TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Protecting Texas by Reducing and Preventing Pollution

October 14, 2014

EPA Docket Center
U.S. Environmental Protection Agency
Mailcode 28221T
1200 Pennsylvania Ave. NW.
Washington, DC 20460

Attn: Docket ID Number EPA–HQ–OAR–2013–0603

Re: Title 40 Code of Federal Regulations Part 60
Carbon Pollution Standards for Modified and Reconstructed Stationary Sources: Electric Utility Generating Units; Proposed Rule

Dear Sir or Madam:

The Texas Commission on Environmental Quality (TCEQ) appreciates the opportunity to respond to the U.S. Environmental Protection Agency's proposal published in the June 18, 2014 issue of the *Federal Register* entitled: "Carbon Pollution Standards for Modified and Reconstructed Stationary Sources: Electric Utility Generating Units; Proposed Rule."

Enclosed, please find the TCEQ's detailed comments relating to the rulemaking referenced above. If you have any questions concerning the enclosed comments, please contact Mr. Michael Wilson, P.E., Director, Air Permits Division, Office of Air, (512) 239-1922, or at mike.wilson@tceq.texas.gov.

Sincerely,

Richard A. Hyde, P.E.
Executive Director

Enclosure

Texas Commission on Environmental Quality (TCEQ) Comments on Carbon Pollution Standards for Modified and Reconstructed Stationary Sources: Electric Utility Generating Units; Proposed Rule

Docket ID No. EPA-HQ-OAR-2013-0603

Background and Summary of Proposed Rule

On June 18, 2014, the United States Environmental Protection Agency (EPA) proposed new source performance standards (NSPS) under §111(b) of the federal Clean Air Act (FCAA or CAA) for emissions of carbon dioxide (CO_2) for modified and reconstructed electric utility steam generating units (EGU), integrated gasification combined cycle (IGCC) units, and natural gas-fired stationary combustion turbines. The proposed modified and reconstructed unit standards followed an earlier NSPS proposal by the EPA on January 8, 2014 that was limited to establishing CO_2 standards for newly constructed fossil fuel-fired power plants. On June 18, 2014, the EPA also published proposed requirements for existing units under §111(d) of the FCAA, separate from the proposed standards for modified and reconstructed units. The proposed standards for modified and reconstructed units would establish CO_2 emission standards in 40 Code of Federal Regulations (CFR) Part 60, Subparts Da and KKKK.

The EPA proposed two standards for modified utility boilers and IGCCs. The first alternative standard is a unit-specific emission limit based upon the unit's best historical CO_2 emission rate (from 2002 to date of modification) plus an additional 2 percent reduction; and the emission limit will be no lower than 1,900 (lb CO_2/MWh-net) for large units and 2,100 (lb CO_2/MWh-net) for small units. The second alternative is the same as the first alternative, for sources modified prior to becoming subject to §111(d). Sources modified after becoming subject to §111(d) would be required to meet a unit-specific emission limit determined by the §111(b) implementing authority from results of an energy improvement audit. These proposed standards for modified utility boilers and IGCC units are based upon operating practices and equipment upgrades as the best system of emission reduction (BSER).

The proposed emission standards for reconstructed utility boilers and IGCCs are 1,900 lb CO_2/MWh for larger units and 2,100 lb CO_2/MWh for smaller units. These proposed standards are based upon a supercritical steam cycle for large units and a subcritical steam cycle for small units as BSER.

The proposed emission standards for modified and reconstructed natural gas-fired stationary combustion turbines are 1,000 lb CO_2/MWh for larger units and 1,100 lb CO_2/MWh for smaller units. These proposed standards are based upon modern, efficient natural gas combined cycle (NGCC) technology as BSER.

The EPA's preamble states that existing sources subject to a §111(d) plan which become modified or reconstructed sources will remain in the §111(d) plan, and in addition, must meet the §111(b) rule requirements.

TCEQ Comments on the Proposed Rules

I. TCEQ's Overall Recommendation

TCEQ recommends that the EPA withdraw the proposed rule because of numerous legal, practical, and technical issues. The EPA has not adequately demonstrated the need for the proposed rule; has not performed a reasonable evaluation of the projected benefits and costs of the proposed rule; and the rule as proposed is not consistent with the FCAA. These issues are discussed in greater specifics in TCEQ's comments below.

II. Legal Concerns with the Proposed Standards

A. The EPA's failure to provide proposed rule language and supporting information for modified and reconstructed EGUs subject to §111(b) fails to provide adequate public notice.

The EPA's proposal did not include proposed rule language to implement its intended carbon pollution standards for modified and reconstructed EGUs. Instead, the EPA provided potential draft rule language in two technical support documents to illustrate how the EPA anticipates the proposal for the modified and reconstructed standard would integrate with its January 8, 2014 proposal for new sources. While the commission appreciates the EPA's effort to provide proposed rule language in the docket, the language does not clearly elaborate all of the concepts discussed in the proposal preamble. For example, the technical support documents contain bracketed placeholder information instead of proposed rule text to indicate critical date information necessary to determine applicability. Since this rule language was not proposed, it is not clear what date the EPA intended to propose. Also, as discussed in the comments below, the draft rule language in the technical support documents creates additional ambiguity, particularly regarding whether a unit is subject to both §111(b) and (d).

In addition, EPA failed to include any technical data to support its proposed standard for modified Subpart Da units or for the proposed standards for either modified or reconstructed Subpart KKKK units. For instance, the preamble to the Modified Source rule references a technical support document, "Standards of Performance of Natural Gas-Fired Combustion Turbines," which the EPA states is available in the docket. (See 79 Fed. Reg. at 34,990 n.94.) But that document is not available on the docket. Without such missing data and related materials, states and the public cannot properly determine the basis on which the EPA claims that these emission standards are achievable or reasonable.

B. The proposal should be withdrawn because the EPA has inexplicably and without basis "bundled" its conclusions regarding modified and reconstructed sources with its illegal scheme proposed for new sources under §111(b) and existing sources under §111(d).

The proposal should be withdrawn because the EPA has repeatedly tied several key components of its proposal to the pending proposals for new sources under §111(b) and existing sources under §111(d). As discussed elsewhere in these comments, many of the EPA's conclusions are inherently dependent on its conclusions in concurrent proposals. If those proposals are significantly altered by the EPA upon promulgation, or by federal courts upon review, this proposal will be similarly affected. The EPA has not provided a rational basis for relying on its schema for new or existing sources in this rulemaking.

C. There is no legal basis for requiring existing sources subject to §111(d) to remain "subject to" state plans under §111(d) after modification or reconstruction. This appears to be an effort by the EPA to preserve flawed goals for states established under §111(d).

The EPA provides no legal basis for requiring existing sources subject to §111(d) to continue to be regulated under state plans under §111(d), post modification or reconstruction, in addition to being subject to requirements under §111(b). In the proposal preamble, the EPA states that its reasons for this requirement were outlined in the "Legal Memorandum" supporting document filed in Docket ID: EPA-HQ-OAR-2013-0602. However, that legal memorandum does not provide any discussion regarding EPA's authority to apply both §111(d) and §111(b) requirements to existing sources. There is no rational basis to require that sources be subject to both §111(d) and §111(b) requirements; and EPA has not addressed how this concept will be implemented, particularly given the disparity in standards proposed by EPA under both §111(b) and (d) for states. Since the EPA has provided no rational basis to support this position, the EPA should withdraw this proposal.

Additionally, the EPA's proposal does not explain what is meant by the phrase "subject to a state plan under §111(d)," and the draft rule language in the technical support documents do not provide clarity on this issue or the dual applicability of §111(b) and §111(d). The EPA provides no discussion regarding how an affected EGU could meet two different standards, the basis for the requirement to do so, or any analysis to support why such a requirement would be necessary or beneficial. The proposed rule preamble does not provide information regarding how this concept integrates with current regulatory text in 40 CFR §§60.14 and 60.15 specifying that modified and reconstructed facilities become "affected facilities" if certain criteria are met. Under the EPA's proposed §111(d) rule, in proposed 40 CFR §60.5795, sources are subject to the state plan requirements of §111(d) if they commenced construction on or before January 8, 2014. All modifications and reconstructions that occur after January 8, 2014 would then be occurring at units that were applicable to §111(d). The fact that the EPA has proposed a schema for existing sources under §111(d) that is dependent on a "captive" source population is not a rational basis for not obviating the statutory obligations applicable to modified or reconstructed sources.

The EPA is essentially proposing a "once in always in" rationale for units subject to §111(d), which is contrary to the statute and to past §111(d) actions taken by EPA. Ironically, the EPA says in its proposal, "It should be noted at the outset that the EPA determined that reconstructions are a type of construction, and therefore subject to CAA

Section 111(b), as part of the 1975 framework regulations, and the EPA is not re-opening that determination" (79 Fed. Reg. 34981). Yet, the EPA has taken the contradictory position that sources that are modified or reconstructed remain regulated under §111(d). The notion that a unit is always subject to the §111(d) plan and not the standard under §111(b) is a significant flaw in logic in the proposed modification and reconstruction rule and in the §111(d) rule. If Congress intended modified sources to remain under §111(d), then there would have been no need to define modification in §111(a) and set standards for modified sources in §111(b), since modified sources are just existing sources that have undergone a physical change. The EPA's departure from applying BSER to the emission source in formulating state goals under §111(d), results in significantly different performance standards for modified or reconstructed sources compared to state goals, along with the impossibility of demonstrating compliance with those goals in state plans. The EPA would not be able to compel existing turbines to be re-dispatched up to 70 percent under Block 2 of the EPA's proposed §111(d), if these units ceased to be subject to §111(d) upon reconstruction or modification and instead become subject to a unit-specific emission standard under §111(b). Similarly, all existing coal-fired EGUs could potentially be considered modified, depending upon the physical changes each unit implements to achieve Block 1 six percent heat rate improvement, thereby removing them from regulation under state plans formulated under §111(d).

D. The EPA's proposed BSER under §111(b) for EGUs which are modified or reconstructed after becoming subject to a CAA §111(d) state plan eliminates the required state flexibility under §111(d).

The EPA's §111(b) proposal regarding BSER for modified and reconstructed EGUs that modify or reconstruct after becoming subject to CAA §111(d) requires that these units "meet a unit-specific emission limit that would be determined by the CAA §111(d) implementing authority and would be based on the source's expected performance after implementation of identified unit-specific energy efficiency improvement opportunities." This proposal eliminates the statutorily-required state flexibility under §111(d) and the EPA's proposed regulation for carbon pollution from EGUs under §111(d), because it requires the state to consider unit-specific energy efficiency improvement opportunities; does not consider state flexibility to rely on a mass-based implementation of §111(d) and requires states to take specific actions for modified and reconstructed units in their §111(d) state plans. This illustrates that the EPA has not addressed or adequately supported the conflicts created by the EPA's proposal to require that modified and reconstructed units covered by §111(b) remain subject to §111(d).

E. There is no legal basis supporting the EPA's contention that each proposed §111 standard "remain in effect" regardless of whether any of the other §111 standards were to be vacated or remanded.

In the proposal preamble for the §111(b) modified and reconstructed unit standard, the EPA states that each of the three proposals under §111 addressing carbon pollution from EGUs are severable from each other, and states that each BSER determination is

severable from all other BSER determinations, such that they all remain "in effect" regardless of whether any of the other §111 standards or BSER determinations were to be vacated or remanded. EPA cites to *K Mart Corp. v. Cartier, Inc.*, 486 U.S. 281, 294 (1988) (holding that a regulation was severable because the "[t]he severance and invalidation of [subsection at issue would] not impair the function of the statute as a whole, and there [was] no indication that the regulation would not have been passed but for its inclusion.") However, EPA provides no discussion or rational basis to support this contention in light of the plain language of §111(d), which limits regulations under §111(d) to existing sources "to which a standard of performance under this section would apply if such a existing source were a new source." Additionally, the EPA provides no support for the severability of each BSER determination, nor does the EPA provide adequate discussion of how the EPA would interpret this severability for BSER to apply within states (or groups of states). The EPA also provides no discussion or analysis of how BSER severability would impact the cost of controls, cost of electricity to consumers, electric reliability, or impact the economy of states and the nation generally. Lastly, the EPA has no basis to establish any requirement relating to new or existing sources in this proposal addressing modified or reconstructed sources.

F. EPA's assertion that the modified or reconstructed source rule provides the prerequisite for §111(d) is contrary to the plain language of the statute and is logically flawed.

EPA puts forth a one-line conclusive argument in the EPA's Legal Memorandum (See Page 13 of the Memorandum) that "either of those section 111(b) rulemakings will provide the requisite predicate for this [§111(d)] rulemaking." The EPA asserts that a modified or reconstructed source is a "new source" and satisfies the requirements of §111(d) that say, "The Administrator shall...establish[es] standards of performance for any source for any air pollutant ... but to which a standard of performance under this section would apply if such a source were a new source...." The plain language of the statute specifically requires that a standard for *new sources* (emphasis added) would need to apply first, not a standard for modified or reconstructed sources.

G. EPA must make a separate endangerment finding under FCAA §111 based on emissions from the source category and cannot rely on the FCAA §202 finding to regulate CO_2 emissions under §111.

Before the EPA proposes any standard of performance under §111(b) or (d), an independent endangerment finding must be made for each source category and for each pollutant it seeks to regulate. An endangerment finding is a determination by the EPA that a particular pollutant may reasonably be anticipated to endanger public health or welfare. For the same reasons stated in TCEQ's comments on the NSPS for newly constructed EGUs, the EPA must conduct a proper endangerment finding for CO_2 emissions from fossil fuel-fired EGUs prior to proposing a §111(b) or §111(d) rule for this pollutant. The EPA cannot rely on the 2009 Endangerment Finding because it was made under §202 of the FCAA, not §111, and the §202 finding was for emissions of a group of six well-mixed GHGs emitted from mobile sources. The EPA has provided no

compelling evidence to show that the United States' contribution of EGU CO_2 emissions to global concentrations of GHG, or to temperature change, is significant. The EPA has provided neither a proper endangerment finding nor a statutorily derived rational basis for regulating one GHG, i.e., CO_2 from EGUs; nor has EPA provided an explanation for its interpretation regarding when or why separate endangerment findings are, or are not, required by the FCAA.

In both the §111(b) and §111(d) proposals, the EPA assumes that because an existing source category is already listed and because sources in that category emitted a particular pollutant, that source category must cause or contribute "significantly to air pollution which may reasonably be anticipated to endanger public health and welfare" for a different pollutant. The purpose of identifying source categories is to establish appropriate standards of performance on a pollutant-specific basis for those source categories. A standard of performance is defined as "...a standard for *emissions of air pollutants* (emphasis added) which reflects the degree of emission limitation achievable through..." Because the standard is on a pollutant-specific basis, the determination of the endangerment consideration must also be on a pollutant-specific basis.

Further, GHGs are newly regulated pollutants under the FCAA, having never been evaluated for impacts on a source category by source category basis, and are wholly different from criteria pollutants generally regulated from stationary sources. These pollutants react differently in the atmosphere than any other type of pollutant and thus do not endanger public health or the environment in the same immediate or localized manner. Therefore, a new and distinct endangerment finding should be conducted. For this same reason, EPA should not rely on the 2009 Endangerment Finding it made for emissions of six GHGs from mobile sources as a "rational basis" for a finding of endangerment caused by emissions of only CO_2 from a specific category of stationary sources. Section 111 imposes a heightened standard requiring that a source category's emission of a pollutant "contributes *significantly* to air pollution which may reasonably be anticipated to endanger public health and welfare." No other endangerment requirement under the CAA requires such a finding of significant contribution. The EPA simply proposes in this rulemaking that CO_2 emissions from fossil fuel-fired EGUs cause or contribute significantly to GHG air pollution, because CO_2 emissions from existing EGUs account for almost one third of all United States emissions of GHGs, and EGUs are the single largest stationary source category of CO_2 emissions. This assertion is not a substitute for a properly-conducted endangerment finding. The TCEQ is not aware of any endangerment determination made by the EPA, in this proposal or elsewhere, directly considering the effects of CO_2 emitted from new, modified, or existing fossil fuel-fired EGUs which demonstrates how this specific impact endangers public health and welfare. Even if climate change in general is suspected to pose a risk to public health and welfare, EPA has not made a proper finding that United States emissions of CO_2 from EGUs are significant contributors to climate change.

As in the NSPS proposal for new EGUs, EPA's "rational basis" argument for regulating CO_2 from modified and reconstructed fossil-fueled EGUs is flawed. The EPA does not concede that §111 requires an endangerment finding to justify regulating GHG from fossil fuel-fired EGUs, but instead claims EPA is only required to "have a rational basis for promulgating standards for GHG emissions from electric generating plants..." The

EPA concludes, "...that even if section 111 requires an endangerment finding, the rational basis described in today's action would qualify as an endangerment finding as well." The EPA's interpretation substituting "rational basis" for "reasonably anticipated" is not founded in statute. An agency provides no rational basis for regulation absent a showing that its proposed rules will have a meaningful effect on the dangers it's trying to mitigate. Even if CO_2 emissions from EGUs are a substantial fraction of overall United States GHG emissions, the global concentration of GHG in the atmosphere are well-mixed and relatively uniform in dispersion, thus the effect of GHG emissions on the climate cannot be traced back to specific geographic emission points.

H. The requirement for unit-specific emission limits based on a source's expected performance after implementation of identified unit-specific energy efficiency improvement opportunities violates CAA, §111(b)(5).

EPA has provided no rational basis for requiring EGUs that modify or reconstruct after becoming subject to §111(d) "to meet a unit-specific emission limit that would be determined by the CAA section 111(d) implementing authority and would be based on the source's expected performance after implementation of identified unit-specific energy efficiency improvement opportunities." The EPA does not address how this is consistent with the statutory prohibition of §111(b)(5) which prevents the EPA from requiring new or modified sources to "install or operate any particular technological system of continuous emission reduction to comply with any new source standard of performance." The EPA's assertion in the §111(d) rulemaking that states have "flexibility" to choose how to require sources comply with the overall state goals established under §111(d) cannot justify this complete disregard for statutory plain language.

III. Lack of Demonstrated Benefits

The EPA has not provided any quantifiable climate benefits of the proposed rule.

The EPA has not provided any data or other evidence that the proposed rule will have any quantifiable effect on global climate. The EPA has only provided monetized climate benefits of the CO_2 reductions from the proposed rule using the social cost of carbon (SCC) and has not provided a single real-world climate benefit. In fact, the EPA discusses at length it's assessment of climate change impacts in the regulatory impact analysis, e.g., global average temperature, sea level rise, and extreme weather and climate events (Regulatory Impact Analysis for the Proposed Carbon Pollution Guidelines for Existing Power Plants, Section 4.2.1). However, the EPA has not provided a single quantified effect to any climate parameter to demonstrate that the proposed rule would actually affect those climate events which the EPA cites as justification for the rule. The EPA has not even provided an estimated impact of the proposed rule on global atmospheric CO_2 concentrations. Furthermore, even though the EPA used the global SCC factor for calculating monetized benefits from the CO_2 reductions of the proposed rule, the EPA failed to consider global CO_2 emission trends. The EPA cannot claim benefits on a global basis while only taking into consideration

changes in United States CO_2 emissions. The EPA is attempting to claim benefits from the proposed rule, but has not met the burden of demonstrating that the rule would have any effect on the environmental issues the EPA has cited as justification for the rule.

IV. Modified sources: Number of affected sources, cost of compliance, and proposed emission standards

A. The EPA failed to correctly estimate the number of modifications and therefore dramatically underestimates the cost of the rule.

In the preamble, the EPA states, "...the EPA expects few units would trigger either the modification or the reconstruction provisions that we are proposing today. Because there have been a limited number of units that have notified the EPA of NSPS modifications in the past, we have conducted an illustrative analysis of the costs and benefits for a representative modified unit" (79 FR 34963). The TCEQ agrees with EPA's estimate that few units would be reconstructed; however, the TCEQ disagrees with EPA's estimate that few units would be modified. The EPA's basis for the estimate is flawed. A modification is defined in 40 CFR §60.14 as "...any physical or operational change to an existing facility which results in an increase in the emission rate to the atmosphere of any pollutant to which a standard applies." The EPA has not previously regulated CO_2 in any NSPS, so any physical changes made to units in the past that resulted in increased CO_2 emissions would not have been considered modifications, as the changes would not have resulted in an increase in emission of a pollutant to which a standard applied. If the EPA is relying upon other pollutants as a surrogate to estimate the number of modifications, this approach is also flawed. Unlike CO_2, other pollutants currently regulated under the NSPS typically rely upon add-on control devices to control those emissions. The NSPS defines an increase in emissions as an increase that occurs on an hourly basis. If a unit has an add-on control device, the hourly emission rate of the pollutant subject to regulation can be mitigated by enhanced utilization of the control device, yet since no add-on control devices are currently used to control CO_2 emissions, all changes that would result in an hourly increase in CO_2 would be modifications. The TCEQ estimates that most existing combustion turbines will be modified over the course of their useful life. Upgrades to existing turbines based upon advances in turbine technology that are designed to increase power output or improve the heat rate are common. Additionally, Block 1 heat rate improvements required in §111(d) could actually trigger a modification under §111(b), because the hourly emission rate of CO_2 could increase depending upon the heat rate improvements implemented. Heat rate improvement can be achieved when there is a greater increase in output (MW produced) relative to the increase in input (BTU, fuel).

Due to this underestimation of the number of modifications, the EPA has also dramatically underestimated the cost of the rule to the industry and to consumers of electric power. Consequently, EPA's illustrative example in evaluating the costs and benefits of the proposed modification rule is not a sufficient analysis because it does not reflect or acknowledge the cumulative costs from all the sources which would be affected by the proposed rule. Additionally, the estimated health benefits for collateral decreases

in SO_2, NO_x, and $PM_{2.5}$ continue to be exaggerated and do not take into account other recent rules implementing emission reductions from electric generating units.

B. The EPA should not propose standards based upon one type of unit and then require a completely different type of unit to comply with those standards. The EPA's proposed 1,900 lb CO_2/MWh standard is not appropriate BSER for subcritical units because it is based on the technology and performance of a different type of unit.

The EPA is soliciting comments on whether the most stringent standard for modified steam generating units should take into account the current steam cycle of the facility. For example, EPA asked if large subcritical steam generating units should have a most stringent standard that is less stringent than the proposed standard of 1900 lb CO_2/MWh-net, which is based upon the use of a supercritical steam cycle. The TCEQ believes that the existing steam cycle should be considered only in understanding realistic limits for modified units in establishing standards. Specifically, the EPA should not propose standards based upon one type of unit and then require a completely different type of unit to comply with those standards. Section 111 allows the EPA to, "distinguish among classes, types, and sizes within categories of new sources for the purposes of establishing standards." The difference in efficiency resulting from different steam cycles is inherent in the design and construction of the unit. No matter the adjustments made, a subcritical unit cannot approach the efficiency of a supercritical boiler. Modifications tend to be more incremental adjustments to a unit's design than a complete unit redesign that would be required to convert a subcritical unit to a supercritical unit. For these reasons, the TCEQ does not believe that the EPA's proposed unit-specific 1,900 lb CO_2/MWh-net standards are appropriate BSER for subcritical units.

C. Basing a proposed standard upon a historic emission rate is problematic, unfair, and does not appropriately reflect the inherent nature of electric generation.

Although the proposed standard for modified sources appears to be reasonable, basing a proposed standard upon a historic emission rate is problematic, unfair, and does not appropriately reflect the inherent nature of electric generation. The EPA proposes basing BSER on the best historic annual CO_2 emission rate (from 2002 to the date of the modification) plus an additional 2 percent emission reduction. Selection of the baseline year is critical, because CO_2 emission rates vary over time and there must be room for a 2 percent reduction in CO_2 emissions below that baseline year, given the limited range of technically feasible and economically reasonable optimization methods that are available. The historic variability has little to do with add-on controls, but rather how the unit was dispatched, weather conditions, temperature of cooling water, type and blend of fuel fired, normal wear and tear, degradation of equipment over time, etc. Because the CO_2 emission rate varies over time, any applied standard of performance based upon the lowest CO_2 emission rate over that time period would be expected to increase, since it was the lowest emission rate selected. There is evidence that factors

beyond the control of the unit operators will cause a modified unit's CO_2 to creep up over time. The TCEQ recommends if the EPA follows this approach, that a three year average from historic emission rates be utilized and that CO_2 emission limits remain in effect until the next modification or for a period of five years, whichever comes first.

V. Reconstructed Sources: Reconstructed vs. New Source BSER

A. The EPA's reconstruction premise is flawed and violates CAA §111(b)(5).

The EPA assumes that the reconstruction of all units will be so broad in its scope that the entire unit can also be completely re-built and converted to a different steam cycle that is much more efficient. EPA's proposed standard of 1,900 lb CO_2/MWh-net was based upon a supercritical unit. EPA fails to establish technical feasibility and economic reasonableness for their assumption of the scope of reconstruction and for the proposed standard by not providing any example of a reconstructed subcritical coal-fired boiler being converted to a supercritical coal-fired boiler. The EPA's finding that the supercritical steam cycle is BSER violates §111(b)(5) in that, "...nothing in this section shall be construed to require, or to authorize the Administrator to require, any new or modified source to install and operate any particular technological system of continuous emission reduction to comply with any new source standard of performance."

B. Because the EPA proposed that reconstructed sources would not be required to meet the new source standard, this has prompted the EPA to contemplate additional capital cost thresholds for reconstructed sources.

The EPA is soliciting comments on the delineation between a reconstructed source, which would be subject to the proposed reconstructed standard, and a newly constructed source, which would be subject to standards proposed in January 2014, for those situations where significant equipment is being replaced (enough to exceed the reconstruction threshold) but the entire unit is not being rebuilt. The EPA requests comment on an upper capital cost threshold for reconstruction, such that facilities that exceed that threshold would be subject to the standard of performance for newly constructed sources. The TCEQ believes there is no need to identify an upper capital cost threshold for reconstruction, if the EPA is confident in their projection that there will be very few units that reconstruct with capital costs exceeding 50 percent. Establishing any range of capital costs is arbitrary and its only purpose is to justify a reconstruction standard which is significantly less stringent than the newly constructed source standard previously proposed by the EPA in January 2014. The EPA makes the argument that it has historically considered reconstructed sources as new sources, yet now the EPA struggles to justify a basis for not making reconstructed sources meet the new source standard. The root problem is that the EPA established an unreasonable new source standard that new sources and reconstructed sources cannot meet. The EPA offers very little justification or reconciliation as to why BSER for reconstructed sources (which the EPA assumes to be new sources) is based upon supercritical steam cycle efficiency, yet the BSER for newly constructed sources is based upon partial carbon capture and sequestration.

C. The TCEQ does not agree that there is sufficient technical justification to establish CO_2 emission standards at the lower end of the range the EPA is considering for reconstructed sources.

EPA solicits comments on whether the emission limit for reconstructed utility boilers and IGCC units should be set at a different level between 1,700 and 2,100 lb CO_2/MWh-net for large units, and 1,900 and 2,300 lb CO_2/MWh-net for smaller units. The lower end of the range of considered limits may not be achievable. Specifically, EPA proposed the 1,700 lb CO_2/MWH-net standard based upon the ultra-supercritical steam cycle. The TCEQ is aware of just one ultra-supercritical coal-fired boiler located in the U.S., which only recently commenced operation in December 2012. The TCEQ is unaware of any reconstructed subcritical or supercritical units being reconstructed to an ultra-supercritical unit that has demonstrated it can achieve 1,700 lb CO_2/MWh-net. The EPA has no basis for establishing an emission limit without data supporting its achievability.

VI. General/Other Comments

A. The TCEQ does not support the expansion of the steam generating unit source category in Subpart Da to include other emissions units regulated in other existing source categories.

The EPA proposes to amend the definition of steam generating unit to include "...any furnace, boiler, or other device combusting fuel for the purpose of producing steam plus any integrated equipment that provides electricity or useful thermal output to either the affected facility or auxiliary equipment." The TCEQ understands the EPA's reasoning for the proposed definition change; however, the EPA should not expand the source category to include other emissions units regulated in other existing source categories. The expansion of the source category does not account for the numerous configurations of plants, nor has EPA evaluated the effect of expanding the applicability on BSER. Instead of expanding the definition of steam generating unit, EPA should address what parameters are included and what parameters are not included in the demonstration of compliance with the standard.

B. The TCEQ suggests that if the EPA establishes separate standards for load-following NGCC units, the EPA should also establish separate standards for coal-fired EGUs based upon how they are dispatched.

For gas turbines, the EPA is soliciting comment on whether a separate standard should be established for load-following (i.e. intermediate capacity factor) NGCC EGUs. EPA stated that the more stringent standard would apply only during periods of high annual capacity factors and a less stringent standard should apply during periods of intermediate load (e.g., when electric sales are between 33 to 60 percent of the potential electrical output). The TCEQ agrees with the EPA's recognition that a unit's dispatch will affect its emissions. Furthermore, the TCEQ suggests that if the EPA establishes separate standards for load-following NGCC units, the EPA should also establish separate standards for coal-fired EGUs based upon how they are dispatched.

C. The current rulemaking proposal for reconstructed and modified sources is not the appropriate forum for soliciting comments about applicability criteria and standards for new natural gas-fired stationary combustion turbines.

The EPA requested comment on a full range of alternatives for low capacity factor stationary turbines and/or simple cycle combustion turbines to the general applicability thresholds proposed in the January 2014 proposal. The EPA lists several options in its treatment of simple cycle combustion turbines and solicits comments on the merits of these options, or variations of them. The current rulemaking proposal for reconstructed and modified sources is not the appropriate forum for soliciting comments about applicability criteria and standards for new natural gas-fired stationary combustion turbines, even if the EPA intends for the applicability and standards to be similar. Commenting on the merits of the listed options about what EPA should or should not do, in no way satisfies the requirement that the public has the opportunity to comment on specific EPA proposals. In the absence of a specific EPA proposal, specific EPA analysis, and specific EPA documentation, the TCEQ cannot effectively comment on any changes the EPA makes to the January 8, 2014 proposed rule affecting newly constructed units.

D. The purpose of the energy audit is unclear because states would already have to rely upon methods other than a unit-specific emission rate for modified units in order to meet their state goals.

The EPA is proposing that utility boilers and IGCC units undertaking modifications after they become subject to a CAA §111(d) plan would be required to meet a unit-specific emission limit determined by the §111(d) implementing authority based on an assessment to identify energy improvement opportunities for the affected source. As stated in earlier comments, it is inappropriate to specify requirements for §111(b) in any way based on requirements for existing sources under §111(d). Additionally, the proposed rule is unclear about what the energy audit will actually achieve, given EPA's proposal that existing sources subject to §111(d) remain subject to state plans under §111(d) after modification or reconstruction. Only four states have final state goals above 1,700 lb CO_2/MW, and the EPA acknowledges limited opportunities exist for decreasing CO_2 emissions for modified units when the EPA proposes a lower end value of 1,900 lb CO_2/MWh. Therefore, states would already have to rely upon methods other than a unit-specific emission rate for modified units in order to meet their state goals.

E. The modified and reconstructed BSER approach taken by the EPA under §111(b) is completely different than the approach the EPA took when applying BSER to existing sources under §111(d).

The EPA solicited comment on whether building blocks two, three, and four would be appropriate components of the BSER determination for modified or reconstructed units. According to the FCAA, BSER is applied to the source, thus, inclusion of building blocks two, three, and four is not appropriate for modified or reconstructed units regulated under §111(b), nor is it appropriate for existing sources regulated under §111(d). Additionally, the modified and reconstructed BSER approach taken by the EPA

under §111(b) is completely different than the approach the EPA took when applying BSER to existing sources under §111(d), and the EPA has provided no justification for why existing source BSER is more stringent than modified or reconstructed BSER under §111(b). BSER was applied to the source under the modified and reconstructed rule; whereas, the EPA applied BSER to the electric grid in determining state goals under §111(d). The EPA offers no compelling reason why the application of BSER proposed on the same day, potentially being applied to the same sources, is so dramatically different.

For example, the standards proposed for modified utility boilers call for a unit-specific emission limit based upon the unit's best CO_2 emission rate (from 2002 to date of modification) plus a two percent reduction, with an emission limit no lower than 1,900 lb CO_2/MWh-net; yet, the proposed Texas state goal for all sources is 791 lb CO_2/MWh, which includes 45 percent of the state's total fossil fuel-fired electrical generation being supplied by coal-fired utility boilers with an average emission rate of 2,239 lb CO_2/MWh. The standard for new, modified, and reconstructed large natural gas-fired turbines is 1,000 lb CO_2/MWh-gross compared to the proposed Texas state goal for all sources of 791 lb CO2/MWh.

F. In the proposal preamble (79 Fed. Reg. 34975) the EPA states that "Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations." TCEQ disagrees with this assumption. This may not be the case for all regulated industry types, and particularly not for the electric generating sector, which is compelled to fluctuate with the variable demand for electricity. There is no evidence in the record that the proposed reconstructed source standard included or considered routine startup and shutdown emission rates.

G. Because of the interrelated nature of the proposed carbon standards for new, modified and reconstructed, and existing EGUs, TCEQ incorporates the comments submitted by TCEQ on May 8, 2014, relating to the proposed standards of performance for new sources, into these comments. TCEQ will be also be submitting comments on the proposed standards for existing units by December 1, 2014, and TCEQ similarly incorporates those comments for the proposed standards for existing sources to these comments.