



## Midwestern Power Sector Collaborative

Initial Recommendations to the U.S. Environmental Protection Agency on Regulation of Existing Power Plant Sources under Section 111(d) of the Clean Air Act

### 1. Introduction

The Great Plains Institute, Pace Energy and Climate Center and World Resources Institute convened the Midwestern Power Sector Collaborative (Midwestern Collaborative), a diverse group of regional stakeholders formed to discuss pending and anticipated regulations to control greenhouse gas emissions from the power sector. Collaborative stakeholders include electric power providers, environmental organizations and state regulators (see participant list following recommendations), each with an interest in the draft new source performance standards for the power sector and the anticipated federal guidelines for state plans under section 111(d) of the Clean Air Act.

Some participants in this dialogue support federal regulation of greenhouse gases from existing power sector sources under the Clean Air Act and encourage the U.S. Environmental Protection Agency (EPA) to move forward with a proposed rule. Other dialogue participants prefer congressional action, if federal policy-makers seek additional greenhouse gas emissions reductions.

However, recognizing that EPA has announced plans to issue a proposed rule for existing sources, dialogue participants jointly desire the opportunity to provide the following consensus recommendations to EPA regarding how best to craft a rule and ensure that Midwestern states and the region are treated appropriately.

This working document articulates points of common ground at this time for EPA consideration. Midwestern Collaborative participants will build off this effort and make further joint recommendations to EPA in the future, even as they continue to provide their own input to the agency individually as power providers, environmental organizations and state regulatory agencies, respectively.

## **2. Principles for Development of Standards of Performance**

In developing federal guidelines to states establishing standards of performance under section 111(d) of the Clean Air Act, the EPA should:

- 2.1. Recognize that standards of performance have the potential to drive reductions of greenhouse gas emissions from the electric sector, while maintaining system reliability and affordability for customers.
- 2.2. Provide long-term investment signals and define a pathway to assure meaningful, cost-effective limits on greenhouse gas emissions from the electric sector over time.
- 2.3. Recognize and also provide states with the flexibility to acknowledge appropriately the early and ongoing actions of states, utilities and independent power producers to improve the carbon profile of existing portfolios and plants.
- 2.4. Provide states substantial flexibility, as is contemplated by the Clean Air Act, in how required reductions are achieved.
- 2.5. Allow states the flexibility inherent in the rules to capture additional benefits for the environment, consumers, and public health.
- 2.6. Enable the utilization of state clean energy programs and policies, including but not limited to renewable and advanced energy standards, energy efficiency standards, incentives for lower carbon technologies including carbon capture, utilization and storage, and emissions reduction projects that result in verifiable carbon dioxide emissions reductions within the power sector, to maximize the cost effectiveness of achieving greenhouse gas emissions reductions from electricity generating units.
- 2.7. Ensure that rules and guidelines to states and state programs are legally durable and as cost-effective as possible within the requirements of the Clean Air Act.
- 2.8. Support, and not require or create barriers to, harmonization across state boundaries, while permitting individual states to exceed federal requirements.
- 2.9. Promote regulatory certainty, thus providing for consistent, long-term investment signals.
- 2.10. Avoid creating unintended incentives to continue operating inefficient and higher-emitting electric generating units beyond when they might otherwise be repowered or retired.

- 2.11. Credit and enable efforts to deploy energy efficiency and cleaner energy sources.
- 2.12. Allow units to comply using renewable electric generation or electric generation with carbon capture, utilization and storage in other states, and articulate a process to prevent double counting.
- 2.13. Consider changes to the electric system as a result of compliance with other EPA regulations.

### **3. Considerations for Form and Stringency**

- 3.1. EPA should establish the minimum stringency states must meet but allow states to exceed the required level of reductions.
- 3.2. EPA should consider different types of rate-based and mass-based standards, or their equivalent.
- 3.3. In proposing the level of the standard, EPA should enable states to use averaging and/or crediting programs that enable more cost-effective reductions, including the reasonable assumption that states will adopt plans containing one or more flexibility mechanisms to lower costs.
- 3.4. In determining the best system(s) of emission reduction, EPA should consider a number of factors, including, but not limited to, technology type; fuel; past utilization or annual capacity factor; historic emissions rates, the impact of new and forthcoming non-GHG environmental regulations and their effect on utilization, adequately demonstrated GHG pollution reducing technologies, and potential impact on reliability.
- 3.5. Stringency at the outset of the program should be aligned with technologies adequately demonstrated. As lower-emitting technologies improve and costs decline, the stringency of the program should increase.

### **4. Early Action**

- 4.1. Crediting early action is critical to ensuring that ratepayers receive the full value of state policies and industry investments that result in greenhouse gas emissions reductions, and to encourage states, utilities and electric power producers to take such actions in the future.

### **5. State Plans under Section 111(d)**

- 5.1. In developing its state plan under section 111(d) of the Clean Air Act and demonstrating equivalency, a state should be granted substantial flexibility in determining the “standards of performance” that will apply to the state’s existing

sources. States should have the flexibility to propose a “system of emission reduction” for its state or region and that system need not be the same as the system(s) described in EPA’s guideline as long as EPA deems that it delivers equivalent reductions to those specified in the federal guideline.

5.2. States should harness the flexibility available to them in complying with federal EPA guidelines. Sources should be able to meet a state’s standards of performance through any activity that reduces direct emissions from fossil fuel combustion at power plants. States may also determine additional actions that reduce the emissions associated with electricity production, including but not necessarily limited to:

- 5.2.1. Compliance with state renewable energy, clean energy and energy efficiency standards and programs;
- 5.2.2. Power plant retirements;
- 5.2.3. Addition of new renewable energy, clean energy and energy efficiency standards, programs and investments beyond existing requirements;
- 5.2.4. Fuel-switching or co-firing with a lower-emitting fuel;
- 5.2.5. Other on-site reductions, including station power load reduction and scrubber recycle options to reduce upstream and on-site CO<sub>2</sub> emissions;
- 5.2.6. Demand side management, load shifting and demand response (curtailment versus on-site generation);
- 5.2.7. Carbon capture, utilization and storage through CO<sub>2</sub>-enhanced oil recovery, saline formation and other geologic storage;
- 5.2.8. Utilization of waste heat and generation by combined heat and power units;
- 5.2.9. Power plant boiler heat rate improvements;
- 5.2.10. Generator turbine efficiency increases; and
- 5.2.11. Improvements in transmission and distribution infrastructure to reduce line loss.

5.3. EPA should work with states to develop appropriate measuring and monitoring protocols for the options identified in 5.2, where necessary.

5.4. In assessing whether a state plan meets the requirements of the federal guidelines, EPA should interpret the term “best system [or systems] of emissions reduction” in

a way that affords sources the broad range of emission reduction opportunities set out in 5.2. States should be free to propose the “system” after consultation with their stakeholders. EPA should allow states sufficient time for that consultation to occur.

5.5. Without limiting a state's flexibility to propose a different “system of emission reduction”, EPA should include and recognize the following two approaches, among others, as available systems of emission reduction for states:

5.5.1. The Portfolio Approach. Under this approach, a state would develop a plan that:

- (a) applies federal guidelines to establish emissions reductions based on covered existing generation in the state; and
- (b) permits the entity to achieve reductions across its system through a wide variety of compliance pathways, including those set out in section 5.2.

A state's plan should be approvable so long as the reductions are equivalent to or greater than the reductions EPA would achieve through the standard set out in the section 111(d) guideline regulations.

5.4.2 State Average CO<sub>2</sub> Emission Rate Approach. Under this approach, a state will develop a plan that reduces that state's annual average carbon dioxide emissions rate from covered generators by a set percent and allows those reductions to come from:

- (a) on-site emissions reductions;
- (b) emission credit trading that allows owners and operators to change unit dispatch or implement other measures in ways that reduce that state's annual average emission rate; and
- (c) other measures outlined in 5.2 above that reduce that state's annual average emission rate from covered generators.

5.6. EPA should propose a clear methodology by which states may demonstrate that their programs achieve emission reductions equal to or greater than any reductions required by the EPA guideline. The methodology should be flexible enough to accommodate state plans that differ in manner of regulation from those described by EPA in its emissions guidelines or those EPA might impose under section 111(d) (2) of the Act.

5.7. Any state program that effectively limits or reduces emissions from the electricity sector should be allowed to be included in a state's 111(d) plan if the plan can demonstrate reductions equal or greater than any emission reductions required by the EPA guideline.

- 5.8. EPA should allow a state participating in a multi-state program to propose that participation in the program should meet the state's obligations under section 111(d) of the Act, as long as EPA deems that it delivers equivalent reductions to those specified in the federal guideline.
- 5.9. EPA should preserve state roles as the primary implementers of performance standards.
- 5.10. EPA should adopt a process for evaluating state plans and determining their equivalency with federal guidelines in consultation with states.

# Midwestern Power Sector Collaborative Participants and Observers

## State Regulators

- Vince Hellwig, Chief, Air Quality Division, Michigan Department of Environmental Quality
- Doug Scott, Chairman, Illinois Commerce Commission
- David Thornton, Associate Commissioner, Minnesota Pollution Control Agency
- Shannon Whiton, Public Utilities Engineer, Michigan Public Service Commission

## Regulated Utilities

- Jack Ihle, Director of Environmental Policy, Xcel Energy
- Greg Ryan, Senior Technology Specialist, DTE Energy, Inc. (Observer)<sup>1</sup>

## Generation and Transmission Cooperatives

- Bob Ambrose, Director, Governmental Affairs and Mary Jo Roth, Manager, Environmental Services, Great River Energy
- Steve Tomac, Senior Legislative Representative, Basin Electric Power Cooperative
- Brian Warner, Vice President, Environmental Strategy, Wolverine Power Cooperative

## Merchant Power Provider

- Bill Constantelos, Managing Director, Environmental Services, Midwest Generation

## Municipal Joint Action Agency

- Andy Kellen, Assistant Vice President for Power Supply Resources, WPPI Energy (Observer)<sup>2</sup>

## Environmental Organizations

- Trent Dougherty, Managing Director, Legal Affairs, Ohio Environmental Council
- Steve Frenkel, Midwest Director, Union of Concerned Scientists
- Keith Reopelle, Senior Policy Director, Clean Wisconsin
- Conrad Schneider, Advocacy Director, Clean Air Task Force

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<sup>1</sup> DTE Energy supports and has actively contributed to the stakeholder dialogue in the Midwestern Collaborative. However, in deference to its role with the Edison Electric Institute, DTE Energy prefers to remain as an observer and refrains from formally endorsing these recommendations.

<sup>2</sup> WPPI Energy just joined the Midwestern Collaborative and will participate with the group in development of further recommendations to EPA in the future.