April 27, 2016

Pennsylvania Public Utilities Commission
400 North Street
Keystone Bldg.
Harrisburg, PA 17120

Re: Comments on the Pennsylvania Public Utilities Commission's Proposed Policy Statement on Combined Heat and Power

To Whom It May Concern:

The Alliance for Industrial Efficiency (hereinafter, "The Alliance") appreciates the opportunity to comment on the Pennsylvania Public Utilities Commission's (the Commission) proposed Policy Statement on combined heat and power (CHP).[1] We write now in support of the Commission's efforts to promote CHP deployment within the state and to recommend the Commission include waste heat to power (WHP) in the Policy Statement. The Alliance is a diverse coalition that includes representatives from the business, environmental, labor and contractor communities. Our national membership includes over 600 electrical, mechanical and sheet metal contractors in Pennsylvania alone. The Alliance is committed to enhancing manufacturing competitiveness and reducing emissions through industrial energy efficiency, particularly through the use of clean and efficient power generating systems, such as CHP and WHP.

I. The Alliance Supports the Commission's Proposed CHP Policy Statement and Offers Recommendations for Strengthening CHP Policy in Pennsylvania

We applaud the Commission for proposing a Policy Statement that seeks to increase CHP technology development among Pennsylvania's regulated electric and natural gas distribution companies. As Commissioner Powelson has explained, "In addition to improving manufacturing competitiveness and reducing greenhouse gas emissions, CHP benefits businesses by reducing energy costs and enhancing reliability for the user." For these reasons, we are very supportive of efforts to increase deployment.

The Commission also notes in its proposal that CHP had figured prominently in Pennsylvania's Act 129 energy efficiency and conservation programs. In fact, in the Implementation Order for Phase III of Act 129, CHP was specifically highlighted as a comprehensive measure to be

[1] Pennsylvania Public Utilities Commission, February 25, 2016, Joint Motion of Chairman Gladys M. Brown and Commissioner Robert F. Powelson, (http://www.puc.pa.gov//pcdocs/1418181.pdf).

considered by electric distribution companies.[2] The Alliance believes that Act 129 is important legislation that further supports CHP deployment across the state. We are concerned about efforts to weaken Act 129 by allowing an opt-out provision for large commercial and industrial customers. An opt-out provision would dramatically alter how energy efficiency is achieved in Pennsylvania. If fewer customers choose to pay into the efficiency program, less resources will be available to support utility incentives, reducing the program's overall effectiveness. Further, customers who opt out would still receive the benefit of lower energy and capacity prices paid for by those customers who remain in the program, leading to inequity among utility customers.

The Commission further identifies interconnection as an area for state policy improvement and is exploring whether Pennsylvania should utilize systemic changes and programs that other states have adopted, such as streamlining interconnection applications and fees. We commend the Commission for encouraging electric and natural gas distribution companies to design streamlined interconnection and non-discriminatory standby rates for owners and operators of CHP facilities through this proposal. We fully support streamlining Pennsylvania's interconnection standards to encourage the deployment of CHP. A burdensome, complex, and/or costly interconnection process can be a significant barrier to CHP deployment, as was stated by participants at the two *En Banc* hearings on CHP in 2014.

We are also aware that the Commission is considering alternate ratemaking methodologies, such as revenue decoupling, and held an *En Banc* hearing on the topic on March 3rd. We are pleased that the Commission is exploring options that may increase energy-efficiency investments.

While the Commission's proposal does not create any substantive mandates for Pennsylvania's utilities, we are hopeful that the proposed biennial reporting requirement will prompt the state's electric and natural gas distribution companies to give a harder look to CHP and seek to find ways to increase its use in their service territories. Moreover, the reporting requirements reflected in the Commission's policy statement will promote the sharing of best practices among utilities, creating opportunities for electric and natural gas distribution companies to learn from one another.

Indeed, CHP, WHP and industrial energy efficiency in general provide many benefits to Pennsylvania ratepayers. Industrial 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 industrial sector, which includes manufacturing, mining, construction and agriculture, accounts for nearly 35 percent of all energy demand in Pennsylvania (1,318.2 trillion British thermal units) and continues to be the largest

[2] *Energy, Efficiency and Conservation Program,* Implementation Order at Docket No. M2014-2424864, entered August 20, 2015, at page 61.

single energy use in the state.[3] Studies estimate that up to 32 percent of industrial energy use could be saved through cost-effective efficiency measures.[4] CHP and WHP are a key contributor of these savings.

Finally, industrial energy efficiency (including measures such as CHP and WHP) would have price suppression effects and lower energy bills for all customers. An increase in industrial energy efficiency reduces load on the electric system, which in turn reduces the amount of energy that must be produced to serve customers, lowering ratepayers' energy bills across sectors.

We believe that there is significant opportunity in Pennsylvania to promote CHP and WHP investments, and recommend adding WHP to the following actions proposed by the Commission:

(1) Encouraging electric and natural gas distribution companies (EDCs and NGDCs) to make CHP an integral part of their energy efficiency and resiliency plans, as well as their marketing and outreach efforts;
(2) Encouraging these companies to design tariffs relating to interconnection and standby rates for owners and operators of CHP facilities; and
(3) Promoting the consideration of special natural gas rates for owners and operators of CHP facilities.

We further recommend that the Commission support financial incentives for businesses that either build using CHP or WHP designs or convert to using a CHP or WHP design. Indeed, while CHP and WHP offer significant benefits, they also require a substantial up-front investment, which can discourage deployment.

II. CHP and WHP Offer Environmental, Economic, and Reliability Benefits

We commend the Commission for recognizing the distinct opportunity to promote CHP and WHP in Pennsylvania. By generating both heat and electricity from a single fuel source, CHP dramatically lowers emissions and increases overall fuel efficiency – allowing utilities and companies to effectively "get more with less." CHP can operate using more than 70 percent of fuel inputs. As a consequence, CHP can produce electricity with roughly one-quarter the emissions of an existing coal power plant. WHP can generate electricity with no additional fuel and no incremental emissions. Due to its scale, a single CHP or WHP investment can achieve significant emission reductions.

[3] US Energy Information Administration, May 2015, "Pennsylvania State Profile and Energy Estimates," http://www.eia.gov/state/?sid=PA#tabs-2
[4] US DOE, June 2015, "Report to Congress: Barriers to Industrial Energy Efficiency," at iii (http://www.energy.gov/sites/prod/files/2015/06/f23/EXEC-2014-005846_6%20Report_signed_v2.pdf).

In addition to its emissions benefits, CHP and WHP enhance electric reliability. Because CHP and WHP systems produce electricity at the point of use, the losses associated with transmission and distribution (T&D) can be eliminated. This reduces energy use and defers or eliminates the need for costly new T&D investment. Moreover, because these systems can operate independent of the grid, they can continue to provide heat and electricity during extreme weather events, which may compromise the grid. They can also be sited to relieve grid congestion, further enhancing reliability.

As a testament to the power resiliency of CHP systems, during both Hurricane Katrina in 2005 and Hurricane Sandy in 2012, facilities with CHP continued to have access to power and thermal amenities, including several hospitals that were able to continue serving patients.[5] Indeed, while more than eight-million residents in the Mid-Atlantic lost power during Hurricane Sandy in October 2012, CHP systems helped several large energy users — New York University, Long Island's South Oaks Hospital, Co-op City in the Bronx and New Jersey's Bergen County Utilities Authority — stay warm and bright. These islands of power acted as places of refuge for emergency workers, displaced people, and evacuated patients from medical facilities without power.[6]

By promoting CHP and WHP deployment throughout the state, Pennsylvania will also cut its manufacturing costs, make its existing manufacturers more competitive in international markets, attract new industry to the state, and create jobs. Efficiency measures designed to improve a facility's energy productivity enable manufacturers to reduce costs, increase competitiveness and insulate themselves from volatile energy prices. Industrial efficiency technologies such as CHP can be twice as efficient as the separate generation of thermal energy and electricity, which significantly cuts costs for businesses. What's more, industrials can reinvest the money they save on energy to expand production and hire more employees. Industrial efficiency offers economic benefits society-wide, helping to postpone or eliminate the need for expensive generation and transmission investments, and keeping energy costs down for all consumers.

III. The Potential for CHP in Pennsylvania

[5] Natural Resources Defense Council, Apr. 2013, "Combined Heat and Power Systems: Improving the Energy Efficiency of Our Manufacturing Plants, Building, and Other Facilities," at 6 (http://www.nrdc.org/energy/files/combined-heat-power-ip.pdf); David Gardiner & Associates and Institute for Industrial Productivity, Jul. 2015, "Combined Heat and Power as a Compliance Option under the Clean Power Plan" (reporting incremental emissions of Natural gas CHP of 450 to 600 lbs/MWh, compared to 2000 to 2200 lbs/MWh for coal) (http://www.dgardiner.com/wp-content/uploads/2015/08/CHP-Pathway-Final-Report-8-18-15.pdf).

[6] *See, e.g.,* U.S. EPA, June 18, 2014, 79 Fed. Reg, 34830, 34899, "Carbon Pollution Emission Guidelines for Existing Stationary Sources: Electric Utility Generating Units" (noting that CHP "reduce[s] demand for centrally generated power and thus relieve[s] pressure on the grid.")

There is significant opportunity to implement CHP in Pennsylvania. Currently, the state has 164 CHP sites, generating 3,269 megawatts of clean and efficient power.[7] It is estimated that Pennsylvania has 7,759 megawatts of remaining industrial and commercial CHP technical potential.[8]

Further, manufacturing accounts for 12 percent ($77.37 billion in 2013) of the total gross state product and employs 9.7 percent of the workforce.[9] As stated earlier, Pennsylvania's industrial sector consumed nearly 35 percent of the total energy used statewide in 2013 (or 1,318.2 trillion British thermal units).[10] The size of the state's manufacturing industry and the significant technical potential for CHP indicates that Pennsylvania has a tremendous opportunity for CHP implementation.

CHP and WHP can help Pennsylvania meet its emissions reduction goals under the Clean Power Plan as well. Despite the Supreme Court stay of the rule, many states are continuing to plan their compliance strategy. CHP and WHP can be effectively utilized in both a rate-based and a mass-based plan, so will be an appropriate compliance option regardless of which path Pennsylvania ultimately adopts.

IV. Conclusion

Despite the many benefits of industrial efficiency, a number of barriers impede greater adoption, including the internal competition for capital that often undervalues efficiency investments, business models that discourage utilities from fully promoting industrial efficiency and CHP, and information barriers that make it harder for industrials to make educated decisions.

We commend the Commission for its dedication to reduce these barriers by encouraging EDCs and NGDCs to include CHP as an integral part of their energy efficiency and resiliency plans and to design interconnection tariffs and standby rates for owners and operators of CHP facilities. Further, we support the requirement of EDCs and NGDCs to report to the Commission biennially on the development of CHP in their service territories and their efforts to promote such development. We encourage the Commission to explicitly include WHP in the Policy Statement to clarify that this support extends to both CHP and WHP. We also recommend that the Commission streamline interconnection procedures and fees to remove barriers to CHP. We believe that

[7] U.S. DOE, Combined Heat and Power Installation Database, https://doe.icfwebservices.com/chpdb/state/DE.
[8] U.S. DOE, Mar. 2016, "Combined Heat and Power (CHP) Technical Potential in the United States," at 72 (http://energy.gov/sites/prod/files/2016/03/f30/CHP%20Technical%20Potential%20Study%203-18-2016%20Final.pdf).
[9] National Association of Manufacturers, "Pennsylvania Manufacturing Facts," February 2015, (http://www.nam.org/Data-and-Reports/State-Manufacturing-Data/2014-State-Manufacturing-Data/Manufacturing-Facts--Pennsylvania/).
[10] U.S. Energy Information Administration, *supra* note 1.

strong policy in support of CHP and WHP will strengthen Pennsylvania's manufacturing base, promote economic growth, increase grid reliability, and reduce emissions while lowering everyone's electric bills.

Thank you for the opportunity to comment.

Sincerely,

Jennifer Kefer, Director
Alliance for Industrial Efficiency