

UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF LOUISIANA

UNITED STATES OF AMERICA,
Plaintiff,

LOUISIANA DEPARTMENT OF
ENVIRONMENTAL QUALITY,
Plaintiff-Intervenor,

CIVIL ACTION

NO. 09-100-JJB-CN

VERSUS

LOUISIANA GENERATING, LLC,
Defendant

RULING ON MOTIONS IN LIMINE

This matter is before the Court on three Motions in Limine filed by Louisiana Generating (“LaGen”) relating to expert testimony. First, LaGen filed a motion to exclude testimony of Dr. Ranajit Sahu and Mr. Myron Adams regarding cost-benefit analysis (“CBA”) on *Daubert* grounds (doc. 196). The Plaintiffs filed an opposition (doc. 206) to which LaGen replied (doc. 220). Second, LaGen seeks to exclude the testimony of Dr. Sahu and Mr. Robert Koppe based on the *Cinergy*¹ and *Alabama Power*² analysis (doc. 195). Plaintiffs opposed this motion (doc. 210) and LaGen replied (doc. 218). Finally, LaGen filed a motion to exclude Mr. Bruce Biewald as a rebuttal witness, again on *Daubert* grounds (doc. 193). Plaintiffs opposed the motion (doc. 207) and LaGen replied (doc. 216).

¹ *United States v. Cinergy Corp.*, 623 F.3d 455 (7th Cir. 2010).

² *U.S. v. Alabama Power Co.*, No. 01-00152, Slip Op. (N.D. Ala. March 14, 2011) attached as (doc. 193-2).

The Court heard oral argument on these motions on March 21-22, 2012. For the following reasons, the motions are DENIED.

This lawsuit centers around Units 1 and 2 at Big Cajun II (“BCII”) a coal-fired electric utility generating plant in New Roads, Louisiana. Specifically, whether certain work done to the turbines in 1998 and 1999 (“the 1998/99 work”) was done in violation of two portions of the Clean Air Act (“CAA”): (1) the Prevention of Significant Deterioration of Air Quality (“PSD”) program and (2) the Title V operating permit provisions, as well as the corresponding provisions of the Louisiana State Implementation Plan (“Louisiana SIP”). In a nutshell, any work done to a facility such as BCII would be in violation of the PSD program if it is deemed to be a “major modification” that was done without a preconstruction permit. Further, it would be a violation to be currently operating without a valid Title V operating permit. In a prior ruling, the Court found that LaGen can be liable for this 1998/99 work under both the PSD and the Title V provisions even though it did not own the plant at the time. (Doc. 260). The motions before the Court today involve how the Plaintiffs will prove the work done consists of “major modifications.”

In order to be deemed a major modification, Plaintiffs will have to show (1) a physical change to the plant; (2) a significant net emissions increase; and (3) a causal link between the two. See 57 Fed. Reg. 32,314, 32,326 (July 21, 1992); LA. ADMIN. CODE tit. 33, § 509.B. A significant net emissions increase is an increase that would equal or exceed 40 tons per year of nitrogen oxide (“NO_x”) or

sulphur dioxide (“SO₂”). 40 C.F.R. § 52.21(b)(23)(i). As the PSD program is forward-looking, the question becomes whether the owner of the facility at the time of the work, Cajun Electric, expected or reasonably should have expected, the work to increase emissions at BCII.³ In these motions, LaGen asserts that the methods used by Plaintiffs’ experts are unreliable and that some or all of their testimony should be excluded under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). After discussing the law as it relates to all three motions, the Court will consider each in order.

Under Rule 702 of the Federal Rules of Evidence:⁴

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a)** the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b)** the testimony is based on sufficient facts or data;
- (c)** the testimony is the product of reliable principles and methods;
and
- (d)** the expert has reliably applied the principles and methods to the facts of the case.

Rule 702 requires the Court to make a preliminary determination that the testimony is both relevant and reliable before it will be admitted. *Vargas v. Lee*,

³ In the prior ruling mentioned above, the Court determined that LaGen could be liable under a theory of successor liability for the permitting violations of its predecessor Cajun Electric. See doc. 260.

⁴ This rule was amended effective Dec. 1 2011. The committee notes indicate “[t]hese changes are intended to be stylistic only. There is no intent in any way to change any result in any ruling on admissibility.”

317 F.3d 498, 500 (5th Cir. 2003). The purpose behind this gate-keeping function is to ensure that an expert uses the same sort of intellectual rigor in the courtroom that marks the practice of an expert in the relevant field. *Id.* at 500. The *Daubert* Court pointed out that “[v]igorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.” *Daubert*, 509 U.S. at 596. The Court also noted that Rule 702 is not the only one to consider in determining the admissibility of expert testimony: Rules 703, 706 and 403 also help ensure reliable and helpful—and not overly prejudicial—testimony by experts.

1. Motion to Exclude Sahu and Adams Relating to Cost-Benefit Analysis

LaGen argues in this motion that the CBA testimony of Dr. Sahu and Mr. Adams should be excluded because it is irrelevant and unreliable. It also contends their reliance on the CBAs in reaching their opinions is unreasonable. Finally, LaGen claims Dr. Sahu’s calculations based on the CBA are irrelevant for determining PSD liability. The Court notes that the emissions calculations based on the CBAs are presented by the Plaintiffs as an alternative to the method at issue in Motion II below. Dr. Sahu performed the initial analysis and Mr. Adams provides rebuttal testimony that Dr. Sahu was correct in his procedure and findings.

At the center of this motion are CBAs done in advance of the 1998/99 work, one for each unit. (Docs. 196-6, 196-7). These CBAs are filed under seal.

The Court discusses some specifics regarding these CBAs in Supplemental Reasons Filed Under Seal.

LaGen argues that because the CBAs do not reflect the exact projects done, they are useless to an analysis of what Cajun Electric expected or reasonably should have expected when they undertook the reheater projects. The Court disagrees.

Testimony from Dr. Sahu at the March 21-22 hearing indicates that at the emissions rate of the units, the 40 ton trigger to PSD liability would be reached after an additional 16 total hours of operation. (March 21-22 Hearing Tr. at 148-49). The CBAs indicate that Cajun Electric expected to save multiple days' worth of outages due to replacing certain parts of the reheaters. LaGen complains that the CBAs do not differentiate in the nature of those savings between the primary and secondary reheater replacement and thus the numbers are misleading and unreliable. And while this is potentially fertile ground for cross-examination, the Court finds the CBAs are reliable insofar as evidence of what Cajun Electric expected or reasonably should have expected in terms of increased emissions.

The Court might feel differently were there different documents on which Dr. Sahu could base his opinion. However, as LaGen quite emphatically pointed out at the hearing, there are not. To not allow Dr. Sahu to use what documents there are would be to reward Cajun Electric/LaGen for in essence burying its head in the sand as to expected emissions increases. The documents clearly

show outages were a problem and the company planned to work on the reheaters in order to fix those problems. Even if the CBAs are not the same exact projects, they are similar and are relevant to what Cajun Electric knew or should have known about the work they were considering.

The opinions of Dr. Sahu and Mr. Adams are relevant and reliable. Their use of the CBAs in forming their opinions is reasonable. Further, the CBAs are relevant to Dr. Sahu's calculations. All of LaGen's concerns can be addressed through cross-examination and contradictory testimony from its own witnesses. The motion is DENIED.

2. Motion to Exclude Under *Cinergy* and *Alabama Power*

In its second motion, LaGen urges the Court to exclude the reports of Dr. Sahu and Mr. Robert Koppe under two recent cases on the same subject. (Doc. 195-1). In these cases, the Seventh Circuit determined that the emissions calculation methodology applied by Dr. Sahu and Mr. Koppe ("Sahu/Koppe method")⁵ applies only when baseload units are concerned. *Cinergy*, 623 F.3d 455. This is because the method presumes that a unit, if modified, will be more productive and that there will be an increase in generation due to this greater

⁵ This method is done in three steps: first, Mr. Koppe, a reliability engineer, evaluates how replacing boiler components would affect the unit availability—essentially what percentage of the time a plant is ready to generate electricity and not shut down for repairs (outages), either forced or planned. Koppe makes this calculation by examining historical operating data to determine the number of outages. He then converts this into how many increased hours each unit would be available to operate. Second, Mr. Koppe determines how much of the additional availability would be used to generate electricity. This is done by looking at historical operation data to determine how much the unit was actually used for every hour of availability. He then multiplies that usage rate and the increased hours to come up with the "output factor." Third, Dr. Sahu then translates this increased output into emissions.

productive capability. The Seventh Circuit identified the three types of electricity producing plants: baseload, cycling, and peaking. It noted that it is common practice for utilities to run their cheapest power sources at full capacity in order to meet their baseload demand, it found such units are “operated virtually continuously.” *Id.* at 459. They then use more expensive plants in order to meet increased demand. A plant used for this purpose is said to be a “cycling” plant. “Peaking” equipment, still more expensive, is used only when demand is at a maximum. These terms refer to how a plant is used, they are not official designations given plants. For example, a utility with a nuclear plant, a coal-fired plant, and a natural gas-powered plant might use the nuclear plant for its baseload, then cycle the coal-fired plant, and use the gas-powered plant only when it has to. The reason for this is because nuclear plants are the cheapest to operate, followed by coal, followed by gas. Unsurprisingly, economic principles dictate how a plant is used. The *Cinergy* court then determined that because the plant in question was old and expensive to run it was a cycling unit. Therefore, the Sahu/Koppe methodology, which it determined assumes maximum capacity output to determine its emissions projections, was not reliable. *Id.* at 460.

In following the Seventh Circuit, the Northern District of Alabama defined baseload units as those that run “virtually continuously” at “full capacity.” (Doc. 193-2 at 14). It then went unit by unit assessing the days of operation when available and the capacity at which a unit ran during that time. The court found that each plant in question either did not operate continuously or that it was

continuous but not at full capacity. Therefore, it found the units to not be baseload units and that the Sahu/Koppe method was unreliable.

Assuming, *arguendo*, that the *Cinergy* court is correct, the Court finds the factual situation before it distinguishable: in *Cinergy* and *Alabama Power*, there clearly appears to have been a cheaper source of electricity available to the utility than the units involved.⁶ After all, there cannot be a cycling unit without a baseload unit. At the hearing, LaGen could point to no cheaper sources of electricity than the BCII units. Therefore, these units must be baseload units as they are used to meet their base demand. Further the Court does not agree with the Northern District of Alabama's interpretation of the definition of "baseload" as set forth by the *Cinergy* court. As stated earlier, the Seventh Circuit stated, "[b]aseload equipment is operated virtually continuously; such operation results in a low cost per kilowatt hour." 623 F.3d at 459. Only when it analyzes the units at issue does it conclude, "Cinergy's Wabash plant is old; old plants are more costly to operate than new ones; the Wabash plant is therefore operated as a cycling rather than a baseload plant *and so does not operate at full capacity. Id.* at 460 (emphasis added). The capacity at which a plant operates is a function of its status as baseload or cycling, not the other way around. Therefore, instead of a two-part test for being a baseload unit, the Court interprets *Cinergy* to require only "virtually continuous" operation in order to be considered a baseload unit.

⁶ In *Alabama Power*, the court noted the defendants had six nuclear-powered units in their multi-state power cooperative network. The *Cinergy* court did not mention what the cheaper units were, but the fact that it refers in the comparative indicates such units exist.

As the testimony at the hearing was to the effect that BCII units 1 and 2 operate whenever they are available, the Court finds this qualifies as “virtually continuously” under *Cinergy* and that the plants are therefore considered baseload under that case.

Cinergy is not controlling on this Court, of course, and the Court finds that the failure of LaGen to seriously contend there is another source of power to satisfy its baseload demand is all the Court needs to determine that the units in question are baseload units. As such, the Sahu/Koppe method is reliable under *Daubert* and the rules of evidence for forecasting future emissions under the PSD program. This motion (doc. 195) is DENIED.

3. Motion to Exclude Bruce Biewald

In its third motion, LaGen seeks to exclude Mr. Biewald, who provides rebuttal testimony to LaGen’s expert Mr. Chupka.⁷ LaGen gives two reasons he should be excluded: (1) his report purports to rebut an opinion Mr. Chupka did not in fact give and (2) Mr. Biewald’s modeling evidence is irrelevant and unduly prejudicial. (Doc. 193).

As to the first point, the basic argument is that Mr. Chupka’s report concludes that there is not a strong relationship between the availability of the primary reheaters (which were the subject of the 1998/99 work) and unit emissions. This counters the conclusions of Dr. Sahu and Mr. Koppe. LaGen

⁷ Mr. Chupka is the subject of a pending *Daubert* motion, although that motion is not before the Court at this time.

claims that Mr. Biewald's rebuttal report concludes that there is a nearly linear relationship between unit availability and generation. Essentially, LaGen argues that this is apples and oranges while Plaintiffs contend these are rather all part of the same apple orchard.

The Court agrees with Plaintiffs that the rebuttal report of Mr. Biewald is responsive to Mr. Chupka's report. Mr. Chupka says there is not a relationship between the work and emissions and Mr. Biewald says there is. The differences in the reports are distinctions without a difference: the unit cannot be available without an operational primary reheater and generation leads directly to emissions. In short, they are all links in the same chain.

As for the relevance and prejudicial nature of his report, this largely revolves around Mr. Biewald's choice in modeling software. The Court finds cross-examination and testimony from Mr. Chupka is the proper way to handle any problems LaGen has with it. In short, these issues go to weight the jury should give the evidence, not its admissibility. This motion (doc. 193) is DENIED.

CONCLUSION

For these reasons, Defendant's motions (docs. 193,195,196) are DENIED.

Signed in Baton Rouge, Louisiana, on May 14, 2012.



**JUDGE JAMES J. BRADY
UNITED STATES DISTRICT COURT
MIDDLE DISTRICT OF LOUISIANA**