Industrial Energy Efficiency and the Clean Power Plan
A Briefing Packet for States

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Summary of the Opportunity

The US Environmental Protection Agency (EPA) has confirmed that states can use industrial efficiency as one way to meet their emission's targets under the Clean Power Plan. Energy efficiency will be the cornerstone of a least-cost compliance strategy. Industrial energy efficiency represents not only an opportunity for achieving significant, low-cost emissions reductions, but also a means of supporting in-state jobs, economic competitiveness, and improved energy reliability.

The resources in this packet have been compiled to help states understand the potential for industrial energy efficiency, highlight best practices in policy and program design, and provide guidance for including industrial energy efficiency as a component of a state compliance plan.[1] This packet also includes technical assistance resources for manufacturers, along with a database of incentives available to industry, as the public and private sectors will need to work in partnership to pursue this pathway for compliance.

We understand that time is of the essence, which is why we have mobilized to assist you in your planning efforts. David Gardiner & Associates convenes an informal committee of representatives from leading organizations focused on industrial energy efficiency that are prepared to provide their expertise as you explore compliance options.[2] Several of these organizations worked together to develop this briefing packet.

Key Resources for States

I. Market Assessment

***Barriers to Industrial Energy Efficiency*. 2015. US Department of Energy (DOE).**
This study examines barriers that impede the adoption of energy-efficient technologies and practices in the industrial sector and identifies successful examples and opportunities to overcome these barriers. The conclusions emphasize the important role that industrial energy efficiency has in the United States and its potential to continue to help make American industrial sectors stronger, cleaner, and more efficient for decades to come. Available at: http://energy.gov/sites/prod/files/2015/06/f23/EXEC-2014-005846_5%20Study__0.pdf.

***Combined Heat and Power: A Clean Energy Solution.* 2012. DOE and EPA.**

This paper provides a foundation for national discussions on effective ways to reach the Obama Administration's goal to achieve 40 gigawatts (GW) of new, cost-effective CHP by 2020. It includes an overview of the key issues currently impacting CHP deployment and the factors that need to be considered by stakeholders participating in the dialogue. Available at: http://www.epa.gov/chp/documents/clean_energy_solution.pdf.

[1] All materials included in this briefing packet were published prior to the release of the final rule on August 3, 2015.

[2] The following organizations participate in the Industrial Coordinating Committee: American Council for an Energy-Efficient Economy, Advanced Energy Economy, Alliance for Industrial Efficiency, Alliance to Save Energy, Ceres, the Environmental Defense Fund, the Great Plains Institute, the Heat is Power Association, the Idaho Conservation League, the Institute for Industrial Productivity, the Keystone Energy Efficiency Alliance, the Midwest Cogeneration Association, the Midwest Energy Efficiency Alliance, Natural Resources Defense Council, the North Carolina Sustainable Energy Association, the Southeast Energy Efficiency Alliance, the Southwest Energy Efficiency Project, the Ohio Environmental Council. Participation does not equate endorsement of all products and positions of the Industrial Coordinating Committee.

***The Opportunity for Combined Heat and Power in the United States*. 2013. American Gas Association (AGA) and ICF International.**
This report provides a state-by-state market assessment of CHP potential in the United States, with a focus on impacts to the natural gas industry. It includes a history of CHP development, characteristics of CHP, discussions of emerging drivers, market trends, and suggestions on how utilities, policy makers, and other stakeholder groups can work together to overcome technical and regulatory barriers to enable the wider adoption of CHP in the United States. Available at: https://www.aga.org/opportunity-chp-us-may-20node3.

***Waste Heat to Power Market Assessment.* 2015. Oak Ridge National Laboratory and ICF International.**
This report provides a comprehensive look at waste-heat sources across a wide variety of industrial sectors and processes in the U.S. and assesses the opportunity to deploy waste heat to power (WHP) technologies. It considers both high and low temperature waste heat streams and describes the technologies, market sectors, existing installations, technical potential, economic potential, drivers, barriers and policies by state. Available at: http://info.ornl.gov/sites/publications/Files/Pub52953.pdf.

II. Policy and Program Design

***Industrial Energy Efficiency: Designing Effective State Programs for the Industrial Sector.* 2014. SEE Action.**
This report provides an overview of the spectrum of U.S. industrial energy efficiency (IEE) programs delivered by a variety of entities, including utilities and program administrators. It includes an assessment of key program features that have helped lead to success in generating increased energy savings. Available at: http://www.energy.gov/eere/amo/downloads/industrial-energy-efficiency-designing-effective-state-programs-industrial-sector.

***Guide to Successful Implementation of State Combined Heat and Power Policies.* 2013. SEE Action.**
This guide provides state utility regulators and other state policymakers with information to assist them in implementing key state policies that impact combined heat and power. It discusses five policy categories (design of standby rates, interconnection standards for CHP with no electricity export, excess power sales, clean energy portfolio standards, and emerging market opportunities) and highlights successful state CHP implementation approaches within each category. Available at: https://www4.eere.energy.gov/seeaction/publication/guide-successful-implementation-state-combined-heat-and-power-policies.

Five Actions Governors Can Take to Help Industry Save Energy. 2014. National Governors Association (NGA).
This paper is the result of NGA's Policy Academy on Enhancing Industry through Energy Efficiency and CHP to help states identify and encourage industrial companies to implement new measures that can save energy and increase their competitiveness. It includes an overview of successful CHP policies and recommendations from five states – Alabama, Arkansas, Illinois, Iowa, and Tennessee. Available at: http://www.nga.org/files/live/sites/NGA/files/pdf/2014/1412FiveActionsGovernorsCanTake.pdf.

III. Including IEE and CHP in State Compliance Plans

***Implementing EPA's Clean Power Plan: A Menu of Options.* 2015. National Association of Clean Air Agencies (NACAA).**
This technical document identifies a wide range of technologies, programs, and policies that agencies might employ to reduce greenhouse gas emissions from the power sector as part of Clean Power Plan implementation. Chapters 2 and 3 specifically focus on implementing CHP. Available at: http://www.4cleanair.org/NACAA_Menu_of_Options.

***Securing Greenhouse Gas Reductions Through Private-Sector Delivered Industrial Energy Efficiency Under EPA's Clean Power Plan.* 2014. AJW.**
The paper discusses the role of the industrial sector in producing energy savings and greenhouse gas reductions through private-sector delivered energy efficiency. It includes a description of EPA and state actions that would facilitate an increase in the adoption of industrial energy-efficiency including energy management systems (EnMS) such as International Organization for Standardization (ISO) 50001 and programs such as DOE's Superior Energy Performance (SEP). The report was prepared on behalf of the Institute for Industrial Productivity, the National Electrical Manufacturers Association, ABB, Danfoss, Eaton, GE, Ingersoll Rand, Rockwell Automation, Schneider Electric, and Siemens. Available at: http://ajw-inc.com/IEE/.

***Navigating the Clean Power Plan: A Template for Including Combined Heat and Power in State Compliance Plans.* 2015. American Council for an Energy-Efficient Economy (ACEEE).**
This template is intended to help states document and claim emissions reductions resulting from the adoption of CHP. It includes background guidance and precedents, particular elements states should address to claim emissions reduction credit for CHP, recommendations on how to address these elements, and model language based on a hypothetical compliance plan scenario. http://aceee.org/navigating-clean-power-plan-template-including.

***Combined Heat and Power as a Compliance Option under the Clean Power Plan*. 2015. David Gardiner and Associates (DGA) and Institute for Industrial Productivity (IIP).**
This template outlines the key issues that any state must consider to incorporate CHP into a compliance plan, examines how EPA and state air agencies might treat CHP, and recommends a process for states to follow if they wish to include CHP in a plan. It was prepared for the American Gas Association (AGA), American Chemistry Council (ACC), and American Forest & Paper Association (AF&PA). Available at: http://www.dgardiner.com/wp-content/uploads/2015/08/CHP-Pathway-Final-Report-8-18-15.pdf.

Additional Helpful Links

Technical Assistance and Peer Learning

- DOE's Industrial Assessment Centers (IACs): http://energy.gov/eere/amo/industrial-assessment-centers-iacs
- DOE's CHP Technical Assistance Partnership (TAP): http://tinyurl.com/CHPtaps
- EPA's CHP Partnership: http://www.epa.gov/chp/

Policy and Program Examples

- DOE's Superior Energy Performance (SEP) program, which certifies leaders in industrial energy management and productivity improvement: http://tinyurl.com/eere-amo-sep
- EPA's online database, which allows users to search for existing CHP policies and incentives by state: http://www.epa.gov/chp/policies/database.html

For Further Information:

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