## ACT 129 PHASE TWO DOCKET NO. M-2012-2289411

## **COMMENTS**

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PA PUBLIC UTILITY COMMISSION SECRETARY'S BUREAU

Prepared for the:

Pennsylvania Public Utility Commission

Submitted by:
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These Comments are submitted by Veolia Energy North America Holdings, Inc. ("Veolia"). Veolia is an active participant in the energy markets of eastern Pennsylvania through its two principal subsidiaries in the Commonwealth, Veolia Energy Philadelphia, Inc. ("Veolia Philadelphia") and Grays Ferry Cogereration Partnership ("Grays Ferry"). Veolia Philadelphia (formerly known as Trigen Philadelphia) owns and operates the district steam utility that serves over 400 buildings in inner city and west Philadelphia, including those of the University of Pennsylvania, the Art Museum, Thomas Jefferson University Hospital and Drexel University. Grays Ferry is a 163 MW combined heat and power facility providing steam to the Veolia Philadelphia steam utility and electric power into PECO and the wholesale power markets.

Veolia thanks the Pennsylvania Public Utilities Commission (the "Commission") for this opportunity to comment on the Secretarial Letter dated March 1, 2012, regarding the design and implentation of any future phase of the Energy Efficiency & Conservation ("EE&C") programs for the Commonwealth under Act 129.

Veolia appreciates the excellent work that the Coimmission has done thus far in implementing Act 129. Since the signing of the Act 129 in October 2008, the Commonwealth has witnessed energy efficiency savings far in excess of the initial goals set out for the Act. In response to the first question asked in the Secretarial Letter, Veolia urges the Commission to build on the energy efficiency gains, environmental emissions reductions and ratepayer economic benefits that it has achieved through the first phase of Act 129 implementation.

In particular, Veolia wishes the Commission to give careful consideration to the benefits of Combined Heat and Power ("CHP") as an expanded tool in its arsenal of EE&C initiatives. CH&P – formerly known as cogeneration – is the similutaneous production of both thermal and electrical energy from a single fuel input. As noted, one of Veolia's CHP plants, the Grays Ferry facility, is located in Philadelphia. Veolia and its Dalkia afilliate together have almost 5000 MW of CHP capacity at plants in the United States and around the world.

The efficiency benefits of CHP are well known to this Commission and have been detailed further in the excellent Comments, which Veolia wholeheartedly endorses, of the US DOE Mid-Atlantic Clean Energy Application Center and the Commonwealth Recycled Energy and Economic Development Alliance ("CREEDA") in this proceeding and will not be repeated here. However, Veolia wishes to call the Commission's attention to two excellent recent studies that have been done in the area of the efficiency benefits of CHP. One is by the US DOE Oak Ridge National Laboratory, entitled "COMBINED HEAT AND POWER, Effective Energy Solutions for a Sustainable Future", dated December, 2008, and found at the following web site link, <a href="http://www1.eere.energy.gov/manufacturing/distributedenergy/pdfs/chp">http://www1.eere.energy.gov/manufacturing/distributedenergy/pdfs/chp</a> report 12-08.pdf. The other report is a White Paper by the International District Energy Association, entitled "Combined Heat and Power (CHP): Essential for a Cost Effective Clean Energy Standard", dated April, 2011, and found at: <a href="http://www.districtenergy.org/assets/pdfs/White-Papers/WhitepaperIDEACleanEnergy4-4-11.pdf">http://www.districtenergy.org/assets/pdfs/White-Papers/WhitepaperIDEACleanEnergy4-4-11.pdf</a>.

While CHP has been somewhat recognized in the context of Act 129 to date, it has not approached its full potential. For example, PECO is to be commended for targeting 35 MW of distributed generation (including CHP) as part of its Act 129 Plan, Section 3.3.6, DR Program 6 (Revised 8/18/11). However, the eligibility criteria seem restrictive and it is not clear how successful the program has been. Further, PECO appears to be the only utility in the Commonwealth to encourage CHP.

In addition to the general benefits of CHP as an energy efficiency strategy, Veolia wishes to emphasize in particular the unique opportunity that exists in the area of using thermal energy from a CHP facility to drive non-electric chillers. Given the expected long term abundance of inexpensive natural gas, particularly from the Marcellus Shale as noted by CREEDA, and the expense of meeting summer cooling with inefficient central station electric utility peaking generators, additional investigation should be done on the ability of thermal energy from CHP facilities to reduce electric peak demand. Thermal energy driven chillers (including absorption

chillers and steam turbine driven centrifugal chillers) can utilize waste heat to produce air conditioning. In this way, thermal energy drives the production of cooling, as opposed to electricity from the utility grid. From an economic perspective, the capital expense of installing thermal driven chillers is similar to electric chillers. From an energy-efficiency performance point-of-view, however, thermal driven chillers excel where inexpensive, waste heat is readily available. This is the case when thermal driven chillers can be coupled with, and improve the overall efficiency of, CHP and district energy heating networks using natural gas for fuel. Thus, we encourage the support of thermal driven cooling, as it will support the goals of Act 129 to reduce the demand for electricity, especially during peak demand summer months where cooling is needed.

Thermal driven cooling is only one way in which greater deployment of combined heat and power can create additional energy efficiency gains for the Commonwealth. With the new abundance of clean and inexpensive Marcellus Shale natural gas, CHP presents the Commonwealth with a wide range of economic, environmental and energy efficiency opportunities. Veolia Energy respectfully suggests that Act 129 affords the Commission a unique vehicle through which to take maximum advantage of these opportunities. Thank you.

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