



The Navy Yard, Building 101 | P 215.218.7590
4747 South Broad Street | F 215.218.7587
Philadelphia, PA 19112 | www.eebhub.org

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TESTIMONY BEFORE THE PHILADELPHIA ENERGY AUTHORITY May 23, 2012

Presented by Dr. Mark Alan Hughes of the University of Pennsylvania
On Behalf of the Energy Efficient Buildings Hub at the Philadelphia Navy Yard

Mr. Chairman, thank you for the opportunity to make brief comments before the Authority Board and congratulations to you and the Board for energetically pursuing your new and emerging role on this critical issue for the City and region's economic future.

Today, we would like to submit three comments to the Authority and look forward to working together in the near future.

First, we want to acknowledge the productive context in which the Authority exists. In recent years, the City has exercised the powerful option of Pennsylvania's Guaranteed Energy Savings Act (GESAs) mechanism to pursue long-term energy savings contracts with no impact on the City's capital budget and careful controls on performance as well as strategic purchasing of electricity supply that have greatly improved transparency and almost certainly avoided higher supply costs than under the previous approach. The City has assembled a high-performing team on energy in the Mayor's Office of Sustainability, the Office of Transportation and Utilities, the Law Department, and elsewhere. These larger efforts are organized under the City's ambitious energy targets within Greenworks (30% reduction in City government energy consumption, 20% of energy supply from renewables by all sectors, 10% reduction in building energy consumption by all sectors.) We all eagerly await the City's midpoint review of Greenworks due out in a few weeks, but progress towards these ambitious targets appears to be on track.

Second, the Authority represents an important opportunity to take these existing efforts to a new level of performance. GESAs and the Philadelphia Municipal Authority provide the essential powers needed to pursue all of the City's existing energy strategy. But this Board represents a critical capacity for advising on, say, a much larger City effort to use GESAs to upgrade the large portfolio of City buildings in need of efficiency upgrades. There is a deep and diverse set of expertise on this Board that can provide mission-driven direction on a wider GESAs effort and on the other elements of a comprehensive energy strategy. Board members can sit on important local institutions that themselves contribute to Greenworks targets and



that can help guide City efforts on technical aspects of power purchase agreements and, someday, on SRECs and so on. Furthermore, in addition to the expertise of these particular Board members, the Authority itself provides an important capacity for experience to accumulate into institutional wisdom, so that the City gains over time a durable capacity for taking full advantage of our assets.

Third, taking full advantage of those assets will require moving beyond existing programs and adopting some best practices from other local, regional, and state energy authorities around the country. I've always touted the advantages of backwardness, and the City need not invent any wheels here. Council President Clarke had the right policy instinct in directing the original Authority ordinance toward aggregating demand for energy purchases, but encountered some difficulties. Perhaps an even bigger opportunity, however, lies with aggregating demand for energy efficiency directly. This can take two forms. First, the Authority could bundle energy retrofits among a large number of building owners to ensure price and quality guarantees. Many building owners lack the expertise or market IQ to know why, how, and with whom to improve the performance of their buildings. In addition to permanently reducing the City's energy load, I'm sure you'll hearing more later about the opportunity to dynamically shed load to produce virtual generation. As with the retrofit of buildings, this kind of activity happens through markets when companies provide expert services...real jobs generated by real economic value. But the missing element of successful demand aggregation—and there are emerging success stories in Washington DC, Brooklyn, Denver, and elsewhere—is a trusted convener that can maintain a mission-driven focus. The Authority could provide this critical leadership on aggregating retrofits and load shedding, which would lower costs for all consumers as well as for participants.

The Hub eagerly seeks the opportunity to support the Authority in its important work. We are assisting the City of New York in the data analysis related to its benchmarking and disclosure ordinance and have agreed to provide similar support for Philadelphia's newly proposed ordinance. We are assisting the Pennsylvania Public Utilities Commission, PECO, and other members of the Mid-Atlantic Conference of Regulatory Utilities Commissioners to define common data protocols across the PJM footprint. Similarly, the Hub is prepared to convene peer organizations from across the country to help you explore and define your mission. NYCEEC, the Delaware SEU, the Washington DC SEU, Efficiency Vermont all provide great models of innovation and best practices that could support your work. And we believe a high performing Philadelphia Energy Authority is absolutely critical to our own work at the Energy Efficient Buildings Hub at the Philadelphia Navy Yard.