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December 1, 2014

**VIA EMAIL TO [a-and-r-docket@epa.gov](mailto:a-and-r-docket@epa.gov)**

Environmental Protection Agency  
EPA Docket Center (EPA/DC)  
Mailcode 28221T,  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460  
Attn: Docket ID No. EPA-HQ-OAR-2013-0602

Re: Public comments of Cleco Corporation on Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units; Proposed Rule, Docket ID No. EPA-HQ-OAR-2013-0602.

### **Introduction**

On June 18, 2014, the U.S. Environmental Protection Agency published a proposal in the Federal Register at 79 Fed. Reg. 34830 (Proposal), to create emission guidelines for states to follow in developing plans to address greenhouse gas emissions from existing fossil fuel-fired electric generating units. Cleco Corporation (Cleco) respectfully submits comments below on the Proposal.

Cleco is an energy services company based in central Louisiana. Our primary business is Cleco Power LLC, a regulated electric utility. Cleco Power serves approximately 284,000 customers in Louisiana and operates five power plants with a total of 4,611 megawatts of nameplate generating capacity.

We thank you for the opportunity to submit these comments:

### **Comment 1: The Clean Air Act does not allow regulation of sources under Clean Air Act Section 111(d) that are already regulated under Clean Air Act Section 112.**

EPA claims that electric generating units may be regulated under Section 111(d) even though they are already regulated under Section 112. However, the Clean Air Act, 42 U.S.C. § 7411(d)(1)(A)(i) states that sources that are already regulated under Section 112 shall not be regulated under Section 111(d):

- (d) Standards of performance for existing sources; remaining useful life of source
- (1) The Administrator shall prescribe regulations which shall establish a procedure similar to that provided by section 7410 of this title under which each State shall submit to the Administrator a plan which (A) establishes standards of performance for any existing source for any air pollutant (i) for which air quality criteria have not been issued or which is not included on a list published under section 7408 (a) of this title *or emitted from a source category which is regulated under section 7412 of this title* but (ii) to which a standard of performance under this section would apply if such existing source were a new source ...

EPA claims that the statute is ambiguous and therefore, under *Chevron v. NRDC*, 467 U.S. 837 (1984), EPA deserves deference for its interpretation. However, the *Chevron* decision confirms that EPA cannot “interpret” an unambiguous statute to mean something that it does not say:

First, always, is the question whether Congress has directly spoken to the precise question at issue. If the intent of Congress is clear, that is the end of the matter; for the court, as well as the agency, must give effect to the unambiguously expressed intent of Congress.

Section 111(d)(1) is neither silent nor ambiguous. It very plainly states that Section 111(d) cannot be used to regulate sources already regulated under Section 112. Coal-fired and oil-fired electric utility units are already regulated under Section 112 through EPA’s Mercury and Air Toxics Standards (MATS) and therefore cannot be regulated under Section 111(d). Because the Clean Power Plan would be an illegal regulation, EPA should withdraw the Proposal.

**Comment 2: Even if existing fossil fuel-fired electric generating units could be regulated under Section 111(d), EPA’s proposed guidelines do not comply with the Clean Air Act.**

Contrary to the direction provided by the Clean Air Act, the Proposal seeks to impose regulatory requirements that do not fit the statutory definition of a “standard of performance” and seeks to impose requirements on facilities and entities that are not subject to the Clean Air Act at all. Section 111(d)(A)(1) states that:

The Administrator shall prescribe regulations which shall establish a procedure similar to that provided by [Section 110] under which each State shall submit to the Administrator a plan which [ ] establishes *standards of performance for any existing source* for any air pollutant ....

The term “*standard of performance*” is defined in Section 111(a) as:

[A] standard for emissions of air pollutants which reflects the degree of emission limitation achievable through the *application of the best system of emission reduction* which (taking into account the cost of achieving such reduction and any nonair quality health and environmental impact and energy requirements) the Administrator determines has been adequately demonstrated.

In these provisions, it is clear that the Congress intended BSER to be “applied” to existing stationary sources and reflect a “standard of *performance*” that involves emissions reductions through process changes, operation changes, direct emission control, or other methods applied *at the emissions unit*. “Standards of performance,” while broadly defined, cannot be based on the elimination of the source itself (*i.e.*, no performance) or reduced utilization of the source, which is what EPA’s Proposal would mandate. With the exception of Building Block 1, the Proposal, through Blocks 2, 3, and 4, is based on reducing the amount of power generation at certain existing sources and increasing generation from others. That approach does not meet the statutory definition of “standard of performance” and thus violates the Clean Air Act by seeking to require natural gas combined cycle units to operate at higher capacity factors and thus emit *more* CO<sub>2</sub>. In addition, requiring coal units to operate at lower capacity factors is not the best system of emissions reduction because reduced operating levels will result in higher CO<sub>2</sub> emission rates at coal units, as their efficiency declines. EPA’s approach also violates the Act by effectively imposing regulatory requirements on renewable resources, nuclear facilities, and end users of electricity that do not emit anything at all.

In contrast to EPA’s Proposal, EPA’s prior Section 111(d) programs have remained within the confines of the statutory authority Congress granted to the Agency. In the past, EPA’s definition of BSER in establishing Section 111(d) emission guidelines has always been based on activities that can be applied within the fence line of the emitting unit. For example, in developing Section 111(d) emission guidelines for Kraft Pulp Mills to control emissions of total reduced sulfur emissions (TRS) in the 1980’s, EPA produced a guideline document (*Kraft Pulping – Control of TRS Emissions at Existing Mills*) which contained the determination of BSER for various mill emission sources. One of the emitting sources evaluated, a black liquor recovery boiler, is very similar to many of the steam generators utilized in the electric utility industry in that they both produced high pressure steam used for electricity generation. EPA determined that BSER at existing recovery boilers included state-of-the-art process controls and black liquor oxidation (pre-treatment of fuel). In addition, the Section 111(d) program provided for sub-categorization of recovery boiler units with different limits assigned based on unit design and unit age. In Louisiana, for example, LDEQ set the TRS emission limit for existing boilers was set at 20 PPM, but in Arkansas the emission limits on existing recovery boilers ranged from 40 PPM to 100 PPM. This precedent illustrates how EPA should craft its Section 111(d) emission guidelines for electric utilities – identifying the best control options that can be applied to the performance of the emitting units covered by the rule, and then allow states to determine the specific level of performance required for the specific emitting units within its borders.

EPA cites a vacated rule, the Clean Air Mercury Rule (CAMR), as support for its authority to determine flexible compliance mechanisms under Section 111(d), such as cap and trade. However, CAMR was crafted based only on emission reductions that could be achieved through application of control technology at units within the affected source category. The cap-and-trade option did not serve as the basis for determining the BSER; it was simply a compliance option to be implemented at the discretion of the states.

EPA should withdraw its Proposal and re-propose its Section 111(d) emission guidelines to follow the Clean Air Act and past precedent by determining BSER only at the emissions source.

**Comment 3: EPA’s Proposal would unreasonably and illegally impose more stringent emission standards on existing units than it has proposed for new units.**

EPA should recognize that one of the fundamental policies underlying the structure of the CAA is that existing unit standards must be less stringent than new units standards, given that fewer options are available to reduce emissions from existing units and even the options that are available for control retrofits are often more expensive and less cost-effective. Control technologies and improved processes can be incorporated far more easily into the design of a new unit than that of an existing unit. However, for Louisiana, the proposed final limit of 883 lb/MWh is well below the proposed emission limit of 1,000 lb/MWh for a new large gas-fired unit and the proposed limits of 1,100 lb/MWh for new coal-fired units and small gas-fired units. These unreasonable results illustrate EPA’s failure to follow the direction of Congress in Section 111(d) and the Agency’s own implementing rules.

**Comment 4: The Clean Air Act 111(d) was written by Congress to be applied to emission sources and not states.**

By setting state-wide goals without reference to particular sources of emissions, the proposed guidelines stray from the source-focused structure of Section 111. The text of the Section requires the regulation of sources and not states. Specifically, Section 111(d)(1)(A) requires states to “establish standards of performance for any existing [stationary] *source*.” Section 111(a)(3) defines “stationary source” as “any building, structure, facility, or installation which emits or may emit any air pollutant.” Section 111(d) also requires the EPA and the states to consider the “remaining useful lives” of regulated *sources* among other factors in promulgating standards.

EPA’s implementing regulations also reflect a source-oriented interpretation of the statute, indicating that the Agency will issue guidance on the best system of emission reduction adequately demonstrated “*for designated facilities*,” and that EPA will consider “*sizes, types, and classes of designated facilities*,” in producing the guidelines for states to use in plan development. See 40 C.F.R. § 60.22(b).

But the Proposal is built around the total amount of emissions from all the affected sources in a state and is not limited, as it should be, to the designated affected facilities. This approach is not authorized by the Act. EPA’s Proposal should be based on reductions that are achievable by implementing measures at an individual emitting source, rather than assumptions about reductions that can only be accomplished across an entire industry that consists of a wide variety of emitting and non-emitting facilities.

**Comment 5: The Clean Air Act does not authorize EPA to regulate the same source under both a 111(b) rule and a 111(d) rule at the same time.**

The Proposal indicates that “an existing source that becomes subject to requirements under CAA § 111(d) will continue to be subject to those requirements even after it undertakes a modification or reconstruction.” However, Section 111 is clear that (1) “modified” units must be regulated as

a “new source” and (2) the definitions of “new source” and “existing source” are mutually exclusive—one unit cannot be both. A “new source” is clearly defined as “any stationary source, the construction or modification of which is commenced after the publication of regulations (or, if earlier, proposed regulations) prescribing a standard of performance under this section which will be applicable to such source.” Once an existing source is modified, it becomes a “new source” by virtue of the language in Section 111(a)(1) that deems modified sources to be “new sources.” Under EPA’s own longstanding regulations, the same would ordinarily be true of any reconstructed source. An “existing source,” on the other hand, is not defined directly, but only as “any stationary source *other than a new source.*” Congressional intent to make these terms mutually exclusive could not be more clear. To suggest that a source can be both is therefore directly inconsistent with the statute. EPA offers nothing to support its interpretation that a source can be regulated as both a “new source” and an “existing source” simultaneously. Never in the history of the Clean Air Act has a source been classified under both “new” and “existing” categories at the same time, and EPA should withdraw its attempt to do so from this Proposal.

**Comment 6: EPA does not have the authority to require compliance with building blocks 2, 3, and 4 that address natural gas re-dispatch, renewable energy, nuclear energy, and demand-side energy efficiency.**

EPA notes that achieving the state goals does not require the implementation of any particular measure, but the fact that EPA does not explicitly require states to implement blocks 2, 3, and 4 does not lessen EPA’s encroachment into traditional state regulatory functions. EPA’s strained interpretation of “BSER” yields state goals that are so stringent that compliance is not possible without a state’s imposition of entirely new electricity regulatory policies. The proposed 111(d) guidelines functionally require that states adopt the building blocks, which would involve the regulation of retail, transmission, and distribution of electricity that could be perceived as an attempt to circumvent the Louisiana Public Service Commission’s planning authority. Regulation of retail and intrastate transmission and distribution activities is a function reserved for the states, specifically public utility commissions under the Federal Power Act. In addition, the building blocks infringe on the authority and responsibility given to regional transmission organizations and the North American Electric Reliability Corporation (NERC).

In addition, if one or more states decide not to establish a state implementation plan, EPA would not have legal authority to establish a federal implementation plan that applied building blocks 2, 3, and 4 because the Clean Air Act does not provide EPA that authority. EPA can avoid these legal issues by following the Clean Air Act and determining BSER based only on activities that can be undertaken at the emission source.

**Comment 7: EPA ignored the impact of the building blocks on each other.**

Each building block will impact the others when implemented simultaneously. For example, increased generation from variable renewable resources, like wind energy, will likely require utilities to operate some natural gas combined cycle units at lower capacity so that the remaining capacity can be ramped up quickly to support any sudden reductions in wind generation. However, operating at lower loads to preserve back-up capacity in support of variable renewable generation may interfere with a state’s ability to achieve EPA’s assumed 70-percent utilization

rate for existing NGCC units. Another example of a potential conflict would be the lower loads, increased cycling, and increased startups and shutdowns of coal-fired units needed to allow higher utilization of existing NGCC units to meet building block 2, all of which will reduce the efficiency of coal-fired units, increase CO<sub>2</sub> emission rates, and interfere with efforts to achieve building block 1. EPA's failure to consider the trade-offs that its building blocks will require, by analyzing each one individually without accounting for the constraints presented by the others, causes EPA to overestimate the reductions achievable and results in unreasonably stringent emissions goals.

**Comment 8: The 2012 baseline is not representative of normal electricity generation.**

The year EPA selected as the baseline for calculating emission reduction goals—2012—was not a representative year for electric generation in Louisiana because of a mild winter and historically low natural gas prices that led many utilities to switch to gas and reduce solid fuel generation. Specifically for Cleco, its petroleum coke and coal-fired fluidized bed unit, Madison 3, experienced a very low capacity factor in 2012 because it was just beginning commercial operation and completing the shakedown phase of its initial startup. In its goal calculation for Louisiana, EPA identified solid fuel generation as having a nameplate capacity of 4,727 MW in 2012, which provided 24 million MWh to the grid, resulting in a weighted capacity factor of 58.5 percent. However, if Madison 3 had been in full operation, the capacity factor of Louisiana solid fuel generation would have been 64.4% in year 2012 using nameplate capacity, resulting in a higher goal calculation for Louisiana.

Because a single year is often a poor representation of a state's generation mix, Cleco supports EPA's discussion in its Notice of Data Availability regarding the use of an average of several years as the baseline for the goal calculation. Cleco also supports allowing states to choose their own baselines, rather than arbitrarily requiring all states to follow a single baseline that will inevitably be unrepresentative for at least some states.

**Comment 9: The Proposal's emission limits effectively penalize states that have developed natural gas generation resources.**

In the preamble, EPA indicates that it "agrees" with the "policy principle" that the section 111(d) guidelines should be structured so as not to "disadvantage states that already have adopted programs that reduce CO<sub>2</sub> emissions from EGUs." However, EPA's approach to calculating the state-specific emission rate goals disadvantages states and electric utilities that already have undertaken investments in new NGCC capacity that reduce emissions from affected EGUs by assigning them more stringent targets. Specifically, EPA's goals are based on running all NGCC at 70 percent capacity, so the more natural gas capacity a state has, the more the state is required to displace coal through "re-dispatch" of its gas units, resulting in lower goals. As a result, the State of Louisiana has a very low goal—883 lb/MWh—due to its substantial gas generation fleet. This goal is even more stringent than EPA's proposal for new sources. By comparison, states with more limited natural gas generation have much higher goals. For example, Kentucky, which has no existing gas-fired generation has a goal of 1763 lb/MWh, with almost no requirement to displace coal generation. EPA's goal setting calculation unfairly penalizes Louisiana's more balanced generation mix.

Congress did not intend for EPA to use Section 111(d) to set state-by-state existing source performance standards. Quite the opposite, Congress intended to authorize the states, not EPA, to decide what appropriate measures to take to reduce emissions from the sources located within their borders. In EPA's prior Section 111(d) emission guidelines, these issues have never arisen because those prior emission guidelines only required emission reductions using techniques that could be applied to a single facility. As such, the only question remaining was what level of reductions to require each facility to make, something EPA has historically left to states to decide. In its Proposal, however, EPA has generated new issues never before considered by attempting to stretch the scope of Section 111(d) to require emission reductions through a re-ordering of the entire power sector, including facilities that do not emit anything at all and should not be subject to the jurisdiction of the Clean Air Act. EPA should withdraw its Proposal and replace it with a program that fits within the legal confines of Section 111(d) to require emission reductions at individual covered sources that would, if new, be regulated under Section 111(b). In doing so, EPA would largely eliminate the unfair unintended consequences of its Proposal.

**Comment 10: Increasing NGCC utilization to 70% is not adequately supported.**

In the GHG Abatement Measures TSD, EPA indicates that only 10 percent of the NGCC fleet operated at annual utilization rates of 70 percent or greater in 2012. However, EPA relies on that data to support its claim that all NGCC units in each state can operate continuously at 70% utilization or greater to displace load from coal-fired units. Not only is 10 percent of the industry an insufficient sample size, the use of only one year of data is also inadequate. Even if 70% capacity is achievable for the NGCC fleet, EPA also made numerous errors in calculation the potential emission reductions achievable through re-dispatching coal and natural gas units. Specifically, EPA used the incorrect maximum capacity values for NGCC units, included some NGCC units that do not serve the power grid, and some units that are neither in operation nor under-construction. These errors result in a significant overstatement of the potential for re-dispatch to natural gas combined-cycle (NGCC) units by EPA. The specific errors EPA made in applying building block 2 to Louisiana are identified in the next comment below.

**Comment 11: EPA erroneously estimated the capacity of Louisiana's NGCC fleet, resulting in unfairly stringent emission limits for Louisiana.**

EPA made numerous errors in applying building block 2 to Louisiana. If the Agency insists on retaining the current building-block approach, EPA should, at a minimum, make the following changes to the calculation of Louisiana's emission reduction goals:

- While EPA used name plate capacity of NGCC units in the emission limit calculation, EPA uses capacity information from the National Electric Data System (NEEDS) in the IPM modeling. Unit capacity values in the NEEDS v.5.13 data base reflect net summer dependable capacity, which is more often used in daily planning and operation purposes during the summer peak season, after accounting for auxiliary services. The NEEDS v5.13 net summer ratings should be used in the emission limit calculation in building block 2 instead of EIA nameplate capacity.

- Several NGCC units under construction in Louisiana were not included in the calculations. Units 6a and 6b at Entergy Louisiana Nine Mile Point have nameplate capacity of 640 MW and projected net summer capacity of 559 MW. Also, Louisiana Energy and Power Authority's (LEPA) Morgan City Power Plant NGCC unit 14-01 is under construction and will have a nameplate capacity of 84 MW and projected net summer capacity of 64.5 MW.
- EPA's emission limit calculations for Louisiana classify each of the three gas turbines at Entergy Louisiana's Perryville Power Station as NGCC units. However, one of the three, unit ID 2-CT, is not equipped with a heat recovery steam generator and operates in simple cycle mode only. Therefore, the capacity for that unit should not be included in the block 2 equation.
- EPA's calculations include input data for five EGUs at Entergy Gulf States Louisiana's Station No. 1 Generating Plant. Three of the units, (1A, 2a and 3A) are boilers and not turbines. No unit at Louisiana 1 will meet the definition of affected electric generating unit because none of these units supplies one-third or more of its potential electric output and more than 219,000 MWh net-electric output to a utility distribution system (*Information source – Initial comments of Louisiana Department of Environmental Quality RE: 40 CFR 60 Subpart UUUU-Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units(79 FR 34830), September 12th 2014.*). Input data for these units should be removed from the building block 2 calculations.
- EPA's calculations include input data from Washington Parish Energy Center which is neither in operation nor under-construction.

Upon making the above adjustments to the input data for block 2 of the emission limit calculations, Louisiana's final emission limit goal should be 1,078 lb/MWh and the alternate limit should be 1,239 lb/MWh.

**Comment 12: EPA's proposal that heat rates can be improved at existing units by as much as 6% is not adequately supported.**

The Proposal indicates that each state's coal-based EGU fleet should be capable of achieving, on average, a six percent improvement in heat rate, based on a combination of a four percent reduction through improvements to operations and maintenance (O&M) "best practices" and a two percent reduction due to equipment upgrades. Both of these assumptions are unsupported and fail to take into account practical realities associated with operating coal-fired power plants.

First, EPA's "best practices" analysis assumes that any variability in a unit's heat rate represents a correctable flaw that can be fixed by improving an inadequate O&M program. In other words, EPA claims that variability can be reduced through better O&M practices and that lower variability will result in an improvement in heat rate. But that analysis assumes that existing O&M practices are inadequate, and EPA has provided no evidence to support that assumption. EPA also fails to consider dozens of factors that contribute to heat rate variability, many of

which are outside of the control of the operator. Since EPA only considered two of those factors, and ignored many more, its claim that a four percent heat rate improvement is achievable on a fleet-wide basis through O&M practices remains unsupported.

EPA's detailed statistical analyses fail to support its assumptions. EPA analyzed hourly heat rate data over a 10-year period for a number of EGUs. Although EPA controlled for variability in heat rate associated with ambient temperature and capacity factors, EPA assumed that all of the remaining variability could be controlled through operating and maintenance best practices. Under that assumption, EPA concluded that EGUs on average could eliminate 30 percent of the deviation from top-decile performance that is not attributable to hourly temperature and load variation.

EPA's analysis, however, fails to explain why it assumed that most heat rate variability in the sampling is caused by O&M practices, thus ignoring other sources of uncontrollable variability, such as unit size, steam conditions. Thus, the key assumption in EPA's analysis is also its key flaw. Rather than assuming that all heat rate variability beyond that associated with temperature and load is attributable to O&M, EPA should have attempted to determine what portion of variability is directly attributable to poor O&M practices. EPA should also have considered other factors that could have skewed its analysis, such as:

- Heat rate increases related to the installation of pollution control technologies required by other EPA regulations;
- Changes in equipment replacement practices for units scheduled to retire in the near future, some of which will likely be attributable to EPA's Proposal;
- Implementation of best O&M practices during the 10-year study period that are now already in place, but were not in effect during a significant portion of the study.

Second, EPA has also failed to support its claim that a 2% improvement in heat rate is achievable through equipment upgrades. The Proposal and support documentation reference a 2009 Sargent & Lundy (S&L) study on heat rate improvements that evaluated a number of potential heat rate improvements opportunities and estimated the potential ranges of heat rate reduction associated with each individually. S&L then applied the findings to two case studies to estimate potential improvements. Since the study does not contain any evidence that the recommendations from the case studies were actually implemented, there is no empirical data available to demonstrate that the estimated improvements were actually achieved or could be maintained.

The Proposal assumes that the types of improvements evaluated by S&L are equally applicable and achievable at each coal-fired unit in the industry, but that assumption is incorrect. There are many factors to consider in determining whether the projects evaluated by S&L present a realistic opportunity for heat rate improvements at an individual facility. Those factors include:

- Improvements are not uniform and what may work for one unit, may not for another;

- The heat rate benefit of multiple improvement projects is not necessarily cumulative because improvements in one area can be masked by operations or conditions in another, thus diminishing any significant overall heat rate improvement;
- Outside influences beyond the control of the unit operators and outside the optimized equipment design performance can alter or erase heat rate improvements as these plants are dispatched based upon electricity demand, which is driven by external forces (e.g. customers, regional transmission operators, etc.);
- Improvements must be cost effective and measurable to justify their implementation;
- Space constraints may exist on a particular unit that prohibit the addition of equipment or re-routing of ductwork/piping to implement a heat rate improvement project;
- The benefit derived from many of the suggested heat rate improvement technologies is finite, and will diminish over time due to the age and operation of the unit;
- For some heat rate improvement projects the potential benefits will only be apparent at full load operations, but offer no measurable improvements for cyclic or minimum load operations that will likely be required under EPA's Proposal;
- Some units that remain base load would show no benefit to heat rate if the improvement was obtained only at lower loading of the unit;
- The feasibility and benefits of any potential heat rate improvement must be evaluated more in context with future operations that may not afford the same magnitude of improvement potential.

S&L itself has also disputed the conclusions that EPA reached using its study. S&L recently submitted a letter to the National Rural Electric Cooperative Association to confirm that EPA's conclusions cannot be supported by its 2009 study. According to S&L:

- "Sargent & Lundy's 2009 Report does not conclude that any individual coal-fired EGU or any aggregation of coal-fired EGUs can achieve 6% HRI [heat rate improvement] or any broad target, as estimated by the EPA. ..."
- "Various limitations exist for applying each heat rate improvement strategy, and these limitations depend on the unit type, fuel type, and many other site-specific conditions. Therefore, the ability to apply each strategy and the amount of heat rate reduction that can be achieved by each strategy is site-specific and must be evaluated on a case-by-case basis. ..."
- "Combinations of strategies to achieve heat rate improvements do not always provide heat rate improvement reductions equal to the sum of each individual strategy's heat rate improvement because many of the technologies affect, or are dependent upon, plant operating variables that are inter-related. ..."

- “[A]ny [heat rate improvements] achieved by undertaking the relevant options described in S&L’s 2009 Report could, in some cases, be negated by [heat rate] losses associated with load-cycling. ...”
- “Based on the case studies performed by S&L, it appears that most of the utilities are employing best operational and maintenance practices. In light of this observation, it appears that significant further reduction in heat rate, such as that assumed by the EPA, may not be feasible. ...”

Letter from Raj Gaikwad, Ph.D., Vice President, Advanced Fossil Technologies, Sargent & Lundy to Mr. Rae Cronmiller, Sr. Principal Environmental Counsel, National Rural Electric Cooperative Association (Oct. 15, 2014).

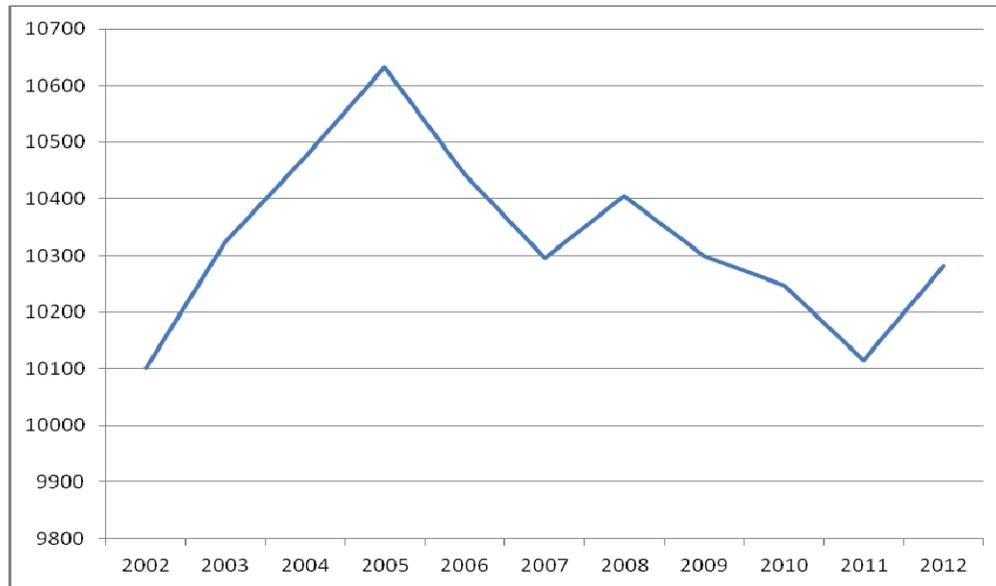
In light of these statements from S&L, the author of the report upon which EPA relies so heavily, EPA should reconsider its conclusions regarding the level of heat rate improvement that is achievable at existing coal-fired power plants.

In addition to the S&L Study, EPA cites other evidence to support its heat rate improvement assumptions in Chapter 2 of its GHG Abatement Measures Technical Support Document, but that evidence also fails to provide sufficient support for EPA’s building block 1 assumptions. Section 2.5.9 of the TSD cites 16 EGUs that EPA claim to have reported a single year-to-year heat rate improvement of between 3 and 8%. Specifically, the TSD states:

In two of these cases we were able to identify equipment upgrades responsible for 2-3% heat rate improvement using the applicable estimates from the Sargent & Lundy 2009 study. Similarly, in the other cases, while our research was unable to confirm specific equipment upgrades, based on the elimination of other possible explanations we believe that equipment upgrades were the most likely cause of some of the observed heat rate improvements.

Document ID EPA-HQ-OAR-2013-0602-0236 indicates that a Cleco unit, Brame Energy Center Unit 2, is one of the 16 units EPA lists in support of its analysis. However, Cleco has calculated the annual heat rate for Brame Energy Center Unit 2 over the years 2002-2012 using measured fuel input and measured generated electricity (gross). The heat rate values per year are shown in the table and graph below:

Year	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Heat rate, Btu/kw	10,102	10,324	10,474	10,632	10,443	10,295	10,405	10,300	10,247	10,116	10,282



None of the changes in heat rate from one year to the next involve a change of two percent. In fact, these data contradict EPA’s analysis entirely—whereas EPA’s calculations suggest that the heat rate of the unit dropped well below 10,000 Btu/kWh, Cleco’s fuel flow records confirm that the unit has not operated below that level, at least in the past decade. Regardless, Cleco is not aware of any upgrades taking place during the time period that would account for any heat rate improvements referred to in the TSD GHG Abatement Measures.

In short, the analysis underlying EPA’s conclusion that a six percent heat rate improvement is achievable at coal-fired electric generating units is unsupported and fails to address numerous important factors.

**Comment 13: EPA should provide a safe harbor from New Source Review for projects intended to improve heat rate.**

EPA should establish in the final rule that the efficiency projects EPA expects to encourage through its Proposal will not trigger New Source Review or Prevention of Significant Deterioration permitting. Although that may require a revision to the NSR / PSD regulations, EPA should take this opportunity to make clear that NSR / PSD are not intended to discourage efficiency projects. Without that assurance, NSR / PSD permitting risk will likely present a significant barrier to the very projects EPA relies upon to claim that its building block 1 assumptions are achievable, particularly in light of EPA’s past enforcement practices.

**Comment 14: The IPM model erroneously predicts the retirement of Brame Energy Center Unit 2 in year 2016.**

A review of the files from the Integrated Planning Model (IPM) results reveals that data for Cleco’s Brame Energy Center Unit 2 (previously referred to as Rodemacher 2) is not included in the year 2016 or for any other year thereafter. This suggests EPA’s model assumes that Cleco will retire the unit.

In response to Cleco's inquiry regarding this discovery, EPA's Power Sector Modeling staff indicated that the assumed retirement of Unit 2 was most likely attributable to the NEEDS data base, which may indicate an expected retirement of the unit in year 2016. However, Cleco's own predictive modeling of demand and optimum generation indicates that Unit 2 is expected to operate normally in year 2016 and Cleco does not expect to retire the unit in the near future.

Since EPA's IPM modeling analysis failed to consider the future operation of Brame Energy Center Unit 2, Cleco asks EPA to re-evaluate its model to include the expected costs of the proposed BSER and ensure that its proposed targets for Louisiana take into account the continued operation of the unit.

**Comment 15: States in the same region do not have similar renewable energy potential.**

EPA grouped states together into six regions for determining state renewable energy goals. However, states within the same region can and do have very different solar or wind potential. For example, Louisiana and Kansas have dramatically different wind resource potential, but are included in the same region. Specifically, data from NREL indicates that, based on 2012 values, Kansas has 7.8 times and 10.5 times more potential capacity and generation, respectively, than Louisiana. EPA's proposal to assign Louisiana the same renewable energy goal as Kansas, given the known differences in their wind resource potential, is unreasonable.

**Comment 16: EPA's alternative renewable analysis confirms Louisiana has already made excellent progress in realizing its renewable energy potential as compared to other states.**

In EPA's alternative renewable analysis, provided primarily in the "Alternative RE Approach Technical Support Document" made available in the docket for the Proposal, EPA indicates that Louisiana already generates three percent of its electricity from renewable energy sources. Based on Louisiana's total renewable energy potential, as identified by the National Energy Renewable Laboratory (NREL), that level of renewable energy generation indicates that Louisiana is one of the top-performing states in the country with regard to utilizing its available renewable energy resources. In fact, EPA's analysis concludes that, in the future, Louisiana would only need to generate two percent of its electricity from renewable energy sources—a reduction compared to current levels—to maintain a level of performance similar to other high performing renewable energy states. Specifically, EPA suggests that Louisiana could reduce its total renewable energy generation from its 2012 level of 3,110 gigawatt-hours to 2,503 gigawatt-hours by 2030 and still remain within EPA's expectation of good performance in utilizing renewable energy resources, as compared to the states overall renewable potential. Cleco supports these conclusions and asks EPA to further confirm in its response to comments Louisiana's success in encouraging the appropriate and cost-effective use of renewable energy resources.

EPA also discussed briefly in its recently published Notice of Data Availability the possibility of a third renewable energy approach. Under that approach, EPA is apparently considering a means of addressing renewable energy that relies on regional renewable potential estimates allocated to states based on some metric, such as total generation, sales of electricity, or some other value.

However, EPA's Notice did not provide sufficient information to provide meaningful comments because the discussion in the Notice does not explain even some of the basic parameters of that approach, including the regions EPA would establish for its analysis and the means by which the regional renewable energy potential would be allocated to states. To the extent EPA wishes to adopt a different renewable energy approach other than the two initially proposed in June 2014, Cleco asks EPA to issue a re-proposal to ensure all stakeholders have an opportunity to comment after the details of that third option are made available to the public.

**Comment 17: States should be able to count biomass units' generation as renewable energy in demonstrating compliance with EPA's Clean Power Plan.**

EPA has not provided clear guidance as to whether biomass-fired units can be considered carbon neutral and used for compliance purposes. Many states' renewable energy standards, upon which EPA relies in establishing its renewable energy expectations under building block 3, allow generation from biomass-fired units to be used for meeting the requirements. Some units, relying upon previous EPA determinations that biomass is a carbon neutral fuel, converted to biomass-fired units or co-fired units. EPA should determine that biomass is carbon neutral before asking states to complete compliance plans so that states can use biomass units for compliance.

EPA's recently released accounting framework for biomass may be a step in the right direction, by agreeing that waste-derived biogenic materials and those managed under appropriate forest management programs qualify as carbon-neutral. However, that accounting framework remains a proposal only, leaving regulated sources and state regulators without sufficient certainty to determine the impact of EPA's Proposal on biomass sources and thus on each state's ability to comply generally. EPA's accounting framework also expressly declines to comment on how the framework should be applied in implementing specific environmental programs like EPA's Proposal for its "Clean Power Plan," adding to the uncertainty that remains for states. EPA should finalize its carbon account framework before finalizing the Clean Power Plan to ensure all stakeholders and states will have sufficient opportunity to comment on the important implications that the framework may have on compliance with EPA's proposed emission guidelines.

**Comment 18: Cleco disputes EPA's assumptions regarding demand-side energy efficiency.**

Building block 4 of EPA's Proposal indicates that Louisiana should be able to reduce the demand for electricity by 9.33% cumulative by 2029, but that expectation is unreasonable—it is unlikely that Louisiana will be able to improve its energy efficiency levels at the rate EPA claims. In fact, only three states have ever been able to achieve the savings rate EPA claims to be achievable, and only did so for a single year during a slow economy. Even if Louisiana is able to improve its energy efficiency levels, the levels EPA seeks are not sustainable indefinitely as the Proposal suggests. As more and more cost-effective energy efficiency measures are employed, less cost-effective measures become necessary to continue improving efficiency until eventually the only measures that remain are those that are not worth the cost. For example, although LED lighting typically provides a cost-effective means of improving efficiency across all sectors of the economy, the efficiency improvements associated with installing LED bulbs will only continue until those bulbs saturate the market. To achieve additional improvements

beyond that point, states must move to less cost-effective means of encouraging efficiency improvements. EPA should reevaluate its energy efficiency expectations to make sure its assumptions are achievable for all states based on state-specific circumstances.

**Comment 19: Cleco supports EPA’s decision to allow states to convert their rate-based goals into mass-based goals, but disagrees with the illustrative examples that EPA provided in its recently released guidance.**

So long as the option remains available to states for use only in their sole discretion, Cleco supports EPA’s decision to allow the conversion of its proposed rate-based goals into mass-based goals using an appropriate conversion methodology. Cleco also generally supports EPA’s decision to provide non-binding guidance to assist states in determining an appropriate and approvable means of converting the rate-based goals into mass-based goals.

However, Cleco does not support the approach illustrated in EPA’s conversion guidance because it uses a different generation level than EPA assumed in its original rate-based proposal, which results in far more stringent goals that are not equivalent to EPA’s original proposal. Specifically, EPA’s original proposal relied on an equation that determined generation based on the sum of 2012 generation and all incremental renewable generation, nuclear generation, and energy efficiency improvements required under the Proposal. In contrast, the primary option in EPA’s guidance utilizes 2012 generation alone—without any incremental changes—to calculate a mass-based goal. Although EPA’s guidance contains several complicated formulae, all of the variables in those formulae cancel each other out, leaving nothing but 2012 generation in the calculation (EPA allows states with under construction nuclear and NGCC units to count that additional generation, but Louisiana is not one of those states).

By using a 2012 generation value that does not account for any incremental changes, the resulting mass-based goal is far lower than it should be to approximate EPA’s originally proposed rate-based goals. Cleco does not support this illustration in EPA’s guidance because it would essentially prohibit any load growth and require all new incremental changes in the generation mix to displace fossil generation, and is therefore inconsistent with the Proposal.

EPA’s guidance does contain a second option that allows for the use of a more appropriate generation level in determining mass-based goals by including a growth factor. However, that approach still is not equivalent to the generation level utilized in EPA’s original proposal, and therefore does not result in “equivalent” goals, which EPA claims are necessary for states to employ the mass-based option. In addition, EPA’s guidance seems to suggest that a growth factor would only be appropriate if states require newly constructed units to fall under the mass-based goal as well, something that the Clean Air Act clearly forbids, as noted above. Therefore, even the more reasonable second option of EPA’s guidance fails to provide an appropriate illustration of how states can convert their proposed rate-based goals into mass-based goals.

EPA should withdraw its guidance on develop new guidance that results in mass-based goals that are equivalent to EPA’s proposed rate-based goals. In addition, Cleco asks EPA to confirm that the illustrations provided in its recently released rate-to-mass conversion guidance are just that—

illustrations only—and do not represent the only means by which a state may take advantage of the flexibility provided by a mass-based approach.

**Comment 20: The proposed guidelines do not provide States with sufficient time to comply.**

As noted in public comments provided by MISO, SPP, and NERC, EPA’s Proposal fails to allow sufficient time for compliance. Specifically, MISO stated in comments to the Louisiana Public Service Commission on October 2, 2014 that “the compliance timeline challenges resource adequacy.” Likewise, Southwest Power Pool also stated in comments to EPA on October 2, 2014 that “the timing proposed by EPA for compliance is infeasible.” In November, NERC released a report on the Potential Reliability Impacts of EPA’s Proposed Clean Power Plan, stating that “developing suitable replacement generation resources to maintain adequate reserve margin levels may represent a significant reliability challenge, given the constrained time period for implementation.”

In addition, to continue to satisfy existing NERC standards, new transmission infrastructure may be required to support the changes to the bulk power system that EPA’s Proposal would require. However, the Proposal’s compliance schedule does not allow adequate time for the needed reliability assessments and system changes to be accomplished before the compliance obligations begin in 2020. Such studies can take years to complete. Building new generation, new natural gas delivery infrastructure, and new transmission lines will also take many more years to complete.

EPA has also failed to allow states sufficient time to develop their state-specific plans or sufficient time for EPA to review and approve (or disapprove and revise) those plans. Typically, state implementation plans require three years to prepare and two years for EPA to approve, based on provisions in Section 110 that often apply to much less complex planning requirements. Because the Section 111(d) planning procedures must be “similar” to those found in Section 110, EPA should employ at least the same five-year planning period under its Section 111(d) Clean Power Plan, given that it is perhaps one of the most complex rules ever proposed. Of course, after allowing an appropriate period of time for planning, EPA must also adjust the compliance timeframes accordingly. As such, Cleco recommends that EPA allow an additional five years for both planning and compliance purposes, with the final compliance goal set for 2035 or later.

**Comment 21: The interim compliance goal should be eliminated and States should have the authority to set the emissions “glide path”.**

Despite the warnings from the expert authorities on grid reliability, EPA claims in its Proposal that there will be sufficient time to achieve the interim and final emission rate goals. However, most of the reduction in emissions for many states appears to take place by 2020, the date by which EPA expects states to complete the “re-dispatch” from coal-fired units to natural gas units. But by the time that the state plans are submitted and approved, there will be only two or three years left before those significant reductions are expected in 2020. In light of this short compliance window, Cleco questions whether EPA has allowed adequate time to address the natural gas transmission and distribution infrastructure challenges associated with such significant increases in the dispatch of existing NGCC units.

Section 111(d) clearly allocates to the states the authority to provide for the implementation and enforcement of the standards of performance for any existing source in a state plan adopted under EPA's emission guidelines. In spite of that clear separation of authority, EPA's Proposal seeks to impose specific interim goals that define a particular rate of progress in reaching the final emission guideline established by EPA for 2030. In doing so, EPA has severely limited state flexibility in implementing EPA's Proposal. In fact, many states would have to achieve the majority of the required emission reductions by 2020, even though the final goal would still be a decade away. EPA should eliminate the Proposal's interim goals and defer to the state the task of setting interim goals because the state is better equipped to evaluate how quickly efforts under each building block can be implemented in accordance with EPA's proposed BSER.

Eliminating the interim compliance goal and allowing states to determine their own reduction glide paths and milestones to achieve the 2030 goals would enable states to choose a reasonable schedule for implementing the emission reduction measures consistent with providing safe, reliable, affordable, and environmentally responsible power to customers. States and utilities would then have more time for the completion of any needed infrastructure developments (including expansions and upgrades of both electric and natural gas transmission systems) to facilitate the significant changes in energy resources expected by EPA. Allowing states the opportunity to set their own milestones along the glide path would also provide states, electric utilities, and other regulators time to assess the significant changes to the interconnected power system that will be required to achieve the 2030 goals. In addition, the final guidelines should clarify that states will have the opportunity to modify their plans as needed to account for unexpected circumstances, subject to EPA approval and so long as those plans continue to satisfy the requirements of Section 111(d) and EPA's emission guidelines.

**Comment 22: Electricity generated from recovery of waste heat and sold to the grid should be recognized as generation without carbon dioxide emissions.**

In the preamble of the Proposal, EPA requests comment on whether industrial combined heat and power approaches warrant consideration as a potential means of avoiding affected EGU emissions and how to incorporate that policy into its Proposal. EPA should recognize the benefit of capturing waste heat from combustion processes through a heat exchanger to generate high pressure steam by allowing credit for that effort in its emission guidelines. The steam generated by waste heat can be used to produce significant amounts of electricity for sale to the grid that should be treated as zero-carbon emitting generation because it displaces the need for other CO<sub>2</sub>-emitting generation. Cleco encourages EPA to apply that reasoning broadly to all of the many ways in which waste heat that otherwise would simply escape to the atmosphere can be utilized.

**Comment 23: Because of inadequate availability of support documentation in the docket on the date of rule proposal, EPA must repropose the rule.**

Cleco points out here that there was a failure to include required and critical information in the regulatory docket at the time the Proposal was published. Section 307(d) of the Clean Air Act sets requirements for all proposed rules and specifically provides that information on which a proposed rule is based must be made available to the public at the time of proposal. For example,

omitted from the docket are 84% of the modeling runs which EPA relied upon in crafting the Proposal. In particular, 21 of the 25 Integrated Planning Model runs used to arrive at the proposed standards are not available in the docket for public comment.

The docket also fails to include the net heat rate data that EPA cites to support its contention in the first building block that existing units are able to achieve a net 4%-6% improvement. In particular, EPA failed to include any supporting data regarding the 16 units that it identified in the preamble as having achieved gross heat rate improvements of 3% to 8% per year. Failure to include the data is of particular interest to Cleco because one of those 16 units was Cleco's Brame Energy Center Unit 2. As discussed in more detail below, and Cleco disputes EPA's conclusions regarding that unit.

Because the information used in crafting the Proposal was not released to the public upon the day of publication of the Proposal in the Federal Register, EPA should withdraw the Proposal and repropose it only after posting all supporting information in the docket.

**Comment 24: EPA should not require incremental increases in renewable energy, nuclear energy, or energy efficiency to displace fossil generation in calculating state goals.**

In its original Proposal, EPA determined that states should be able to reduce their carbon intensity by "re-dispatching" coal and natural gas units in favor of more gas generation and less coal generation. With respect to building blocks 3 and 4, addressing renewable, nuclear, and energy efficiency resources, EPA did not require any increases to displace the use of fossil resources in its goal calculations. However, EPA recently released a Notice of Data Availability that asks whether that displacement should be required. Cleco opposes that approach. Due to EPA's aggressive assumptions in its building block analysis, the goals are already far more stringent than necessary or appropriate, and applying a displacement approach to building blocks 3 and 4 would only increase that stringency even further. If EPA does decide to require the improvements expected under building blocks 3 and 4 to displace fossil generation, EPA should also provide some other means for addressing load growth. Otherwise, EPA's proposal will essentially assume load growth will not occur, which is an unreasonable assumption, despite the requirements likely to be imposed under EPA's Proposal.

**Comment 25: EPA's Proposal will provide no real benefits to Louisiana or the nation.**

The Proposal's positive impact on "climate effects" is not sufficiently demonstrated. EPA's Regulatory Impact Analysis states that the primary goal of the proposed guidelines is to reduce emissions of CO<sub>2</sub> in order to address climate-change. However, the RIA offers no empirical data regarding how much the Proposal will reduce global climate impact—Table 4-1 confirms that the effect has not been quantified. The RIA contains a number of statements pointing to various "major peer-reviewed scientific assessments" but none of those assessments provide an appropriate quantification of the benefits of EPA's Proposal.

In contrast, the American Coalition for Clean Coal Electricity recently conducted an assessment of EPA's Proposal (ACCCE, Climate Effects Of EPA'S Proposed Carbon Regulations, June 2014) using the data from the projected climate impact from the 2012 EPA assessment of the

climate impacts of its proposed greenhouse gas (GHG) emission standards for its light-duty vehicle rule. EPA's Regulatory Impact Assessment (RIA) for that rule includes annual projections of GHG emission reductions resulting from the standards and estimates the effect of those emission reductions on global average CO<sub>2</sub> concentrations, global average temperature, and sea level rise. While making clear that use of EPA analysis to estimate climate effects does not imply an endorsement by ACCCE of its assumptions or conclusions, the ACCCE assessment shows that future climate effects are negligible under EPA's proposal:

- Atmospheric CO<sub>2</sub> concentrations would be reduced by less than 0.5%.
- Global average temperature increase would be reduced by less than 0.02° Fahrenheit.
- Sea level rise would be reduced by 0.01 of an inch.

These conclusions are consistent with the Social Cost of Carbon analysis that EPA relied upon in attempting to monetize global climate change benefits expected from its Proposal—specifically, that analysis agreed that “[e]ven if the U.S. were to reduce its greenhouse gas emissions to zero, that step would be far from enough to avoid substantial climate change.” *See* Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, at 15 (May 2013, revised November 2013).

Despite the lack of any significant benefits, modeling by NERA Economic Consulting (Potential Impacts of the EPA Clean Power Plan, October 2014) indicates the Proposal will be very costly to Louisiana ratepayers. The modeling by NERA projects that the Proposal will cause a 16% increase in retail electricity prices for Louisiana consumers, with a peak year increase of 20%. In addition, the modeling shows that if Louisiana consumers are unable to reduce electricity use, prices in Louisiana could increase by 22% with a peak year increase of 24%. A study prepared by the Midwest Independent System Operator (MISO), of which Cleco is a member, also indicates that the total cost of the rule could be as high as \$83 billion in 20-year net present value costs. EPA must reevaluate the need for its proposal in light of these significant costs and the lack of any benefit expected to result from EPA's Proposal.

## **Conclusion**

Cleco is grateful for the opportunity to comment on EPA's Proposal and urges EPA to withdraw the Proposal or, at a minimum, adopt the changes and modifications included above. If there are any questions, feel free to contact me at (318) 484-7718.

Respectfully submitted,

*/s/ Bill Matthews*

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