

Overview

Seattle's Green Building Capital Initiative was launched in February 2008. This focused effort to make Seattle the nation's Green Building Capital placed a special emphasis on increasing the efficiency of Seattle's residential and commercial buildings. The three goals of this initiative are to:

- Improve the energy efficiency of residential and commercial buildings
 - o Increase energy efficiency in existing buildings by 20%
 - o Increase energy efficiency in new buildings and major retrofits consistent with the requirements of the 2030 Challenge
- Create job opportunities in the green economy
- Save Seattle residents and businesses money on energy costs

To help the City accomplish these goals, the Mayor convened a Green Building Task Force of 50 local stakeholders¹ to provide guidance and feedback on new policy mechanisms that the City could employ to achieve the goals of the Green Building Capital Initiative. The Task Force met regularly between July 2008 and January 2009 to provide feedback to staff on policy options, including thoughts on feasibility, likelihood of success and compatibility with other state, regional, national and international efforts.²

On January 29, 2009, the Task Force delivered its final recommendations to staff and on Earth Day 2009, the City announced the final policy direction of the Green Building Capital Initiative (GBCI). This comprehensive building energy strategy addresses conservation opportunities in new and existing buildings alike. It encompasses the vast residential and commercial housing stock in our City. It creates tools and financial resources that will help building owners conserve energy and save money; it will create more than 150 green jobs in our region and help reduce Seattle's greenhouse gas footprint. And it is one that we again hope to share with our region and our nation.

Residential Energy Efficiency Program Policy Framework

Building energy efficiency is one of the most immediate and effective ways we can reduce regional greenhouse gas emissions while creating jobs and saving our residents money. The opportunities for implementation are ripe, in many cases ready for immediate execution given sufficient investment. The residential component of the Green Building Capital Initiative employs a four-tiered vision for achieving the highest levels of efficiency in our residential building sector.

Motivate: Create outreach and recruitment programs to inform and enroll participants

Measure: Develop standard energy performance measurement protocols and audit programs to identify efficiency and renewable energy generation opportunities, track progress, and assign value to improvements made.

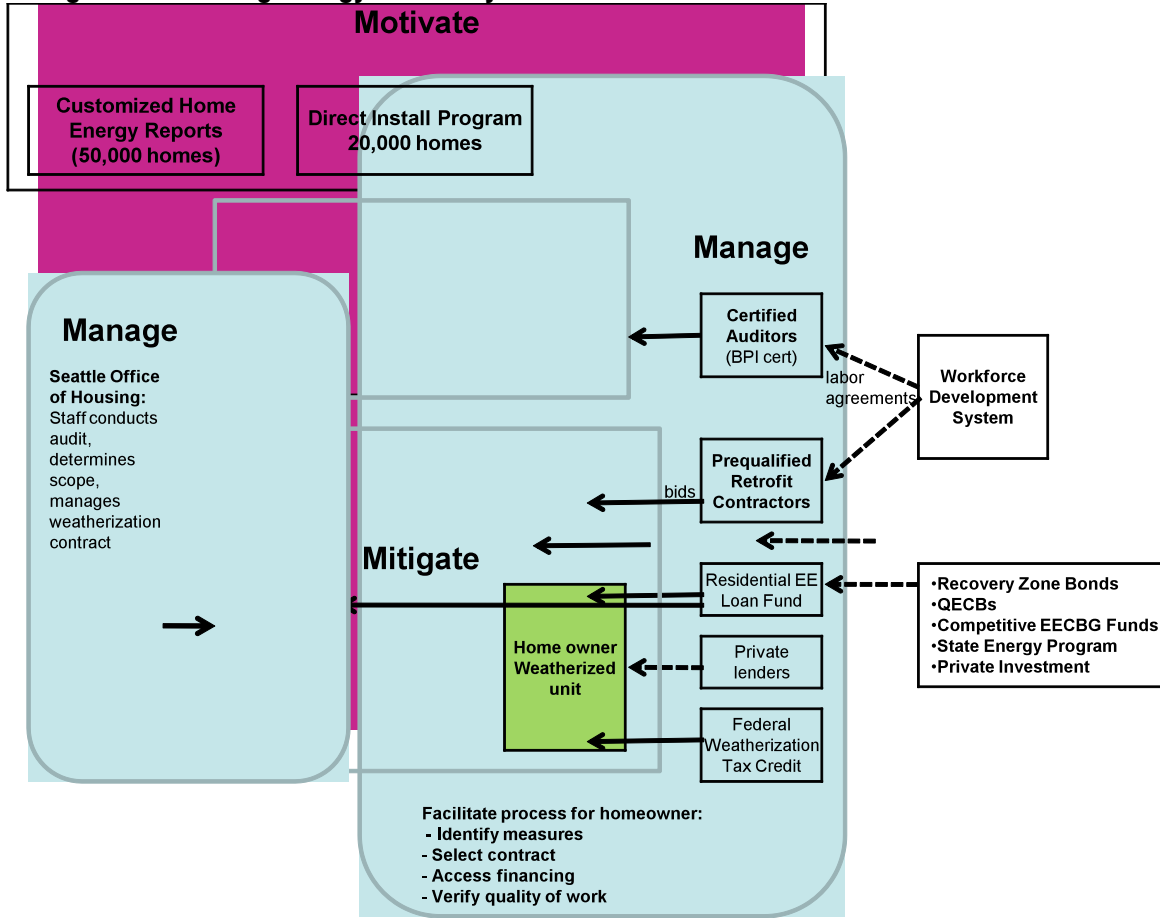
Mitigate: Provide financing mechanisms that allow for cost-effective investment in efficiency upgrades.

Manage: Establish program(s) to shepherd individual homeowners through the upgrade process.

¹Task Force membership list available at: <http://seattle.gov/environment/GBTaskforce.htm#GBMembers>

² For a discussion of policies considered and Task Force feedback, please visit the Green Building Task Force website: <http://seattle.gov/environment/GBTaskforce>.

Figure 1: Building Energy Efficiency Vision



Motivate:

- **Direct Installation Program:** This community-based direct installation pilot program is an innovative model for delivering energy efficiency to Puget Sound area residents. The program recruits and trains field staff to conduct the door to door outreach and direct installation of CFLs and low flow showerheads in 20,000 homes. Recruitment of disadvantaged youth, veterans and displaced workers is a priority. The goal of this project is to help residents reduce their climate pollution and home energy costs while creating green jobs.
- **Customized Home Energy Reports:** Seattle City Light has contracted with OPower (formerly Positive Energy) to produce “Home Energy Reports” for 20,000 of our single family customers. Each report is customized to the home receiving it based on size and heat type. The report includes monthly energy consumption information and a comparison to 100 neighbors in similar homes as well as a top 20% “efficient” neighbors subgroup. Each household will be targeted with appropriate recommendations based on housing, usage and demographic data. By providing energy use in relation to their neighbors, customers should gain an understanding of how their energy choices compare to the norm. The utility will evaluate the results of this program in achieving electrical savings (goal: 2% per household) for expansion throughout its service territory.

- **Utilizing Key Partnerships**

- **Sound Alliance/Sustainable Works:** The City of Seattle is providing support to a pilot project in partnership with SustainableWorks. This initiative is designed to create quality jobs for local residents by establishing an intensive, neighborhood based energy efficiency retrofit program in a targeted neighborhood. The SustainableWorks approach involves four steps: 1) deploy certified auditors who will produce a list of retrofit measures that are cost-effective within a 10 to 20 years; 2) work with customers to secure financing for their portion of the project and collect utility, government and private incentives; 3) pool the retrofits agreements obtained from each customer and put the package out to bid for qualified contractors; and 4) select & oversee contractors.³ The goal of this pilot is to retrofit 200 homes in the target neighborhood.
- **Real Estate Community:** The real estate professionals in the Seattle area are one of our best resources for sharing information with homeowners. The City is working with the Seattle/King County Association of Realtors to establish a partnership for recruiting participants for the energy audit pilot program. In addition, the City will be developing a training program for Realtors to include the home energy performance rating as well as energy efficiency and sustainability more broadly. We will also be working closely with this organization to establish a linkage to Seattle's Multiple Listing Service database so that listed homes may display the home energy performance rating if they choose to do so.

Measure:

- **Home Energy Performance Audit Pilot Program:** To catalyze energy efficiency investments, the City of Seattle is partnering with Puget Sound Energy (PSE) and Seattle City Light (SCL) to implement an 18 month, 5,000-unit residential energy performance audit and home energy performance rating pilot program for residential customers throughout Seattle. SCL, PSE and the City of Seattle will offer and conduct energy audits for residential customers at the deeply subsidized rate of \$95 (audit value is approximately \$600). Audits are underway and we hope to deliver 3000 audits by the end of 2010 (completing the remaining 2000 in 2011).
- **Energy Performance Score:** The whole home performance audit delivered through this program will include analysis of home energy performance, a recommendation report detailing cost effective improvement options for the home, and an Energy Performance Score (EPS). The EPS assesses the energy demand and carbon emissions of existing homes, analyzes the home's energy use and carbon emissions and produces a comparable score of the home's performance, an analysis of use, and a prescriptive path of recommendations on how to improve performance in a cost-effective manner. The rating will enable homeowners to learn how efficiently their homes are performing with respect to both energy consumption and carbon impact. Homeowners can then compare their scores to those of other homes, take measures to improve their scores, and use the improved performance as a valuable selling point on the residential real estate market.

³ An overview of the SustainableWorks approach is available here:
http://www.soundorganizing.org/sw/SustainableWorks%20-%20Page%20Description.pdf/file_view

Figure 2: Integrating the Energy Performance Score

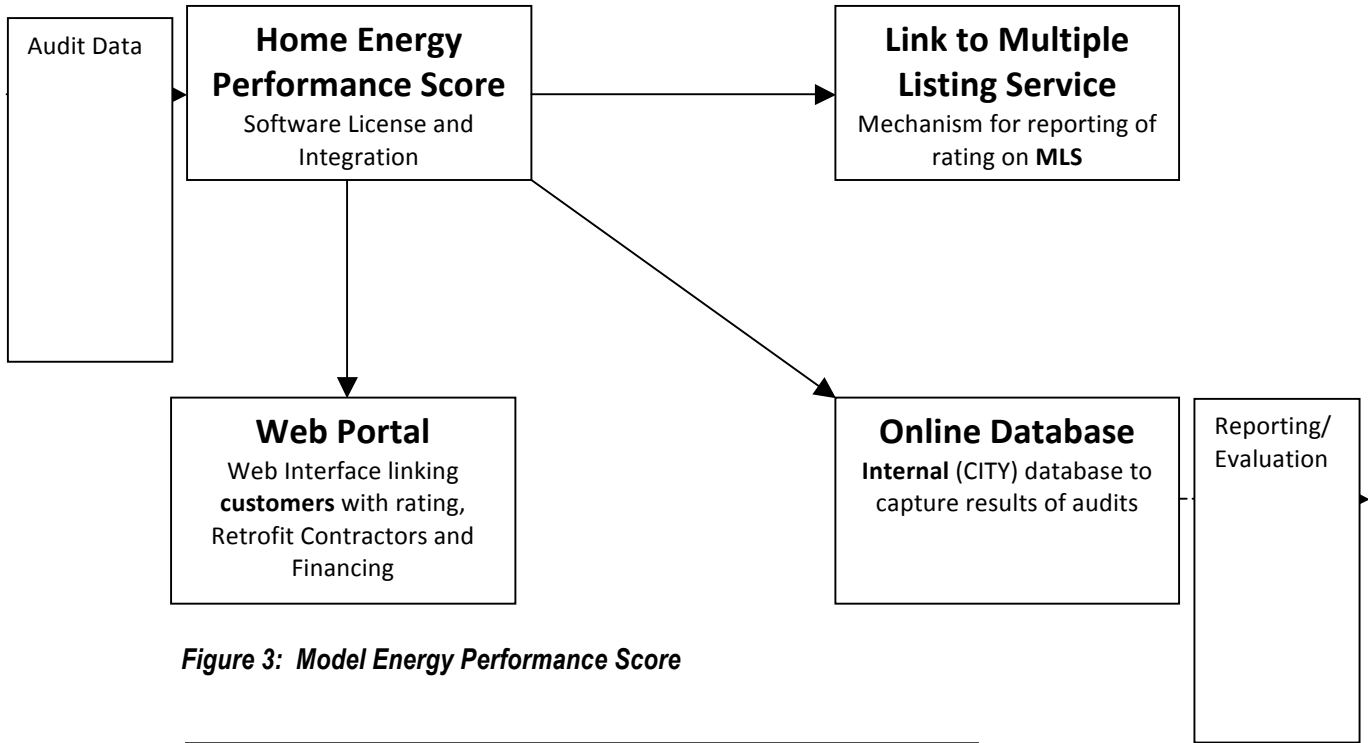
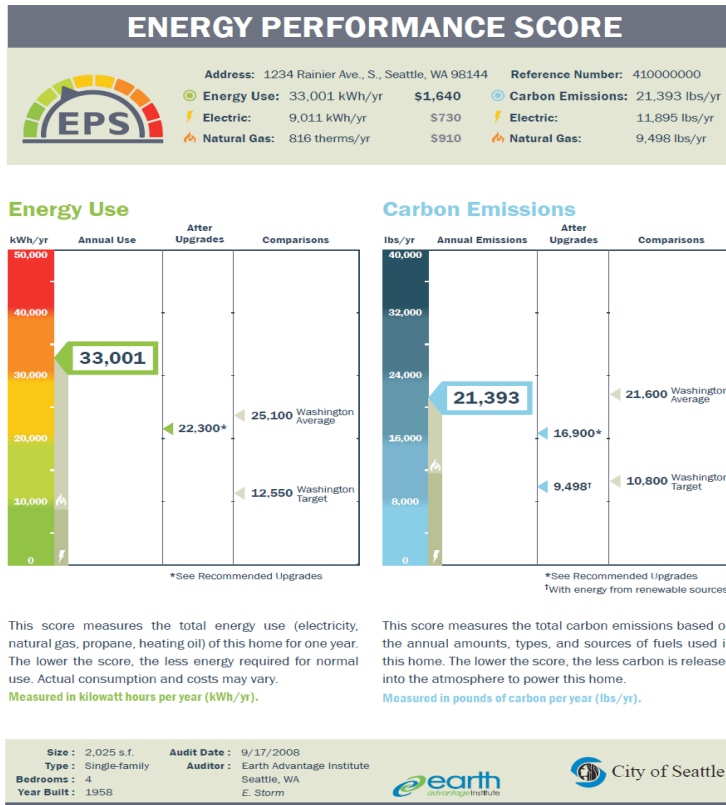


Figure 3: Model Energy Performance Score



Mitigate

- **Residential Energy Efficiency Loan Program:** Lack of access to adequate financing was considered by many Green Building Task Force members to be the single greatest barrier to increased conservation in the residential sector. The City of Seattle has contracted with ShoreBank Enterprise Cascadia, a local Community Development Financial Institution, to attract and manage a pool of public and private capital to finance loans for residential energy efficiency retrofits. This loan is initially seeded with \$1.2 million of the City's Energy Efficiency and Conservation Block Grant (EECBG) dollars and is additionally secured with \$250,000 in State Energy Program to create a loan loss reserve fund. The program has been designed for all households, including individuals who may qualify for grants through the City's HomeWise, low-income weatherization program. The loan program will utilize a tiered payment structure with greater subsidy for the lowest income borrowers and individuals undertaking the most significant retrofit actions. It is anticipated that loans may range from \$8,000 - \$20,000 depending on the types of energy efficiency upgrades undertaken. Homeowners participating in the residential energy audit pilot program and the HomeWise weatherization program will be the initial market for the energy efficiency loan program, although it will be made available to all Seattle homeowners on a first come, first served basis. We anticipate loans will be available by Q2 2010.
- **Utility Incentives:** Utility incentives will be available to all SCL and PSE customers (not only those participating in the audit pilot) to help to buy down the upfront cost of investment in key energy efficiency measures, including new energy efficient appliances as well as building systems.
 - **Seattle City Light:** SCL is developing a new package of residential energy efficiency incentives to be jointly launched with the Residential Energy Loan Program in early 2010.
 - **Puget Sound Energy:** PSE has an existing energy efficiency incentive program for residential gas customers. Rebates can range anywhere from \$50 to nearly \$4000 depending on the measure.⁴
- **Tax Credits:** Seattle residents who choose to invest in energy efficiency retrofits are eligible for a tax credit to cover 30% of the cost of investment, up to \$1500.⁵
- **Supplement Funding for HomeWise Weatherization Program:** As part of the City's Energy Efficiency and Conservation Strategy, EECBG funds will be used to supplement the Office of Housing low income weatherization program (HomeWise) to allow for deeper energy efficiency retrofits in homes where owners face significant barriers to investment in energy efficiency.

Manage

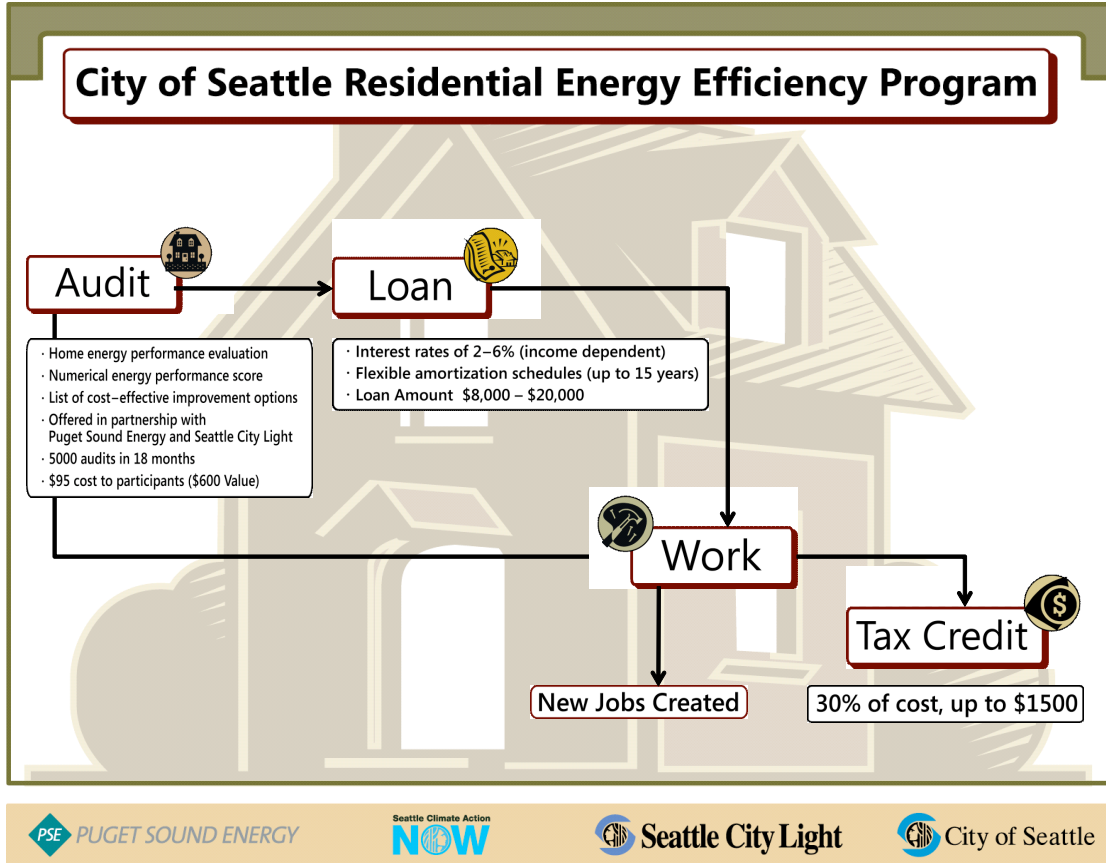
The City of Seattle's Residential Energy Efficiency program envisions a stepwise process where homeowners 1) receive information; 2) make decisions to pursue upgrades; 3) identify available financing (loans, incentives and tax credits); 4) select a contractor to complete the work; and 5) confirm energy savings. While some Seattle residents may be able to navigate this process without a great deal of support, many homeowners are not familiar with the residential retrofit marketplace and will require more significant levels of support to ensure that audit recommendations result in real

⁴Puget Sound Energy Residential Energy Efficiency Rebates and Promotions:
<http://www.pse.com/solutions/foryourhome/Pages/rebatesOnAllRebates.aspx>

⁵Federal Consumer Tax Credits for Energy Efficiency Retrofits,
http://www.energystar.gov/index.cfm?c=tax_credits.tx_index#s1

energy savings. The City of Seattle has therefore identified a three track program to assist homeowners in negotiating the retrofit process. Audit participants will be assigned to “track” depending upon their preferences and/or manner of recruitment.

Figure 4: Steps in the City of Seattle Residential Energy Program



Track 1: Web Portal: The City of Seattle is developing a web interface, to be launched concurrently with the loan program, where results of the home energy performance audits and ratings may be accessed by home owners, energy efficiency contractors and financiers. This portal will facilitate communication between customers and contractors: contractors wishing to complete work will be able to log in and bid on packages of improvements as recommended by auditors. Customers will have the ability to view these bids online and select from a list of prequalified contractors who must meet minimum standards as established by the City of Seattle. The portal will also include links to utility rebates as well as City and other financing options to facilitate easy, one-stop shopping. We anticipate that some residents will prefer to manage their own retrofit process through this web-based database.

Track 2: HomeWise: Currently, low-income renters and homeowners at or below 200% of the federal poverty level are eligible for weatherization grants through the City’s low income weatherization program (HomeWise). Existing programs for low income weatherization, including HomeWise, will be greatly expanded (nearly quadrupled) under the American Recovery and Reinvestment Act. While individuals who qualify for low-income weatherization will still be eligible for

additional financing opportunities such as utility incentive and the residential energy efficiency loan program, these projects will be managed directly by City Office of Housing staff through the HomeWise Program.

Track 3: Energy Advocate: Still under development, this track will offer homeowners access to personal assistance to shepherd them through the entire process from initial energy audit all the way through post-work audit analysis. This role will be fulfilled in a number of ways through either a single or multiple delivery mechanism(s):

- **Partnership(s) with SustainableWorks (and/or other community-based organizations)**
Through the pilot project funded in part by Seattle City Light and the Washington State Energy Program’s “Community-wide urban residential and commercial energy efficiency pilot program” SustainableWorks will provide energy consultant services to all participating homeowners.
- **Incentivizing multiple actors:** The City is planning to establish a “carbon incentive fund” to tie energy conservation to the burgeoning carbon market. The City will pay a subsidy, per ton of carbon reduced, to entities that successfully bring homeowners through the retrofit process from pre- to post-audit.

Green Jobs and Workforce Development

Of the many sectors that may be created in the green economy, energy efficiency is considered a major new economic and employment driver – in 2006, the energy efficiency industry nationwide exceeded 8 million jobs (90% in private industry).⁶ Modest projections forecast an additional 7 million jobs in energy efficiency nationwide by 2030. Within the Pacific Northwest, energy efficiency products and services are projected to bring in more than \$2 billion in annual sales through 2020.⁷ A recent study completed for the US Conference of Mayors shows that a national reduction in energy consumption levels of 35% over the next 30 years could result in creation of nearly 81,000 jobs divided nearly evenly between the commercial and residential sectors.⁸ The same study estimates that current green jobs in the Seattle metro area could increase by over 40,000 by 2038 given consistent investment in green policies and programs.

Investment in Workforce Development

The energy efficiency sector generally focuses on retrofitting existing buildings that would otherwise not have been improved upon, which may include mechanical, electrical and plumbing upgrades. Retrofitting buildings to be more energy efficient includes a variety of skills and jobs, mainly in “manufacturing the construction materials and devices to make buildings more efficient, as well as construction jobs and high-skill auditing jobs.”⁹

New sustainable strategies and materials may require new skills and new job opportunities, along with entirely new specializations, within the energy efficiency sector. Yet the majority of jobs within the sector will be in fields that presently exist. The lack of a skilled workforce is perhaps the greatest

⁶ Renewable Energy and Energy Efficiency: Economic Drivers for the 21st Century 2007. American Solar Energy Society.

⁷ POISED FOR PROFIT: How Clean Energy Can Power the Next High-Tech Job Surge in the Northwest. Climate Solutions. 2001.

⁸ US Metro Economies: Current and Potential Green Jobs in the US Economy. Prepared by Global Insight for the US Conference of Mayors

⁹ Community Jobs in the Green Economy. Apollo Alliance/Urban Habitat. 2007.

non-technical barrier to the advancement of energy efficiency and renewable energy technologies. One key component of the Green Building Capital Initiative is investment in developing Residential and Commercial energy efficiency training pathways.

▪ **Residential Energy Efficiency Pathway**

A career pathway includes a stepwise progression, starting at the lowest levels of literacy/numeracy prevailing in the region. Training opportunities move people through these steps. A Residential Energy Efficiency Pathway was developed by the Georgetown Campus of South Seattle Community College during 2008 with support from the City of Seattle and is now in place (Figures 9& 10 show the stepwise progression of the Residential pathway). Each training step is a discrete component with industry recognized titles and competencies arranged sequentially and culminating in Energy Auditing training and certification.

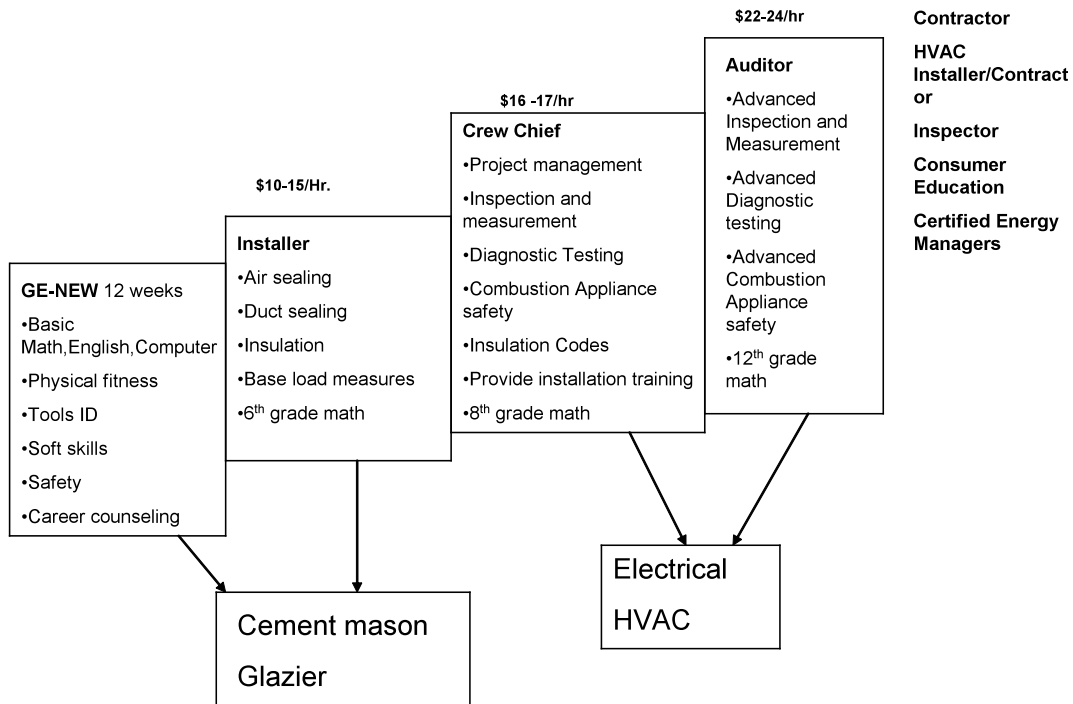


Figure 9. Residential Energy Efficiency Training Pathway

Finally, the City wants to ensure that training programs meeting agreed upon standards drawing from target communities and that graduates from these programs are entering jobs created by the City’s investment in this sector. We have therefore established a three tier process to establish standard training competencies, high-road hiring requirements, and contractor quality assurance.

In partnership with Green For All and the Community Benefits Law Center, the City will initiate a stakeholder process in early 2010 to help identify appropriate standards and recommend implementation, enforcement and monitoring mechanisms. Figure 10 describes the key outcomes of this process.

Figure 10. Seattle Residential Energy Efficiency “High Road” Workforce Strategy

Mission

The City of Seattle will work with local stakeholders, workforce development experts, and residential home performance contractors to develop a “high-road” retrofit model for the City’s initiatives to catalyze the residential energy efficiency market.

Training Standards

Agency Lead: Seattle Jobs Initiative (SJI)

National Partners: Living Cities

Summary:

Seattle Jobs Initiative will develop a set of training competencies/standards to ensure that employers have access to qualified applicants and that participants have marketable skills they can build upon. SJI currently staffs a residential energy efficiency committee that served as the sounding board for this work.

Deliverables & Status:

Complete:

- Develop training standards for 1) Installer; 2) Crew Chief; 3) Auditor
- Establish MOU on Uniform Testing Procedures

Ongoing:

- Certify and monitor the quality of these training programs

“High Road” Hiring Standards

Agency Lead: City of Seattle Office of Sustainability & Environment (OSE)

Key Local Partners: Puget Sound Energy (PSE) / Seattle City Light (SCL) / HomeWise Low Income Weatherization Program / SJI

National Partners: Living Cities, Green For All, Community Benefits Law Center (CBLC)

Summary:

The City of Seattle will develop hiring standards to ensure that all Seattle residents have the opportunity to access the jobs created by EECBG as well as future energy efficiency initiatives.

Deliverables:

- Design and manage stakeholder engagement process
- Draft hiring standards for consideration
- Establish monitoring / enforcement policies
- Integrate with City policies & programs

Contractor Quality Assurance Standards

Agency Lead: OSE

Key Local Partners: PSE / SCL / HomeWise

National Partners: Living Cities, Green For All, CBLC

Summary:

The City of Seattle will develop contractor quality assurance standards to ensure that companies working on behalf of the city are competent and skilled in their trade.

Deliverables:

- Design and manage stakeholder engagement process
- Draft pre-qualification (certs, hiring agreements) and quality assurance (BTU reduction) standards for consideration
- Establish monitoring / enforcement policies
- Integrate with City policies & programs