



City of Seattle
Office of Economic Development

Memo

Date: July 3, 2012

To: Councilmember Sally Clark
Councilmember Tom Rasmussen
Councilmember Richard Conlin
Councilmember Jean Godden

CC: David Yeaworth, Legislative Assistant to Councilmember Sally Clark

From: Steve Johnson, Director, Office of Economic Development

Re: **Smart Buildings Management Pilot Project**

Background

Metropolitan Business Plan: Building Energy Efficiency Testing and Integration Center and Demonstration Network (BETI): The Prosperity Partnership completed a metropolitan business plan looking at Seattle's relative strengths in the clean energy economy. The business plan was funded by a \$150,000 grant from OED and was conducted in close collaboration with the Brookings Institution. The business plan concluded that the Seattle metro area is competitively strongest in the area energy efficiency and green building design and retrofit, and as a result, should focus its economic development energies in this area. It called for the creation of a coordinated effort to test and demonstrate new and innovative energy efficiency technologies and delivery mechanisms (BETI). Highlights of the report are:

- 23,000 jobs in Seattle metro area in renewable energy, energy efficiency, environmental remediation, and recycling and waste management.
- Projected growth of US spending on energy efficiency and technologies and infrastructure will top \$700 billion by 2030, up from \$300 billion in 2004.
- Seattle metro strengths in building design, constructing and engineering services, energy or building management systems, grid connection and communication. Big strength in supportive industries of software/IT and manufacturing.

Based on the findings of the Metropolitan Business Plan, OED has focused on certain elements of the Business Plan recommendations where the City could uniquely contribute. Specifically, the City of Seattle offers a unique platform to test and prove new energy efficiency technologies, and in doing so, contribute to the potential for generating sales revenue and helping new businesses form. Toward this end, US Department of Energy (USDOE) awarded a \$300,000 grant (i6 Green Challenge Grant) to fund a unique partnership between Seattle City Light, OED, Microsoft and some large downtown commercial consumers of electricity.

Stephen H. Johnson, Director
Office of Economic Development
700 Fifth Avenue, Suite 5752
PO Box 94708
Seattle, WA 98124-4708

Tel (206) 684-8090
Fax (206) 684-0379
www.seattle.gov/economicdevelopment
OED@seattle.gov

Analysis

The field of energy efficiency and building design and retrofit is broad. For that reason, when talking about innovation and economic opportunity, we like to break the discussion into two general topic areas:

- Local adoption of proven technologies at scale, and
- Leadership in the development, testing, demonstration, and commercialization of new disruptive technologies that lead to the creation of new businesses and industries.

Local Adoption at Scale

Expanding use of current best practices and technologies in Seattle's homes, businesses, and buildings

- Great success over the last 30 years through traditional government funded rebate programs – SCL has a staff of 30 people and spends millions of dollars subsidizing energy efficiency improvements that have resulted in millions of kilowatt hours saved.
- Community Power Works is experimenting with new approaches that try to make it easier for the homeowner or building owner to invest in energy efficiency improvements: outreach, information, assessment, connection to pre-approved contractors and financing are all available through the program.
- Results have been slower in materializing for a variety of reasons: recession, low cost of power provides less compelling economic case, and competing policy priorities (e.g., job creation vs. energy usage reduction).

Looking to private sector delivery models is one new approach under exploration among certain leaders. In this vein, the task is to look at how to lower the cost and expand penetration by privatizing the delivery of current best practices and technologies. We call it the "Home Depot" model and it seems best applied to the residential markets.

- In the commercial sector, private sector energy services companies provide all the services offered by CPW but there is no equivalent capacity to serve residential homeowners. In fact, a homeowner using all the services gets handed off three times
 - outreach makes a referral to an auditor
 - the auditor completes an audit and hands off the names of some possible contractors
 - the homeowner gets bids from the contractors (who were not part of the original audit)
 - the homeowner negotiates with the lender separately once he/she has the bid in hand
- Even if a homeowner makes it through all those steps, he or she often does not think about energy efficiency improvement in isolation of other home improvements; e.g., "my wife has always wanted to redo our counters and now that you are here..."
- SPU offers an example of where a private sector delivery model works smoothly. A customer looking to purchase hot water heaters, dish washer, or clothes washer goes to Home Depot or Sears where they get one stop access to: information about the appliances, potential government rebates and assistance in completing them, installment by a pre-qualified contractor with a guarantee behind the work, and access to a possible payment plan.
- McKinstry is thinking about how this model might work in a private sector partner like Home Depot:
 - Could establish an assistance center (AC) for energy efficiency information within the store to engage customers as they enter

- The AC could be a separate non-profit that would inform people about all the possible options: what they can do themselves, what they may do by themselves with more information, what they should hire to get done properly
- The AC would connect and coordinate the next steps depending on the interests of the customer
- The AC would not be limited by utility lines of division and could address improvements to conserve gas, water, and electricity.

Leader in Commercialization of Disruptive Technologies

Whereas the previous strategy is to think about how to make is as easy and affordable as possible for Seattle residents to adopt proven technologies, this strategy is how to marshal our assets to create jobs and generate income by leadership in the solution of the world's environmental challenges. Seattle has great strengths upon which to distinguish itself as a center of innovation in the research, demonstration and commercialization of ground breaking technologies that will be in demand across the globe:

- Strong environmental value among the general population and public leadership
- Great institutions of research: University of Washington and Battelle Northwest Labs among others
- City ownership of electric and water utilities
- Strong companies already leading in many areas:
 - Fuels – Boeing and agriculture
 - Software and smart-energy systems – Microsoft and Itron
 - Building design – Mithun
 - Environmental law
 - Private sector leadership – 2030 District
 - Pockets of innovation – Bullitt Center, McKinstry incubator

Energy Management Pilot Project

Though Seattle is well positioned for significant clean technology growth and innovation, particularly in the application of information technologies to energy-efficiency, we are not as intentional in synchronizing/marshalling these strengths across our silos. The University of California Davis, the Sacramento Municipal Utility District, the State of California, and major employers (Microsoft, Goldman Sachs, Chevron, Walmart) have developed an energy efficiency center that is attempting to do for energy efficiency innovation what the Silicon Valley has done for the IT sector.

In support of our emerging clean energy economy, which includes excellent utility customer service via a robust renewable energy generation portfolio, the City of Seattle, Seattle City Light, Microsoft and its technology partners are working together to implement a high performance buildings pilot in Seattle. This partnership grew out of the metropolitan business planning process led by the Prosperity Partnership, supported and publicized by the Brookings Institution, and funded by OED.

We are looking for a few of Seattle City Light's leading commercial customers to join us as partners in implementing and testing new information technology-based energy management solutions across a diverse portfolio of buildings and stimulate more deliberate collaboration with the goal of commercializing new energy efficiency technologies.