BACT for the Sylvanergy facility?

STATEMENT OF THE CASE

Petitioners Sylvanergy and Save Our Climate (“SOC”) seek judicial review of the final decision of respondent Shaney Granger, Regional Administrator of the United States Environmental Protection Agency (“EPA”), granting a PSD preconstruction permit to Sylvanergy for construction of a biomass-fired electricity generation and wood pellet production facility in Forestdale, New Union (“Forestdale Biomass Facility,” “Facility,” “Plant,” or “Proposed Project”). These petitions for judicial review are preceded by an order of the EAB, which denied Sylvanergy and SOC’s former petitions for review.

STATEMENT OF THE FACTS

On June 12, 2014, NUARB issued a federal PSD permit to Sylvanergy, pursuant to 42 U.S.C. § 7475. PSD Appeal No. 15-0123, 4 (June 1, 2015). The permit authorized Sylvanergy to construct a new biomass-fired electricity generation and wood pellet production facility near Forestdale, New Union, which would consist of an advanced stoker design wood-fired boiler and two ultra-low sulfur diesel (“ULSD”) start-up burners. *Id.* at 5. The facility would have an electrical generation capacity of 40 megawatts, and would be located approximately 2 kilometers from the center of Forestdale. *Id.*

Because the entire state of New Union is an attainment, or PSD, area under the CAA, for EPA to grant Sylvanergy’s NAD application, Sylvanergy would be required to show that it did not have potential to emit pollutants in excess of the relevant thresholds of the CAA, that it did not qualify as a “fossil-fuel fired steam electric plant” subject to the 100 ton-per-year “major

emitting facility” threshold, and that it did not have the potential to emit more than the threshold of 250 tons-per-year of regulated pollutants. *Id.* 5-6. NUARB rejected Sylvanergy’s NAD application for the following reasons: the facility included ULSD start-up burners, the facility qualified as fossil-fuel fired, and the restriction on operating hours contained in the site plan, intended to bring the facility within threshold limitations, did not constitute a federally enforceable limitation as required by statute. *See id.* at 6. Sylvanergy then filed a PSD preconstruction permit application, which NUARB approved after proper notice and comment and completing BACT review. *Id.*

SUMMARY OF ARGUMENT

The 12th Circuit Court of Appeals does not have jurisdiction to review NUARB’s denial of Sylvanergy’s request for a NAD. Sylvanergy has no proper framework through which to jump straight into appellate court without first taking their case before a federal district court, and because there is no such framework the circuit court of appeals is the improper forum for judicial review of the NAD at issue here.

The Sylvanergy facility is not a fossil-fuel fired source under the CAA, and thus is not subject to the 100 ton-per-year threshold under section 169(1) of the CAA. The facility does not meet regulatory determinations for fossil-fuel fired, and biomass units are meant to be excluded from the designation of “fossil fuel-fired.” Thus, the facility cannot be subject to the threshold set by the CAA, applicable only to sources that are fossil-fuel fired.

The Sylvanergy facility otherwise has the potential to emit more than 250 tons-per-year of carbon monoxide, despite the limitations imposed by the Village of Forestdale site plan approval. Because the Village’s plan fails the PSD permit program’s definitions of “federal enforceability,” and is outside of federal and state implementation plan scope, it is invalid. Since

the Village's site plan approval is invalid, Sylvanergy has the unchecked potential to emit more than the regulated limit of 250 tons-per-year of carbon monoxide.

A biomass-fueled facility is subject to PSD Review as an emitter of greenhouse gases. The facility, operating at an assumed 96 percent capacity level, would produce more than 250 tons-per-year of carbon monoxide. This classifies it as an "anyway source"—a source subject to PSD review for its production of regulated pollutants can also be subject to PSD review as a greenhouse gas emitter since it is being regulated anyway. Because it falls under the judicially-recognized category of an "anyway source," the Sylvanergy facility is subject to PSD review as an emitter of greenhouse gases.

NUARB properly rejected SOC's proposal to implement a wood gasification and partial carbon capture and storage plant as BACT for the Sylvanergy facility. NUARB had discretionary authority to reject the SOC's plan, since the proposal would have redefined the primary purpose and scope of Sylvanergy's proposed facility. Thus, NUARB properly rejected the SOC's wood gasification and carbon capture and storage facility as BACT.

NUARB permissibly imposed the Sustainable Forest Plan as BACT for the Sylvanergy facility. NUARB found that the combustion of biofuel is not BACT per se, and that the CAA permits implementation of "beyond-the-fence" control measures. Therefore, the Sustainable Forest Plan was permissibly imposed as BACT.

ARGUMENT

1. Standard of Review

Review of an agency-granted PSD permit ordinarily will not be granted unless the conditions of the permit are based on a clearly erroneous finding of fact or conclusion of law, or involve an important matter of policy or exercise of discretion that warrants review. 40 C.F.R. §

124.19(a) (2013). Review of PSD permits is further guided by the preamble to 40 C.F.R. § 124.19, stating that review “should be only sparingly exercised” and that “most permit conditions should be finally determined at the [permit issuer’s] level.” 45 Fed. Reg. 33290, 33412 (May 19, 1980). The burden of establishing that the issues raised warrant review falls on the petitioner. *In re BP Cherry Point*, 12 E.A.D. 209, 217 (EAB 2005).

2. The Court of Appeals for the 12th Circuit does not have jurisdiction to review New Union Air Resources Board’s denial of Sylvanergy L.L.C.’s application for a Non-Applicability Determination.

Federal courts have federal question jurisdiction over challenges to federal agency action. 28 U.S.C. § 1331 (1948). The Administrative Procedure Act (“APA”) provides a right of judicial review of “agency action made reviewable by statute and final agency action for which there is no other adequate remedy in a court.” 5 U.S.C. § 704 (1966). Final agency action on a permit occurs after administrative review procedures before the EAB have been exhausted and the Regional Administrator subsequently issues a final permit decision. *See* Section IV.C of “EAB Practice Manual.” According to the U.S. Supreme Court, agency action is final if it constitutes “the consummation of the agency’s decision-making process” and “determines rights or obligations.” *Bennett v. Spear*, 520 U.S. 154, 177-78 (1997). If the EAB issues a remand order or interlocutory decision requiring further action from the permitting authority, the EAB requires the parties to appeal contested portions of any decision on remand to the EAB in order to exhaust administrative remedies. *See, e.g.*, 40 C.F.R. § 124.19(l)(2)(iii) (2013). Under the APA, even if all the standards are met and a federal court can properly review a decision of the EAB, that court will review the decision only to determine whether it was “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A) (1966).

The actual text of the APA does not contain an explicit grant of jurisdiction to challenge agency action in the federal courts. *Califano v. Sanders*, 430 U.S. 99, 105-06 (1977). Therefore, the APA does not afford an implied grant of subject-matter jurisdiction permitting federal judicial review of agency action. *Id.* at 107.

Here, the appellate court does not have the proper jurisdiction to review NUARB's denial of Sylvanergy's NAD application. The APA does not provide an inherent, self-executing jurisdictional hook, so for judicial review to be proper, Sylvanergy must bear the burden of proving federal question jurisdiction exists at all, under the U.S. Code. Even if Sylvanergy can show federal question jurisdiction exists, review of final federal agency action is properly undertaken in the federal district courts; going straight to the appellate court was an improper abuse of judicial review. While the U.S. Code does provide a framework for bringing an agency action before the federal district courts for review, it does not provide any such framework for skipping the district court and going directly before the circuit court of appeals. Therefore, because Sylvanergy has no way of showing the denial of their NAD application belongs in federal appellate court, the Court of Appeals for the 12th Circuit is not the proper forum for judicial review of NUARB's denial of Sylvanergy's NAD application.

3. NUARB properly determined that the Sylvanergy facility is a "major emitting facility" subject to PSD review.

A. NUARB's denial of the requested NAD was improperly based on characterizing the Facility as "fossil-fuel fired."

The CAA defines "major emitting facility" for the purposes of PSD permitting as a stationary source which emits, or has the potential to emit, one hundred tons-per-year of any air pollutant. 42 U.S.C. § 7479 (2006). Only certain sources qualify for this threshold, including

“fossil fuel-fired steam electric plants” of more than 250 million British thermal units (“Btus”) per hour of heat input. NUARB found PSD applicability under that criterion, classifying the Facility as fossil fuel-fired. They did so in error for the following reasons.

i. The Facility does not meet regulatory determinations for “fossil fuel-fired.”

“Fossil fuel” means natural gas, petroleum, coal, and any form of solid, liquid, or gaseous fuel derived from such materials for the purpose of creating useful heat. 40 C.F.R. § 60.41 (2012); *accord.* 40 C.F.R. § 63.10042 (2014). (Of note, the Sylvanergy Facility would rely on wood biomass as its primary fuel. Biomass is not considered a fossil fuel. *See, e.g.*, 40 C.F.R. § 60.41 (2012) (“Biomass means plant materials and animal waste”). The Facility would rely on two ULSD start-up burners for its operations. ULSD is produced in a similar way to diesel but requires additional processing steps to reduce viscosity and sulfur content. *See, e.g.*, 40 C.F.R. § 60.41(b) (2012). Accordingly, ULSD is a fossil fuel. Startup is the only time during which the facility would use ULSD.

Yet determining the presence of a fossil fuel in a plant’s operations is only part of the test to determine whether a facility is “fossil fuel-fired.” NUARB apparently stopped at this first step. This leaves their analysis incomplete and inadequate.

The CAA does not define the term “fossil fuel-fired.” National Emission Standards for Hazardous Air Pollutants From Coal- and Oil-Fired Electric Utility Steam Generating Units and Standards of Performance for Fossil-Fuel-Fired Electric Utility, Industrial-Commercial-Institutional, and Small Industrial-Commercial-Institutional Steam Generating Units (hereinafter NESHAP Rule), 77 Fed. Reg. 9309 (Feb. 16, 2012) (to be codified at 40 C.F.R. §§ 60, 63). Rather, the definition comes from regulations. An examination of several of these regulatory

definitions reveals that Sylvanergy's biomass facility cannot properly be considered "fossil fuel-fired."

a. Sylvanergy's facility fails the "heat input threshold" rule.

The 2014 NESHAP Rule directs that the definition of "fossil fuel-fired" is based on the "amount of fossil fuel combustion" per year relative to combustion of non-fossil fuels. 40 C.F.R. § 63.10042 (2014). An electric utility steam generating unit ("EGU") must fire a fossil fuel "for more than 10.0 percent of the average annual heat input during any three consecutive calendar years or for more than 15.0 percent of the annual heat input during any one calendar year after the applicable compliance date." *Id.* Leading up to passage of the 2015 Clean Power Plan, the EPA stated in its rulemaking guidelines that the heat input combustion formula would be utilized in determining affected fossil-fuel fired EGUs. Carbon Pollution Emission Guidelines for Existing Stationary Sources, 79 Fed. Reg. 34830 (June 18, 2014).

Therefore, it is appropriate to consider the contribution ULSD firing would make to the facility's yearly heat input. Sylvanergy's two ULSD start-up burners would each have a maximum heat input rate of 60 MMBtus per hour. Both start-up burners operating at maximum capacity would have 120 MMBtus/hr of heat input. Meanwhile, the facility's main operations house a 500 MMBtu/hour biomass-fired electricity generating unit. Though the record is silent on the number of startup hours the Facility expects annually, common practices by other electricity generating units provide a useful framework for illustrating just how *de minimis* an EGU's startup hours can be.

An EPA study on startup events found that the average EGU had between nine and 10 startup events per year, with the overall number of startup events remaining "reasonably consistent" for the two years of study. "Assessment of Startup Period at Coal-Fired Electric

Generating Units—Revised” (hereinafter “EPA EGU Assessment”), U.S. EPA, Office of Air and Radiation 5 (Nov. 2014), <http://www3.epa.gov/airtoxics/utility/matsssfinalruletsd110414.pdf>. Successful startups most often required between five to seven hours of fossil fuel combustion before electricity generation. *Id.* at 6.

Applying the industry averages, Sylvanergy’s facility very likely fails the “fossil fuel-fired” regulatory threshold. Given the plant’s maximum startup output of 120 MMBtus/hr, and assuming 10 startup events per year lasting six hours each, the Facility’s annual ULSD-powered heat input amounts to 7.2 billion BTUs. Although the record does not disclose the expected hours of operation, assuming that the facility operates for 24 hours a day for 360 days (allowing for downtimes) and runs at a capacity of 500 MMBtus/hour, the start-up’s contribution to heat input would be 0.01 percent. This is far less than the 15 percent threshold. Even reducing the assumed number of operating days further would still not come close to reaching 15 percent. Sylvanergy’s biomass facility, therefore, falls far short of being “fossil fuel-fired” according to the EPA’s approach of examining relative heat input.

- b. The definition in the CAA’s New Stationary Source Standards excludes the facility.

The definition of “fossil fuel-fired” found in the CAA’s New Stationary Source Standards (“the Standards”) is contrary to NUARB’s application. The Standards define the term as “a furnace or boiler used in the process of burning fossil fuel for the purpose of producing steam by heat transfer.” 40 C.F.R. § 60.41 (2012). Here, the key term is “for the purpose of producing steam.”

Because the Facility would only use a fossil fuel during startup, that term’s definition is relevant in determining “purpose.” “Startup” ends “when any of the steam from the boiler is used

to generate electricity for sale. . .”). Memorandum from William Maxwell, Startup and Shutdown Provisions (Nov. 16, 2012), http://www3.epa.gov/airtoxics/utility/2012/SSTSD_111612.pdf.

Because startup ends when steam is used to generate electricity, the ULSD fuel is not used “for the purpose of producing steam” according to the definition found in the Standards. Rather, the ULSD will be used so that the biomass may produce steam. Therefore, according to the Standards, this places the Facility outside the designation of fossil fuel-fired.

Moreover, it is worth noting that the New Stationary Source Performance Standards (“NSPS”) contain an applicability test to determine what qualifies as a “fossil fuel-fired steam generator.” 40 C.F.R. § 60.40 (2012). The Sylvanergy biomass unit fails this test as well. The NSPS state that a facility is fossil-fuel fired if is capable of firing fossil fuel at a heat input rate of more than 250 MMBtu/hr. *Id.* at part (2). The Sylvanergy facility’s maximum heat input rate is 60 MMBtu/hr for each boiler, or 120 MMBtu/hr total. This amount of fossil fuel heat input fails to amount to even half of the requisite threshold. Through this section of the CAA that fundamentally qualifies certain types of facilities, the Sylvanergy biomass plant fails to qualify as “fossil fuel-fired.”

- ii. Biomass units are meant to be excluded from the designation of “fossil fuel-fired.”

It is evident from the 2014 NESHAP regulation that biomass-fired units like the Facility in question were meant to be excluded from “fossil fuel-fired” designation. In its explanation for the 15 percent threshold rule cited above, the EPA noted that it sought to produce a final definition of “fossil fuel-fired” in order to address the conundrum facing biomass facilities that “primarily fire non-fossil fuels . . . but generally start up using either natural gas or distillate oil.” NESHAP Rule at 9309. The EPA stated explicitly: “We believe this definition accounts for the

use of fossil fuels for flame stabilization use without inappropriately subjecting [biomass units] to this final rule.” *Id.* Based on this guidance from the EPA, it would be improper for NUARB to adopt a different, contrary approach to classifying a facility as “fossil fuel-fired.” Accordingly, NUARB’s designation of the Sylvanergy’s biomass facility as “fossil fuel-fired” based on its startup fuel is incorrect.

B. Sylvanergy’s facility has the “potential to emit” more than 250 tons-per-year of carbon monoxide, despite the limitations imposed by the Village of Forestdale site plan approval.

Sylvanergy argues that it is not a “major emitting facility” because it does not have the “potential to emit” over 250 tons-per-year of carbon monoxide (“CO”). *See* 42 U.S.C. § 7475(a) (2006). The company’s position is based on the Village of Forestdale’s site approval plan, which would restrict the Facility to operating at only 75 percent capacity. At this operating level, the Facility’s CO emissions would be 190 tons-per-year. The site approval plan, however, is not “federally enforceable” by the EPA Administrator. The 75 percent capacity limit is therefore invalid. The Facility’s 96 percent capacity’s CO estimate of 255 tons-per-year control is the proper metric, qualifying it as a “major emitting facility” and triggering PSD permit requirements.

i. The Village’s plan fails the PSD permit program’s definitions of “federal enforceability.”

EPA regulations, rather than the CAA, impose the requirement of “federal enforceability” on a major emitting facility’s “potential to emit.” In defining “potential to emit” as the maximum capacity of a stationary source to emit a pollutant based on its design, the regulations state that

“any physical or operational limitation . . . including . . . restrictions on hours of operation . . . shall be treated as part of [the source’s] design *only if the limitation . . . is federally enforceable.*” 40 C.F.R. § 51, App. S (A)(3) (April 6, 2015) (emphasis added). This makes the Village’s restriction on the Facility’s capacity subject to “federally enforceable” scrutiny.

The PSD program defines “federally enforceable” broadly to include “all limitations and conditions which are enforceable by the Administrator.” 40 C.F.R. § 52.21(b)(17) (2015). The court in *U.S. v. Louisiana-Pacific Corp.* defined “Administrator” with respect to this definition as “the EPA.” F.Supp. 1141, 1159 (D. Colo. 1988). It is difficult to imagine how the EPA would enforce Forestdale’s municipal limitation. Even the site plan itself casts doubt on this requirement, stating that the city’s “building inspector” would be responsible for enforcement. This is inadequate to qualify as “federal enforcement.” Because of this, the village’s 75 percent capacity limit cannot be used and the Facility’s 96 percent capacity emissions of CO render it a “major emitting facility” for PSD purposes.

- ii. The Village’s plan is outside of federal and state implementation plans, and therefore invalid.

States play an active role in implementing the CAA. Notably this process does not confer the same authority on towns, cities, villages, and other levels of local and regional governance.

The PSD definitions provide that “federally enforceable” includes requirements contained in or created pursuant to any State Implementation Plan (“SIP”) enforcing National Ambient Air Quality Standards (“NAAQS”) and the PSD program. 40 C.F.R. § 52.21(b)(17) (2015). Additionally, the term encompasses limitations imposed to enforce the NSPS or created pursuant to a new source review process. *Id.* The Village’s site approval plan is not within a SIP, nor is it enforcing NSPS or pursuant to new source review. Notably, the critical common thread

running through all of these is EPA approval. The Village's plan lacks this approval, and therefore cannot qualify as "federally enforceable."

The SIP process illustrates the inapplicability of a village-level restriction. The CAA confers "primary responsibility" on states for assuring air quality within its boundaries. *Train v. Natural Res. Def. Council, Inc.*, 421 U.S. 60, 86-87 (1975); 42 U.S.C.A. § 7407(a) (2004). The primacy of the state's role is reflected in the CAA's "cooperative federalism" approach of directing each state to create its SIP determining the manner in which national primary and secondary ambient air quality standards will be achieved and maintained. 42 U.S.C.A. § 7407 (2004). *See also Natural Res. Def. Council v. Browner*, 57 F.3d 1122, 1123 (D.C. Cir. 1995) (explaining how the CAA establishes a partnership between EPA and states to achieve air quality goals); *Train v. Natural Res. Def. Council*, 421 U.S. 79 (holding that EPA is "relegated . . . to a secondary role in the process of determining and enforcing the specific, source-by-source emission limitations"). While local and regional governments may inform a state's SIP creation process, the primary unit of authority remains the state. Notably, even with this delegation of authority, the EPA must still approve a SIP before it is codified as law. 42 U.S.C. § 7410(a) (2012). The Village's commitment to a 75 percent capacity limit is outside this chain of authority, and therefore irrelevant in PSD permit considerations.

This underscores the factual determination that even if the Village sought to incorporate its limit on Sylvanergy's facility hours into a SIP, this would require EPA approval. Once approved by the EPA, a SIP "cannot be changed unless and until EPA approves any change." *Safe Air for Everyone v. EPA*, 488 F.3d 1088, 1096 (9th Cir. 2007). The EPA has not approved the Village's site plan, and therefore its limitations are not controlling.

Even if the Village were to argue that its limitations are stricter than what the CAA requires and thus enforceable, this argument fails because the site plan does not involve either state or federal authority. In *Friends of the Earth v. Potomac Electric Power Co.*, the court held that under CAA Section 110, state-adopted emission limitations more stringent than necessary to meet federal ambient air quality standards are federally enforceable. 419 F.Supp. 528, 533 (D.D.C. 1976). Yet the Village's approval plan, while admirable in its goals, was not created, approved, adopted, or incorporated by the state. The Village acted on its own, leaving its approval plan outside state and federal enforceability regimes. Therefore, its 76 percent capacity plan does not control whether or not a federal PSD permit is triggered.

- iii. Allowing the Village's plan to influence Clean Air Act permitting would violate public policy.

Federal enforceability limitations exist for public policy reasons. They ensure that requirements implicating the CAA are enforceable "as both a practical and legal matter." Memorandum from Michael S. Alushin, Associate Enforcement Counsel for Air Enforcement; *et al.* ("Air Quality Memorandum"), Office of Air Quality Planning and Standards, (September 23, 1987) (on file with the Duke Environmental Law and Policy Forum and cited by Joyce M. Martin, "Crossroads for Federal Enforcement of the Clean Air Act" 6 DUKE ENVTL. L. & POL'Y F. 77, 78-79 (1996). Both of these standards exist to maintain the CAA's rigorous requirements guarding against air pollution, one of the most serious environmental problems of the modern age. *See* R. ARVILL, MAN AND ENVIRONMENT: CRISIS AND THE STRATEGY OF CHOICE 97 (1967).

The "practical enforceability" requirement ensures that limitations and controls are of sufficient quality to ensure accountability, "i.e., that federal authorities have the data and resources necessary to take enforcement action." *See* 54 Fed. Reg. 27274 (1989); *see also* Air

Quality Memorandum at 2. If the Village created the limitation and enforces it through their staff, it is difficult to see how the goal of adequate data for federal enforcement will be met. The Village may or may not gather requisite data, and from there, it is unclear how and when it would be shared with the Administrator. The site plan therefore fails the policy aim of “practical enforceability.”

“Legal enforceability” means that federal authorities have “both the jurisdiction and the statutory or regulatory authority necessary” to take enforcement actions. Joyce M. Martin, “Crossroads for Federal Enforcement of the Clean Air Act” 6 DUKE ENVTL. L. & POL’Y F. 77, 79 (1996). In other words, the CAA assumes that federal enforcement may happen directly. Requirements for the Preparation, Adoption, and Submittal of Implementation Plans; Approval and Promulgation of Implementation Plans, 54 Fed. Reg. 27274-01 (June 28, 1989). The Village’s site plan takes away federal jurisdiction and thus, the authority necessary to fulfill “legal enforceability.”

Because the Village’s plan runs counter to public policy goals of “federal enforceability,” it cannot control the determination that Sylvanergy’s facility qualifies for the EPA’s PSD permit program. Deciding otherwise would put clean air goals at risk of being outside federal redress.

4. A biomass-fueled facility is subject to Prevention of Significant Deterioration Review as an emitter of greenhouse gases.

PSD review applies to new major sources of pollutants where the area the source is located in is in attainment with the National Ambient Air Quality Standards (NAAQS). 42 U.S.C. § 7410 (2012). A major stationary source is defined as any stationary source which emits, or has the potential to emit, 250 tons-per-year or more of a regulated New Source Review (“NSR”) pollutant. 40 C.F.R. § 52.21(1)(i)(b) (2015). The NSR program-regulated (or “criteria”)

pollutants are ozone, carbon monoxide, particulate matter, sulfur dioxide, lead, and nitrogen oxide. EPA Fact Sheet, New Source Review.

Since 1978, the Supreme Court has held that EPA-promulgated regulations including the term “air pollutant”—for example, the PSD-permitting trigger—as being limited to *regulated* air pollutants, not including greenhouse gases. *Utility Air Regulatory Group v. EPA*, 134 S.Ct. 2427, 2440 (2014). However, the Court also held in *Utility Air* that EPA’s decision to require BACT for “anyway sources,” or sources that emit greenhouse gases that are otherwise subject to PSD review for regulated pollutants, is a permissible interpretation of the CAA. *Id.* The Court reasoned that the evidence provided showed that the BACT provision as written was capable of being sensibly extended to greenhouse gases, so there was no reason to overturn that interpretation. *Id.*

Similar to the facility in *Utility Air*, in this case we are dealing with an “anyway source” that produces regulated air pollutants as well as greenhouse gases. While Sylvanergy argues that it was improper for NUARB to consider PSD limits for its greenhouse gas emissions, because the facility will be biomass-fueled and plans on offsetting carbon dioxide emissions by carbon sequestration via biofuel regrowth, in reality the facility is additionally producing levels of regulated pollutants that make it proper for NUARB to classify the facility as an “anyway source” for purposes of greenhouse gas limitations. The fact that the facility produces greenhouse gases, on top of the other regulated pollutants, does not automatically preclude the facility from PSD review, as it claims.

Sylvanergy’s proposed facility falls under the category of “new major source of pollutants” because it unquestionably has the potential to emit 250 tons-per-year of an NSR pollutant: assuming a 96 percent capacity factor, the facility would emit over the regulated limit of carbon

monoxide. Sylvanergy claims that based on a 75 percent capacity factor they would fall under the regulated limit for all pollutants; however, this capacity factor argument is unsustainable. Sylvanergy's rationale for support of a 75 percent capacity factor relied on the Forestdale site plan approval's limitation on hours of operation, which would reduce its carbon monoxide production to below the minimum requirement. However, this restriction on operating hours is not a federally enforceable limitation as required by 40 C.F.R. Section 52.21, and therefore NUARB operated on the assumption that Sylvanergy would operate at a 96 percent capacity, which puts the facility at a carbon monoxide production level above the allowed 250 tons-per-year. 40 C.F.R. § 52.21(b)(4) (2015). Thus, the facility is classifiable as both a major source and an "anyway source" for purposes of PSD review, and the facility is subject to PSD review as a new major source of pollutants under the CAA.

5. NUARB properly rejected a wood gasification and partial carbon capture and storage plant a BACT for the Sylvanergy facility.

NUARB properly rejected SOC's proposal to implement a wood gasification and partial carbon capture and storage plant as BACT for Sylvanergy's proposed biomass-fired electricity generation and wood pellet production facility. Implementation of SOC's proposed BACT would fundamentally redefine the design and scope of Sylvanergy's project.

- i. NUARB had the discretion to reject the wood gasification and partial carbon capture and storage plan proposed by SOC.

The CAA requires that any proposed major emitting facility incorporate BACT for each regulated pollutant that it emits. 42 U.S.C. §7475(a)(4) (2015). The term "BACT" refers to an emission based limitation that reduces each pollutant subject to regulation under the CAA from any major facility. 42 U.S.C. § 7479(3) (2015). Under the act, the permitting authority, e.g., the

EPA, must conduct a case-by-case analysis of the proposed facility, considering energy, environmental, and economic impacts in implementing any method, system, or technique for achieving reduced emissions of a pollutant. *Id.*; see also 40 CFR § 51.166(b)(12) (2015).

The starting point in any BACT determination is the five-step “top-down” process. U.S. EPA Office of Air Quality Planning and Standards, PSD and Title V Permitting Guidance for Greenhouse Gases 17-18, (2011). According to the PSD and Title V Guidance for Greenhouse Gases (“Greenhouse Gas Guidance”), all available control technologies for a given pollutant must be identified and ranked in descending order of control effectiveness. *Id.* Unless the permit applicant demonstrates that energy, environmental, or economic factors infringe upon the success of the proposed project, the top-ranked option should be considered BACT for the proposed facility. *Id.* at 18. The Guidance sets forth a five-step process: 1) identify all available control technologies, 2) eliminate technically infeasible options, 3) rank remaining control technologies, 4) evaluate most effective controls and document results, and 5) Select the BACT. *Id.*

In determining whether a wood gasification and partial carbon capture and storage facility is BACT for Sylvanergy’s proposed facility, NUARB must consider under the first step of the top-down process whether a BACT may redefine the design of the proposed facility, including its fuel source and the means of electrical generation. When determining the appropriate BACT for a proposed facility, the permitting authority should examine how the permit applicant stated its goals, objectives, purpose, and basic design for the facility. *Id.* at 26. Such considerations should not disrupt the permit applicant’s “basic business purpose” for the proposed facility. *Id.* at 28.

Under Step One, NUARB had the duty to determine whether or not Sylvanergy had thoroughly and accurately listed all potential BACT options for its proposed facility. Sylvanergy defines its facility as a biomass-fired electricity generation and wood pellet fuel production facility. The primary function of the facility would be to burn wood as a means of electrical generation. The wood gasification proposed by SOC purports to alter the basic business purpose of the facility by forcing Sylvanergy to gasify its biomass fuel source, not burn it. In addition, the proposed facility under SOC's proposal would require Sylvanergy to employ steam reformation to separate the CO₂ from the gasification process and then sequester that CO₂. Each of the processes fundamentally alters Sylvanergy's business plan to burn wood as biomass fuel source. Such a determination, as to implement the wood gasification and carbon capture systems, would fundamentally redefine the source. As such, it was within NUARB's discretion as the permitting authority to determine whether wood gasification and carbon capture represented BACT for Sylvanergy's proposed facility.

Thus, NUARB properly exercised its discretion when it determined that wood gasification and partial carbon capture and storage would redefine Sylvanergy's proposed facility.

- ii. Wood gasification and partial carbon capture and storage is not an acceptable BACT for Sylvanergy's proposed facility.

A permitting authority determines whether a BACT is appropriate for a proposed facility by examining the technology's applicability to the purpose or basic design of the facility. *In re Prairie State Generating Co.*, 13 E.A.D. 1, 18 (EAB 2006). When determining BACT for a bioenergy facility, a permitting authority can utilize information from an applicant stating why a particular fuel is fundamental to the project's purpose in order to determine whether an

alternative fuel would redefine the proposed purpose of the facility. U.S Office Of Air And Radiation, Guidance for Determining Best Available Control Technology for Reducing Carbon Dioxide Emissions from Bioenergy Production, 15 (2011) (“Bioenergy Guidance”). As the following discussion will show, a wood gasification and partial carbon capture and storage facility is inappropriate BACT for the purposes of Sylvanergy’s biomass-fired electricity generation facility.

Generally, the permitting authority examines how the permit applicant defines the said purpose or design of the facility in its application when determining the appropriateness of the BACT. *Id.* In *Prairie*, the Prairie State Generating Company applied for a permit to construct an electricity generating facility featuring two coal-fired steam electric generating units, each of which included a coal-fired boiler. *Id.* at 5. The permit applicant sought to use high-sulfur coal mined locally in Illinois. *Id.* The Illinois EPA granted the permit, but the petitioners appealed. *Id.* at 13. The issue before the appeals board was whether the Illinois EPA determined that implementation of low-sulfur coal as BACT redefined the facility. *Id.*

The EAB found that the Illinois EPA had taken a sufficiently “hard look” at the design of Prairie’s proposed facility and had selected the appropriate BACT. *Id.* at 21. According to the appeals board, when determining the appropriate BACT for a facility, the goal or purpose of a facility must be considered in light of the project as a whole and not just as an isolated part. *Id.* at 18. A permit authority must be able to discern whether the BACT component under review is inherent to the project as whole. *Id.* at 19. In *Prairie*’s case, use of locally mined high-sulfur coal represented a fundamental component of the facility that, if changed, would alter the purpose and basic design of the project. *Id.*

The facts of the present case are similar to those in *Prairie*. Here, Sylvanergy proposed to construct a biomass-fired electricity generation unit combined with wood pellet fuel production. SOC petitioned Sylvanergy's permit approval on the basis that NUARB failed to consider wood gasification and carbon capture as a means to further lower CO₂ emissions. Similar to *Prairie*'s use of high-sulfur fuel, Sylvanergy's wood burning is a fundamental component of the project. The goal of Sylvanergy's project is not electricity generation by means of steam, but the burning of wood. Thus, implementation of a wood gasification system would fundamentally alter Sylvanergy's proposed facility.

In reaffirming the purpose and basic design of proposed facilities, the appeals board in *Prairie* relied on *In re Pennsauken County, New Jersey, Resource Recovery Facility*, 2 E.A.D. 667 (EAB 1988). In *Pennsauken*, the Township of Cinnaminson and others joined as petitioners against the New Jersey Department of Environmental Protection appealing a PSD permit issued to the Pennsauken Solid Waste Management Authority for construction of a municipal waste combustor. *Id.* The petitioners disfavored the use of a municipal waste combustor and argued that a co-firing mixture of 20 percent refuse derived fuel and 80 percent coal should be used at current power plants instead. *Id.* at 670.

The appeals board rejected the petitioners' assertion. Rather than take issue with the facility itself, the board held, "The permit conditions that define these systems are imposed on the source as the applicant has defined it." *Id.* The board found that while conditions of a permit may affect how the permit applicant views the viability of its proposed facility, such conditions may not redefine a source. *Id.* As such, the source cannot itself be a condition of the permit. *Id.*

Pennsauken provides helpful guidance in the present case. Here, the source of Sylvanergy's proposed facility is biomass, or wood. The source of electrical generation derives

from the combusting wood, not wood gasification. Like Pennsuaken County's proposal to construct a municipal waste combustor, Sylvanergy's proposal to construct a biomass-fired electrical generation facility is not a condition of the permit. If the source of the facility changes (from wood to steam), it would fundamentally redefine the source. However, since a source is defined by the applicant in its permit, such appeals may not alter the source for the sake of lower BACT emissions.

In 2007, the Court of Appeals affirmed the holdings of *Prairie* and *Pennsuaken* in *Sierra Club v EPA*, 499 F.3d 653 (7th Cir. 2007). In *Sierra Club*, the Court of Appeals heard the appeal of petitioners from *Prairie*. The petitioners appealed use of high-sulfur coal from Illinois in *Prairie's* proposed facility. The court rejected the petitioners' appeal and determined that BACT does not include redefining the proposed facility. *Id.* at 654, quoting *In re Old Dominion Electric Cooperative*, 3 E.A.D. 779, 793 n. 38 (EAB 1992) (holding that the EPA does not traditionally force a permit applicant to change the scope of its project). The court observed that altering the proposed facility from the mine-mouth plan proposed in the permit application to a facility that burned low-sulfur coal that was shipped to the facility would result in significant modifications. *Sierra Club* at 655. Ultimately, the court rejected the petitioners' arguments and distinguished it, by control technology (low-sulfur and high-sulfur coal) and design (source of the fuel). *Id.* at 657.

The Court of Appeal's holding in *Sierra Club* provides the final explanation of why wood gasification is not an acceptable BACT for Sylvanergy's biomass-fired facility. Primarily, altering the source of Sylvanergy's proposed facility's electrical generation is unrelated to the control technology. Transforming a biomass-fired electrical generation unit into a wood gasification, steam reformation, and carbon capturing system fundamentally shapes the facility

into an entirely different project than the one proposed in Sylvanergy's application. Thus, biomass-fired electrical generation is the source of Sylvanergy's proposed facility, and is essential to the permit.

In short, current regulations, existing case law, and administrative decisions dictate that when an element of a proposed facility functions as a source or other indispensable component of a proposed facility, it may not be altered by BACT's top-down analysis. Here, the fact that Sylvanergy applied for its facility to feature a biomass-fired electricity generation unit means that the SOC's proposal to impose wood gasification and carbon capture as BACT is improper. Thus, NUARB properly rejected wood gasification as BACT for Sylvanergy's proposed facility.

6. The Sustainable Forest Plan is appropriate BACT for Sylvanergy's proposed facility.

NUARB properly approved the Sustainable Forest Plan as BACT for Sylvanergy's biomass-fired electricity generation facility. The EAB also properly reviewed Sylvanergy's PSD Appeal when it determined that 1) the combustion of biofuel, such as those used at the Sylvanergy facility, are not BACT per se, 2) the Sustainable Forest Plan's off-site BACT requirements are outside the scope of the CAA, and 3) that the Sustainable Forest Plan is in fact an environmentally sound and practical BACT for the Sylvanergy facility.

i. The combustion of biofuel is not BACT per se.

In 2011, the EPA considered whether biomass fuel production may provide a natural sink for facilities in order to achieve carbon neutral emissions. *See* Greenhouse Gas Guidance at 10. After three years of referral, in 2014 the EPA determined that carbon neutrality cannot simply be presumed to exist because a facility uses biofuel. U.S. Office of Air and Radiation, Framework for Assessing Biogenic CO₂ Emissions from Stationary Sources, 3 (2014)

(“Framework”). A determination of carbon neutrality depends on several factors affecting the fuel source (“feedstock”) and sequestration, known as carbon fluxes. *Id.* at 1. These fluxes occur in part due to 1) feedstock growth and harvest, 2) processing, transport, and storage of the feedstock at the facility, and 3) the “possible alternative fate” of a feedstock should it not be used as fuel. *Id.* In addition to carbon fluxes, determining whether a biomass-fired facility’s emissions are carbon neutral depends on a number of technical considerations, including but not limited to spatial and temporal elements of a biogenic feedstock. *Id.* at 27, 44-45 (finding that difference in time and space provided in harvest greatly impacted sequestration of ambient carbon).

Here, the Framework provides appropriate guidance in evaluating NUARB’s decision to approve the Sustainable Forest Plan. The record is silent regarding the source or feedstock of Sylvanergy’s biogenic fuel. As a result, it is nearly impossible to determine that burning its biomass is BACT per se. In order to determine that Sylvanergy’s electricity generation is BACT per se, Sylvanergy would need to submit data that demonstrates that it is able to sustainably replenish its biofuel with a feedstock that captures as much carbon as it emits on either a temporal or spatial scale. Since such information is unavailable, NUARB chose the Sustainable Forest Plan as BACT. While an imperfect plan, the Sustainable Forest Plan provides Sylvanergy with a plan that utilizes a short-rotation feedstock like hybrid poplar, capable of capturing 70 percent of the facility’s estimated emissions. *See* PSD Appeal No. 15-0123, 7 (June 1, 2015). If Sylvanergy desires its proposed facility to serve as BACT per se, it must do more than claim that the burning of biofuel is itself a carbon neutral offset. Thus, Sylvanergy’s biomass-fired electricity generation plant is not BACT per se.

- ii. The Clean Air Act permits implementation of “beyond-the-fence” control measures.

The CAA neither implicitly nor explicitly forbids implementation of “beyond-the-fence” or “offsite” control measures to limit the emission of CO₂ for new stationary sources. *See* 42 U.S.C. § 7479(3); *see also* 70 Fed. Reg. 34888-89 (June 18, 2014) (to be codified at 40 C.F.R. pt. 60) (considering “beyond-the-fence” measures for existing stationary sources when implementing the best system of emissions reduction). The EPA suggests that because CO₂ differs from other pollutants, permitting facilities should evaluate the role of the carbon cycle in the production and eventual sequestration of a biofuel’s carbon emissions. Bioenergy Guidance at 20. Since sequestration may occur offsite, it is appropriate to consider BACTs that occur outside, or beyond-the-fence, of proposed facilities. *Id.* at 21. Such determinations should be made on case-by-case, facility-specific basis and should evaluate the carbon impact of the proposed facility. *Id.*

In addition, a permitting authority must assess the environmental, economic, and energy impacts of biogenic fuels. *Id.* at 20. Under Step Four of the BACT decision-making process, “it is appropriate [for a permitting authority]...to account for the underlying objectives of federal and state policies [that] foster...and promote biomass.” *Id.* at 25.

Here, Sylvanergy claims that the CAA does not permit authorization of the Sustainable Forest Plan because BACT only applies to onsite control measures. However, under both the Sustainable Forest Plan and Sylvanergy’s proposed BACT per se plan, the production of biomass and the sequestration of carbon from the proposed facility must occur offsite on forest-dedicated land. In other words, control measures for the proposed facility will occur offsite, away from the actual electricity generation unit itself. As a result, implementation of BACT that applies to

Sylvanergy's facility will occur beyond-the fence. Moreover, the Sustainable Forest Plan complies with state law. Under New Union's Executive Order 005-12, all new power plants are required to be carbon neutral. *See* PSD Appeal No. 15-0123, 7 (June 1, 2015). The Sustainable Forest Plan would permit Sylvanergy to grow and harvest its biomass while simultaneously capturing a nearly equal amount of carbon that its proposed facility would emit. Thus, the Sustainable Forest Plan is permitted under the CAA.

iii. The Sustainable Forest Plan does not pose an unacceptable environmental impact.

The utilization of biofuels poses a number of potential benefits and detriments to the environment. Economics of Biofuel, National Center for Environmental Economics, EPA, <http://yosemite.epa.gov/EE%5Cepa%5Ceed.nsf/webpages/Biofuels.html>. Primarily, biofuels are "inexhaustible resources" that could theoretically "be sustained indefinitely." *Id.* However, when biofuel production compels the conversion of undeveloped lands into commercially viable agricultural crops, biodiversity may be harmed. *Id.*; U.N. Environment Programme World Conservation Monitoring Centre, The Impacts of Biofuel Production on Biodiversity: a Review of the Current Literature 9-10 (2009) (finding that direct conversion of natural ecosystems into commercial feedstocks is likely to negatively affect biodiversity). Nonetheless, biofuels that greatly reduce emissions can help mitigate the more indirect and devastating effects of climate change on biodiversity. *Id.* at 9.

SOC claims that the Sustainable Forest Plan will have negative impacts on the environment. However, the studies that SOC has produced showing that monoculture crops negatively affect ecosystems are too general to facially dismiss the Sustainable Forest Plan. SOC's findings do not determine whether the Sustainable Forest Plan's impacts on biodiversity

are likely to outweigh the benefits the plan poses in mitigating climate change's negative effects on biodiversity. Rather, they simply state general facts and speculation. Without more evidence demonstrating that the plan is detrimental, e.g., converts natural ecosystems into cropland, the SOC cannot claim that the Sustainable Forest Plan is environmentally unsustainable. Thus, SOC's disapproval of the Sustainable Forest Plan is unwarranted.

CONCLUSION

For the foregoing reasons, the Court should find it does not have jurisdiction to review this appeal. However, if the Court determines that jurisdiction is proper, it should find that Sylvanergy's biomass-fired electricity generation facility is (1) not a fossil fuel-fired facility under the CAA, (2) subject to a PSD permit as a new source facility, (3) not required to convert its facility to a wood gasification and carbon capture and storage facility as BACT, and (4) required to implement the Sustainable Forest Plan as BACT.