

**Testimony of Elinor Haider**  
**Vice President, Market Development, Veolia Energy North America**  
**On Behalf of the Alliance for Industrial Efficiency**  
**Hearing on “Keeping the Lights On”**  
**House Committee on Energy and Commerce**  
**Subcommittee on Energy and Power**

**May 19, 2015**

Chairman Upton, Subcommittee Chairman Whitfield, Ranking Member Rush, and other members of the Subcommittee, thank you for the opportunity to testify. My testimony will address the role of Combined Heat and Power in enhancing resiliency and reliability.

With 180,000 employees worldwide, Veolia has been creating integrated energy, infrastructure, and environmental solutions for over 160 years. Last year, Veolia supplied 150-million people with drinking and wastewater services, produced 52-million megawatt hours of energy and converted 31-million metric tons of waste into new materials and energy. In the US, our 8,000 employees ensure the reliable, efficient supply of energy with over 500 MW of owned or operated Combined Heat and Power and the nation’s largest portfolio of district energy systems.

Veolia is a member of the Alliance for Industrial Efficiency, a diverse coalition that includes representatives from the business, environmental, labor and contractor communities. The Alliance is committed to enhancing manufacturing competitiveness and creating jobs through industrial energy efficiency, especially through the use of Combined Heat and Power (CHP) and Waste Heat to Power (WHP).

Both Veolia and the Alliance are pleased to see the recognition of CHP’s grid resiliency benefits in Section 1207 of the Committee’s discussion draft.

Conventional power generation is inefficient. More than two-thirds of fuel inputs are lost from our smokestacks as wasted heat and never converted to useful energy. Another seven percent is lost in the transmission and distribution of electric energy over long distances and multiple voltage changes. Each year, the energy lost in the US from wasted heat in power generation is greater than the total annual energy use in all of Japan.<sup>1</sup> This inefficiency costs consumers and businesses, and harms America’s competitiveness.

By making use of both heat and electricity from a single fuel source located close to the user, CHP dramatically increases fuel efficiency and eliminates much of this waste. CHP typically uses more than 70 percent of fuel inputs. By producing both heat and electricity on site and independent of the grid, CHP can run without any interruption during an extreme weather event.

As one of the US’s leading owners and operators of CHP systems, Veolia’s customers benefit from the energy efficiency and resiliency provided by CHP at universities, hospitals, biotech, R&D and other critical facilities. The benefits of this expertise was on stark display during the \$70 billion Superstorm Sandy in October 2012. While nearly eight-million residents across the MidAtlantic lost power, those with resilient CHP systems kept the lights on. There is no more illustrative case than New York University, where Veolia has played a critical role implementing CHP.

NYU has two campuses in Manhattan. Ten years ago, NYU selected Veolia to serve as Owner's Representative to design and manage expansion of its Washington Square campus energy plant. The expanded CHP system generates up to 90,000 pounds of steam per hour and 13 MW of electricity, serving 37 buildings. While the majority of Manhattan was without power during Sandy, that campus had electricity, heat, and hot water. It became a place of refuge during the height of the storm. That NYU campus kept the lights on.

On the other hand, the NYU Langone Medical Center did not have CHP. It lost all power, knocking out its communications systems and leading to the dangerous forced evacuation of critical care patients on gurneys and in dozens of ambulances.

In response to its experience at the two campuses, NYU selected Veolia to support development and operations of a new CHP energy plant for the NYU Langone Medical Center campus. The new plant will have 13 MW of electric generating capacity and 165,000 pounds per hour of steam. It will be completely self-sufficient in the event of a utility power interruption. NYU Langone will also keep the lights on. When we consider energy resiliency, the price of inaction, such as the \$540 million in FEMA-funded repair work at Langone following Hurricane Sandy,<sup>1</sup> needs to be considered in the cost-benefits analysis.

In the aftermath of Superstorm Sandy, New York, New Jersey, Massachusetts, Connecticut and have each adopted policies to support greater use of CHP. Other regions have long recognized that CHP can help keep critical infrastructure online during extreme weather events. Following Hurricanes Katrina, Rita and Ike, Texas and Louisiana adopted legislation to encourage CHP deployment in critical facilities.

For instance, Texas has model legislation that requires critical public facilities to obtain a CHP feasibility study during any renovation or new construction,<sup>2</sup> and has laws that set minimum efficiency and resiliency requirements for CHP systems.<sup>3</sup>

By encouraging electric utilities to "develop a plan to increase the utilization of resiliency related technologies" and supporting cost recovery for such systems, the Committee's Discussion Draft takes an important step to help keep the lights on during extreme weather events.

Both Veolia and the Alliance for Industrial Efficiency look forward to working with the Committee as it continues to make these recommendations a reality through the Architecture of Abundance.

Thank you for the opportunity to testify.

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<sup>1</sup> Ginger Adams Otis, July 30, 2014, "NYU's Langone Medical Center to get \$1.1 billion for Hurricane Sandy repairs" (<http://www.nydailynews.com/life-style/health/nyu-langone-medical-center-1-1b-hurricane-sandy-repairs-article-1.1885109>).

<sup>2</sup> Texas Code § 10-G- 2311 (<http://www.statutes.legis.state.tx.us/Docs/GV/htm/GV.2311.htm>).

<sup>3</sup> H.R. 1864, 81<sup>st</sup> Texas State Legislature, Regular Session, May 2013 (enacted), (<http://www.legis.state.tx.us/tlodocs/83R/billtext/pdf/HB01864F.pdf>).