January 27, 2014

Office of Information and Regulatory Affairs
Office of Management and Budget
Attn: Mabel Echols
New Executive Office Building, Room 10202
725 17th Street NW
Washington, DC 20503

Re: Comments on Technical Support Document: Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order No. 12866 (Docket ID OMB-OMB-2013-0007)

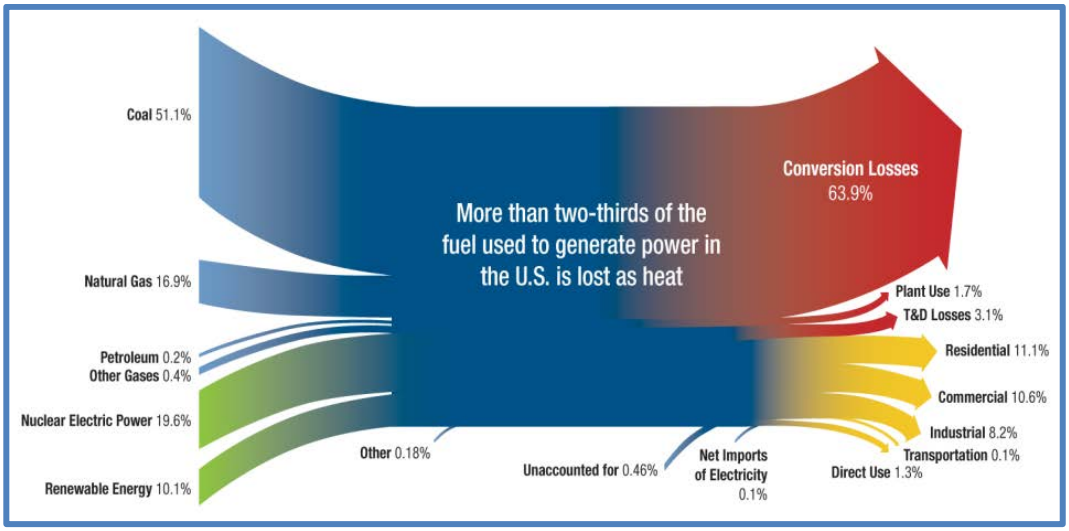
Dear Ms. Echols:

The Alliance for Industrial Efficiency appreciates the opportunity to comment on the Technical Update of the Social Cost of Carbon for Regulatory Impact Analysis. The Alliance is a diverse coalition that includes representatives from environmental organizations, labor, contractor groups, and the business community. 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).

We welcome the proposed revisions to the social cost of carbon. The use of the proposed new social cost of carbon will improve future regulations affecting energy, clean air, and other issues. CHP and WHP are proven means for reducing carbon emissions from the electric power system. The revised costs better reflect the greenhouse gas benefits provided by more efficient power generation technologies like CHP and WHP. It would be a mistake not to use the proposed new social cost of carbon; failing to fully account for the social cost of carbon would subsidize technologies that produce significant greenhouse gas emissions. We also welcome the use of the three independent assessment models (IAM) selected for incorporation into the analysis and recognize them as providing a sound methodological basis for the accurate estimation of costs.

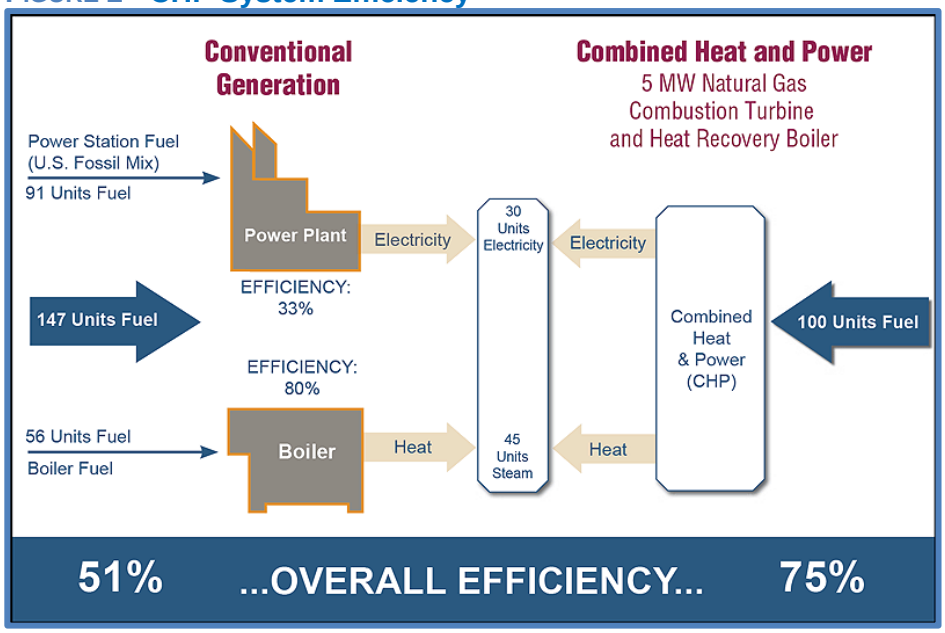
Conventional power generation is very inefficient. In fact, as FIGURE 1 (below) illustrates, roughly two-thirds of energy inputs (68 percent) are simply emitted into the air, with a mere 32 percent actually delivered to customers. The unfortunate results are lost competitiveness and jobs, as well as increased pollution.

FIGURE 1 - Fuel Loss with Conventional Power Generation



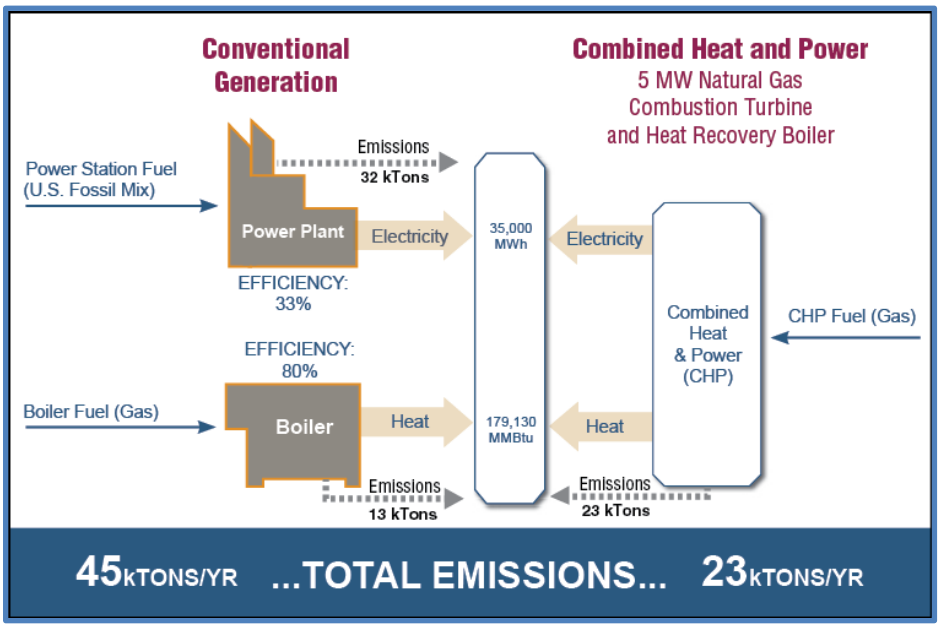
CHP and WHP greatly reduce these loses. By capturing and reusing waste heat, a CHP system can convert what would otherwise be wasted energy into additional electricity and thermal energy (heat). This dramatically increases fuel efficiency (to upwards of 75 percent) and substantially reduces associated greenhouse gas emissions – allowing utilities and companies to "get more with less." As **FIGURE** 2 (below) illustrates, total fuel use is significantly greater with conventional separate heat and power generation (here 147 units) than it is under combined heat and power (here 100 units). WHP systems capture waste heat from industrial processes and use that heat to generate electricity without combustion and the associated emissions. Therefore, both CHP and WHP reduce the amount of fuel that is needed to generate power.

FIGURE 2 - CHP System Efficiency[1]



Using less fuel to produce the same amount of energy produces fewer emissions, resulting in improved air quality. In fact, as FIGURE 3 (below) illustrates, CHP produces just one-half the carbon emissions of the separate generation of heat and power.

FIGURE 3 - CHP Lowers Carbon Emissions[2]



[1] U.S. EPA, CHP Partnership, Aug. 2012, *Fuel and Carbon Dioxide Emissions Savings Calculation Methodology for Combined Heat and Power Systems*, at 5 (http://www.epa.gov/chp/documents/fuel_and_co2_savings.pdf).
[2] *Id.*

In 2012, DOE and the Environmental Protection Agency (EPA) released a report that highlighted these efficiency gains, explaining that "CHP can provide significant energy efficiency and environmental advantages over separate heat and power," and noting that CHP applications operate at 65 to 75 percent efficiency.[3] The same report also compared the greenhouse gas emissions of a 10-megawatt natural gas-fired CHP system with separate heat and power systems and found a 42,751-ton reduction in carbon dioxide emissions and a 59.4-ton reduction in nitrogen dioxide over the separate systems.[4]

EPA's 2012 "Waste Heat to Power Systems" report notes: "Roughly one-third of the energy consumed by industry is discharged as thermal losses directly to the atmosphere or to cooling systems. These discharges are the result of process inefficiencies and the inability of the existing process to recover and use the excess energy streams."[5] Commercially available WHP systems can capture that lost energy and make power with no incremental combustion or emissions.

According to DOE and EPA, CHP and WHP can improve U.S. manufacturing competitiveness, lessen the need for new transmission and distribution infrastructure and enhance power grid security, and enhance energy reliability.[6] We support the proposed update to the social cost of carbon because the proposed changes will encourage greater deployment of these technologies.

Thank you for consideration of these comments. As we have outlined above, we believe the revised costs are a better reflection of the true benefits of greenhouse gas reduction from technologies like CHP and WHP, and we welcome their final adoption.

Sincerely,

David Gardiner
Executive Director
Alliance for Industrial Efficiency

---

[3] US DOE, US EPA, Aug. 2012, "Combined Heat and Power: A Clean Energy Solution," at 7 (http://www1.eere.energy.gov/manufacturing/distributedenergy/pdfs/chp_clean_energy_solution.pdf).
[4] *Id.* at 8.
[5] US EPA, May 2012, "Waste Heat to Power Systems," at 2 (http://www.epa.gov/chp/documents/waste_heat_power.pdf).
[6] *Id.* at 5.