**Draft Outline for State Comments on EPA’s Proposed Affordable Clean Energy Rule**

Comments Due to EPA October 31, 2018

1. **Introduction**
   1. Climate change effects in states – both now and projected
      1. **The global atmospheric carbon dioxide (CO2) concentration has now passed 400 parts per million (ppm), a level which has not been reached in over 3 million years.** Since the start of the 20th Century, the earth has warmed by 1.8oF[[1]](#footnote-1) and the last three years have been the warmest years on record**.** It is extremely likely that human activities, particularly greenhouse gases emission through burning of fossil fuels, are the dominant cause of the observed warming. An increase in observed climatological/meteorological extremes like heatwaves, wildfire events, drought, flooding, and storms have also been observed.
      2. The Fourth National Climate Assessment, released in 2017, reported that “Without major reductions in emissions, the increase in annual average global temperature relative to preindustrial times could reach 9°F (5°C) or more by the end of this century.” A slightly more conservative estimate from an August 2018 Environmental Impact Statement conducted by the National Highway Traffic Safety Administration (NHTSA) concludes that the planet is projected to warm by 7oF (4oC) by the end of the century[[2]](#footnote-2).
      3. In an IPCC special report released in early October 2018, it was stated that there is high confidence that global warming is likely to reach 3oF (1.5°C) between 2030 and 2052 if temperatures continues to increase at the current rate. Based on several lines of evidence, the intensity and frequency of some climate and weather extremes are also projected to increase.
      4. Between 1895 and 2011, temperatures in the Northeast increased by almost 2 ̊F (0.16 ̊F per decade), and precipitation increased by approximately five inches, or more than 10% (0.4 inches per decade)[[3]](#footnote-3).
      5. Between 1980 and 2018, average annual temperature in the Northeast has risen by over 2oF. Over the same period, winter temperatures have warmed by 3oF3.
      6. The Northeast has experienced a greater recent increase in extreme precipitation than any other region in the United States; between 1958 and 2010, the Northeast saw more than a 70% increase in the amount of precipitation falling in very heavy events.
      7. Direct and remotely sensed measurement of sea level have shown that the annual mean level of the ocean surface is rising. In the Northeast, coastal flooding has increased due to approximate 1 foot rise in sea level since 1900. This rate of sea level rise exceeds the global average of approximately 8 inches, due primarily to land subsidence and thermal expansion of the Northeastern coast. Communities in Connecticut should expect that coastal flooding intensity and frequency to increase in coming decades due to accelerating trends in coastal erosion, extreme precipitation, and storms.
      8. The Northeast region is highly vulnerable to changes in mean and extreme climate due to regional characteristics like a dense population and aging infrastructure. In conservative estimates, climate projections for the Northeast robustly indicate that annual mean temperature will rise by 5-10oF by the end of the 21st Century.
      9. Mean annual precipitation is also likely to increase, particularly in winter and spring seasons, contributing to increased flooding risk through the region.
      10. Additionally, weather and climate extremes are projected to be more frequent and intense which will impact both natural and socioeconomic sectors. As temperatures increase along the coast, humidity will also rise, resulting in amplified heat stress during summer months. For inland areas, drought events will become more severe and longer-lived, causing increased competition for limited water resources, agricultural crop damage, ecosystem stress, and risk of wildfire.
      11. In moderately conservative estimates, sea level rise will be 0.76 ft (0.23 meters) higher than 2000 levels by 2050[[4]](#footnote-4).
   2. Our states have significant experience and a critical role in regulating greenhouse gases (GHGs). We have seen the effectiveness of reducing the use of higher-emitting generation sources and increasing deployment of lower carbon sources.
      1. Connecticut’s Comprehensive Energy Strategies (CES) – Yearly plans to evaluate GHG mitigation options at various time horizons, which emphasize near term strategies for purposes of compliance with the 2020 GHG goals.
      2. Connecticut Energy Efficiency Fund supports a variety of programs that provide financial incentives to help Connecticut consumers reduce the amount of energy used in their homes and businesses.
      3. RGGI mention?
      4. RPS
   3. CAA and the history of cooperative federalism.
   4. EPA has a legal obligation to mitigate carbon emissions from existing fossil fuel-fired EGUs. (JH)
      1. The power sector is currently the second largest source of GHG emissions in the United States, surpassed only by the transportation sector. Recent progress on power sector emissions reductions have occurred in part because of market shifts but also due to leading states’ efforts. Looking forward, the power sector is expected to also form the basis of decarbonizing the transportation and buildings sectors, as they are electrified—placing even greater importance on decarbonizing the power sector.
      2. We agree with EPA that regulations must correct the “market failure by causing affected EGUs to begin to internalize the negative externality associated with CO2 emissions.” (83 FR 44749)
   5. There is tremendous potential for decarbonizing the power sector, as the cost of renewable energy resources and natural gas generation have fallen in recent years. Regulatory certainty is needed to ensure that these trends continue and accelerate. (JH)
2. **BSER analysis must consider all available emission reduction strategies and reflect the methods being deployed by states and power companies to meaningfully reduce GHG and other emissions from existing power plants.** (C-2)
   1. The CPP’s application of BSER reflected the significant emission reductions that the power sector could achieve, as well as the way the interconnected power grid actually operates and the way that power companies have been cost-effectively reducing power sector emissions for decades: reducing the utilization of high-emitting plants and increasing the utilization of lower- or zero-emitting plants.
   2. The CPP emission targets are trend-following in that the power sector has been transitioning to cleaner generation and will continue to do so. The targets are very achievable, without compromising reliability or affordable electricity. (JH)
      1. In fact, electricity rates have declined or grown more slowly in recent years, even as renewable energy sources have deployed at unprecedented rates.
      2. This EPA proposal is focused on the past with its emphasis on source-specific regulation of coal plants. The proposed approach is incompatible with trends in the power sector, where the percentage of generation from coal has declined from about 50% in 2007 to about 30% in 2017 and is forecast to decline even further. Focusing standards on boiler improvements will direct investment into a technology that is not cost effective and is on the decline.
   3. The experience of our states and power companies within our states confirms that the best system for reducing carbon pollution necessarily includes optimizing the generation of electricity to reduce emissions—reducing the utilization of higher emitting sources of power generation—and that this system can achieve significant, cost-effective emission reductions. (JH)
   4. Any replacement for the CPP must—as the CPP did—take into account the way the power sector operates in practice, and reflect the systems being deployed by states and power companies to reduce emissions of both GHGs and other pollutants from power generation (see public comments filed by utilities on the CPP repeal and ANPRM. E.g.: Energy Strategy Group & Exelon). (JH)
   5. In ACE, EPA arbitrarily fails to appropriately consider and fully evaluate other systems of emission reduction that would achieve far greater pollution abatement, including co-firing with natural gas or converting to natural gas and carbon capture and sequestration. All of these systems would achieve far greater abatement, and thus be superior candidates for the “best” system of emission reduction than the proposed approach.
      1. A BSER based on heat rate improvements is not an effective emission reduction system:
         1. It will not achieve meaningful emission reductions, and in part because the reductions it does achieve could easily be eroded or even eliminated through emissions increases due to increased dispatch (due to lowered fuel costs) or coal plant operational lifetime (caused by the investments made to achieve heat rate improvements). (C-9)
         2. A recent RFF analysis of standards similar to what is proposed showed heat rate improvements were accompanied by an increase in emissions in 8 states.
      2. The proposal’s lack of market-based solutions and refusal to use the structure of the power grid will:
         1. Limit innovation in generation technology, including transmission upgrades, which would make the grid more reliable, flexible, and resilient. It will also miss an opportunity to drive technological advancement and industry growth for lower-emitting generation technologies.
         2. Constrain the ability of states to take innovative approaches to regulation that may prove more cost-effective and preferable for states, our constituents and our stakeholders.
3. **As the RIA demonstrates, EPA is proposing to replace the CPP with an emission guideline that would achieve significantly reduced emission abatement at equivalent or greater cost. This cannot represent the *best* system of emission reduction under the statute. (C-2)**
   * 1. EPA admits that the estimated costs of the CPP have come down considerably because of industry trends on technology and natural gas prices. Also, one of EPA’s scenarios for ACE would increase costs, compared to the CPP.
     2. The RIA demonstrates that the emissions abatement achieved by the proposal is entirely hypothetical, as ACE would not require any specified level of emission reductions. Thus, it cannot represent the best system of emission reduction or fulfill EPA’s obligation to identify the best system of emission reduction and the emission reductions that can be achieved by deployment of that system.
     3. EPA must fully consider the public health implications of ACE.
        1. RIA estimates increases in pollution relative to the CPP. These increases clearly disqualify EPA’s definition of BSER as one that satisfies the Clean Air Act’s requirements that it represent the best system of emission reduction.
        2. EPA estimates up to 1,400 premature deaths as a result of ACE.
        3. There is no scientific basis for the change in analysis for EPA’s estimate of health benefits of PM2.5 reductions.
           1. EPA must err on the side of a more inclusive consideration of regulatory impacts and costs, and EPA’s proposed approach does not reflect an inclusive consideration of the forgone health benefits of the CPP. (*See,* Michigan v. EPA, 135 S.Ct. 2699 (2015)).
        4. Ignoring ancillary benefits from the reduction in conventional pollution is not consistent with standard practice or with OMB guidance (A-94).
        5. Further, the SCC is a measure of the climate change impacts on the economy cause of CO2 emissions and is used to estimate the benefits of a rule that would reduce CO2 emissions, and therefore, reduce climate impacts and associated costs. EPA’s continued decision to limit cost estimates to those impacts within the United States and use of a higher discount rate is inconsistent with standard practice.
           1. OMB Circular A-4, issued on Sep 17, 2003, provides guidance to Federal agencies on the development of regulatory analysis, including on the use of discounting methods. For rules that have intergenerational benefits or costs Circular A-4 suggests the inclusion of lower rates: “[…] *consider a further sensitivity analysis using a lower [than 3 percent] but positive discount rate in addition to calculating net benefits using discount rates of 3 and 7 percent*.”
4. **EPA fails to establish a minimum standard to ensure that dangerous pollution is addressed in every state.**”
   1. The approach proposed by EPA in the ACE rule fails to achieve this requirement as it undermines the level playing field for all states and affected sources that federal environmental regulations must provide.
   2. EPA must set the minimum standard and the flexibility states should have consistent with section 111(d) is to design a compliance plan that is tailored to state-specific considerations to ensure affected sources can capture least-cost reduction opportunities for their customers. Such an approach would fulfill the Clean Air Act’s goal of avoiding a regulatory “race to the bottom” across states.
      1. EPA Role: The proposal—which is simply a list of heat rate improvement technologies to be considered by states—also fails to identify a “best system of emission reduction” and the emission reductions that could be achieved by deploying that system. By only listing technologies, EPA’s fails to satisfy its obligations under the Clean Air Act and fails to ensure the protection of Americans from dangerous air pollution. In contrast, the CPP established a clear and well-defined floor to ensure that dangerous pollution would be addressed in all parts of the country. States always retain the authority to require more to address state-specific concerns, but the role of the federal government to set the minimum standards is essential and required by the Clean Air Act. (C-14)
      2. States Role:
         1. The proposed rule would allow sources in states with weak or no requirements to emit more pollution, negating any benefits of the emission reductions achieved by other states. This leakage increases emissions and thereby impedes states’ ability to protect the health of our residents.
            1. We are concerned that states will have so much discretion that some could determine that little to no emission reductions are cost-effective or required and that this will drive investments in higher emitting sources rather than driving investments in lower-cost emission reduction opportunities. Both have the potential to increase the overall emissions of the sector and, as a result, ACE fails to address the critical issue of climate change.
            2. The proposed approach fails to give states the guidance they need to effectively establish standards of performance for existing power plants that will meet the statutory requirements.
         2. Significant Administrative Burden - The proposal will place time and cost intensive burdens on states to make unit-by-unit determinations of the standard of performance.
         3. Remaining Useful Life – While the Clean Air Act allows states to consider remaining useful life in developing states plans, the Act does not allow a state to use this language to avoid achieving emission reductions. (C-22, 24)
         4. Form of the Standard- States should have the flexibility to use rate or mass-based standards provided they are at least as stringent as the federal standard. (C-20) A mass-based standard ensures that the overall emissions abatement is achieved, which best fulfills the statutory purpose and ensures the protection of our residents, lands and resources from dangerous air pollution.
   3. The proposal fails to require compliance by specific dates, again failing to protect Americans or establish an equal playing field for states and regulated sources. (C-13)
   4. The proposal’s unit-by-unit determination will invite litigation over each state plan which will create uncertainty and costs on a unit-by-unit basis.
   5. This outcome is contrary to the Clean Air Act obligation to reduce and prevent pollution endangering the health and welfare of Americans.
5. **EPA Foreclosure of Compliance Flexibility Fails to Reflect BSER and is Contrary to States’ Rights to Use Most Cost-Effective Approaches**: The mere fact that additional reductions can be achieved at lower-costs through trading demonstrates that EPA’s definition of BSER is arbitrary and fails to reflect the *best* system of emission reduction. (C-17, 25-43)
   1. Our states have experience with the trading programs and have seen significant benefits including achieving meaningful emission reductions at lower costs for consumers.
   2. We are concerned that EPA’s definition of BSER could preclude using the Regional Greenhouse Gas Initiative (RGGI) or Western Climate Initiative (WCI) to comply with the standard. Also, EPA’s inside-the-fence approach would impose an additional compliance regime on RGGI states that would increase administrative costs with no additional environmental benefits.
6. **EPA’s Proposed Regulatory Changes are Not Necessary and Create Unnecessary Delays to Reducing Emission.** (C-48 through 56)
   1. There is no justification for the proposed delays in compliance times. These very significant expansions of compliance times are counterproductive and will expose Americans to greater quantities of dangerous air pollution, contrary to the purpose of the Clean Air Act.
   2. The current deadlines are generally achievable, and the existing regulations allow EPA to extend schedules if necessary.
7. **EPA’s Proposed Revisions to the New Source Review Program are Contrary to the Clean Air Act’s Statutory Language and Clear Objectives**. (C-59 though C-71)
   1. EPA is proposing to eliminate coverage of the New Source Review (NSR) program for modified sources unless the modifications are causing *both* an increase in yearly emissions *and* an increase in the hourly emissions rate. This allows a unit to increase its annual capacity (i.e., the number of hours it operates each year), which has the potential to increase their *actual* emissions and prevent states from maintaining or attaining the National Ambient Air Quality Standards (NAAQS), which is the fundamental purpose of the NSR program.
      1. As EPA explains: “EPA's New Source Review (NSR) permitting program protects air quality when factories, industrial boilers and power plants are newly built or modified. NSR permitting also assures that new or modified industries are as clean as possible, and advances in pollution control occur concurrently with industrial expansion.” (https://www.epa.gov/nsr, visited 9/13/2018)
      2. The proposed change to NSR would not only apply to coal units regulated under the proposed replacement for CPP, it would also apply to all EGUs. This could have even greater negative implications for air quality, which are not modeled or considered under the RIA.
   2. EPA’s proposal is contrary to the objectives Congress established with NSR—to ensure that major investments in and changes to existing sources that increase the pollution burden created by those sources are accompanied by a review to ensure that those sources are installing controls to reduce emissions. The pollution burden is created by an increase in total emissions from a source—not an emissions rate—as the increase in total emissions is what affects ambient air quality and matters to the affected communities.
      1. Increasing the actual tons of emissions from a plant is contrary to the plain language of the Act (e.g., 100/250 tonnage threshold/offset language) and case law.
   3. The NSR program complements both the NAAQS and NSPS programs.
      1. Congress intended NSR to ensure that pollution from new sources and additional pollution from existing sources is reduced as much as possible as the area works to achieve or maintain a safe level of air quality.
      2. NSR also ensures that when new sources are built, or existing sources undergo major modifications, the pollution controls adopted by those sources are the most effective available—particularly when what is available for that unit surpasses the “best system of emission reduction” identified in the relevant New Source Performance Standards for new or modified sources or Emission Guidelines for existing sources.
      3. There are existing regulatory tools that states and EPA have to ensure these programs can continue to work hand-in-hand and ensure protection of the public health of our residents.
8. **Conclusion**
   1. There is an urgent need to reduce the emissions that are causing climate change.
   2. Residents and state lands and resources are experiencing harmful climate change impacts.
   3. EPA has a legal obligation to finalize a rule that results in significant reductions from existing power plants
   4. The proposed approach fails to ensure that states will develop standards that achieve meaningful emission reductions. It will not only fail to mitigate dangerous carbon pollution, but could potentially result in worse air quality and greater health concerns for our states than having no standard at all.
   5. The RIA is inadequate because it undervalues the health of the people, lands and resources in our states (e.g., PM2.5 and domestic social cost of carbon) and it does not attempt to estimate the air quality implications of the proposed changes to NSR.
   6. The proposed draft ignores electric power industry trends, likely resulting in more expensive and less environmentally beneficial outcomes.
   7. The potential race to the bottom undermines our states’ ability to protect our residents and natural resources and ensure continued progress to address climate change impacts in our states.
   8. The proposed approach fails to satisfy EPA’s legal obligation under the Clean Air Act.

**Other possible points**:

1. Because GHG emissions are emitted by a very large number and types of sources, effectively mitigating climate change under the Clean Air Act requires achieving reductions from a wide variety and number of sources, each of which are individually “incremental” relative to the scale of atmospheric concentrations of GHGs.
   1. In the words of the Supreme Court, “Agencies, like legislatures, do not generally resolve massive problems in one fell regulatory swoop.” *Massachusetts v. EPA*, 549 U.S. 497 at 524 (2007). That each policy is addressing only one part of the greater problem does not make it any less vital—to the contrary, it is only by addressing all of the major emission sources, and by providing a regulatory framework that provides the certainty needed for investment and innovation in emission reducing technologies and systems, that we can effectively address this problem.

1. **Wuebbles**, D.J., D.W. Fahey, K.A. Hibbard, B. DeAngelo, S. Doherty, K. Hayhoe, R. Horton, J.P. Kossin, P.C. Taylor, A.M. Waple, and C.P. Weaver, 2017: Executive summary. In: *Climate Science Special Report: Fourth National Climate Assessment, Volume I* [Wuebbles, D.J., D.W. Fahey, K.A. Hibbard, D.J. Dokken, B.C. Stewart, and T.K. Maycock (eds.)]. U.S. Global Change Research Program, Washington, DC, USA, pp. 12-34, doi: [10.7930/J0DJ5CTG](http://doi.org/10.7930/J0DJ5CTG). [↑](#footnote-ref-1)
2. Katz, K. (2018). *Draft Environmental Impact Statement for the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Year 2021–2026 Passenger Cars and Light Trucks.* Docket No. NHTSA-2017-0069 [↑](#footnote-ref-2)
3. Horton, R., Yohe, G., Easterling, W., Kates, R., Matthias, R., Sussman, E., Whelchel, A., Wolfe, D., and Lipschultz, F. (2014). Ch. 16: Northeast. *Climate Change Impacts in the United States: The Third National Climate Assessment*, J. M. Melillo, Terese (T.C.) Richmond, and G. W. Yohe, Eds., U.S. Global Change Research Program, 16-1-nn. [↑](#footnote-ref-3)
4. O`Donnell, J. (March 27, 2018). *Sea Level Rise in Connecticut*. Draft Report, Connecticut Institute for Resilience and Climate Adaptation. [↑](#footnote-ref-4)