



Comments on EPA's Proposed Rule, "Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units" (Carbon Pollution Standard for New Power Plants)

In response to the U.S. Environmental Protection Agency's request for comments published in the *Federal Register* on 13 April 2012 (77 FR 22392)

Docket ID No. EPA-HQ-OAR-2011-0660

**Prepared by
The Association of Union Constructors (TAUC)**

The Association of Union Constructors (TAUC) appreciates the opportunity to provide comments to EPA in response to the proposed Carbon Pollution Standard for New Power Plants (Docket EPA-HQ-OAR-2011-0660). TAUC is a national trade association representing more than 2,000 contractor firms that utilize union labor for their projects, as well as local contractor associations and vendors in the industrial maintenance and construction fields.

TAUC supports EPA's goal of cleaner air, and there is no question that a healthier environment is in the best interest of all Americans. In fact, a large percentage of our member contractors are engaged in the installation and construction of technology designed to lower the level of harmful emissions from power plants and large manufacturing facilities (e.g. scrubbers, flue-gas desulfurization units, selective catalytic reduction devices, etc.). The dramatic reduction in industrial emissions over the last several decades has been due in no small part to the diligent efforts of our union contractors and their partners in the building trades.

The basis for our concerns with EPA's proposed Carbon Pollution Standards stems from the fact that the rule, if promulgated as currently written, will inflict severe economic harm not only on the industrial maintenance and construction industry and our clients in the energy production and services sector, but also on the American economy in general. Moreover, TAUC believes that for a variety of reasons explained below, any environmental benefits derived from implementing the Carbon Pollution Standard will be extremely limited. We urge EPA to reconsider the proposed rule and withdraw it from the rulemaking cycle in favor of an alternative rule that recognizes the practical impact of imposing drastically low carbon emission limits on a country that is already facing severe economic challenges.

1. High Costs and Inefficiencies

In its proposal, EPA admits that implementation of the Carbon Pollution Standard will lead to higher electricity costs, because any new coal-fired power plants will be required to use a carbon capture and storage (CCS) system to meet the required limit of 1,000 pounds of CO₂ per megawatt hour: “However, each [method of CO₂ capture] results in increased capital and operating costs and decreased electricity output (that is, an energy penalty), with a resulting increase in the cost of electricity. The energy penalty occurs because the CO₂ capture process uses some of the energy produced from the plant” (77 FR 22415).

Unfortunately, EPA fails to provide specifics regarding these increased costs. The energy penalty, also referred to as the “parasitic load,” can consume anywhere from 20% to 40% of a plant’s energy output, according to estimates.¹ A 2008 report concluded that CCS could increase the cost of electricity generation at new coal plants by a staggering 60% to 80%.²

Recommendation: TAUC urges EPA to go back to the drawing board and conduct a more comprehensive cost-benefit analysis regarding CCS implementation. Such an analysis should include extensive fact-finding initiatives, including in-depth surveys of and conversations with U.S. energy companies regarding the real-world concerns of implementing CCS. We believe that such an initiative would lead to a better understanding of the long-range implications of the proposed rule as currently written, and would persuade EPA to revisit the 1,000 lbs. CO₂/MWh standard. Furthermore, such analysis should yield specific data regarding the cost of CCS implementation, both in terms of hard dollars and consumers’ electricity bills. The full results of this analysis, including all supporting data sets, should be made publicly available before EPA moves forward with any Carbon Pollution Standard.

2. Job Losses and Economic Harm

Figures such as those cited above regarding parasitic loads will ultimately persuade most, if not all, energy companies to abandon any plans to build new coal-fired power plants – a result favored by many environmental groups. However, TAUC believes that forcing energy companies to make such decisions will ultimately weaken the reliability of the electrical grid and permanently eliminate tens of thousands of jobs. This “collateral damage,” along with numerous other negative unintended consequences of the Carbon Pollution Standard, have not been adequately recognized or studied by EPA.

Maintenance and installation of environmentally friendly technologies (e.g. scrubbers, SCR units, etc.) at coal-fired power plants represent a significant source of work for TAUC union contractors and the building trades. For these types of jobs, most TAUC members utilize a project labor agreement known as the National Maintenance Agreements (NMA), administered by TAUC’s sister organization, the National Maintenance Agreements Policy Committee, Inc.

¹ Parentau, Patrick. “Go Back, It’s a Trap! On the Perils of Geologic Sequestration of CO₂.” Vermont Law School Legal Studies Research Paper Series, Research Paper No 09-19 (Working Paper, 2009). See discussion of the energy penalty on Page 20 and also at footnote 83. Electronic copy available at <http://ssrn.com/abstract=1410666>.

² *Ibid.*, p. 19.

The NMA provides a standardized set of terms and conditions for unionized work in the U.S. industrial maintenance and construction sector.

To illustrate the importance of coal-fired power plants, consider the following: between 2006 and 2011, more than 180 million work hours were performed under the terms of the NMA at utilities across the United States, and the vast majority of these were coal-fired plants. These 180 million hours translate into stable, well-paying jobs for thousands of middle-class families.

If EPA's proposed rule is implemented as currently written, almost all of these jobs will disappear, because coal-fired plants will be regulated out of existence. Not only will no new coal plants be built, but existing coal facilities may be shut down earlier than previously planned due to the CCS standard and a number of other unrealistically strict EPA regulations, including the Cross-State Air Pollution Rule (CSAPR), the Mercury Air Toxics Standard (MATS) and the Clean Air Interstate Rule (CAIR). Since mid-2011, utilities have announced that more than 20,000 megawatts of coal-fired generation will be taken offline ahead of schedule due to these regulations.³

Operators of coal-fired plants will also have few economic incentives to implement non-CCS emission reduction technologies, since they will not help plants achieve the unrealistic 1,000 lbs. CO₂/MWh limit. This means less work for our contractors and skilled labor. Ironically, the Carbon Pollution Standard also threatens (albeit inadvertently) to slow rather than increase the rate of progress in terms of environmental technology innovation. Scott Segal, executive director of the Electric Reliability Coordination Council (ERCC), a coalition of energy companies, points out that "if EPA essentially bans the future for the [coal] sector, the incentive to further innovate will decline, and reliance on existing technology may continue. All of this is at cross purpose with EPA's stated goals."⁴

Recommendations: Before any Carbon Pollution Standard is finalized, EPA should implement a thorough analysis of the economic impact such a rule would have on the U.S. as a whole. This analysis should not be limited to electricity costs or utility infrastructure investments. It should also include a thorough study and estimate of all job losses associated with implementation of the rule, both in the short and long term. EPA should make these job loss estimates public. It should also conduct a thorough examination of how a Carbon Pollution Standard may inadvertently create disincentives for companies to continue creating effective non-CCS emission reduction technologies for existing coal-fired facilities.

3. Fuel-Specific Standards

As others have pointed out, the Carbon Pollution Standard sets a single performance standard based on emissions for all power plants, regardless of their primary fuel source. However, only

³ Egan, John. "Duke's Rogers Warns Against Building 'All Gas, All the Time,' But Dash to Gas Shows No Sign of Slowing." *Industrial Info Resources*. May 2, 2012.

⁴ "ERCC Remarks on EPA's Proposed Clean Air Act Standards for Greenhouse Gas (GHG) Emissions from New Power Plants." Press release. March 27, 2012.

natural gas can easily meet the 1,000 lbs. CO₂/MWh standard. The only way coal plants can (theoretically) meet the standard is by implementing costly and unproven CCS technology.

Recommendation: In the past, EPA has shown a willingness to set different performance standards for specific fuels, such as coal or natural gas. We urge the Agency to do the same here, and institute a set of realistic performance standards for different fuels that takes into account their unique properties.

4. CCS Technology is Unproven and Untested

Aside from being extremely expensive to implement – a fact acknowledged by EPA in the proposed rule – carbon capture and storage technology (CCS) is still in the very early stages of development. Numerous questions remain regarding the long-term viability of CCS, especially the logistical, technical and environmental hurdles associated with not only capturing and transporting CO₂, but pumping (potentially) billions of tons of carbon into deep-rock chambers.

To our knowledge, there are currently no commercially viable CCS systems currently in operation at any major power plant in the United States. The amount of time, money and resources that would be required to implement CCS on even a small scale would be enormous. As the Union of Concerned Scientists (hardly an industry-friendly organization) pointed out in 2008, “For CCS to play a major role in reducing CO₂ emissions, an enormous new infrastructure must be constructed to capture, process, and transport large quantities of CO₂. And although CCS has been the subject of considerable research and analysis, it has yet to be demonstrated in the form of commercial-scale, fully integrated projects at coal-fired power plants.”⁵

Despite these daunting logistical hurdles, EPA states in the proposed rule that the cost of implementing CCS should decrease over time “as CCS matures and is utilized more widely” (77 FR 22399). It also states that “additional funding mechanisms” in the form of DOE grants, tax credits and state incentives may *possibly* continue to be available in the future, thus further driving down the cost of CCS implementation⁶. EPA further theorizes that the cost of CCS could be partially offset by utilities selling captured emissions (carbon, sulfur, and hydrogen) on the open market.

In short, EPA’s conclusion that CCS is a viable alternative for new coal-fired plants is based on a breathtaking number of unproven assumptions and unsupported possibilities. Such sweeping statements in a formal proposed rule naturally prompt a number of questions:

1. What *specific* data or evidence leads EPA to conclude that the cost of CCS will decrease over time?

⁵ Quoted in Parentau, p. 8.

⁶ “The prospect of declining CCS costs, in conjunction with the possibility of continued availability of additional funding mechanisms...” (77 FR 22399).

2. Can EPA *guarantee* that these additional funding mechanisms in the form of federal grants, tax credits and state incentives will be available two, five, ten or even twenty years from now? If not, what can EPA do to offset the cost of implementing CCS?
3. On what basis does EPA make its assumption that utilities will be able to offset the cost of CCS by selling the captured emissions? What is the strength and size of the market for captured carbon and other emissions, and how can EPA guarantee that such a market will continue to exist?
4. Moving captured carbon from the power plant to an underground sequestration area will likely involve the construction of pipelines. Does EPA plan on assisting companies in funding the construction of these pipelines? Can it guarantee that said pipelines will achieve the required state and federal regulatory approvals?

Recommendations: EPA needs to bolster its supporting arguments in favor of CCS. We urge the Agency to engage in a thorough analysis of its various claims before moving forward with the proposed rule.

5. Coal Should Be A Part of America's Future Energy Portfolio

The U.S. contains massive coal reserves – enough to last at least 200 years, according to many estimates. Coal accounts for more than 90% of the country's total fossil energy reserves and roughly 40% of its electric generation capacity. Given these facts, it makes no sense for EPA to create a carbon emissions standard that would effectively phase out coal-fired plants over time. And, as others have pointed out, such a strategy is in direct opposition to the Obama Administration's stated "all of the above" approach to energy.

The U.S. should maintain a diversified portfolio of energy options, and that includes coal as well as natural gas. TAUC believes that both fuels can and should be important resources as we move into the 21st century. For instance, the recent discovery of huge natural gas deposits in the Marcellus and Utica shale plays has resulted in thousands of new jobs and economic security for countless families throughout Pennsylvania, West Virginia and Ohio. TAUC member contractors are also benefiting, as they are building many of the midstream processing facilities and pipelines needed to process, store and transport the vast new quantities of gas being pumped out of the ground.

However, despite our support for continued natural gas exploration, it is unwise to rely too heavily on any single source of energy and put all of the country's eggs in one basket. Like any other commodity, natural gas is susceptible to fluctuations in supply, demand and price – not to mention the specter of additional environmental and drilling regulations, which could have a serious impact on future production and price levels.

Another salient point that EPA completely overlooks is that *if we don't use our own coal, other countries will*. The proposed Carbon Emission Standard would sound a death knell for coal-fired power plants in the U.S. However, this does not mean the coal will stay in the ground. Instead of

selling it to U.S. utilities, coal producers will simply export their product to foreign countries, where demand for energy is at an all-time high. U.S. coal exports increased by more than 60% from 2005 to 2011, and that percentage is only expected to increase as energy-hungry countries around the world grow at a rapid pace. Many of the countries buying our coal have far less stringent environmental regulations than the U.S. The Carbon Pollution Standard will cause more coal to be shipped to these countries – ironically resulting in *more* air pollution, not less.

Recommendation: As we stated previously, in the past EPA has shown a willingness to set different performance standards for specific fuels, such as coal or natural gas. We urge the Agency to do the same here, and institute a set of realistic performance standards for coal that will not result in its effective elimination as an ongoing source of energy for U.S. households.

For all of the above reasons, we encourage EPA to revise its proposed standard so that coal-fired power plants can continue to play an important role in a balanced and equitable U.S. energy policy.

SUMMARY OF TAUC RECOMMENDATIONS TO EPA

1. Reconsider the proposed rule and withdraw it from the rulemaking cycle in favor of an alternative rule that recognizes the practical impact of imposing drastically low carbon emission limits on a country that is already facing severe economic challenges.
2. Conduct a more comprehensive cost-benefit analysis regarding CCS implementation. Such an analysis should include extensive fact-finding initiatives, including in-depth surveys of and conversations with U.S. energy companies regarding the “real world” concerns of implementing CCS. The full results of this analysis, including all supporting data sets, should be made publicly available before EPA moves forward with any Carbon Pollution Standard.
3. Conduct a thorough analysis of the economic impact such a rule would have on the U.S. as a whole. This analysis should not be limited to electricity costs or utility infrastructure investments. It should also include a thorough study and estimate of all job losses associated with implementation of the rule, both in the short and long term. EPA should make these job loss estimates public. It should also conduct a thorough examination of how a Carbon Pollution Standard may inadvertently create disincentives for companies to continue creating effective non-CCS emission reduction technologies for existing coal-fired facilities.
4. Institute a set of realistic performance standards for different fuels that takes into account their unique properties rather than the “one-size-fits-all” Carbon Pollution Standard.
5. Engage in a thorough analysis of the Agency’s stated claims regarding the long-term economic and logistical viability of CCS.