



The Alliance for Industrial Efficiency

October 24, 2013

CAR6 Comments
Department of State
Office of Global Change
Harry S. Truman Building, Room 2480
2201 C Street, NW
Washington, D.C. 20520

Comments on the Sixth Climate Action Report

The Alliance for Industrial Efficiency (hereinafter, “The Alliance”) appreciates this opportunity to comment on the U.S. Climate Action Report 2014 (hereinafter “CAR”). The Alliance is a diverse coalition that includes representatives from the business, environmental, labor and contractor communities. We are committed to enhancing manufacturing competitiveness and reducing emissions through industrial energy efficiency, particularly in the form of clean and efficient combined heat and power (CHP) and waste heat to power (WHP).

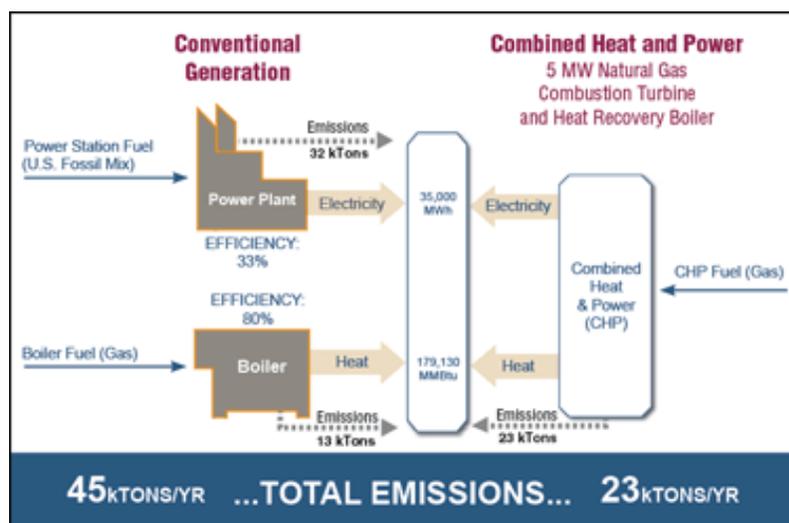
The Alliance would like to thank the Department of State for acknowledging Combined Heat and Power (CHP) as “an efficient, clean, and reliable approach to generating power and thermal energy from a single fuel source.” As the CAR notes, CHP “reduces the environmental impact of power generation.” Moreover, as the report recognizes, EPA’s Combined Heat and Power Partnership has served as an important instrument in supporting CHP development, providing information resources, and promoting the energy, environmental, and economic benefits of CHP.¹ We believe that full-scale CHP deployment will help achieve the President’s goal of lowering the United States’ greenhouse gas emissions to 17% below 2005 levels by 2020. Recognizing the environmental and economic benefits of CHP, the federal government has adopted several additional policies to increase deployment, which are not currently included in the CAR. These policies should be highlighted in Chapter 4 of the CAR, as they represent important advances to mitigate greenhouse gas emissions in the United States.

CHP and waste heat to power (WHP) offer the U.S. industrial sector a source of clean and efficient energy that reduces emissions, increases manufacturing competitiveness, and lowers fuel costs. Traditionally, a building’s electricity and heat is provided through two separate

¹ U.S. Department of State, 2013, “Climate Action Report” (hereinafter “CAR”), Chapter 4: Policies and Measures, page 9 (<http://www.state.gov/documents/organization/214946.pdf>).

mechanisms – utility electricity and an on-site boiler. CHP generates both heat and electricity from a single fuel source, making the technology twice as efficient as traditional power generation. Waste heat to power captures heat that is lost in traditional systems and converts it into electricity. In these ways, CHP and WHP generate half the emissions, require less fuel inputs, and save money compared to conventional power generation. EPA recognizes these benefits saying, “Combined heat and power (CHP) systems offer considerable environmental benefits when compared with purchased electricity and onsite-generated heat.”² In fact, CHP systems have roughly half the emissions of a separate conventional power station and boiler system.

FIGURE: Combined Heat and Power Lowers Emissions Relative to Conventional Power Generation³



What’s more, because CHP and WHP systems produce electricity on site, they can typically operate even when the grid goes down. This reduces the burden on the grid and increases the resiliency of the electricity sector, making CHP and WHP systems a key component of any climate action plan.

The remaining potential for CHP and WHP in the United States is great. In fact, CHP currently supplies less than 9% of U.S. electric capacity, well below the levels in other industrialized economies like Germany (13%), Russia (31%) or Denmark (53%).⁴ According to the U.S. Department of Energy’s Oak Ridge National Laboratory, CHP and WHP could supply 20 percent of U.S. electric capacity by 2030, reducing emissions and helping to create jobs and save industry money. If CHP provided 20 percent of U.S. electric capacity, we could:

² EPA, Combined Heat and Power Partnership, “Environmental Benefits” (<http://www.epa.gov/chp/basic/environmental.html>).

³ *Id.*

⁴ Oak Ridge National Laboratory (ORNL), Dec. 1, 2008, “Combined Heat and Power: Effective Energy Solutions for a Sustainable Future,” at 22 (http://www1.eere.energy.gov/industry/distributedenergy/pdfs/chp_report_12-08.pdf).

- Reduce pollution by an amount equivalent to that produced by approximately one-half of the passenger vehicles currently on the road;
- Create nearly one-million new highly-skilled technical jobs across the country;
- Save the United States more than 5 quadrillion BTUs (Quads) of fuel annually, the equivalent of nearly one-half of the total energy currently consumed by U.S. households;
- Produce 200,000 Megawatts of clean power, equivalent to the power produced by roughly 400 conventional power plants.⁵

Considering CHP's exceptional capacity to reduce greenhouse gas emissions while simultaneously offering increased resiliency to American industry, we urge you to highlight more CHP and WHP successes in the final report. In particular, we believe the report should mention Executive Order 13264, the Hurricane Sandy Rebuilding Taskforce, and the Boiler MACT Interagency Technical Assistance Program.

Executive Order 13264

Signed in August 2012, Executive Order 13264 sets a national goal of deploying 40 gigawatts of new CHP in the U.S. by 2020, aims to convene stakeholders to discuss best practices for overcoming current barriers to CHP and WHP implementation, and encourages efforts to accelerate investments in CHP and WHP.⁶ Achieving this goal would reduce emissions equivalent to removing 25 million cars from the road.⁷ While the technical potential for CHP and WHP in the United States is far greater, the Executive Order should be mentioned in the final report to highlight the federal government's commitment to increasing deployment. Indeed, EO 13264 represents a good first step toward increasing CHP and WHP deployment and will contribute to national greenhouse gas reductions.

The Hurricane Sandy Rebuilding Taskforce

Following the catastrophic effects of Hurricane Sandy, the Department of Housing and Urban Development led an interagency effort to develop recommendations to rebuild the region. In its final report, the Hurricane Sandy Rebuilding Task Force identified steps to make the region more resilient and to reduce the future effect of extreme weather events. Its recommendations include actions that would reduce U.S. greenhouse gas emissions. Notably, the Task Force identifies CHP as a means to "ensure that Sandy recovery energy investments are resilient,"

⁵ *Id.* at 4.

⁶ The White House, Office of the Press Secretary, Aug. 30, 2012, "Executive Order—Accelerating Investment in Industrial Energy Efficiency" (<http://www.whitehouse.gov/the-press-office/2012/08/30/executive-order-accelerating-investment-industrial-energy-efficiency>).

⁷ The White House, Office of the Press Secretary, Aug. 30, 2012, "President Obama Signs Executive Order Promoting Industrial Energy Efficiency" (<http://www.whitehouse.gov/the-press-office/2012/08/30/president-obama-signs-executive-order-promoting-industrial-energy-efficiency>).

and, among other things, calls for financing strategies for CHP in New York and New Jersey.⁸ The Task Force also encourages states to work with the Department of Energy “to improve electric grid policies and standards,” including developing policies and technical requirements to incorporate CHP into the grid.⁹

Investments in CHP proved to be lifesaving during the historically destructive storm. In the wake of Hurricane Sandy, more than eight-million people along the eastern seaboard lost power, but communities, institutions, hospitals and businesses that made investments in CHP generation systems kept the lights and heat on, created refuges for residents, and maintained necessary operations.¹⁰ Because CHP systems are typically able to operate independent of the grid, they can provide heat and light even when central power sources are disrupted.

We encourage the CAR to highlight the effectiveness of CHP in promoting resiliency, efficiency, and reliability during Hurricane Sandy, and to note the specific recommendations from the Rebuilding Taskforce that would lead to increased deployment (and associated emission reductions).

The Technical Assistance Program

We appreciate the CAR mentioning Clean Energy Application Centers (CEACs) and the benefits they provide to current and potential CHP industries.¹¹ We agree that CEACs are a necessary instrument to aid businesses in deploying CHP, while reducing implementation costs. However, the report does not mention that the CEACs are also leading a technical assistance program under the Industrial Boiler Maximum Achievable Control Technology (MACT) standards. Through this effort, representatives from the CEACs have already visited nearly 500 companies, representing nearly 1,200 coal- and oil-fired boilers to discuss the role of CHP as a compliance strategy under the Boiler MACT.¹² Notably, although the Boiler MACT sets emissions limits for hazardous air pollutants (e.g., mercury), by encouraging regulated boiler

⁸ Hurricane Sandy Rebuilding Task Force, Aug. 2013, “Hurricane Sandy Rebuilding Strategy: Stronger Community, A Resilient Region,” at 65-66 (http://portal.hud.gov/hudportal/HUD?src=/press/press_releases_media_advisories/2013/HUDNo.13-125).

⁹ *Id.* at 68.

¹⁰ See Pew Environment Group, “Industrial Efficiency Technology Kept the Lights on During Hurricane Sandy” (providing a compendium of media coverage about successful CHP projects during Hurricane Sandy) (http://www.pewenvironment.org/uploadedFiles/PEG/Publications/Other_Resource/clean-Sandy_Breifing_Web_Dec2012.pdf).

¹¹ U.S. Department of State, CAR, at 35 (note that the CEACs have recently been renamed “Technical Assistance Partnerships”).

¹² U.S. Department of Energy, Energy Efficiency and Renewable Energy, Advanced Manufacturing Office, “Boiler MACT Technical Assistance” (http://www1.eere.energy.gov/manufacturing/distributedenergy/pdfs/boilermact_tech_asst_factsheet.pdf).

owners to fuel switch and add CHP to their facilities, the Technical Assistance Program has co-pollutant benefits. The Department of State should highlight this exciting initiative in the CAR.

In summary, CHP and WHP's overall climate benefits are unequivocal. Proving itself during Hurricane Sandy, CHP has demonstrated its capacity to reduce emissions, improve efficiency, and provide resiliency to the electricity sector. The Alliance is grateful for the numerous mentions of CHP in the CAR, however, we believe the report should profile several additional initiatives. In particular, we encourage the CAR to highlight Executive Order 13264 and pertinent recommendations of the Hurricane Sandy Rebuilding Taskforce. Additionally, we believe the CAR should include a brief description of the Technical Assistance Program under the Industrial Boiler MACT.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in blue ink that reads "David Gardiner". The signature is fluid and cursive, with the first name "David" being more prominent than the last name "Gardiner".

David Gardiner
Executive Director
Alliance for Industrial Efficiency