

Supplemental Comments on EPA's Proposed Standards of Performance for Greenhouse Gas Emissions from New Stationary Sources: Electricity Generating Units Docket EPA-HQ-OAR-2013-0495 RIN 2060-AQ91

The Energy and Environmental Law Institute (EELI) & The Free Market Environmental Law Clinic (FMELC)

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This comment supplements comments submitted by EELI and FMELC on March 10, 2014 [EPA-HQ-OAR-2013-0495-3593](#), as a result of new information that has come to our attention.

SUMMARY OF COMMENT: *The EPA relies on figures concerning the cost of the carbon capture and store (CCS) citing to a study done by the National Energy Technology Laboratory originally produced in 2007 and updated periodically ending in 2011. However, these figures are no longer valid according to the authors of the very study EPA cites, and comments received from other federal agencies (see, Docket entry [EPA-HQ-OAR-2013-0495-0066](#), and <http://www.regulations.gov/#!documentDetail;D=EPA-HQ-OAR-2013-0495-0065>) which call into question EPA's interpretation of this study. Indeed, these comments, upon review, assert that EPA misrepresents the work on which it relies. EPA ignoring and misrepresenting the expert conclusions and participation, which is the basis for deference to Agency decisionmaking typically afforded in rule makings (e.g., Skidmore, Chevron), indicates that such deference should not be afforded in the instant case: an agency must actually defer to its experts if it wants the court to defer to it as the experts. EPA has improperly used the "next of a kind" cost estimates when it should have used "first of a kind" cost estimates for the cost of electricity estimates for power generation with and without carbon capture systems. In its Technical Support Document, EPA unilaterally redefined "next of a kind". EPA must present a full discussion of its costing methodology and any reasons why it should ignore the "first of a kind" costs in its analysis, or otherwise incorporate the "first of a kind" costs into a revised cost analysis. Having done so EPA must withdraw the rule making or reopen the comment period so that the public may comment on the real costs of this regulation, as appropriate given each item described in this Comment.*

Comment: EPA has improperly used the “next of a kind” cost estimates when it should have acknowledged that “first of a kind” cost estimates for the cost of electricity estimates for power generation with carbon capture systems is the contemporary cost level presently confronting the industry. The single value, "next-of-a-kind" costs presented by EPA represent the expected costs after significant learning and the serial deployment of additional demonstrations. This learning hasn't occurred yet and thus represents serious financial jeopardy for those industry participants compelled to deploy it in a competitive power generation market. EPA failed to include the range of costs provided by the Office of Management and Budget (OMB), or the concerns raised by the Department of Energy (DOE). As a result EPA did not accurately represent the true cost of the CCS technology. (*See* Docket entry EPA-HQ-OAR-2013-0495-0066.) Further, the studies from which many of the costs EPA uses are explicit regarding their level of uncertainty (-0%/+30%).

DOE cited expectations that the actual CO₂ mitigation costs for two of its “first of a kind” coal CCS demonstration projects (the WA Parish PC Plant and the Kemper County IGCC plant) would be 35–80% higher than the more mature costs projected by the studies upon which EPA relies. While much of this cost premium may be attributable to differences between the actual design, scope and scale of the demonstration projects compared to what EPA assumed, at least some of the cost delta is certainly associated with “first of a kind” issues. Further, DOE advised that the cost estimates EPA used, based on experience at the Kemper County IGCC, falls near the bottom of the cost estimates for a “first of a kind” plant, that the Kemper IGCC will capture only 75 percent of the CO₂ that EPA assumes is captured, that the design basis of the Kemper IGCC differs from that assumed by studies upon which EPA relied (*e.g.*, different gasification technologies, lignite coal versus bituminous coal) and that the Kemper IGCC plant is still under construction and will likely experience additional increases in cost. Indeed, there have been significant cost increases since the EPA'S September 2013 drafting of the NSPS regulations, amounting to roughly \$800 million total project cost raising it to \$5.5 billion through March 2014, while original cost estimates for the project were in the range of \$2.4 billion.

We refer EPA to the information provided EPA by in the aforementioned federal government comment, as well as the April 15, 2014 Burns & Roe Kemper [Prudency Evaluation Report](#), the submission of which to the Mississippi Public Service Commission we incorporate in our comments by reference (*see esp.* pp. 41-58, sections 8.2 - 8.5. *See*, more particularly, pp. 51 and 54 tables for exorbitant cost increases for components of CCS technology, having been substantially underestimated, and its representation that the project's peak labor projections of 1,200 personnel were dramatically below the 6,540 experienced in August 2013, which tables and evidence further demonstrate spectacular underestimation of both technology and labor costs).

In addition to the increased costs associated with “first of a kind” plants, another factor that will result in higher costs than those upon which EPA relies relates to the ability of a plant to exceed the proposed 1,100 lb/MWh–gross regulatory emission limit. EPA’s estimates reflect costs for plants that would precisely meet the emission limit during steady state operation without any buffer for operational excursions and very limited flexibility to adjust the CO2 capture rate in response to market conditions (while still complying with the regulation on average). Plants designed for additional capture to provide a buffer and/or for flexible capture rates will cost more.

Since OMB and DOE had warned EPA that it does not clearly present these facts and this uncertainty, OMB, DOE and this commenter state categorically that EPA has misrepresented the results of the DOE study upon which it relies, violating not only EPA’s compliance with its own Information Quality Act guidelines but the common law requirements to avoid arbitrary and capricious rulemaking.

Because EPA refused to accurately represent information provided it during the inter-agency review, on which it claims to rely, or to include the “first of a kind” costs in its cost analysis and in its preamble to the rule, the public has not had the opportunity to fully consider and comment on these costs. For that reason the comment period should be reopened and EPA should present a full discussion of its costing methodology and any reasons why it should ignore the “first of a kind” costs in its analysis, or otherwise incorporate the “first of a kind” costs and need for additional demonstrations into a revised cost analysis.

SUMMARY OF COMMENT: *Under the Clean Air Act (CAA), the EPA cannot require a technology that is not commercially viable. EPA must be able to show that such technology has been “adequately demonstrated”. The 2005 Energy Policy Act prohibits EPA from using subsidized power plants as examples that technology is commercially viable or that such technology has been “adequately demonstrated”. EPA solely relied upon plants that received subsidies in reaching this rule, though it later substituted smaller, non-analogous carbon capture operations as examples once it became aware of the prohibition on using subsidized plants. These other examples are not similarly situated to the plants being regulated and do not give EPA sufficient evidence that CCS technology is commercially viable as required by law. The law does not prohibit EPA from considering those plants as evidence that technology is not adequately demonstrated or commercially viable, however, and the examples EPA relied upon show precisely that.*

Comment: EPA is restricted from considering any technology or level of emission reduction as adequately demonstrated for purposes of Section 111 of the Clean Air Act solely by use of technology or the achievement of the emission reduction by 1 or more facilities receiving

assistance under the Federal Energy Policy Act of 2005 (*see* 42 U.S.C. §15962(i) and 26 U.S.C. 48A(g)). Specifically, as other commenters have noted, EPA may not rely solely upon data from a facility's carbon capture system that was funded by the Department of Energy in EPA's determination of what constitutes "Best System of Emission Reduction" (BSER) under Clean Air Act Section 111. [This does not prohibit EPA from relying on that data to conclude that a technology is not adequately demonstrated, and that is precisely the conclusion from comments in EPA's record by another federal agency, *see supra*].

EPA has admitted, however, that it relied on the Kemper IGCC experience as the basis for its BSER determination (also citing two other subsidy recipients in addition to this iconic project), despite the fact that the Southern Company received approximately \$245 million (plus tax incentives) from DOE to build the Kemper ICGG facility and stands to receive another \$25 million upon start-up. An additional \$120 to \$150 million in bonus depreciation tax benefits is now in question due to schedule delays. The WA Parish PC Plant also received DOE grants for its carbon capture system design and construction. Because these are the only two carbon capture systems upon which EPA relies for its cost estimates and its BSER determination, EPA has failed to be in accord with the law when establishing its proposed regulation and must begin anew with information the law allows be used. (EPA subsequently invoked other non-analogous carbon capture operations in its January 8, 2014 Technical Support Document; these are not power generation facilities, not at appropriate scale, and otherwise simply not supportive of EPA's use of them for purposes of claiming that CCS is adequately demonstrated for application within the power generation industry.) As there is no such information available to EPA, the rule must be abandoned until such information surfaces.

Conclusion

EPA has failed to put forward a rulemaking that is compliant with existing law or that provides to the public, or relies upon, adequate and accurate information. As a consequence this rulemaking represents a misuse of EPA's authority and is arbitrary and capricious and otherwise not in accordance with the law. EPA has put forth data that misrepresents the actual costs of this rulemaking. It has done so misrepresenting the cost evidence presented to it by the experts whose participation in an interagency review process, which expert opinion is the basis for courts granting the Agency *Chevron* or *Skidmore* deference, which for reasons indicated in this Comment should not be afforded EPA in any review of this matter.

EPA was informed of a study's findings and misrepresents them in service as the basis of its rule making regarding the key issue of CCS supposedly being adequately demonstrated. To remedy this EPA must withdraw the proposed rule making and proceed in accordance with the law, or supplement the existing record with accurate data on the cost of this rulemaking and

reopen the comment period to allow for public review and comment of the proposed rule that relies upon and presents accurate information.

EPA has also failed to show that the technology required by this rulemaking is commercially viable or has been “adequately demonstrated” as required by the Clean Air Act. The exemplars EPA relied on in reaching this rulemaking do not accord with EPA’s obligations under the Federal Energy Policy Act of 2005 as they have received federal subsidies. After apparently being caught unaware of the Energy Policy Act of 2005 and its prohibitions, EPA then cited other examples which are not analogous to the substance of EPA’s proposal, and otherwise do not offer support for EPA’s conclusions. To remedy this EPA must withdraw the proposed rule making and proceed in accordance with the law, considering it anew restricting itself to the data and exemplars it is allowed to consider by law.

Further, wholly consistent with the Energy Policy Act of 2005, EPA should consider as evidence that CCS is not adequately demonstrated technology the actual, vs. projected, experience with its previously cited examples (*e.g.*, Kemper). This also includes the above-cited information provided EPA by other government commenters and Burns & Roe Kemper Prudency Evaluation Report provided to the Mississippi Public Service Commission.