Business Roundtable Comments on
Carbon Pollution Emission Guidelines for Existing Stationary Sources:
Electric Utility Generating Units; Proposed Rule
Docket ID No. EPA-HQ-OAR-2013-0602

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INTRODUCTION

Business Roundtable is an association of over 200 chief executive officers of leading U.S. companies working to promote sound public policy and a thriving U.S. economy. Business Roundtable member companies produce $7.4 trillion in annual revenues and employ more than 16 million people. Comprising more than a third of the total value of the U.S. stock market, these companies invest $158 billion annually in research and development, equal to 62 percent of private U.S. research and development spending. In addition, Business Roundtable member companies pay more than $200 billion in dividends to shareholders and generate more than $540 billion in sales for small and medium-sized businesses annually. Business Roundtable companies give more than $9 billion a year in combined charitable contributions.

Business Roundtable appreciates the opportunity to comment on EPA's proposed carbon emissions guidelines for existing electric generating units pursuant to Section 111 (d) of the Clean Air Act. In finalizing these regulations, it is of the utmost importance that EPA strikes the right balance between environmental protection and potentially large costs to the economy. These dual imperatives rise and fall together.

These comments identify four areas of concern that merit further consideration before the proposed rules are finalized:

(1) the effects of the proposed rules on U.S. economic competitiveness;

(2) the effects of the proposed rules on the reliability of the U.S. electric power system;

(3) the changes necessary to provide meaningful flexibility for states in implementing the rules; and

(4) the validity of the technical assumptions on which the rules are based.

BUSINESS ROUNDTABLE AND CLIMATE CHANGE

As CEOs who lead major American companies that operate in communities all across the United States and in every economic sector, members of the Business Roundtable care deeply about both the health of the environment and the health of the economy. Consequently, the Business Roundtable has long recognized the need to address climate change. As described in its 2007 Statement on Climate Change:

> Because the consequences of global warming for society and ecosystems are potentially serious and far-reaching, steps to address the risks of such warming

> are prudent even now, while the science continues to evolve. Business Roundtable supports collective actions that will lead to the reduction of GHG emissions on a global basis with the goal of slowing increases in GHG concentrations in the atmosphere and ultimately stabilizing them at levels that will address the risks of climate change.
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> These actions need to be coordinated with efforts to address other urgent world priorities, such as reducing poverty, improving public health, reducing environmental degradation and raising living standards. Reliable and affordable world supplies of energy are essential for meeting these challenges.[1]

Business Roundtable offered a statement[2] upon release of the President's Climate Action Plan in June, 2013. In that statement, the Roundtable articulated the need for an economically sound approach to regulations of emissions from existing power plants:

> Business Roundtable recognizes the potential consequences of climate change and supports both government and private sector actions to reduce greenhouse gas emissions globally. The President's proposals today are a mix of commonsense steps we can all support – such as increasing energy efficiency across all sectors of the economy – and measures that will require additional careful attention to ensure they can be deployed in an equitable and effective global framework. For instance, we look forward to reviewing how the Administration plans to regulate emissions from existing power plants. Partnering with industry and stakeholders will be critical to a smart, economically sound approach.

BUSINESS ROUNDTABLE COMMENTS

I. A Workable, Balanced Rule Is Necessary To Avoid Adverse Effects on U.S. Economic Competitiveness

As Business Roundtable's Statement on Climate Change notes, efforts to reduce GHG emissions must be coordinated with other important priorities, including economic growth and increasing living standards. In addressing the climate challenge, EPA should be mindful of the important role that affordable and reliable supplies of electricity play in ensuring continued U.S. economic growth and job creation.

Reliable and affordable supplies of electricity are a key competitive advantage for U.S. businesses, and are essential for the quality of life we enjoy. This competitive advantage has been increased in recent years, driven in part by new production of clean burning, reliable domestic natural gas. While improving its competitive position, the U.S has also continued to reduce GHG emissions, partially as a result of increased usage of natural gas for power generation. Regulations that jeopardize these advantages will not only stunt U.S. economic growth and job creation, but may also make it more difficult for the

[1] "Climate Change: Business Roundtable Supports Actions to Address Global Warming," A White Paper from Business Roundtable, September 2007, p. 1, available at: http://businessroundtable.org/sites/default/files/Climate_Change_Business_Roundtable_Supports_Actions_to_Address_Global_Warming.pdf.

[2] *See* http://www.whitehouse.gov/blog/2013/06/27/business-leaders-support-president-obamas-plan-reduce-carbon-pollution.

private sector to finance and develop the technologies needed to effectively reduce GHG emissions over the long-term. For these reasons, regulations addressing existing fossil fuel electric generation emissions should be crafted carefully to ensure that we continue to have access to affordable, reliable and diverse supplies of electricity to power our economy.

This proposed rule would result in a fundamental transformation of the electric power sector. If adopted in its current form, the rule would change the way electricity is generated, dispatched and used in the United States, all within a relatively brief period of time. In addition, this rule is going to result in increased electricity prices to consumers and manufacturers, and should be crafted in such a way as to ensure the costs are transparent and justifiable.

II. EPA Should Ensure That The Rule Does Not Jeopardize Bulk Power System Reliability

Recent analysis[3] by the North American Electric Reliability Corporation (NERC), the nation's designated Electric Reliability Organization responsible for overseeing the reliability of the bulk power system in North America, has identified potential concerns regarding electric reliability from the proposed rule. Regional Entities with delegated authorities to ensure the reliability of the bulk electric system also have begun to voice reliability concerns.[4] We ask EPA to take these concerns into consideration.

NERC has highlighted the potential reliability challenges in meeting the 2020 interim targets. In light of EPA's projected coal plant retirements, developing generation necessary to maintain adequate reserves by 2020 (when EPA's interim targets take effect) may present a significant challenge to electric reliability.[5] Permitting and building major electric infrastructure is a complex and lengthy process, and expecting it to occur only a few years after state compliance plans have been adopted is not a realistic planning assumption. As stated by the Midcontinent Independent System Operator, Inc.:

> MISO's review also indicates that the interim targets in the proposed rule will require significant CO2 reductions in the 2020 timeframe. This study indicates that this short timeline may not allow cost-effective, long-term planning. If coal plant retirements are part of the compliance strategy for 2020, corresponding capacity additions (for reliability and resource adequacy) in a two-year window will be difficult if not impossible. MISO's experience is that new gas plant

[3] North American Electric Reliability Corporation, "Potential Reliability Impacts of EPA's Proposed Clean Power Plan," Initial Reliability Review, issued November 5, 2014 (NERC Review), and available at: http://www.nerc.com/pa/RAPA/ra/Reliability%20Assessments%20DL/Potential_Reliability_Impacts_of_EPA_Proposed_CPP_Final.pdf.

[4] *See, e.g.*, the comments submitted by the Southwest Power Pool, Inc. to EPA on October 9, 2014 (SPP Comments), and available at: http://www.spp.org/publications/2014-10-09_SPP%20Comments_EPA-HQ-OAR-2013-0602.pdf; and "Analysis of EPA's Proposal to Reduce CO_2 Emissions from Existing Electric Generating Units," November 2014, by the Midcontinent Independent System Operator, Inc. (MISO) (MISO Study), and available at: https://www.misoenergy.org/Library/Repository/Communication%20Material/EPA%20Regulations/AnalysisofEPAsProposaltoReduceCO2EmissionsfromExistingElectricGeneratingUnits.pdf.

[5] *See generally* NERC Review, p. 2.

> construction typically requires three to six years. If new transmission and gas pipeline additions are needed to accommodate the capacity expansion, this timeline may be even longer. This finding suggests that in order to meet the 10-year average identified in the proposed rule, it is likely that entities will need to take immediate action. Since it is possible that state plans will not be finalized until the 2018-19 timeframe, there will be little time for decisions and implementation for infrastructure changes before 2020.[6]

EPA assumes that natural gas use can increase without the need for major investments in pipeline infrastructure, but NERC points out that critical areas will indeed need additional capital investments.[7] NERC also expresses concern that under the proposed Clean Power Plan timelines, there would be little time to add required pipeline or generating capacity by 2020. In light of similar concerns, the Southwest Power Pool, Inc., is recommending that the schedule for compliance be extended in order to allow for needed electric and gas infrastructure to be identified and constructed.[8]

NERC also has questioned EPA's assumptions regarding the rate of growth in non-hydro renewables.[9] Moreover, EPA's establishment of state goals fails to reflect fully the economic aspects of renewable resources, including key issues such as permitting/siting, the need for new transmission to bring remotely-located resources to the grid, and project financing issues.[10] The time needed for new transmission and related infrastructure expansion again may not align with the Clean Power Plan implementation timeline. Construction of new, high voltage transmission can take from 5-15 years.

In addition, EPA's proposed Clean Power Plan Building Blocks do not directly address grid reliability issues associated with increased variable energy resources (*i.e.*, renewables). Greater amounts of essential reliability services (frequency and voltage support, operating reserves, ramping capability and disturbance performance) will be required to maintain reliability, and the development of processes, tools and operating practices to address operational changes on the system will take time.

Given the concerns expressed by the nation's designated Electric Reliability Organization and other entities with day-to-day responsibility for grid reliability, we respectfully submit that EPA should consider including a reliability assurance mechanism, as has been done with other emissions programs, such as timing adjustments and extensions of compliance deadlines where there is a demonstrated reliability need.[11] Federal Energy Regulatory Commission Chairman LaFleur has indicated interest in such an approach.[12]

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[6] MISO Study, p. 3.
[7] NERC Review, p. 10.
[8] SPP Comments, pp. 2, 10.
[9] NERC Review, p. 11.
[10] NERC Review, p. 12.
[11] The SPP Comments, for example, call for a reliability safety valve, as proposed by the ISO/RTO Council (*see* http://www.isorto.org/Documents/Report/20140128_IRCProposal-ReliabilitySafetyValve-RegionalComplianceMeasurement_EPA-C02Rule.pdf). Similarly, the Electric Reliability Council of Texas' "ERCOT Analysis of the Impacts of the Clean Power Plan" expresses concern that "the timing and scale of the expected changes needed to reach the CO2 emission goals could have a harmful impact on reliability," calls for implementation timeline flexibility, and supports the proposal for a reliability safety

Absent a mechanism to ensure system reliability, EPA should consider undertaking a sensitivity analysis in its Regulatory Impact Analysis for the rule that examines the cost of a less reliable electrical system.

III. Recommended Changes To Achieve State Flexibility

EPA emphasizes the "maximum flexibility" provided for state compliance under the proposed rule utilizing the "best set of cost-effective reductions."[13] However, Business Roundtable remains concerned that some elements of the proposed rule do not provide the flexibility needed to ensure cost-effective emission reductions that are consistent with a state's preferred approach to meeting its 2030 target. These elements include, but are not necessarily limited to, the timing for submittal of state implementation plans (SIPs); the estimation and enforceability of the interim target (*i.e.*, the so-called "glide path"); the lack of appropriate credit for early action; and the possibility of employing a mass-based limit instead of a rate-based limit for the 2030 target.

A. SIP Timing

EPA is proposing that each state submit its implementation plan, along with certain required information, by June 30, 2016. For states that need more time – to issue state regulations, to change state laws, to develop a multi-state plan, etc. – EPA is proposing submittal of (1) an initial plan by June 30, 2016 and (2) a final plan by June 30, 2017 (for a single-state plan) or June 30, 2018 (for a multi-state plan). These deadlines deserve reconsideration. States will need more time than the proposed regulations would provide to issue state regulations, to change statutes through legislative action, and to engage in public dialogue over the optimal approach for meeting the 2030 target. States vary in their capacity to undertake these actions quickly. Furthermore, states that wish to develop a regional compliance approach will face particular pressure in meeting the 2018 deadline.

B. Interim Target

EPA is proposing that states begin required emission reductions by 2020, and achieve full compliance with the emission performance level no later than 2030. States also are required to meet an interim target, which is a ten-year average of the required emission reductions from 2020-2029. SIPs must include emission performance levels anticipated in each year 2020 through 2029. SIPs also must include (1) corrective measures if the

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valve as a mechanism to manage reliability issues. *See* http://www.ercot.com/content/news/presentations/2014/ERCOTAnalysis-ImpactsCleanPowerPlan.pdf.

[12] *See* Responses of FERC Chairman Cheryl A. LaFleur to Additional Questions for the Record, House Energy and Commerce Committee, August 26, 2014, at p. 4: ". . . I would support a carefully designed mechanism to consider reliability if an issue arises," available at: http://docs.house.gov/meetings/IF/IF03/20140729/102558/HHRG-113-IF03-Wstate-LaFleurC-20140729-SD004.pdf.

[13] For example, the EPA "Fact Sheet: Clean Power Plan Flexibility" states: "Maximizing flexibilities – EPA's proposal ensures that states have the flexibility to choose the best set of cost-effective reductions for them. By setting a state-specific goal and allowing states to work individually or in regional groups, EPA is making sure states have the flexibility they need to drive investment in innovation, while ensuring reliability and affordability." *See* http://www2.epa.gov/carbon-pollution-standards/fact-sheet-clean-power-plan-flexibility.

projected versus actual emission performance of affected entities shows an actual performance greater than 10% in excess of projected plan performance for the interim period and (2) a schedule for implementing these corrective measures. In its October 28, 2014 Notice of Data Availability (NODA), EPA sought comments on modifying Building Blocks 1 and 2 such that required emission reductions would be phased in over a longer period of time than the proposed 2020 date. Also in the NODA, EPA sought comment on possible changes to the structure of Building Blocks 2 and 3, which will impact the glide path.

EPA's requirement for states to achieve such a significant portion (roughly 60%-90%) of the required CO_2 emission reductions early in the interim period defeats the intended purpose of providing states flexibility in achieving the required emission reductions. EPA should consider the full range of options to ensure that each state is given the optimum amount of flexibility in developing its preferred approach to achieving the 2030 target.

C. Credit for Early Action

EPA is proposing that emission impacts of existing programs, requirements, and measures that occur during a plan performance period may be recognized in meeting or projecting emission performance by affected EGUs, as long as the action taken under a state program occurs *after* June 18, 2014.

This proposed requirement has raised concerns about emission reductions secured between 2012 (the baseline year) and 2020. Some states have reduced and are expected to reduce emissions substantially beyond "business as usual" (BAU) in this timeframe compared to other states. Understandably, these states would like to be given credit for their early efforts, but the EPA proposal precludes this possibility. Conversely, the proposal actually provides a perverse incentive for states to delay planned emission reductions until SIP approval to ensure full credit in meeting its 2030 target.

EPA should give careful consideration to the closely related issues of establishing the baseline (BAU) and allowing credit for early action.

D. The Mass-Based Limit

EPA is proposing to allow each state to either adopt the rate-based form of the goal established by EPA or an equivalent mass-based form of the goal. A multi-state approach incorporating either a rate- or mass-based goal would also be approvable based upon a demonstration that the state's plan would achieve the equivalent in stringency, including compliance timing, to the state-specific rate-based goal set by the EPA. EPA is proposing that a state clarify in detail in its SIP how it converted the EPA rate-based goal into a mass-based goal.

On November 6, 2014, EPA issued a technical support document showing two potential methods for converting a rate-based goal into a mass-based goal. The first method, based on historical data, produces mass-based equivalent metrics that apply to existing affected EGUs only. The second method, based on a combination of historical data and a projection of future electric demand, produces mass-based equivalent metrics that are inclusive of new fossil fuel-fired sources, in light of the fact that the rule takes comment on the inclusion of new, fossil fuel-fired sources as a component of state plans.

Many states have unique features (transmission constraints, reliability requirements, etc.), and these unique features suggest that a relatively simple EPA methodology for converting from a rate-based goal to a mass-based goal is unlikely to provide enough clarity to states that wish to avail themselves of the option of a mass-based target. Therefore, close collaboration will be required between EPA and each state that chooses to employ a mass-based emission rate. In developing this collaborative process, EPA should provide as much support to the states as possible in terms of technical and analytical resources, including modeling.

E. Not Unduly Impose Regulations on Combined Heat and Power (CHP) Facilities

Industrial CHP facilities are used primarily for manufacturing applications to produce on-site electricity and thermal energy and are not intended to replicate the role of utility generators. However, the proposed rule's applicability criteria defining affected electric generating units risks qualifying some industrial CHP units as affected entities that must be addressed in state plans. Industrial CHP units further the intent of the proposed rule by providing efficient and less carbon-intensive electricity and thermal energy. They also provide industrial market participants with an effective way to hedge electricity costs. To ensure that these facilities are not defined as affected entities, and to remove potential disincentives for the use of industrial CHP, EPA should clarify that affected units do not include units that produce significant amounts of thermal energy.

IV. EPA Technical Assumptions Must Be Correct

Questions have been raised regarding the validity of certain of EPA's assumptions that underpin its four Building Blocks, which are used for establishing state-by-state emissions targets. For example, the Electric Power Research Institute (EPRI) has raised significant issues with respect to the Building Blocks proposed by EPA.[14] Specifically, EPRI observes that coal generation heat rate improvement estimates should, but do not, take into account EPA environmental control regulations.[15] Compliance with other EPA regulations paradoxically can have the effect of reducing coal unit efficiency, thus increasing CO_2 emissions. EPRI also recommends that heat rate improvements be analyzed on a state or regional basis, not a national average, because the increasing use of renewables and natural gas under the rule may actually increase heat rates at coal units because these units will be run at less than optimal efficiency.[16] NERC also questions whether heat rate improvements at the level projected by EPA are achievable, noting that "many plant efficiencies have already been realized and economic heat rate

[14] Comments of the Electric Power Research Institute on Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units, October 20, 2014 (EPRI Comments), available at: http://www.epri.com/abstracts/Pages/ProductAbstract.aspx?ProductId=3002004658.

[15] *See* EPRI Comments, pp. 3, 10. NERC also noted the generation reducing effects of post-combustion environmental controls being required at coal-fired generators to comply with MATS/CWA 316(b) requirements. *See* NERC Review, p. 8.

[16] EPRI Comments, pp. 3-4.

improvements have been achieved."[17] NERC has concluded that the assumed heat rate improvements across the entire coal fleet are "unlikely."[18]

EPRI also stresses that assumptions regarding 70% capacity factors for NGCC units do not consider market prices, availability of pipeline infrastructure or firm pipeline capacity.[19] Among the additional conclusions reported in the EPRI Comments:

- assumptions regarding renewable generation should take into consideration technology costs, fuel costs, network effects and regulatory requirements;[20] and
- nuclear assumptions are uncertain because EPA has not considered the lifetime of existing nuclear units, when many of the units included in EPA's assumptions will reach their license limits by 2029.[21]

Business Roundtable asks that EPA carefully consider comments that question the assumptions that underlie the proposed rules. Only in this way can the nation be assured that the best scientific basis has been relied upon for the final regulations.

CONCLUSION

Given the number of complex issues and the legal uncertainty surrounding the proposed rule, EPA should consider re-proposing the rule and requesting additional comments. Business Roundtable looks forward to working with EPA on how best to achieve cost-effective greenhouse gas emissions reductions while continuing to support economic growth and job creation.

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[17] NERC Review, p. 2.
[18] NERC Review, p. 8.
[19] EPRI Comments, p. 4. Moreover, EPRI notes that "[e]stablishing a dispatch-based mitigation goal that impacts other existing generation types without thorough consideration of the impacts to resource adequacy may significantly degrade reliability."
[20] EPRI Comments, p. 5.
[21] *Id*.