BUSINESS & OPERATIONS PLAN

COMMUNITY POWER WORKS

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communitypowerworks.org

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BUSINESS AND OPERATIONS PLAN

Executive Summary

In 2010, the City of Seattle had the distinction of receiving a $20 million federal grant to develop and implement energy efficiency upgrade programs for multiple building sectors. In charge of implementing the effort, the Office of Sustainability and Environment (OSE) allocated over half of the funds, and a significant amount of time and resources, to establishing Community Power Works (CPW), a single-family home energy upgrade program that provides quality one-stop-shop service to thousands of homeowners, delivers deep energy savings, and creates living-wage jobs.

Beginning in 2014, CPW will transition from federal grant funding into an ongoing program supported by multiple funding sources. Despite the changes in funding, CPW will continue to be a robust program providing customers with seamless delivery of home energy upgrades, and will expand to serve homeowners throughout Seattle City Light's (SCL) service territory.

The success of the CPW pilot over the last three years demonstrates that there is a strong appetite for home energy efficiency in the Seattle market, the program can deliver a high level of customer satisfaction, the market has the capacity to sustain living-wage jobs, and there is an opportunity to achieve significant energy and carbon savings. This Business and Operations Plan outlines the funding, management, and operations requirements and opportunities for sustaining CPW into the future.

CPW Benefits

CPW delivers energy efficiency solutions to Seattle's single-family residents through energy audits, on-bill financing options, and coordinated service delivery ("one-stop shopping") of home energy upgrades. As of October 2013, nearly 2,000 families enjoy homes that keep cooler in the summer, stay warmer in the winter, are healthier and safer, use less energy, and save money. Upgrades completed through the program reduce energy use by an average of 28 percent per home and include multiple measures such as insulation, air sealing, high-efficiency systems for space heating and cooling, water heating, and windows. Homeowner investments average $12,000 per home and leverage CPW program incentives averaging $2,100 per home, and utility rebates averaging $700. Twenty-five percent of CPW customers finance their project with a program-approved lender. To meet the needs of Seattle's low-income residences, the program coordinates closely with the Seattle Office of Housing's HomeWise program. HomeWise provides weatherization services at no cost to qualifying customers.

Beyond homeowners, CPW delivers a host of benefits for energy utilities, contractors, lenders, and entities driven to influence social, economic, and environmental change, including:

- **Energy Savings, Climate Impact**. CPW achieves deep comprehensive energy savings. According to Washington State University (WSU) evaluators, 25% of homeowners who undergo a utility program audit end up installing recommended measures, while 45% of homeowners who undergo a CPW audit end up installing recommended measures (see Appendix 1: Community-Based Energy Programs in Washington). WSU attributes the higher conversion level to enhanced incentives, financing packages,

and intensive customer support. In addition, CPW has resulted in over 3,400 tons of carbon reductions per year (see Appendix 2: CPW Outcomes Reported by WSU), and is projected to achieve annual reductions of 3,000–3,500 tons of carbon. Climate impact is important to Seattle's goal of carbon neutrality by 2050.

- **Cost-Effective Energy Savings.** CPW provides a non-profit platform for connecting customers to a broad range of energy efficiency solutions and delivering cost-effective utility measures and rebates.
- **Living-Wage Jobs.** CPW offers new approaches and stimulates continued investments in training, creating, and retaining sustainable, living-wage jobs.
- **Financing Support.** CPW offers access to loan funds with easy terms to qualify and the option to pay back on a customer's SCL utility bill.

CPW in 2014-2016

OSE, in close partnership with SCL and a service delivery team comprised of Clean Energy Works, Cascadia Consulting Group, and Fluid Market Strategies, is committed to operating an "optimized" CPW program in 2014 that:

- Markets to all residences with four or fewer units in the SCL service territory.
- Integrates customer and contractor support to achieve high customer satisfaction and high conversion rates.
- Provides utility rebates and energy efficiency incentives for electric and oil heated homes.
- Trains and supports contractors, all of whom agree to adhere to workforce and quality standards.
- Provides home energy audits conducted by trained energy efficiency auditors.
- Delivers 100% quality oversight including a test-out audit for every home performance project.
- Offers a service package that includes whole-home energy efficiency retrofits as well as single and bundled measures.
- Offers financing solutions with access to low interest loans and optional on-bill repayment.

Over the three years from 2014-2016, the program expects to serve 3,500–4,000 customers, saving nearly 8 million kWh of energy and reducing carbon emissions by about 8,500 tons. Program costs are projected to be $3.7–4.5 million annually and revenues are also expected to total $3.7–4.5 million annually.

Program Sustainability

CPW's future relies on delivering cost-effective energy savings to utilities and carbon emissions reductions that advance Seattle toward its goal of carbon neutrality by 2050. Success also relies on delivering a value proposition that customers appreciate, serving multiple fuel types and residents across a broad range of income levels, and sustaining a high quality contractor network providing a sufficient number of skilled, living-wage jobs to meet customer demand.

This Business and Operations Plan details program management, financing, and energy-saving outcomes from 2014-2016. The plan describes optimization strategies indicated throughout the document with a smaller version of the house icon seen at right. In case of further reductions in funding, a description of contingency plans is included at the end of the document along with the vision for the program's future sustainability.

Background

In 2010, the City of Seattle received a Department of Energy Better Buildings grant and launched service to single-family residents on Earth Day 2011. Ramping up customer tracking systems, marketing, and contractor capacity took much of the first six months. The program focused on the city's most diverse neighborhoods—the Central District, Capitol Hill and Southeast Seattle. Community Power Works for Home aimed to serve 2,000 single-family residences, stimulating private investments for deep energy upgrades and resulting in market transformation for the home performance industry. The program piloted several strategies toward these overarching goals:

- An innovative incentive calculation based on the amount of carbon savings achieved over the lifetime of each measure. Carbon was valued at $20 per ton.
- A High Road Agreement establishing wage requirements, quality standards, training, and certification standards for all participating contractors.
- Affordable, accessible loans repaid on SCL utility bills.
- SCL-subsidized energy assessments to calculate an Energy Performance Score (EPS) for homes, similar to a miles-per-gallon rating for cars.

Eight months after program launch, customers said they wanted the program to play a larger role by providing guidance as a trusted resource, helping with contractor selection, explaining and simplifying the loan process, and generally helping them navigate upgrades from beginning to end. Contractors, auditors, and other stakeholders were also urging the city to increase customer demand and simplify the program.

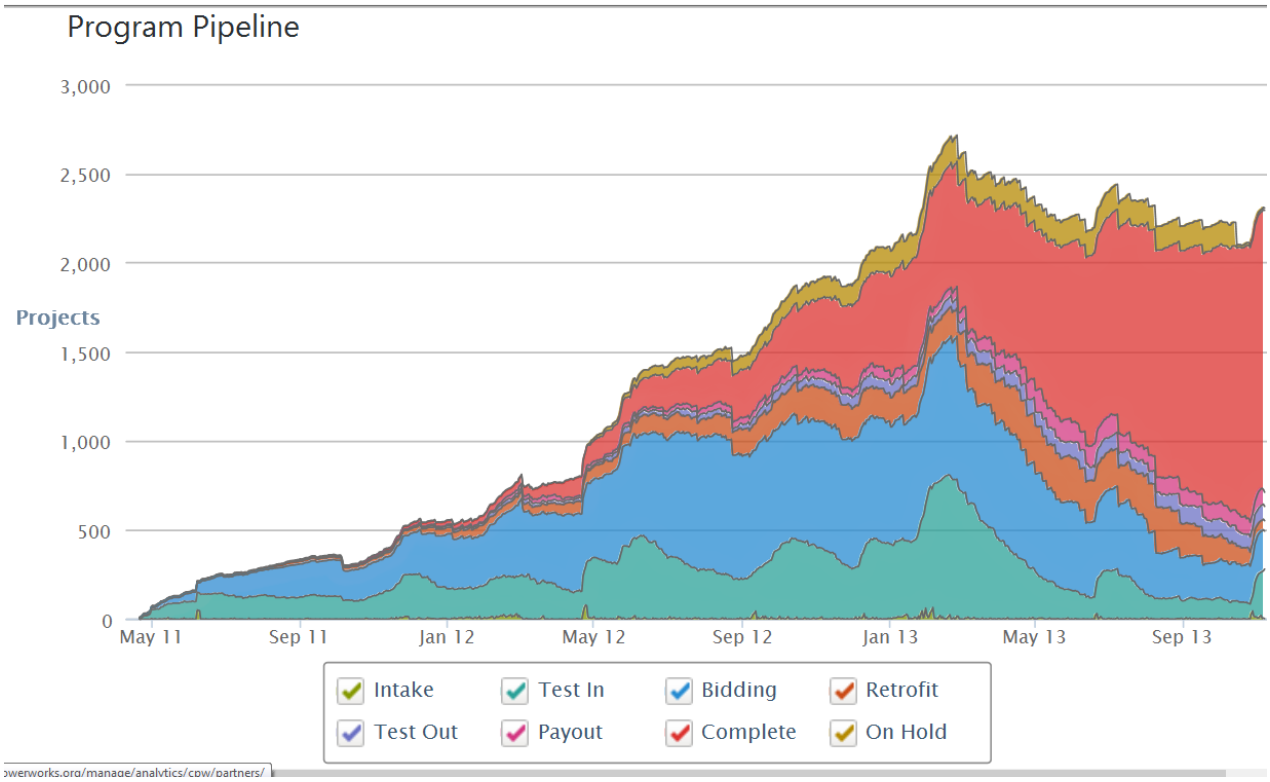
In January 2012, OSE rolled out significant changes that included:

- Expanding eligibility to all single-family residents in Seattle.
- Rebates based on energy savings rather than carbon savings.
- High-efficiency heating incentives for homeowners switching from old, inefficient heating systems to newer, high-efficient electric heat pumps or gas furnaces.

Higher rebates for higher energy savings

If your home's average energy efficiency is improved by...	10-14%	15-20%	21-30%	≥31%
...Your rebate will be	$250	$1,250	$2,000	$2,500

In April 2012, OSE began a targeted mailing campaign to homeowners, promoting rebates, energy savings, and comfort. Demand for the program took off. The EnergySavvy "Program Pipeline" graphic below shows the growth in customers in each program stage (intake, test-in audit, bidding, retrofit, test-out quality assurance, and payout) from the launch in April 2011 to September 2013. The pool of High Road contractors worked to keep up with demand, and the program shifted focus to recruiting and qualifying more contractors and crews to complete the work. The operations team concentrated on delivering a high level of customer satisfaction, and surveys showed 96% of customers would refer the program to others.



In the fall of 2012, OSE convened CPW stakeholders and began the transition planning process to a post-American Recovery and Reinvestment Act (ARRA)-funded future for the program. The process resulted in several conclusions (see Appendix 3: Sustainability Planning Advisory Group Final Presentation, December 2012), including that the program:

- Has value and should continue if the city is going to meet its residential energy efficiency goals.
- Can effectively partner with utilities to help them meet their goals, but should not operate within, nor be completely funded by, a utility.
- Should eventually operate independently of the City, but will need short-term support to be successful.

The primary result of the stakeholder process was the city's release of a Request for Qualifications to undergo a transition planning process for CPW, and selection of a team comprised of Clean Energy Works, Cascadia Consulting Group, Fluid Market Strategies, and Habitat Home Energy Audits. This team worked closely with OSE and SCL to begin the process of developing a funding, management, and streamlined operations model to take CPW into the future. The primary objective of the transition planning team is to prove the program's viability. The team developed financial models of various scenarios, and selected a single "optimized" scenario combining best practices from CPW, Clean Energy Works Oregon, and from programs around the country, to launch in early 2014.

CPW 1.9—The Transition Phase

The transition planning team immediately developed a transition-phase program coined "CPW 1.9." Striving to achieve program efficiencies and respond to changes in funding streams, the team decided to discontinue CPW's Energy Saving Incentives for bids signed after September 1, 2013. CPW rebates for weatherization work are still provided to owners of oil-heated homes. High-efficiency heating incentives are available for owners of homes switching from oil and other inefficient heating systems to newer, high-efficient heat pumps and gas furnaces. Utility rebates remain available from both SCL and Puget Sound Energy (PSE).

Program Goals

The city's goal for CPW transition planning was to determine the viability of a program no longer fully supported with ARRA funding. The transition team established that to be successful in the future, CPW must be financially viable and must offer a value proposition that customers appreciate. In addition, CPW is more likely to succeed if the program:

- **Expands throughout SCL territory** to offer service and financing to all single-family homes, and phase-in service to multifamily buildings of up to four units served by SCL, as well as to provide service to oil-heated homes as funding permits. CPW will refer low-income homes to the Seattle Office of Housing's HomeWise program.
- **Co-brands and co-markets** with participating utility partners to create "one-stop shop" services for homeowners. Ideally marketing is combined and consistent across energy efficiency programs targeting residents in a specific territory. Coordinated marketing can reduce customer confusion by offering a solution for every customer. Combined marketing efforts may also reduce marketing costs for participating utilities and cities.
- **Operates with the ability to nimbly respond to changes in funding sources** and remain cost-effective.
- **Continues serving oil-heated homes** because oil-heated homes are not currently served by utility rebate programs.
- **Maintains the High Road Agreement** to support quality, living-wage jobs that meet regional workforce goals, and ensure quality installations and high levels of customer satisfaction.
- **Provides high-quality customer service to homeowners**, regardless of income or location within the SCL territory.

The team identified an ongoing strategy to find efficiencies through integration with Clean Energy Works Oregon systems and resources.

Performance Metrics, Revenues & Costs

The table below shows the projected performance, estimated revenues, and costs for 2014-2016. Over the three-year period, the program expects to serve 3,500–4,000 customers, save nearly 8 million kWh, and

about 8,500 tons of carbon. Program costs are projected to be $3.7–4.5 million annually and revenues are also expected to total $3.7–4.5 million annually. More detail describing each line item is included below.

PROJECTED PROGRAM PERFORMANCE	2014	2015	2016
Total target number of signups	3,190	3,190	3,190
Total target number of completed projects			
Electric-heated homes	960	960	960
Oil-heated homes	260	260	260
Energy savings projections (on aggregate does not acct for fuel switching)			
Electricity (kWh)	2,280,000	2,280,000	2,280,000
Oil (gallons)	121,000	121,000	121,000
Carbon savings projections	2,792	2,792	2,792
PROGRAM INCOME STATEMENT	**2014**	**2015**	**2016**
Program Revenues			
Pay-to-Play Revenue	$154,000	$292,000	$292,000
Carryover Funds from Better Bldgs Prog (gen & LLR)	$660,000	$0	$0
City of Seattle General Fund	$200,000	$200,000	$200,000
Expected SCL Funding	$2,600,000	$2,600,000	$2,600,000
Potential Payments from PSE	$20,000	$20,000	$20,000
Other Revenue	$11,000	$48,000	$48,000
State CEEP Funding	$750,000	$500,000	$500,000
Total Revenues	**$4,395,000**	**$3,660,000**	**$3,660,000**
Program Costs			
Marketing Expenses	$341,000	$241,000	$241,000
Other Operating Expenses	$2,363,000	$1,728,000	$1,728,000
Incentive Expenses	$1,691,000	$1,691,000	$1,691,000
Total Expenses	**$4,395,000**	**$3,660,000**	**$3,660,000**

Projected Performance

- **Number of signups** is based on historic CPW data and is directly related to the level of program marketing. Direct mail marketing has been the most cost-effective marketing strategy for the program to date. Letters cost approximately $.75 each to mail, achieve a response rate of 1.5-2.5%, for a total acquisition cost of approximately $50 per customer.
- **Completed project** estimates are based on a mix of single measure and whole-home projects, factoring in conversion rate assumptions for each based on SCL and CPW historic data.
- **Energy savings projections** are derived from Regional Technical Forum (RTF) values. Projections to date do not include electric or gas energy use increases as a result of homes switching off of oil and onto the electric or gas utility grid.
- **Carbon savings projections** are based on projected savings for measures installed as calculated by the EPS software tool.

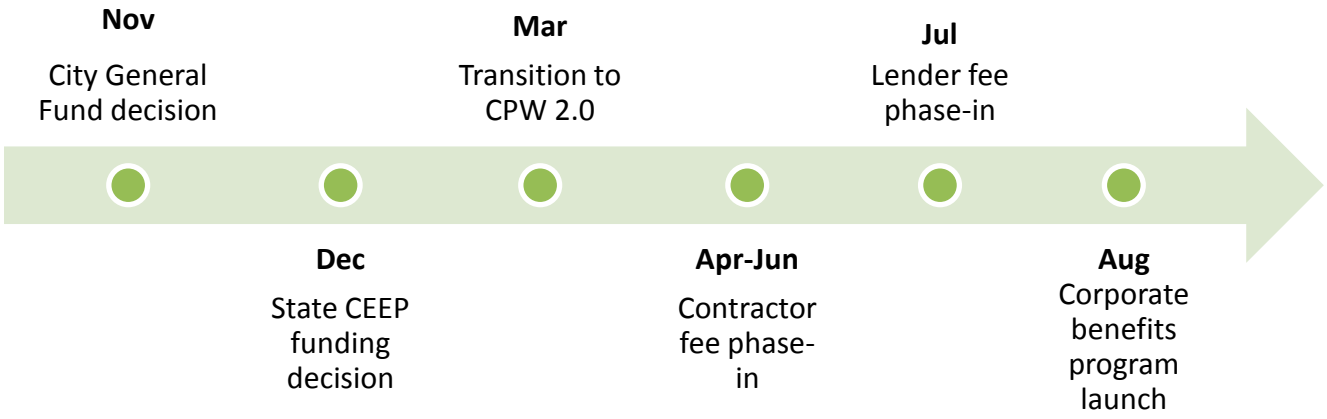
Program Revenues

- **Payments from Seattle City Light** includes all costs associated with serving electrically-heated homes participating in CPW, specifically rebates to customers and payment for program management services based on the quantity of electrically-heated homes served.
- **State Funding** from Washington State University (WSU) to CPW as part of the Washington State Community Energy Efficiency Program (CEEP).
- **Carryover Funds from Better Buildings Program** are the funds remaining from the ARRA-funded Better Buildings grant awarded to City of Seattle in 2010. The program is required to expend all funds by the end of the grant period in 2014.
- **City of Seattle General Fund** based on an initial budget request of $200,000[1] to cover incentives for oil-heated homes in 2014, and future budget requests for 2015-2016.
- **Pay to Play** refers to fees charged to various "users" of program services such as contractors, customers, and lenders. The program will batch together and introduce fees as infrequently as possible to reduce confusion and minimize disruption for all participants. Beyond 2014, the program may also explore customer fees for delivering "hand-holding" throughout the upgrade process, including customer service, technical building science advice, and quality assurance. In 2014, the program is considering the following, while balancing industry feedback and program economic requirements:
  - Project Success Fee charged to contractors beginning in Q2 or Q3 2014 at 2-3% of total project costs. Funds will either not be collected for electrically-heated homes, or collected equally from all customers and electrically-heated homes amounts will be allocated back to SCL. For non-electrically-heated homes, the revenues will cover CPW program costs associated with test-out quality assurance visits, customer service, and access to financing. The program will determine if fees will be applied to projects that include non-energy efficiency work, for example, remodels.
  - Possible Lead Fee charged to contractors beginning in mid-2014. This fee is structured to allow contractors to buy up to a specified number of leads per month for $150 per lead. Before implementing, the program will further explore how fees apply to single measure and multi-measure projects, and clearly define qualifications for leads. Again, Lead Fee revenues from electric homes will be allocated back to SCL, and those from non-electric homes will go to the CPW program.
  - Possible Lender Fee charged to lending partners, currently Craft3 and PSCCU, beginning in mid-2014. The amount will be negotiated with lending partners and for the purposes of budget modeling equals $5,000 per lender per quarter. The amount is intended to cover the value of customer service and leads. In 2014, the program will explore new strategies to increase customer loan uptake.
- **Payments from Puget Sound Energy** to cover referral of customers living in gas-heated homes to PSE's customer service team (not confirmed).

[1] Budget on previous page conservatively assumes $100,000 in City of Seattle General Fund, given the budget is not yet adopted.

- **Other Revenue** includes revenues from corporate partners offering employee energy efficiency benefits, as well as revenues from partnerships with radon and seismic retrofit programs.

Program Revenue Expected Decision and Launch Dates—2013-2014



Program Costs

- **Marketing expenses** include:
  - Program website, blogs, and social media that is accessible to all homeowners.
  - Program-managed, fuel-specific direct marketing which will target only oil-heated homes in 2014.
  - Additional targeted marketing such as paid advertising, earned media, and event staffing and presentations as needed to increase program signups.

SCL will manage and implement broadcast marketing to all electricity customers in the SCL service territory, regardless of heating type, through general channels. SCL will also engage in targeted marketing to owners of electrically-heated homes.

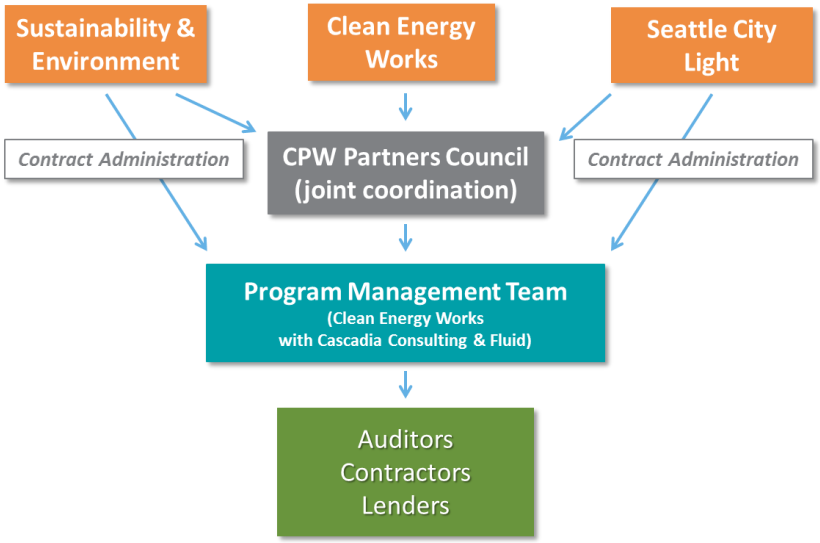
- **Operating expenses** include all expenses associated with managing and operating the program, including but not limited to customer service, contractor support, quality assurance, test-in audits, test-out quality assurance visits, and IT user licenses.
- **Incentive expenses** include all utility and CPW-sponsored weatherization, single measure, and high efficiency heating rebates provided to homeowners participating in the program. This does not include PSE rebates.

Governance

To date, the Seattle Office of Sustainability and Environment (OSE) managed aspects of CPW related to city policy, such as the High Road Agreement, grant reporting, and administration. OSE contracted with the Home Retrofit Coordinator (HRC) consultant team led by Cascadia Consulting Group, with Fluid Market Strategies, Habitat Home Energy Audits, Kick Spark Creative, as well as independent marketing consultants, to manage day-to-day program operations. SCL worked alongside OSE and the HRC team to support the

audit program and marketing, as well as vet development of policies impacting contractor weatherization work, contractor training, and quality assurance.

Going forward, CPW will be managed by both OSE and SCL in partnership with Clean Energy Works (CEW), the provider. Representatives from OSE, SCL, and CEW will form the **CPW Partners Council**. The CPW Partners Council will be a consensus style decision-making body that acknowledges and enables the need for independent decisions by partners for specific circumstances and situations. The scope of the CPW Partners Council and other decision-making processes will be outlined in the CPW Partners Agreement. Day to day operations of the program will be managed by CEW working with Cascadia, Fluid, and Habitat through a Program Management Team that will also include representation of OSE and SCL staff.



Utilities and Heating Fuels

Seattle homes are served by two utilities and many independent suppliers providing heating fuels including oil, propane, and wood. SCL provides electricity to all Seattle residents and provides electric heat to 22% of Seattle's homes. Sixty-one percent of Seattle's homes are heated with gas provided by PSE, an investor owned utility, and 16% are heated with oil supplied by at least seven private heating-oil companies located throughout the city. The remaining homes are heated with propane or wood.

Heating Fuel in Seattle	% of Homes
Gas	61%
Electric	22%
Oil	16%
Other	2%

To date, CPW has been "fuel blind", serving all Seattle homes regardless of heating fuel type. Due to funding sources for the program, beginning in March 2014 CPW may only serve homes heated by electricity or oil.

Oil-Heated Homes

The program offers significant benefit for homeowners with oil-heated homes because:

1. Heating oil is expensive - $3.75 per gallon according to SCL's online fuel cost comparison, or $1,371-1,828 per year, depending on the annual fuel utilization efficiency (AFUE) of the heating system. Switching to another heating fuel may have significant financial benefits. Per 100K Btu, and depending on AFUE, oil costs $3.35–4.46, gas costs $1.03–1.62, and zone or central electric costs $2.89. Electric heat pumps are the most cost-effective heating system, ranging from $0.92–1.23 per 100K Btu.

2. Homes heating with oil do not have access to utility conservation programs and are not served by traditional utility weatherization programs offering rebates for insulation, air sealing, and high efficiency heating equipment.
3. Oil emits more greenhouse gases than electricity (with a clean generation mix) or natural gas.

Utilities and Community Power Works

Historically, utilities implement energy conservation programs with the focus on load reduction, cost effectiveness, and ratepayer equity. In order to protect ratepayer funds and ensure the validity of claimed savings, they operate under extensive constraints on funding, expenditures, and measures; they also require energy savings verification. CPW meets utility requirements in many ways while also focusing on delivering individualized customer service, achieving deep energy savings, developing the overall home performance market, supporting locally-owned contracting companies, and building a skilled workforce.

CPW has resulted in new customers who switch from heating oil to electricity or gas, an uptick in rebated weatherization projects, a high level of customer service and satisfaction, top performing contractors, positive relationships with trade allies, and easy access to financing for customers.

Estimated Historical Annual Savings from CPW upgrades	
Gas	72,500 therms
Electric	115,300 kWh
Oil	294,000 gallons
Total Utility Rebates Paid for CPW upgrades	
$1,085,700	

SCL has been committed to supporting audits, subsidizing the cost of the audits, providing quality assurance review, and overall management. SCL has also provided marketing support, funneled all city weatherization customers to CPW, and offered its own rebates to supplement the program. SCL sees improved work quality for customers resulting from CPW's oversight, training, and relationship building with trade allies. With expansion to include all of SCL territory, CPW also meets SCL's desire to serve all customers, and provide choices and flexibility, regardless of where a customer is along the energy efficiency continuum.

PSE has not yet determined its commitment to CPW in the future. PSE's territory extends far beyond the City of Seattle, where PSE provides residents with both gas and electricity. PSE internally manages a Contractor Alliance Network of qualified contractors who market and conduct quality assurance for home weatherization projects throughout its territory. PSE also implements the HomePrint program—a non-diagnostic "clipboard" audit for homes located in the areas where PSE provides both gas and electricity. While CPW participants include many PSE customers, CPW customers are only a fraction of all the customers served by PSE's single-family weatherization program.

Beginning in 2014, CPW will no longer be able to support service to gas-heated homes without PSE's participation. This compromises CPW's ability to meet its priority strategies, including providing one-stop-shop services across all fuel types and superior service to all customers. CPW will continue to respond to PSE customers by redirecting them to PSE for service. In addition, CPW will continue to discuss potential involvement with PSE.

Description of Program Elements

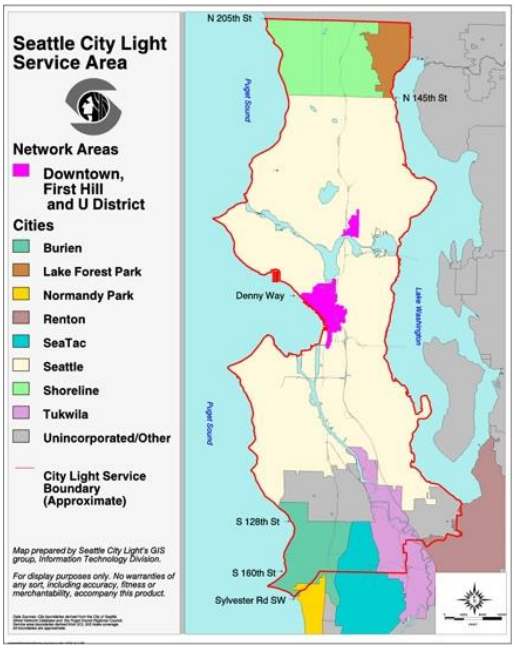
The CPW transition planning team was tasked with designing the next iteration of CPW that, when compared with the program to date, will:

- Cost less to manage and operate.
- Maintain high levels of customer satisfaction and contractor performance.
- Maintain momentum by continuing whole-house upgrades, including single measures, and achieving deep energy savings.

To do this, the team conducted a SWOT analysis identifying CPW's strengths, weaknesses, opportunities, and threats (see Appendix 4: SWOT Analysis), and analyzed various optimization strategies, comparing and contrasting best practices from Clean Energy Works Oregon and programs around the country (see Appendix 5: Optimization Analysis). The result is the "CPW 2.0" program, launching in March 2014.

Customer Eligibility and Description of Service

The next phase of CPW will serve electric-heated and oil-heated single-family homes, and phase in multifamily buildings with up to four units, anywhere in SCL's service territory (SCL's territory extends beyond Seattle city limits as shown on map).



Participants will have the opportunity to receive:

1. A subsidized energy assessment, including recommendations for energy upgrades and an EPS.
2. Program and utility rebates for specific single and bundled energy efficiency measures.
3. Service from a City-approved High Road contractor to install efficiency upgrades.
4. An affordable, easy to qualify loan.
5. Ongoing customer service and energy expert support.
6. Quality oversight.

Customer Service

Great customer service is one of the hallmarks of CPW and will be maintained at current levels provided the availability of sufficient funds in the future. The program's objective is to deliver high-quality service to every customer. CPW does this with timely and thorough responses to customers; careful management of customers who have issues with their contractors, work quality, lender, or anything associated with the program; and swift resolution. To satisfy every customer, the team shares pertinent information in Service Delivery Meetings regarding the customer, contractor, auditor, quality assurance staff, and customer

service staff. The Operations Manager, Maryellen Hearn at Cascadia, develops a clear action plan including documenting what has occurred, conversations with customers and contractors, proposed solutions, and next steps.

Energy Assessments and Auditors

WSU's evaluation of CPW performance since 2010 indicates that energy assessments:

- Encourage customers to install energy efficiency measures and implement energy-saving behaviors by providing specific recommendations.
- Lead to deeper energy savings than single-measure programs.
- Increase customer education and overall satisfaction in the program.
- Provide access to weatherization information for all single-family residential customers, regardless of income level.

The data also suggest that the most important component of a customer's decision to complete an upgrade is their rapport with the energy auditor. Customers value auditor expertise, diagnostic tools like blower doors and infrared cameras, and rigorous and high quality data, such as an audit report that includes visualization of potential energy savings.

The program found that there are no differences in customer satisfaction or quality between **independent auditors, and auditors working directly for a contractor company**. Customers who received independent audits took an average of three weeks more to complete upgrades, but approximately 25% of customers surveyed say they value an independent perspective and it factored into their decision to upgrade. More information about the value of energy assessments and considerations for CPW 2.0 are included in Appendix 6: Audit Redevelopment. Many independent auditors participating in CPW today express interest in selling their customer support and test-out services to customers as an "add-on" customer service feature of the program in the future.

Homeowners participating in CPW 2.0 will enter the program on one of two tracks: 1) single measure, such as space or water heating upgrades, or 2) whole-house. Whole-house customers will receive a streamlined EPS audit, including diagnostic testing and the option to select either an independent or contractor auditor. The streamlined EPS tool will include features like drop-down menus and additional automation to reduce auditor time in the home and to complete the audit report for the projections.

CPW 2.0 will include **quality oversight** of auditors to ensure the program achieves the highest level of customer satisfaction, conversions to completed upgrades, and results in complete and accurate data. To work with CPW customers, auditors must perform a minimum of 24 audits per year. Training will be available for auditors interested in qualifying for the program.

CPW Contractors

CPW's dedicated, high-performing pool of contractors benefit from training and business development, support on IT systems, qualified leads, customer service, quality control, scheduling, and administration (see Appendix 7: CPW Contractors). CPW will continue to serve and support participating contractors, recognizing their critical role in the program's past and future success. All contractors and auditors receive weekly email updates from the program, and many attend program-organized monthly gatherings to hear about overall program and individual contractor and auditor performance, and updates to program operations and policies that impact their work. These meetings will continue and will be the forum for announcing and working through changes for contractors in 2014. One significant change is charging contractor fees for leads and project support. As these fees are rolled out, the program will work closely with contractors to ensure they are able to continue participating while retaining jobs and profitability.

Applications to Contractor Pool

CPW will have an open application process whereby contractors can apply to participate in CPW at any time as either an Approved or an Emerald (previously "Certified") contractor, based on their experience and qualifications (see Appendix 8: High Road Application). Every contractor will be required to submit documentation supporting their application in order to qualify for the program. Once accepted, Approved contractors will have access to the brand and the program, but will not receive leads from the program. Emerald contractors will receive CPW-generated leads.

High Road Agreement

All CPW contractors will operate under the program's High Road Agreement (HRA) (see Appendix 9: High Road Agreement), which includes wage, hiring, and certification requirements, quality assurance guidelines, and business participation goals. The HRA is now a national model for triple bottom line residential conservation programs and is a framework that creates living-wage, broadly accessible jobs for area residents while maximizing the environmental benefits of the program and delivering high-quality upgrades to homeowners. The HRA will remain in place as the core tool for managing the CPW contractor pool.

For every completed project, contractors submit a workforce report and are subject to quality assurance. Program staff and an oversight committee will regularly review the performance of each contractor and take corrective action as necessary to ensure the continued quality of the CPW contractor pool (see more under Quality Oversight).

CEW and CPW both operate under a HRA framework that will grow and strengthen through regional collaboration and alignment. A CPW liaison will be housed within OSE, and the CPW liaison and CEW's Equity Strategies Manager will coordinate to build both programs and efficiently manage High Road initiatives at the regional level.

HRA Advisory Committee

A local HRA Advisory Committee, made up of representatives from the city, community stakeholders, and contractors will meet regularly to review a High Road Data Dashboard of agreed-upon metrics and

determine progress toward the High Road goals and targets. With these data, the Advisory Committee will help inform policy development with OSE and the CPW Partners Council (see Governance section below).

The CPW Liaison within OSE will work closely with the CEW Equity Strategies Manager, CPW program staff, and contractors to monitor High Road performance, ensure compliance, and take corrective measures as necessary.

Quality Oversight

Customers value the complimentary verification of contractor work quality provided by the program for every CPW upgrade. Contractors, knowing it is valued, sell their work as verified by the program. Although highly valued by both customer and contractor, 100% quality assurance is costly for the program. CPW 2.0 is designed to maintain the highly-valued program verification by implementing a quality *oversight* structure that significantly reduces program costs. The reduced version will maintain 100% quality oversight, provide test outs for qualifying whole-house jobs, and incorporate an incentive plan for contractors who maintain high quality work. The intent is to recognize high-performing contractors and offer support to low-performing contractors. The plan also allows for dispute resolution when issues arise between customer and contractor or between two or more contractors working on the same job.

Program-offered quality oversight will consist of activities on some or all upgrade projects as described below. The program will work with contractors to effectively communicate the QA structure to homeowners so they understand what projects qualify, how QA is implemented, and how QA costs are calculated.

- **Bid review** will be conducted on all projects.
- **In-process quality control** on a percentage of all jobs, with more for low-performing contractors.
- **Quality assurance test outs** for all jobs that include 1) a total cost greater than a threshold amount determined by the program, 2) full heating system replacement, wall blows, air sealing/ventilation, and attic insulation, 3) at least three measures, or measures from at least two measure categories (HVAC, insulation, windows, building tightness, controls, water heat).

In general, quality assurance will be prioritized to whole-house jobs, which will be further defined by the program, and generally require using "house as a system" methodology and recommendations and measures that are solutions-based in agreement with homeowners.

Additional Quality Assurance Available at Cost

If a contractor or customer is interested in *additional* quality assurance on a project, the program will charge the amounts shown in the table at right. Contractors that do not pass

Measure Type / Quality Assurance Task	Price / Job
Simple space and water heat (DHPs and HPWHs only)	$200
Single and small bundle Weatherization	$250
Home Performance	$300
Full Air Source Heat Pump	$500
Bid Review	$70

quality inspections will be charged $250 for the additional inspection required.

The program will provide details on costs prior to implementing charges to contractors, and develop messaging for customer communications related to quality assurance.

Master Installer Program

High-performing, CPW Emerald contractors may "earn" and sell their Master Installer status to customers. High-performance will be based on quality of work rather than quantity to avoid preference for large over smaller contractor companies. The program will rely on existing contractor reporting to assess the value of the Master Installer approach, and to avoid adding a data collection burden onto contractors and the program. Master Installer contractors receive a certificate from the program credentialing their work, and reduce the number of program-provided quality assurance site visits to a minimum of 5% on single measure installations (exact percentage to be determined) and 50% for whole-house jobs. Master Installers also have the opportunity to participate in program design meetings and/or lead roundtable discussions with the CPW management team as the program evolves.

To qualify for Master Installer status, CPW Emerald contractors must:

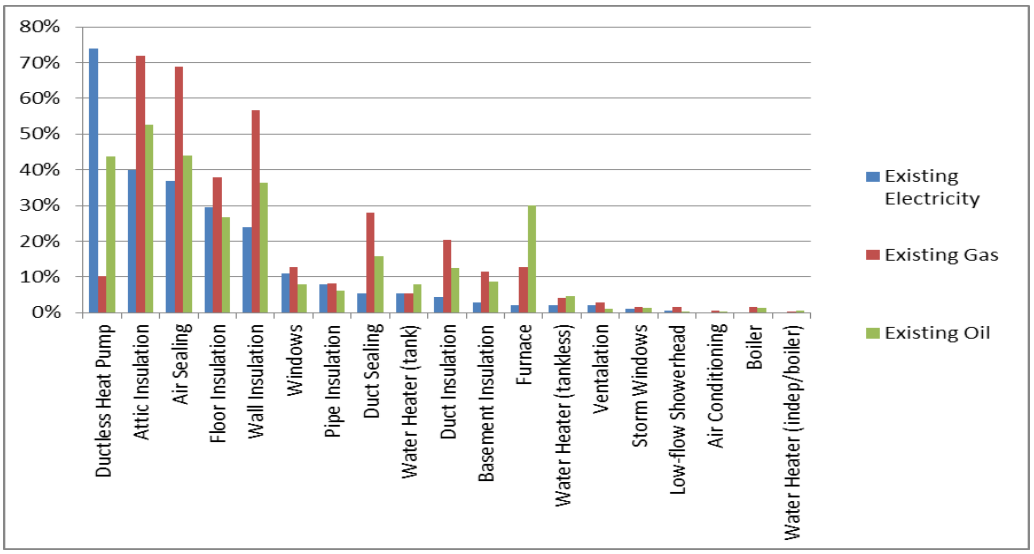
- Employ at least one installer who has attended a program-offered *Success with Retrofits and Quality Control* class or submit a sufficiently rigorous example of their quality control protocol in writing.
- Add 16 CEUs per year for external certifications that are sufficiently complimentary to CPW, or work with CPW staff to identify and submit their own CEUs based on field and classroom training.
- Perform a minimum of 20 jobs for CPW per year with a 90% success score.
- Routinely complete and submit quality control checklists and schedule in-process quality control inspections.
- Participate in a topic-specific, roundtable discussion either online (occur quarterly) or in person (occur monthly).

Master Installers that do not maintain 90% pass scores will lose their status and associated privileges.

Energy Measures

CPW retrofits have historically included a wide range of energy efficiency measures, as shown below.

Frequency of Historical CPW Measures (by existing heat type)



The CPW 2.0 program includes both individual and bundled measures, with an assumed mix that is based on historical CPW program data, NEEA's Residential Building Stock Assessment (RBSA), and SCL data and preferences. While stand-alone measures will be allowed, the program will be designed and marketed to encourage whole-house bundles to maximize energy savings. For example, bonus incentives may be offered for projects that include multiple measures. For more analysis and considerations on the recommended measure framework for CPW transition planning, see Appendix 10: Background, Research Methodology and Recommendations for Measure Framework for Seattle City Light.

Incentives

To date, all homes in Seattle have been eligible for CPW rebates, regardless of heating fuel. The Energy Savings Incentive based on the total projected savings due to the installed measures (see table on page 5 showing rebate amounts associated with energy savings) has resulted in a greater dollar amount per customer of any other rebate offered by the program or utilities. Incentives are assumed to create higher demand and upgrade conversion; CPW will test this assumption beginning in 2014. Some Better Buildings programs and other energy efficiency programs around the country have achieved high participation and energy savings with significantly lower rebates than CPW. CEW in Oregon, for example, averages $1,000 program and utility rebates per customer and achieves comparable participation and energy savings.

Contractors also provided feedback that while incentives are great, the other elements of the program such as customer service, quality assurance and control, and marketing are most valuable. Some contractors even suggest that "utility incentives are enough." That said, the program has shown that contractors and customers respond to time-sensitive incentives, as well as incentives focused on a single action such as oil-tank decommissioning. CPW will likely use similar incentive tactics in the future to increase and control program demand.

In 2014, CPW will offer program rebates only to homeowners who heat their homes with oil. The high-efficiency heating incentive is available for homeowners who switch from an old, inefficient heating system to a new, highly efficient ductless electric heat pump ($1,500 incentive), a ducted electric heat pump ($1,200), or a gas furnace ($350). Rebate values will likely change in 2014 as a result of revised RTF values. Customers who opt to continue heating with oil will receive rebates for weatherizing their home at 50% the measure cost up to a given amount (varies by measure). Eligible customers will also receive utility rebates from SCL and PSE, depending on whether they heat their homes using electricity or gas.

Rebate Fulfillment

CPW will incorporate "instant rebates" for both CPW and participating utility rebates on final project invoices to the homeowner. CEW, serving as fund manager, will reimburse the rebate amount directly to the contractor after verifying measure installment and completing quality assurance. CPW will collect these rebates and submit invoices with back up for each homeowner application to the utilities on a monthly or bi-monthly basis, and utilities will reimburse CPW for rebates.

Lending / Lenders

Offering financing options through lending partners is an important part of CPW services. According to WSU analysis, approximately 25% of CPW customers take advantage of loans through the program. Typically higher income customers use financing to pay for larger projects, with an average loan amount of $14,600.

SCL currently offers on-bill repayment to customers with Craft3 loans and may expand the service to customers of all lenders participating in CPW.

In 2014, CPW will continue to work with current lenders Craft3—a non-profit lender with a social equity mission—and Puget Sound Cooperative Credit Union (PSCCU); and will also explore expanding to additional lenders serving the Western Washington market. Beginning in mid-2014, participating lenders will pay a quarterly fee of an amount to be negotiated for customer leads, customer service, and program administration.

Corporate Partnerships

CPW is partnering with the Clinton Foundation's Climate Initiative HEAL (Home Energy Affordability Loan) program to pursue and partner with corporations and organizations interested in offering an energy efficiency benefit to their employees. Employees participating in the program are channeled through the CPW customer process, but with additional benefits such as a discounted or free energy audit and the opportunity to take advantage of a loan that would be paid back through paycheck deduction. Participating employers offer the benefit to employees to reduce their living expenses and invest in the comfort and efficiency of their homes. Participation in employer-provided energy efficiency benefit programs is increasing around the country, and the Clinton Foundation will offer CPW critical support in establishing partnerships.

Corporate employee benefit programs could result in great savings for the program. The partnering corporation or organization would provide a steady stream of program participants using internal communication channels such as company newsletters, intranet, and employee benefits fairs. CPW would incur minimal marketing costs to acquire these customers. CPW staff, auditors, and contractors would use the corporate communication channels to recruit participants; schedule audits; deliver audit results, recommendations, and contractor bids; and schedule quality assurance. These processes could be considerably less expensive than recruiting and working with customers from the open market. Corporate partners would pay the program between $250–400 per employee participant, as negotiated with each partner.

Marketing & Outreach

CPW has piloted a broad spectrum of marketing and outreach strategies including fairs, summer festival appearances, and tabling; radio, bus and billboard advertising; targeted subsector advertising through sporting events, neighborhood blogs, and flyers in home-delivered produce boxes; yard signs; volunteer mobilization; and door-knocking. The most successful strategy for driving demand is City- and SCL-branded direct mail, accounting for at least half of all CPW signups. The CPW brand benefits substantially from city affiliation in customer communications. The city's logo provides a stamp of approval that instills trust and confidence among eligible homeowners. Contractor and auditor referrals are also a significant source of signups.

In 2014, marketing for CPW will be conducted in close coordination with SCL as the program's utility partner. SCL will conduct initial broadcast marketing through *Light Reading* and e-newsletters to customers throughout the SCL service territory. After assessing customer response, the program will follow with targeted marketing by fuel type as needed to better match participation rates to program plans and funding source budgets. SCL will be responsible for its own direct marketing efforts to customers living in electrically-heat homes. CPW will also implement general outreach to maintain visibility, including frequent updates to the CPW website, social media, blogs, and appearances and presentations at events and meetings when considered appropriate and valuable.

Tracking, Reporting and Evaluation

From the outset of CPW, OSE invested in developing a robust customer management platform built by EnergySavvy. CPW administrators, customer service team, contractors, lenders, and customers have the ability to view progress on individual projects, specific tasks that need completing to move a customer project forward, and overarching program metrics, depending on their level of access (see Appendix 11: CPW Customer Management Platform).

The EnergySavvy "Optix" program has been critical to evaluating and reporting on CPW's overall progress. In addition, the city contracted with WSU to conduct rigorous evaluation of all aspects of the program (see Appendix 12: Notes on Reporting and Data Collection). WSU conducted surveys and interviews with several audience groups throughout the pilot program, including administrators, contractors, auditors, customers, and non-participants. WSU's data and analysis played a critical role in shaping the program over the three years from launch to planning future program sustainability.

Without WSU playing this key design assistance and real-time support role in the future, CPW will need to establish the scale of reporting necessary to assess progress and understand program effectiveness—as well as meet the requirements of funders. CPW's reporting will:

- Use the EnergySavvy Optix platform to collect key program metrics.
- Closely incorporate reporting assessments into program management functions, including regular Service Delivery and Management meetings.
- Standardize reporting and consistency of measure definitions to better capture non-energy versus energy upgrades.
- Review and input "clean" data into EnergySavvy or an alternative data infrastructure system at invoice review or closeout stage.
- Use deemed savings calculations based on RTF values to derive total energy savings, rather than EPS test-in and test-out values.

Risk Management

As the CPW team envisions future growth, we must also recognize and plan for the risks described below. As with all energy efficiency programs implemented over time, CPW operates in an ever-changing political and economic environment. Seattle's Mayor and Council leadership currently support energy conservation and are likely to continue that support in the future; however, a new Mayor whose agenda and priorities are unknown will take office in January 2014. Energy prices also have an impact and are beyond the control of the program. Generally, energy conservation is likely to continue to be considered most cost-effective energy resource for utilities and the region. Program risks include:

- **Inadequate Funding.** Inadequate funding is a threat to CPW's continued success. This plan includes optimization strategies for reducing costs while maintaining outcomes for the program, such as reduced quality assurance, shared marketing, streamlined audit software, merged tracking and reporting, and lower rebate values. The plan also describes new revenue models such as "pay to play" and corporate employee benefits programs. Revenue streams such as these could grow significantly as efforts focus on building strong partnerships and delivering value with program elements that are designed to meet specific objectives. Pay to play strategies under consideration, in addition to those planned to launch in 2014, include customer fees for energy expertise and program services.
- **Lack of gas utility participation.** The CPW program operates most effectively as a high-functioning one-stop shop platform providing seamless service delivery to all homeowners in the Seattle area, regardless of fuel type, income level, and specific energy efficiency interests. A partnership with PSE is required to allow for seamless energy efficiency services delivery to all residents but it is not clear whether PSE will commit to coordinating service with CPW at this time. To plan for this, the transition team modeled three scenarios for PSE involvement: 1) providing full service to gas-heated customers; 2) providing HomePrint audits performed by qualified auditors to assess opportunities and generate qualified leads to PSE; and 3) redirecting customers to PSE customer service, expending the lowest amount of resources possible. CPW incurs costs with any of these scenarios, but is committed to

providing some level of customer service in order to maintain CPW's and SCL's outstanding customer satisfaction ratings.

- **Low customer interest and participation.** CPW program targets are fairly aggressive. Customer participation may reduce significantly without continued high incentives based on projected energy savings. To manage lower demand, the program could increase targeted marketing to the most eligible homes based on age of home, fuel type, and other attributes common to CPW customers. The program could also offer a rebate "bonus" or time-sensitive rebates to stimulate signups. Both of these tactics would create additional demand, but at a cost that is likely unsustainable for the program in the long term.
- **Reduced energy savings.** The program will likely result in lower average energy savings per home in 2014 because of the addition of single measures to the program, as well as discontinuing incentives based on modeled, rather than deemed, energy savings. To counter this, CPW will include a "boost" incentive for homes installing three or more measures. The program will also encourage all CPW customers to get an audit and pursue a whole-house upgrade. CPW contractors are trained on whole-house approaches and will be required to encourage multi-measure upgrades with every customer.
- **Lower quality work.** Contractor quality may diminish if the program discontinues 100% quality assurance test-outs for every project. The new quality oversight system, however, rewards high quality work, and requires payment for additional quality assurance by the program. These strategies should mitigate this risk, especially given the highly capable and mature home performance contracting industry resulting from CPW's investment working with contractors to date.
- **Lack of pay to play participation.** Contractors and lenders may not be willing or able to pay CPW for leads or program services. The program has reached out via several venues including one-on-one conversations, Home Performance Washington meetings, Washington Weatherization meetings, and small group discussions to better understand contractor interest and commitment to continued participation. The program will continue to communicate openly with contractors and address their concerns as much as possible before launching fees for their participation.
- **Space and Water Heating Technology Changes.** Going forward, CPW will offer more single measures such as space and water heating technologies. Energy savings projections for the program assume a specific level of demand, but there are several factors affecting measure installation. The RTF could change deemed savings values, which affects incentive values, and potentially CPW's ability to offer the measures. Manufacturers and distributors also offered incentives to attract buyers to new technologies. The reduction or discontinuation of incentives for these measures could also affect installation. Finally, new measures entering the market could also reduce demand. CPW will track RTF, NEEA, BPA, and market changes in order to anticipate impacts to savings potentials, market awareness, and market demand.
- **Washington State Labor and Industries (L&I) prevailing wage requirements.** State funds used for labor trigger a Washington State L&I prevailing wage requirement. CPW incentives lower the cost of projects by discount labor costs. CPW already manages wage requirements under the HRA and would prefer to continue with the existing structure rather than adopting prevailing wage requirements. Therefore, CPW plans to use state funds to cover program management, operations, marketing, and quality assurance, and avoid using these funds for incentives. In 2014, incentives for CPW customers

will be funded by SCL and the city's General Fund pending approval of the Council's proposed budget. CPW will pursue alternative funding sources for incentives to avoid triggering L&I wage requirements in the future.

Future Planning (2015-2016 and Beyond)

The CPW transition planning team developed and considered a number of possible scenarios and financial models for CPW in the near and long-term future (see Appendix 14: Financial Model). The selected scenario and accompanying model for 2014-2016 was dictated by the funding that was successfully secured for the program as described on page 8. But the transition team is committed to developing and building support for some of the alternatives explored and highlighted in the various scenarios, specifically associated with program independence, diversification, and regionalization.

- **Independence.** The vision is for CPW to become an increasingly self-governed public-private partnership that is not part of, but rather affiliated with, partnering cities and utilities. Increasing independence could create opportunities for CPW to serve as an advocate for energy efficiency policy and raise funds from mission-driven foundations and private investors interested in a broader geography and impact. More analysis of the funding opportunities and value propositions is included in Appendix 15: Funding Strategy Memo.
- **Diversification.** A stand-alone program can also become a platform for delivering not only energy efficiency but a host of additional services to a variety of clients whose diverse interests include carbon reduction, radon and seismic retrofits, workforce development and job retention, financing, conservation and management of other resources such as water and waste, and healthy homes.
- **Regionalization.** The program could grow into a regional, multi-state effort that gains efficiencies by scaling to serve a large volume of homes while maintaining program costs, thereby reducing the dollars spent per home served by the program. Cost efficiencies achieved through scale include those associated with administrative tasks such as data management and reporting. Regionalization also allows for more robust education and marketing about home performance that will eventually result in a more informed market, and allows for greater consistency in measure installation specifications, contractor training, and work quality standards. Regionalization also allows for policy advocacy, development, funding, and implementation across states and regions.

Summary

CPW is proven to be a viable program for achieving deep energy savings, creating living-wage jobs, and providing customers with the services to increase comfort and conservation in their homes. Even without ARRA funding, the program will continue serving homes in Seattle—and eventually the region—by employing optimized systems, remaining committed to important policies and standards, and forging varied and broad-reaching partnerships with funders, corporations, utilities, and local and regional government.

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Appendix 1:

Community-Based Energy Programs in Washington

Community-Based Energy Programs in Washington: Rediscovering and Relearning the Lessons of Thirty Years of Residential Energy Efficiency Program Delivery

Vince Schueler, Washington State University Energy Program, Olympia, WA

ABSTRACT

Since 2009, the American Recovery and Reinvestment Act (ARRA) has spurred a resurgence of interest and investment in energy efficiency programs in the Northwest and throughout the nation. Much of the interest and investment have focused on creating "new" neighborhood and community-based delivery models that were intended to provide an alternative to "traditional" utility-delivered programs. In Washington state, 11 grantees tested and deployed 12 community-based models, nine of which were funded through the Washington Community Energy Efficiency Pilot (CEEP) project and three through the Better Buildings Neighborhood Program (BBNP). Many of the grantees and implementation partners had limited prior experience with energy efficiency services.

This paper highlights the use of just-in-time formative evaluation techniques to accelerate learning and integrating the lessons learned from 30+ years of developing and delivering energy efficiency programs and services in the Pacific Northwest and beyond. It includes a case study of using intensive just-in-time techniques in Seattle's Community Power Works for Home program.

Drawing on three years of formative evaluation and research, we compare delivery models and summarize lessons learned. Part of the learning for grantees involved rediscovering that the underlying fundamentals of designing energy efficiency programs documented over decades of research had not changed. Community-based programs also uncovered new ground and refined utility program delivery models. We describe how community-based programs complement and extend existing utility programs, have a role in addressing un-served and underserved markets, and can promote/integrate social and economic values as part of program delivery.

Introduction

Since 2009, 11 grantees tested 12 community-based pilot programs in Washington state.[2] Eight projects were deployed through Washington's Community Energy Efficiency Pilot (CEEP) project, which is administered by the Washington State University Energy Program (WSU EP). Washington state also hosts three other U.S. Department of Energy (DOE) Better Buildings Neighborhood Programs (BBNP). Total initial investment across all projects was almost $40 million.[3] Lead grantees included one investor-owned utility, three public utilities, three local governments, a Community Action Agency, an Economic Development Council and two non-profits. Six of the 11 grantees ran programs serving both residential and commercial market segments.

[2] One grantee – Snohomish Public Utility District – tested two very different models: direct install in multi-family buildings and a customer choice audit program for single-family homeowners.

[3] The CEEP project was initially funded with a $14 million U.S. Department of Energy State Energy Program (SEP) grant. In 2012, the Washington State Legislature authorized a one-year $15 million extension through June 2013, bringing the total investment to $55 million. Results from the 2012 extension are not included in this paper.

What Is A Community-Based Energy Program?

Washington does not have a specific definition of a community-based energy program. Although 10 of 11 grantees included targeted intensive outreach at the neighborhood level in their original design, all but four moved to broader city, county or multi-county service areas by 2012. This was done to extend access to benefits and to meet participation goals. One of the early lessons learned was the difficulty achieving high penetration rates or quick conversions for more comprehensive upgrades, which require significant financial investments and involve complex decisions. Three of the four projects that still deploy neighborhood targeting are projects that directly install a prescribed package of measures.

The "community" in community-based programs has evolved to describe the nature of delivery partnerships rather than geographic targeting. Each of the 11 projects developed unique delivery partnerships that included or engaged local community-based organizations.[4]

Table 1. Washington's Community-Based Energy Efficiency Programs

Program Name (Grant Period)	**Lead Grantee (Organization Type)**	**Location**	**Grant ($M)**	**Fund Source**	**Model**
Community Power Works (6/10- 9/13)	Seattle (City)	Seattle	20.0	BBNP	Whole House
Repower Bainbridge (6/10 – 9/13)	Bainbridge Island (City) Conservation Services Group (Private)	Bainbridge Island Bremerton	4.9	BBNP	Customer Choice
Repower Kitsap (12/10 – 9/13)	WA Department of Commerce Washington State University	Kitsap County	1.7	BBNP	Customer Choice
Home Energy Round-up (6/09 – 3/12)	Sustainable Living Center (Non-profit)	Walla Walla	.8	CEEP	Fixed Package
Project Energy Savings (6/09 – 3/12)	Clark Public Utility District	Clark County	1.0	CEEP	Fixed Package
Energy Challenge (6/09 – 3/12)	Opportunity Council (Community Action Agency)	Whatcom County	2.9	CEEP	Whole House
Sustainable Works (6/09 – 3/12)	Sustainable Works (Non-profit)	Multiple	4.0	CEEP	Whole House
Community Power – Multi-family (6/09 – 3/12) SF Audit (6/10 – 3/12)	Snohomish PUD	Everett Snohomish County	2.2	CEEP	Direct Install Customer Choice
Manufactured Home Free Upgrade (6/09 – 3/12)	Puget Sound Energy (IOU) and U-CONS (LLC)	Multiple Western Washington	1.5	CEEP	Direct Install
Residential Gas Program (6/09 – 3/12)	Ellensburg Municipal Utility District	Ellensburg	.06	CEEP	Customer Choice
Thurston Energy (6/09 – 3/12)	Thurston County Economic Development Council	Thurston County	1.0	CEEP	Customer Choice

[4] See Washington State Energy Efficiency Summit: An Integrated Look at Program Delivery (Washington State Energy Program 2012b) for detailed profiles of partnership structures, delivery and funding models.

Utilities, including lead grantees, reported that community-based programs were challenging to implement. While utilities valued the flexibility and opportunity to experiment with new models offered by community-based programs, they also reported that it was often difficult to communicate and align the differing goals, objectives, constituencies and constraints of utility-based and community-based energy efficiency programs (Table 2).

Evaluation Strategy Drivers and Methods

The central evaluation question for Washington's community-based programs was not whether installed measures would save energy, but how new delivery models would affect the rate, costs and comprehensiveness of installations. A long history of energy efficiency programs in Washington and the Northwest has resulted in fairly robust methods for estimating energy savings from installed residential efficiency measures moderated by the Northwest Power Planning Council Regional Technical Forum.

As summarized in Table 2, a common feature of community-based grantees was lack of prior operational experience with delivering energy efficiency programs and services. The four utility grantees that did have some energy efficiency experience tested new delivery models and partnerships. While there is a wealth of historical information and institutional knowledge in the region and the country on how to best deliver energy efficiency programs and services, it is very hard to turn abstract lessons from another program, region or industry into concrete program design and implementation. Comprehensive reviews of energy program evaluations (Peters and McRae 2009; Bensch and Pigg 2002) suggest there is a great deal of content redundancy across evaluation studies, indicating that common best practices and findings are frequently relearned. One might speculate that while the "industry and experts" are learning lessons, many of the individuals who design, implement and manage these programs leave those positions. New entrants may believe their markets, customers and processes are "different" unless they are shown evidence otherwise. While relearning may be inevitable, it can be accelerated by fostering a learning culture and embedding evaluation and information sharing in program design and delivery.

Table 2. Evaluation Context for Community-Based and Utility-Based Programs

	Community-Based Programs	**Public/Private Utility Programs**
Authorizing Environment	Political (federal, state, local), Funding source (legislature, DOE) Community	Regulatory, shareholders, political and community
Primary Goals	Diverse: social justice, economic, environmental	Utility focused: load reduction, cost-effectiveness and ratepayer equity
Secondary Goals	Energy cost effectiveness	Social and economic
Energy Efficiency Experience	Limited or no experience (non-utility grantees)	Extensive
Trade Allies	Partially established	Established
Program Stage	Mostly experimental and pilot	Mostly mature
Support Infrastructure	Little or none in place	Existing and extensive
Risk Tolerance	Higher	Lower
Design Constraints	Moderate – political constraints affect goals and targets	Extensive – regulatory constraints on funding, expenditures and measures
Evaluation	Evaluation optional	Energy program evaluation and energy savings verification expected

The need to address the effectiveness of delivery models and process and to accelerate the learning (and relearning) process led WSU EP to develop a formative or internal evaluation strategy (Love 1991) for evaluation work with Washington's community-based programs. The execution of this strategy differed across grantees based on funding and other factors.

Community Energy Efficiency Program. CEEP staff and the evaluation team met in May 2010 to develop the evaluation and reporting framework. Evaluation efforts focused on:

- Capturing basic process data and documenting marketing, outreach and delivery strategies through monthly reporting of upgrade and assessment totals and quarterly reporting summary data on expenditures, marketing and installations;
- Providing technical assistance and support to program staff; and
- Regularly feeding process data to program staff and grantees.

Over the life of the program, WSU EP provided ongoing technical assistance and monthly status check-ins with grantees. This was supplemented with a day-long networking and planning session in fall 2010 to share outcome data and brainstorm successful strategies. Evaluation staff frequently participated in calls and provided summary data for planning sessions. These data were abstracted to provide a report to the Washington State Legislature (Washington State University Energy Program 2010). In fall 2011, the evaluation team conducted half-day site visits and exit interviews with all CEEP grantees to document design, results, lessons and outcomes. This information was used to develop project profiles for a statewide summit and information-sharing session in May 2012.

Community Power Works. The City of Seattle, Office of Sustainability and Environment (OSE) contracted with WSU EP to provide comprehensive evaluation and reporting services. The original evaluation scope had a heavy emphasis on monitoring and energy savings verification. After an initial evaluation needs assessment identified many of the conditions summarized in Table 1, the evaluation shifted to an internal or embedded evaluation model similar to what was developed for CEEP, but with more robust funding. This effort is described in more detail later in this paper.

Repower Kitsap/Repower Bainbridge. Evaluation and reporting roles in Kitsap Repower were more complex, as this project was part of a four-state National Association of State Energy Offices (NASEO) grant involving programs in Virginia, Massachusetts and Alabama. Overall evaluation was handled through a collaborative led by NASEO; WSU EP provided technical assistance, quality assurance and data collection and reporting services for the program.

Apples, Oranges, Tomatoes and Squash – Four Models for Service Delivery

Washington State's community-based programs employed diverse marketing and outreach strategies, delivery models, incentives structures and financing models. As other evaluations of community-based programs have found, process definitions, data quality, reporting systems, cost accounting and basic outcome definitions (e.g. project completion) vary widely and confound comparisons (Roy and Afflerbaugh 2013). Evaluating Washington state's community-based programs poses the same challenge. Many of these projects were start-ups operating in organizations with little pre-existing delivery infrastructure, which made it difficult to isolate start-up infrastructure investments

from ongoing operational costs. Program strategy and delivery models were complex, often testing bundles of services that changed rapidly over the life of the projects.

As a result, costs, savings and conversion rates could not be consistently calculated across programs or meaningfully compared in many cases. However, we grouped and categorized these programs to draw general conclusions and illustrate trade-offs among often-divergent goals. Four general delivery models emerged from the 12 models tested. There is no "best" model. As summarized in Table 3, each model involves trade-offs among costs, energy savings, leverage and penetration. Focused package and direct installation models were more likely to serve moderate income and working poor households, and required less administrative support. Projects that addressed broader social goals, including workforce development and training, had higher delivery costs.

- **Whole house**. Projects are managed start to finish using a structured process with the goal of achieving comprehensive upgrades. The lead delivery partner acts as a general contractor or exerts significant control over the contractor pool. Incentives are designed to encourage whole-house upgrades.
- **Customer choice**. Projects focus on intensive outreach and marketing to drive demand for deeply subsidized audits. Utility incentives are supplemented to encourage participation in existing utility efficiency programs. Installing multiple measures is encouraged but not required. Homeowners are referred to existing auditors and utility contractors, and they select and manage their audit option, measure package and bid process with limited support from the program.
- **Focused package**. Incentives are targeted to a limited number of high-value measures (e.g., insulation or heating systems). Projects are brought in with a two-step audit process: an initial assessment to select likely households (conversion rate ~30%) and a more comprehensive audit or job order (conversion rate 75-100%).
- **Direct install.** Direct installation of a prescriptive set of low-cost measures in a targeted neighborhood using one or two contractors selected by competitive bid. Audits are not conducted, though an assessment may be done to generate a statement of work.

Table 3. Profile of Four Washington State Community-Based Models for Upgrading Energy Efficiency

Model Type	**# Projects**	**# Upgrades 6/2009–2/2113**	**Project Cost Range (avg $)**	**Customer Cost Share**	**% Loans**	**Site Energy Saved Unit[5] (avg mmBTU)**	**Assessment /Audit Conversion**
Whole House	3	1,800	$6-12,000	60-70%	20-35%	22.5 – 30.1	35-65%
Customer Choice	5	1,200	$3-8,000	70-90%	0-5%	13.4 – 17.7	20-40%
Focused Package	2	600	$2-4,000	0-40%	0%	16.1 – 27.4	75-100%
Direct Install	2	14,000	<$1,000	0%	0%	2.3 - 2.9	NA

Lessons Relearned and Learned

The *Recovery Through Retrofit* report (2009) provided much of the impetus for ARRA funding for energy efficiency improvements. The report identified three primary barriers to a stronger residential retrofit market: access to financing, access to information and access to a skilled workforce.

[5] Average annual estimated energy savings were calculated for CEEP projects using engineering estimates using deemed values from the Regional Technical Forum applied to reported measures, square footage and heating fuel source. DOE projects (two customer choice and one whole house) relied on savings estimates derived from the Energy Performance Score. Savings estimates and measure profiles were evaluated for consistency across these methods.

Washington's community-based programs developed new models to address these barriers and integrate social and community values into this work by re-learning three broader lessons:

- Addressing barriers related to financing, information and training, while necessary, was not sufficient to drive upgrades or create markets.
- Simplify and focus delivery models.
- Make long-term investments to build capacity to serve these markets.

Financing Supports – but Does Not Drive – Demand

Recent national analyses have highlighted the limits of financing in driving demand (Borgeson et al. 2012; Fuller et al. 2010). Results of the six Washington programs offering financing options were consistent with national studies: in short, financing works best for those who need it the least (those with access to capital and good credit), overall demand for financing was modest, and financing tools did have an important supporting role to play, especially in whole house programs.

- With aggressive marketing, rate buy-downs, utility rebates and matching community rebates, two whole-house programs achieved loan participation rates between 25 and 35%. In the absence of these enhancements, loan take-up rates were under 5%.
- Loans were associated with larger projects. The average loan for 294 loans in Community Power Works was $14,623. Loan amounts data were not as readily available for other projects but anecdotal reports pegged typical loan amounts at over $10,000.
- Few loans went to moderate-income households. Of loans provided through Community Power Works, 64 (22%) were provided to homes below the area median income ($72,500 for a family of three), who qualified for a lower rate (3.49%). This was the result of a very intensive effort by Craft 3, a lending organization with a social equity mission. Other programs offering financing reported anecdotally that loans were not reaching targeted working poor households.

During site visit interviews, loans were mentioned as a useful option to include in whole-house programs, but not a tool that would substantially move the market. Anecdotal evidence and general lack of participation of Washington's financial institutions in federally supported loan loss reserve funds, rate buy down and other efforts to lower the cost and risk of developing financing products for these projects suggests that federal reporting requirements and other limitations offset much of the value of using federal funds for developing specialized lending products for energy efficiency projects.

Community-based programs reported that it was easier to work with existing home improvement loan products offered through credit unions or community banks. Puget Sound Cooperative Credit Union, a regional credit union in Western Washington, currently has an energy efficiency loan portfolio of 2,250 projects and $24 million. Of these, 423 loans totaling $5.3 million were supported by federal or state grant funds, which were used to simplify the loan application process by using history of home mortgage payments instead of requiring credit scores. Grant-supported loans were an average of $3,000 greater than other efficiency loans (Ellis-Brock 2013).

Driving Demand Requires Carefully Targeted Outreach and Marketing

Ten of the 11 community-based programs started outreach efforts with broadly targeted efforts including energy fairs, tabling and traditional media buys. Although most community-based programs maintained some general outreach to maintain visibility, the overall evolution of marketing was toward more targeted channels (direct mail, e-mail blasts and contractor referrals).

Nine of the 11 projects had a dedicated website and eight experimented with Internet and social media. Of the nine dedicated websites, five included some form of online application. Most of these were fairly simple online forms. Only Community Power Works made the large investment required to automate the application and include on-line screening. By 2013, three community-based programs still maintained a social media presence beyond a basic web presence and only Community Power Works had defined and budgeted for a social media strategy.

Eight projects included some form of door-to-door canvassing in the original project delivery model. Four utility-led programs reported that variants of door-to-door sweeps were effective for projects where most measures were directly installed and/or full costs were paid. Door-to-door canvassing was not an efficient marketing approach for audits and comprehensive upgrades requiring significant customer investments. Only one of the four audit and upgrade-based projects that tested canvassing models, SustainableWorks, retained a canvassing model after initial trials. While SustainableWorks is still using and optimizing this delivery model, they are also testing other models.

Driving Comprehensive Action Requires Comprehensive and Targeted Energy Assessments

Homeowners need good information to make decisions about energy upgrades but, as other evaluators have found, very low- or no-cost audits were less effective: conversion rates are lower and they frustrate contractors because they generate unproductive leads. Assessments do need to be subsidized because few homeowners are willing to pay the full price ($400-$750). The three community-based programs offering or requiring whole-house installations settled on a subsidized audit cost between $95 and $195.

Pre-screening was also used to increase conversion efficiency. Southeast Washington Energy Round-up, a focused package model, used on-site pre-screening visits to focus audits on priority projects. All applicants received low- or no-cost measures and a walk-through assessment to determine whether focused package measures were feasible and the home was eligible for an audit. Nearly one-third of those assessed qualified for a full audit. Close to 100% of the full audits resulted in completed upgrades. Similarly, Clark PUD Project Energy Savings provided walk-through assessments to electrically heated homes in low- to moderate-income neighborhoods to establish eligibility for a no-cost energy upgrade. Promising candidates were referred to a contractor for a detailed audit and work order, and 75% of these audits resulted in upgrades.

Washington's three whole-house programs established that a package of enhanced incentives, financing packages and intensive customer support significantly increases application and assessment conversion rates. Existing utility assessment/incentive programs will convert around 25% of assessments or audits to whole- or partial-home upgrades in two years (see Dethman and Associates 2010). Measured and estimated conversion rates at one year for the three whole-house programs ranged from 35% to 65%. While high conversion rates were achieved, these programs were expensive. Excluding incentive and financing costs, ongoing costs for marketing, customer support and program management were estimated to range from 25% to 50% of total upgrade costs.[6]

[6] Estimated indirectly by comparing the sum of household contributions, utility and federally funded rebates to grant amounts less federally funded rebates. This estimate includes significant start-up investments.

Workforce Development Needs Are Diverse

Washington's community-based programs initially focused workforce development on auditing, weatherization skills and building performance by encouraging – or sometimes requiring – certification for auditors or contractors. When technical training was required by programs, contractors reported that classroom training and certifications did not prepare workers for the reality of weatherization work, but hands-on experience, on-site in-progress quality assurance and direct mentorship did. While contractors and program managers reported needing workers with good technical skills, many reported their greatest need was for what some referred to as "unicorns" – auditors, crew chiefs and program managers with a rare mix of technical and sales skills. WSU EP and the other community-based programs invested in providing supplemental training in marketing and communications to help develop this mix of skills.

Flexible Compliance Standards for Prevailing Wage Requirements Work Better

Most of the grantees struggled with meeting, reporting and administering prevailing wage requirements. In addition to Federal prevailing wage requirements, most projects were subject to an additional layer of prevailing wage requirements established by the Washington State Department of Labor and Industries. Grantees found these requirements complex and confusing. The WSU EP invested as much as a third of its technical assistance resources to explain requirements and assist with reporting.

Partly in response to these challenges, the City of Seattle established and tested the High Road Agreement – a flexible set of standards covering service quality and the provision of family wages and benefits, training and career pathways for new hires and returning workers. *The Community High-Road Agreement for Seattle's Residential Retrofit Programs* (2010) was developed by a partnership involving the city, contractors, workforce training organizations, and labor and community groups.

All Community Power Works for Home certified contractors were required to adhere to the High Road Standards. A streamlined online system for reporting hours, wages, worker classifications and demographics was established. Reporting was required as a condition of paying rebates to contractors. The system has resulted in 99% reporting and greater than 95% verification of wage compliance (City of Seattle 2013). As reported in the *Community Power Works Fall 2012 Progress Report* (Washington State University Energy Program 2012a), Home program contractors considered the High Road Agreement a significant improvement over prevailing wage reporting and were willing to provide detailed workforce reports as long as the reporting system was easy to use, transparent, fair and enforced.

Building Operational Capacity Takes Time

Most programs had high and, in many cases, unreasonable expectations of how easy it would be to establish contracts; build program infrastructure; train and develop staff; and market the services of home assessments, upgrades and investments, especially for whole-house models. A review of the literature of whole-house upgrade programs found that two to three years are required to establish these programs and five or more years are needed to reach cost-effectiveness (SBW Consulting 2012). Three factors were associated with more rapid and effective implementation:

- Prior experience,
- Less complexity as measured by fewer levels of contracting, and

- A focus on process management and improvement and evaluation.

Tracking systems used by CEEP and Community Power Works showed that it takes at least six months to move a program from planning and design to drafting and signing the initial implementation contract between federal and state funders and the local implementation partner. Each additional level of contracting (for example, between a local community organization and delivery partners like financial institutions, auditors and contractors) added six to nine months to the start-up phase before upgrades could start.

The most aggressive programs spent a year in start-up mode before any upgrades were completed (Figure 1). More complex delivery models involving multi-level contracts can take several years to move out of start-up. Utility programs such Puget Sound Energy's partnership with UCONS, which expanded on an existing delivery model and contractual arrangements and installed prescriptive measures, scaled up more quickly.

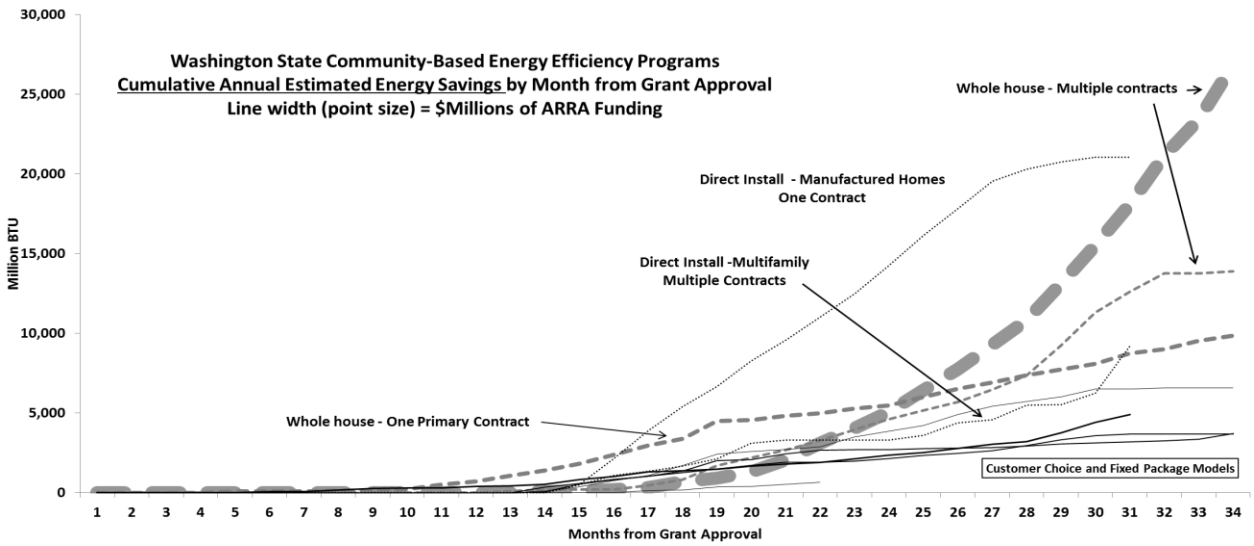

Figure 1. Implementation Curves for Washington State Community-Based Programs

Keep it focused, keep it simple.

Community-based programs have fewer regulatory constraints than utility programs and offer more flexibility to test new approaches and delivery models. Most of Washington's community-based programs started out with complicated services, incentive structures and intensive customer contact. Over time, most gravitated back to the simpler program designs common in most utility programs. Strategies included:

- Whatcom Community Energy Challenge and SustainableWorks found that multiple customer contacts between assessments and bids were too costly or intrusive, so they redesigned their delivery models to reduce the number of contacts. In contrast, the Thurston Energy Challenge began with no follow-up process after audits were completed and found that some follow-up was needed.
- The Sustainable Living Center and Clark PUD simplified its approach by focusing on a limited list of high-value measures.

- Community Power Works for Home found that an incentive design based on dollars per estimated carbon saved over the life of the measures was hard for contractors or the program to communicate. After nine months, Community Power Works shifted to a simpler three-tier incentive design based on estimated energy savings. This change contributed to a significant increase in uptake.
- A preliminary analysis of integrated (audit/contractor) delivery models in Community Power Works found that integrated models reduced hand-offs, miscommunications and process time (Schueler 2012).

Seven projects tested if energy efficiency services could be delivered comprehensively across multiple sectors within a geographic area. The most ambitious expression of this model was Seattle's Community Power Works program, which launched initiatives in six sectors. Snohomish PUD launched community-based initiatives in three sectors and five other projects served residential, small business and commercial customers. Seattle and Snohomish PUD reported they could launch only one major new initiative at a time and adopted a phased implementation strategy. Among residential programs, whole-house and focused package models more effectively coordinated and integrated audits and incentives than the customer choice model. Programs serving more than one sector coordinated branding and reporting but did not coordinate outreach, marketing and service delivery across sectors and within neighborhoods.

Find and fill gaps in existing energy efficiency services and programs.

Washington's community-based programs were most successful when they found and filled un-served or underserved markets for energy efficiency services. The nature of the gaps that were found and filled differed in each community.

- In South Central Washington (Walla Walla and surrounding counties), there were no comprehensive weatherization services available (with the exception of low-income weatherization), an older housing stock and fragmented utility efficiency programs. The Sustainable Living Center focused on building demand for and contractors capable of performing complete, comprehensive single-family upgrades.
- In Seattle, oil-, propane- and wood-heated homes are un-served by utility rebate programs. Citywide, 17% of single-family homes were heated with oil. Community Power Works was particularly effective at using targeted direct mail and incentives to reach oil-heated homeowners. As of March 2013, 41% of completed projects were in homes initially heated with oil.
- Prior to CEEP, energy efficiency services in the City of Ellensburg were limited to electrically heated homes, so the City elected to use CEEP funds to develop audits and incentives for gas customers. Although the City of Ellensburg ultimately discontinued CEEP funding (because of program requirements related to reporting and prevailing wage), the City reported that they are still moving forward with City-funded services for gas customers.

Embedding Evaluation in Community Power Works for Home: A Case Study

In October 2011, the City of Seattle's Community Power Works program had the dubious distinction of drawing the attention of Fox News and *The Daily Show* with Jon Stewart, who threw jabs

at the program for its perceived lack of progress toward energy efficiency upgrade goals. But by fall 2012, the driving challenge for the program was developing and maintaining sufficient contractor capacity to meet the explosive demand for upgrades. In the space of 12 months, Community Power Works:

- Developed, deployed and tested multiple outreach strategies, incentives, services and delivery models.
- Increased monthly production from five whole-house upgrades to 75. By spring 2013, production exceeded 100 completed projects per month (Figure 2).
- Converted (or is converting) more than 45% of audits to whole-house upgrades within one year of the audit (Table 4). An audit is counted as converted when a bid is signed. The program is experiencing a drop-out rate after bid completion of less than 1%. A June 2012 partial participant survey found that 19% of those who received a test-in audit installed one or more weatherization measures on their own. This increases conversion rates by 11 points to 56%.
- Reduced estimated Energy Performance Scores (EPS) for homes by 30% on average. The EPS standardizes energy savings by fuel type to kWh equivalences. Reductions are estimated by comparing audit test-in scores to scores generated from a test-out assessment/visual inspection for all completed projects.
- Established a network of 25 certified contractors who are supported by 37 sub-contractors.

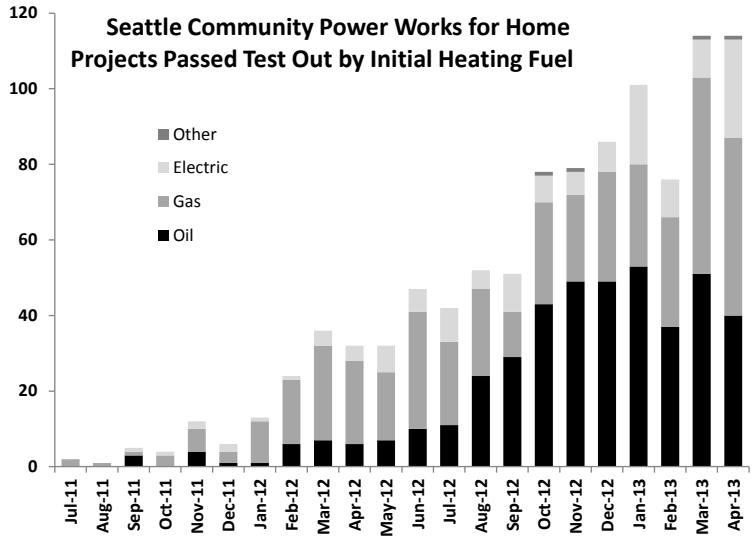

Figure 2: Monthly Production by Heating Fuel

Table 4: Summary Statistics for Community Power Works for Home by Quarter

Quarter	Audit Conversion Rate per Quarter	Avg Decrease EPS Score (kWhe)	Avg Total Upgrade Price
Total	45.6%	31.10%	$11,606
Apr – Jun 2011	37.9%	NA	NA

Jul – Sep 2011	40.0%	34.4%	$12,172
Oct – Dec 2011	39.5%	30.5%	$10,025
Jan – Mar 2012	49.8%	24.8%	$7,280
Apr – Jun 2012	44.7%	28.9%	$10,623
Jul – Sep 2012	48.6%	32.2%	$11,974
Oct – Dec 2012	NA	33.1%	$12,043
Jan – Mar 2013	NA	31.3%	$13,238

A key driver of this turn-around was an internal evaluation model focused on generating information used to refine program delivery in real-time. This model was successful because:

- The Seattle OSE budgeted for a robust evaluation and reporting system. Seattle is one of two BBNP projects to explicitly budget for and engage a local evaluation contractor. OSE collaborated with Clean Energy Works Oregon to invest in a comprehensive web-based project management tool (EnergySavvy Optix) and with Seattle City Light to support deployment of a single energy assessment tool (Cake Systems - EPS).
- OSE invited WSU EP to participate and comment on early planning and program design. One of WSU EP's first assignments was providing detailed data and reporting specifications to integrate and guide development of the Optix application. This was followed by a comprehensive start-up evaluation to clarify program and evaluation goals and objectives. WSU EP participated in monthly/bimonthly design implementation team meetings.
- The WSU EP Statement of Work identified evaluation and reporting services and specific deliverables. These were revisited and reprioritized at nine-month intervals as the program needs and models changed.

Credit for this success goes to:

- OSE, which encouraged, supported and rapidly authorized process improvements through an established change management plan;
- The Community Power for Home implementation team lead by Cascadia Consulting; and
- The auditors and contractors for suggesting changes and running with them.

Over the life of the contract, the original evaluation scope focusing on energy savings verification and reporting evolved to emphasize design assistance and real-time support for process improvement. Defining features included:

- **Rapid response and reporting**. Process outcomes and customer data for Community Power Works for Home were reported at three, six and eighteen months, and supplemented by a monthly compilation of production and pipeline indicators drawing from several data sets. To ensure that programs received timely feedback from the customer and trade allies, WSU EP released early results from participant, partial participant and contractor surveys to program staff, contractors and utility partners.

- **On-call reporting to inform program planning and implementation**. Some analyses were done at the request of the program implementation team, such as analyzing conversion rates to inform projections for completed upgrades. In other cases, WSU EP helped program staff anticipate bottlenecks by documenting the impact of rebate payment processing delays on contractors and mapping contractor and sub-contractor relationships to draw attention to capacity and bid assignment issues.
- **Tight integration of program operations with evaluation**. The line between program delivery and evaluation was blurred. For example, partial participant surveys were used to test whether program changes would appeal to early drop-outs and, if so, the drop-outs were given the option of being reconnected with the program. Participant surveys captured contractor- and auditor-specific ratings, which were reported back to the program and to contractors to build contractor capacity and skills.
- **Show use**. Specific instances of how data had been considered and addressed in program design were highlighted when sharing results with contractors and implementation partners.

This evaluation approach helped Community Power Works yield strong results and contributed to a climate of transparency, trust and receptiveness in which data was used to improve program design. This creates a virtuous cycle, where evidence that data will be used effectively to answer relevant questions creates ownership, which leads to better data and more demand for better data and reporting. But this embedded evaluation model would not meet standards for independent third-party evaluation required for many utility-funded energy efficiency programs. Ironically, this close relationship generated a comprehensive and accurate set of process metrics that go beyond what is usually available for most energy efficiency programs.

Conclusions

Compared to utility-based programs, community-based programs have broader goals and constituencies and more flexible funding to support innovation in design, delivery and partnership models. Many of the non-utility grantees had limited prior operational experience or infrastructure in place to deliver programs. Early information and rapid feedback on the effectiveness of outreach, operations and delivery was critical. In response, real-time evaluation services were embedded and provided in a technical assistance model

In the space of three years, Washington's state community-based programs have established that these models can:

- Deliver energy efficiency upgrades,
- Complement and extend existing utility programs,
- Have a role in addressing un-served and underserved markets, and
- Successfully promote and integrate social and economic values as part of program delivery.

Washington's community-based programs relearned lessons from 30 years of utility experience delivering and evaluating energy efficiency programs:

- Financing and broadly targeted outreach are not enough to drive demand,
- It is essential to clearly define and target your audience,
- Keep program designs and incentive structures as simple as possible,
- Provide training in marketing in addition to technical training, and
- Invest to build long-term capacity.

One test of these programs' success is whether the efforts are sustained. This has already happened to some degree. In WSU EP exit interviews, utility partners described instances where lessons learned, program strategies or partnerships were incorporated into other efficiency programs. Non-utility lead agencies are making plans to continue. The Washington State Legislature extended CEEP funding for another year after the initial pilot, allowing many of the programs to take steps toward sustainability.

Acknowledgements

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Appendix 2:

CPW Outcomes Reported by WSU

Community Power Works for Homes Monthly Tracking

Current as of10/31/13	
	Total
# New accounts on CPW for Homes web portal	6046
# contractors CPW for Homes (one or more upgrade comple	97
# Assessments completed	4760
$ Total new investment in pipeline (Contractor Work)	$ 22,562,759
# CPW low income loans signed (Craft 3)	99
# CPW standard loans signed (Craft 3)	241
# CPW loans signed (PSCCU)	204
$ CPW loans signed (Craft 3 Low Income)	$ 1,205,985
$ CPW loans signed (Craft 3 Standard)	$ 3,199,456
$ CPW Loans signed (PSCCU)	$ 3,835,213
# CPW for Homes starting Contractor Work	1,797
$ CPW incentive funds for projects starting work	$ 3,749,374
$ Utilty incentives for projects starting work	$ 1,289,270
# CPW Projects Under Construction on last day of month	NA
$ CPW Incentives/Under Construction on last day of month	NA
$ CPW Projects Under Construction on last day of month	NA
Output measures	
# homes closed out	1563
# homes with completed upgrades (passed test out)	1639
# CPW complete upgrades with Craft 3 low income loans	96
# CPW complete upgrades with Craft 3 standard loans	219
# CPW complete upgrades with PSCCU Loan	169
$ CPW Craft 3 Lowincome loans for completed upgrades	$ 1,150,482
$ CPW Craft 3 Standard loans for completed upgrades	$ 2,817,194
$ CPW PSCCU loans for completed upgrades	$ 2,955,939
$ CPW for Homes incentives for projects completed	$ 3,367,242
$ Utility Incentives for completed CPW projects	$ 1,172,892
$ Total invested in Completed CPW supported project	$ 20,330,748
Estimated annual electric savings (kWh)	173,200
Estimated annual gas savings (therms)	76,280
Estimated annual oil saving (gallons)	311,192
Average change in EPS score (%)	30%
Average Change in EPS score (kWhe)	9254
Estimated annual dollar savings ($)	$ 1,472,354
Estimated carbon reduction (tons/yr)	3659.8

Appendix 3:

Sustainability Planning Final Advisory Group Presentation, December 2012

COMMUNITY POWER WORKS

CREATING JOBS • SAVING ENERGY

Community Power Works Sustainability Planning Update

Advisory Group: December 12, 2012

Agenda and Goals

Objective: To achieve alignment and concurrence around the Community Power Works residential recommendations to the Mayor's Office

Agenda

Welcome & Meeting Opening	2:00 – 2:15
Utility Needs Assessment	2:15 – 2:35
Financial Model Overview	2:35 – 3:15
Proposed Recommendations & Discussion	3:15 – 4:15
Commitments and Next Steps	4:15 – 4:30

2

Review of Work to Date

- Advisory Group Convened May, 2012
  - **Goal**: Develop recommendation for next steps to Mayor's Office
- Outcomes to date
  - Identified value that Community Power Works has brought to the table
  - Agreed that some version of Community Power Works should continue
  - Explored cost-effectiveness and utility regulatory environment in Washington
  - Identified potential models to pursue

3

Review of Work to Date

- Advisory Group pared down to a "Working Group"
  - **Goal**: Define and analyze options; quantify costs and benefits; research activities and needs across the state
- Two consultants brought on board
  - Milepost Consulting – developed statewide utility needs assessment and asset map.
  - Energy Market Innovations (EMI) – developed financial model that allowed for scenario/cash flow analysis that applied cost-effectiveness filter.

4

Utility Needs Assessment

Consultant: Milepost Consulting

5

Objectives

1. To gain an understanding of how residential energy efficiency programs are implemented today across Washington State
2. To gather data that will help guide the transition planning of Community Power Works

Utility Needs Assessment Objective:

- To identify outstanding needs that utilities have in implementing programs and opportunities that may be met or supported by Community Power Works or other entities

Organizations Asset Map Objective:

- To identify where there may be gaps in geographic reach and/or service offerings and if/how Community Power Works or another entity may support those needs

5

Interview Question Areas

Utilities Interviewed:

- Avista Utilities
- Cascade Natural Gas
- Clark Public Utilities
- Franklin PUD
- PacifiCorp
- Puget Sound Energy
- Snohomish County PUD
- Tacoma Power

Utility Interview Question Areas:

- Background and geographic context
- Residential Energy Efficiency Programs
- Third-party Contracting
- ARRA
- Community Power Works

7

Observations

- In general, Federal Tax Credit was more impactful for utilities than ARRA funding *in terms of impact on energy savings*
- ARRA funding increased awareness of utility programs but did create some growing pains and lessons learned
- Utilities have implementation contractors on-board and are generally satisfied with those contractors or perform those activities with in-house staff
- Savings targets are going to get harder to attain
- Utilities seem to be moving towards whole house approach, but need to know what potential remains in single-family houses

I really want to emphasize that, as these things develop, we are reaching the perfect storm. WUTC is looking at how to assess gas programs, ARRA is expiring, so many people are dedicated to pursuing the value in efficiency programs. *Something very cool and unique could result from this!*

Opportunities

- **Management & Program Design**
  - Behavior change design and evaluation
  - Accuracy in data tracking and reporting
  - Whole house approach (*acknowledging that this is hard for utilities*)
  - Natural gas program design
  - Focus on non-low income customers
  - Small business
  - Pool resources to create cooperative programs that meet everybody's needs and help bridge instability of short funding cycles
- **Weatherization trade association for contractors who work with utilities** – targeted lead generation, training, cross-measure coordination, audits at time of house sale, etc.)
- **Communications** – public outreach for awareness of and justification for utility energy efficiency programs, cross-utility service territory public outreach, awareness and motivation campaigns on cross-measure issues (e.g., being "green," water use, etc.)

Financial Model Development

Consultant: Energy Market Innovations (EMI)

10

Overview

- **Goal**

  Develop a financial model that allows the program to test different program scenarios and their impact on budget, cash flow, and utility cost-effectiveness tests.

- **Process**
  - Current program modeled using recent costs and performance
  - Financial model tested costs and benefits using different program structure scenarios, customer fuel proportions, etc.
  - "Optimized" Community Power Works scenario developed as a reference case for next steps and not as an official recommendation.

11

Optimized Scenario

Possible Reallocation

- Home Performance Branding
- Advocacy
- Contractor Certification
- Contractor Support

→ Statewide/Regional Partner (Trade Ally, WSU)

- Lead Generation
- Customer Service
- QA/QC/Reporting
- IT Portal

→ Local Implementing Program

Financing → Financial Partner (Craft3, PSCCU)

Incentives → Utility Partners (SCL, PSE)

12

Optimized Scenario

- **Key Assumptions**
  - Maintains most of the current program elements
  - Streamlines program administrative expenses
  - Year 1 projection: 1000 units
  - Proportion of projects determined by current customer fuel mix
  - Costs and savings based on historical project values
  - CPW/Utility Incentives = 75% of current
- **Key Findings**
  - Program not cost-effective from utility perspective (UCT or TRC)
  - Customer fuel mix assumptions substantially affect utility cost-effectiveness
  - Involvement of utility funders also affects cost-effectiveness
  - No current structure to value energy or carbon savings from oil-heated homes

13

Year 1 Budget Projections

Expenses	Year 1	Percentage
Incentives (non-utility, 75% of current)	$1,593,000	50%
Project Management & Operations	$587,000	18%
Outreach & Marketing	$400,000	13%
QA/QC	$280,000	9%
IT Systems	$185,000	6%
Data Tracking and Reporting	$100,000	3%
Contractor Management	$50,000	2%
TOTAL EXPENSES	**$3,195,000**	

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Recommendations

Office of Sustainability and Environment

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Context

- City goals and policies
  - Carbon neutral by 2050
  - 20% by 2020 – Comprehensive Plan
    - With current CPW = ~14,000 homes/year
  - Economic development goals
- Evolving state/national trends
  - Clean energy economy is an Inslee priority
  - Renewed focus on climate change and carbon pricing
- Challenges
  - Utility cost-effectiveness is constraining
  - Difficult economics with low natural gas prices

How do we meet our city goals within in the current economic and regulatory environment?

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Recommendations

- Community Power Works has value and should continue if we are going to meet our residential energy efficiency goals as a City
- Community Power Works can effectively partner with utilities to help them meet their goals, but should not live within, nor be completely funded by, a utility.
- Community Power Works should live outside of the City, but will need short-term support to be successful.
- Community Power Works has assets that can live on in different parts of the community – an "optimized" program is one compelling strategy, but there are many models that can be successful.
- Community Power Works must include a financing option moving forward.

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Short-Term

Identify and implement an effective and efficient strategy for a community partner to widely deliver deep residential energy efficiency improvements.

- Identify annual/phased residential energy efficiency performance targets for City
- Develop an RFI process to transition program out of the City.
  - A set of Community Power Works assets would be "auctioned off" to the successful respondent, City would be a partner.
- Identify funding streams for transition and long term sustainability
  - General fund (carbon purchasing)
  - ARRA funding for short term transition
  - Other funding sources: State, local foundations, grants, QECBs
- Work with WSU and others to identify state-wide/regional support/infrastructure for targeted programmatic elements
- Ensure long term financing available (loan loss reserves, etc)

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Mid- to Long-Term

Work to create a regulatory environment that allows for the market to deliver the energy efficiency needed to meet our goals.

- Use program data to prove out home performance model
  - Measurement and verification (M&V) of EPS-modeled savings
  - Regional Technical Forum (RTF) paper on whole home retrofits
- Integrate energy information into home transactions
- Quantify non-energy benefits more accurately in cost-effectiveness tests
  - Transition to Societal Test?
- Identify long-term funding structures, such as:
  - Property Tax Levy
  - Public Benefits Charge
  - Carbon pricing/taxation

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Next Steps

- Dec. 12 - Advisory Group Meeting
- December/January
  - OSE available for one-on-one discussions with partners
  - Work with WSU and others to identify statewide strategy
- January/February: Active engagement with Mayor's Office and Council
  - Work with utilities to identify opportunities for partnership (ongoing)
  - **Group ask**: Support from group through letters, testimony, accompanying OSE on meetings, individual outreach to elected officials
- March/April: RFI for Community Power Works
- May – September: Formal transition, laying the groundwork for handover

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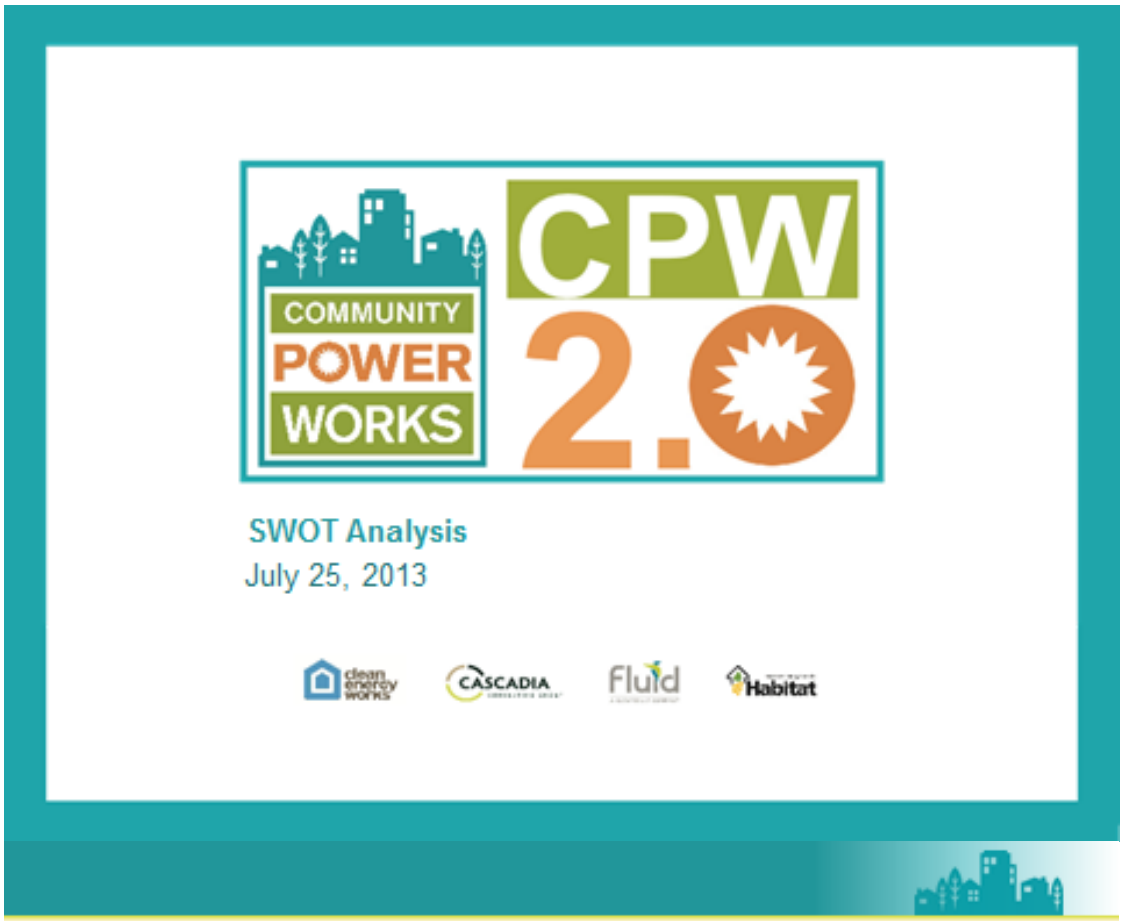
Questions?

Appendix 4:

SWOT Analysis



Key Take-aways

- **Strong foundation**
  - Cascadia, Fluid, auditors, engaged contractors
  - City support / affiliation
  - Technology & process platform (Savvy, EPS, QA)
- **Funding constrained;** need cost reduction & revenue creativity
- **Need to build contractor business acumen & HP strength**
- **Fiscal challenge and marketing oppty:** rebates for oil
- **Opportunities for process streamlining**
  - Scrappy success to date
  - Future: leverage CEW automation investments
- **Major opportunity to expand SCL integration**
- **PSE integration opportunity**: interested in discussion

Strengths

- **Cascadia/Fluid/Habitat Team**
  - Cohesive
  - Strong, trusting relationships with contractors
  - Homeowner support/field team
- **CEW Team & Program Experience**
- **City affiliation**
- **Direct mail/marketing success**
  - Low-cost
  - Predictable
- **Customer focus and satisfaction**
- **Rebate structure**
- **Utility coordination (SCL)** – good relationship & commitment to building a model
- **Robust data collection** → marketing, EnergySavvy, WSU
- **Infrastructure in place and tested** (Optix, EPS and QA)
- **Fuel-Blind-** serve oil-heated homes

Weaknesses

- **Ongoing operational cost are still relatively high** (may not be sustainable)
- **Funding to cover the gaps** (operations and support for 'one-stop'; oil) is hard to come by
- **Limited effectiveness in reaching low-income or other hard-to-reach audiences**
- **Contractor capacity/skill level/"fails"/ business acumen**
- **Utility rebate process/structure**
- **Process inefficiencies / manual steps**

Opportunities

- **Streamlining systems --** Lots of opportunity for reducing costs – or moving them to other parts of delivery system or focusing models
- **Work closely with utilities to design**
- **PSE engagement** (include Infrasource)
- **Convert oil → electric, gas**
- **User fees/pay-to-play**
- **Contractors are okay with lower incentives**
- **Project does not have to be all things to all stakeholders** - by focusing may have a shot at optimizing delivery
- **Regional expansion:** opening up market (targeted marketing)/equity

Threats

- **Lack of funding --** sustainable resources for ops, oil, other rebate boosts/promotions
- **Maintaining contractor staffing and expertise during transition**
- **Homeowner response given lower incentives**
- **Funding for contractor development** (workforce, business acumen, marketing, sales, accounting)

Appendix 5:

Optimization Analysis

CPW 2.0 OPTIMIZATION TABLE / RECOMMENDATIONS

Current/Past Activities	Ideas for Future	2014 Plan & Recommendations	Program Goals Addressed
Marketing & Outreach to Build Awareness			
• Social media • Blogging for community pubs • Yard signs • Billboards • Busboards • Radio (KUOW, KEXP, KPLU) • Contractor training • Event outreach – breakdancers, tabling, presentations • Canvassing – paid and volunteer	• Leverage CEW creative • Earned media • More social media • More contractor training • Search engine optimization • Working in partnership with home inspectors, solar installers, realtors, and other influencers during "trigger" events to ensure that homeowners receive info about upgrades • Identify other paths of entry such as working with homes in radon areas and collaborating with remodelers and earthquake retrofit contractors	• Will be done primarily by SCL to all customers in their service territory regardless of fuel type • As budget allocation allows, supplement with targeted messaging/events and direct mail to drive demand • No other whole home or weatherization stand-alone (non-utility) program should be implemented in the SCL territory	✓ Expand to SCL territory ✓ Co-brand, co-market ✓ Operate with limited funding ✓ Target oil ✓ Target for service equity
Customer Acquisition – Lead Generation to Conversion			
• Direct marketing (1.9% response) • Sales training for contractors • Auditor/Contractor referral bonuses	• More support from SCL/PSE • Partnering /targeted marketing – community groups and specific audiences • Friends/family referrals	• Direct mail targeted by fuel type, age of home, customer characteristics	✓ Target oil ✓ Target for service equity

• Signing bonuses for homeowners ($500 Fall Bonus) • Oil tank decommissioning rebate ($500) • Contractor sales training	• Contractor sales training • Conversion incentives for contractors/auditors • House characterization / targeting		
Audits *(see Appendix 6 for additional recommendations)*			
• Reduced redundancies and increased automation between ES & EAI • Audits scheduled directly with the customer • No preference for independent or contractor auditors	• Continue to streamline and automate between ES & EAI • Streamline in-home audit procedures and data collection to align with regional/national best practices • Continue no preference for independent or contractor auditor • Continue diagnostic audit and require for all HR contractor/auditor leads	• Reduce audit cost • Update EPS software • Continue with EPS, but discontinue CEAR • Require contractors who are interested in energy savings to pay for their own EAI license to use CEAR • Do not collect projected energy savings from bid unless needed for reporting • Determine long term timeline and ability to open up to various audit software programs including DOE's Home Energy Saver, Snugg Pro, etc. • Develop alternate (single measure/no audit) path and track separately in ES • Allow non-HR contractors to bring in leads for above, but require whole-house education • Implement quality oversight of auditors • Allow EPS/SCL-trained auditors to bring their own leads in	✓ Offer value customers appreciate ✓ Increases conversion ✓ Operate with limited funding ✓ Provide service equity ✓ Provide whole-house service ✓ Achieve deep energy savings ✓ Quality of auditor (not independent vs contractor) is the most important driver of conversions, therefore, program will not dictate who does audit. ✓ Superior quality and customer service

Customer Support, Program Administrative Support			
• Leverage automated emails from ES platform • High personal touch in bid stage (emails, calls) • Spending significant time with "high issue" customers • Live welcome calls • Technical assistance (Lucas) • Email updates at big milestones (newsletters, mail merged emails, etc) • Managing customers through ES • HRC provides support to OSE/WSU/Lenders/other stakeholders	• Better policy for off-ramping difficult customers; drawing line between the program and other stakeholders (who should manage them?) • Incorporate "your project" page on ES platform • Streamlined ES platform/process	• Maintain simplicity - don't introduce big changes when program future is uncertain • Streamline test out scheduling with ES • Scale back, but still provide QUALITY customer service • Allow phased projects and multiple contractors • Streamline support related to Craft3 loans • Provide SCL on-bill payback for all lenders in the program	✓ Operate with limited funding ✓ Provide a service customers appreciate ✓ Deliver superior quality & customer service
Quality Oversight			
• Coordinated directly between program QA auditors and contractors • Loosely defined by the program • Technical workshops/webinars and emails • 100% test out • Test out auditors schedule audits with homeowners and follow up with contractors	• Better definition around QC procedures, requirements, etc • Process optimization from CEW	• Maintain 100% quality *oversight* while building in strategies to reduce costs • Develop pathways for QA based on measure type • Reduce requirements for contractors with good QA scores • Charge $250 for return QA	✓ Maintain focus on consumer protection. ✓ Deliver a value proposition that customers appreciate ✓ Operate with limited funding – use low-cost methods to communicate with contractors about quality management

Contractor Support, Including Outreach			
• Full day trainings for Certified contractors • One-on-one trainings for contractors re program policies and administrative systems and requirements • Workshops/webinars on EAI software	• Leverage CEW scheduling • Auto-populate of data fields and forms • More SCL/PSE synchronization • Business support (accounting, HR, operations, cash management, technical)	• Provide a bonus incentive for electrically-heated jobs with 3 or more measures (if funds allow) • Maintain current level of support (now provided by Cascadia) • Consider downsizing contractor pool so only highest quality contractors are included OR continue high level of QC (now provided by Fluid/Habitat)	✓ Operate with limited funding ✓ Achieve deep energy savings ✓ Provide whole-house service ✓ Provide superior quality and customer service
High Road Administration			
• Workforce reporting for every project • Monitoring of High Road points • Open application process	• On-the-job subsidy in coordination with trade board • Engage community groups (integrate Andrea's list) • Find funders for high road objectives • Fully integrate into the contractor selection process a review of contractor follow-through on High Road commitments. The contractor selection process is a critical contributor to achievement of High Road goals • Evolve a more optimized mix of requirements, support, and incentives for contractors • Peer to peer mentoring for	• Establish a HRA Advisory Committee that meets regularly to review the data dashboard and progress toward goals and targets • Conduct quarterly office audits to ensure compliance	✓ Provide superior quality

	contractors re High Road implementation, engaging HPW and WWA		
Tracking and Reporting			
• All conducted by WSU • Provide performance reports to contractors and auditors	• Use Energy Savvy for reporting • Use CEW "workbook" for reporting • Use RTF values instead of EPS projected values	• Transition to program-completed evaluation and reporting of at least customer satisfaction and energy savings • Use RTF values to derive energy savings • Enter actual installed measures into data management system for tracking and reporting	✓ Operate with limited funding
Rebate Payments and Fund Management			
• Separate CPW and SCL rebate processing • PSCCU serves as fund manager, pays rebates	• Integrate rebate processing with SCL • Introduce instant rebates • CEW serve as fund manager	• Transfer fund management function to CEW • Implement instant rebates	✓ Offer value customers appreciate
Funding Sources			
• ARRA – Better Buildings grant	• Foundations, workforce development boards, utilities, state • Program-generated revenue (homeowners, contractors, lenders – "Pay to Play") • Find funder for oil	• *See funding memo*	

Appendix 6:

Audit Redevelopment

Audit Redevelopment
Decisions and meeting notes v2 - Sep-Oct

The program will:

Provide diagnostic audits rather than "clipboard" or online audits.

- Customers value the education even if they don't know about audits going into the process.
- Customers often cite the audit as the reason or trigger for conversion.

Not show preference for independent or contractor auditors.

- There are no differences in customer satisfaction or quality between independent and contractor auditors.
- Customers who have received independent audits take an average of 3 weeks more to complete upgrades.
- Approximately 25% of customers surveyed say they value an independent perspective and it factors into their decision to upgrade.

Allow customers to receive audits by a preferred contractor.

Offer two audit paths without customer choice: 1) whole house, 2) single measure.

- In given a choice, customers choose free or less expensive options.
- Consumers are not educated enough about the value of audits to opt for them when given a choice.
- To encourage whole house the program could offer a "bonus" incentive.

Maintain (for now) $95 customer cost with goal to bring utility cost of audit to $200 or less.

- Currently audits are estimated to cost at least $500, although payment is $400.
- Service equity and reducing the barrier to entry is important to SCL.
- Program could refund customers who do any or a minimum threshold of upgrade work.
- Program could offer free audits to customers and pay auditor/contractor $200. Contractors may recover the additional $200-300 by selling the upgrade, but independent auditors would not.
- Contractors could pay program ($200?) for customers that have already received an independent audit, i.e. a highly "qualified" lead.

Reduce the delta between customer cost and total cost. Options to consider:

- Increase customer cost - up to $145. Other program data shows $195 may be too high and while increasing conversion rates may significantly reduce customer demand.
- Introduce variable pricing or variable payment to auditors based on house characteristics, i.e. age of home, fuel type, square footage. Customer cost could be fixed for fairness, and auditor pay could be variable. Program could target higher price for homes with the highest conversion rates, i.e. pre

1960 oil. This model requires verification of house characteristics and monitoring of pricing to ensure we achieve desired results.

Reduce total cost of audits. Options to consider:

- Increase DI measures.
- Use different (cheaper) diagnostics based on house characteristics.
- Streamline data collection.

Include quality oversight.

- To qualify auditors must perform at least 24 audits per year.
- Program will perform 1 ride-along every year and review audits for 1) a priority recommendations list, 2) combustion safety, 3) to ensure square footage values match (this could be automatically checked with audit software or data tool).
- Program will verify direct install in a percentage of homes.
- Determine what qualifies as "failed" jobs and warrants redirecting an auditor to additional training.

Determine software / technology solutions.

- Goals: 1) maintain/increase customer conversion, 2) cut costs, 3) simplify data collection, and 4) offer appealing kitchen table report at time of audit.
- Options:
    - Open program to various audit software tools – selected through RFP process. Program defines data requirements and compatibility with EnergySavvy
        - Could require similar reports to eliminate customer confusion.
        - Cost burden would be on audit tool developers (design) and auditors (licensing).
    - Provide consistent data collection tool – CEW's workbook. Could be required for every audit or offered for auditors to use as a no-cost option.
    - Invest $25K in EPS to simplify data collection and improve report.

Conversion Data – Program to Date

Highest conversion group

Oil heated before 1960 40+%

Size of Home (square feet)

- Under 1500 34%
- 1500-2500 28-29%
- 2500-3500 23%
- 3500 or over 12%

Fuel Type

- Electric 24%
- Gas 22%
- Oil 41.5%

Age of Home

- Pre 1910 34%
- 1910-1959 29-30%
- 1960-1989 19-21%
- 1990 or later 8-9.5%

Appendix 7:

CPW Contractors

CPW Contractors

Certified Contractors	Approved Contractors
AEM	Alfa-Omega
All Points	Arrow
Ballard Natural Gas Service	Bel-Red Energy Solutions
Batt + Lear	Brennan Heating
Carlisle Classic Homes	Glendale Heating and AC
Clean Crawls	GT Residential
COACH	Kohl Construction
Energy Savers	MM Comfort Systems
Greenwood Heating	**Multifaceted (M) Group**
Home Rx	Pathway Design & Construction
Integrity Energy Systems	The Heat Pump Store
Mighty House Construction	WrightWorks
Neil Kelly	
Performance/Fireside	
Peterson	
Progressive	
Puget Sound Solar	
Raatz	
RichArt	
SustainableWorks	
Trius	
Vela Bros	

Appendix 8:

High Road Applications

Approved Contractor Application

COMMUNITY POWER WORKS

COMMUNITY POWER WORKS FOR HOME
COMMUNITY HIGH-ROAD APPROVED CONTRACTOR POOL APPLICATION

UPDATED SEPTEMBER 2012

Please complete and sign the following to apply to become part of the Community Power Works for Home Approved Contractor pool. Community Power Works for Home is the City of Seattle's energy efficiency upgrade program that delivers whole-house energy efficiency solutions to Seattle's single-family homes and duplexes.

Community Power Works contractors are committed to upholding employment and contracting standards set forth in the Community High Road Agreement, which include paying a living wage to employees and hiring from a diverse pool of skilled workers. Delivering exceptional customer service and top-quality work are the key goals of all Community Power Works contractors.

All information submitted as part of this application is public, and is submitted under penalty of perjury.

Applications and questions about the application should be directed to:

City of Seattle, Office of Sustainability and Environment
Attn: Andrea Petzel
Community Power Works for Home Project Manager
Questions: 206.233.0079 or Andrea.Petzel@seattle.gov

SECTION 1 : GENERAL INFORMATION

Company Name _____

Contact Name _____

Address (Street, City, Zip) _____

Phone Number(s) _____

Email _____

State of Washington Contractor Registration Number _____

State of Washington UBI Number _____

City of Seattle Business License Number _____

Name of bonding company and dollar amount for which bonding is provided _____

_____

PG 1

206.449.1170 • CommunityPowerWorks.org • City of Seattle's Energy Upgrade Program

COMMUNITY POWER WORKS FOR HOME

COMMUNITY HIGH-ROAD APPROVED CONTRACTOR POOL APPLICATION

UPDATED SEPTEMBER 2012

SECTION II : MINIMUM QUALIFICATIONS

To be considered for admission into the Approved Contractor Pool, contractors are allowed to bring in up to **three** leads into the program. Approved Contractors will not be given leads by the program. To apply, provide documentation that demonstrates how your company meets the following minimum requirements.

REQUIREMENT	DOCUMENTATION
Documentation of number of employees at the time of application	Recent tax return or other filing
Lead Safe Certification for one onsite job lead/staff.	Photocopy of Lead Renovation, Repair and Painting (RRP) certification
Professional Certification for key staff/crew chief/supervisor in the relevant area of expertise: Building Performance Institute (BPI), North American Technician Excellence (NATE), or the Laborers' International Union (LiUNA).	Photocopy of relevant certification
Insurance: • $1,000,000 worth of general liability • $1,000,000 of automobile liability	Photocopies of policies
One year warranty on all work performed as part of Community Power Works.	Signature on Application
Pay wage rates established by Community Power Works.	Signature on Application
Adhere to QA/QC requirements established by Community Power Works.	Signature on Application
Provide workforce documentation at the conclusion of every upgrade project.	Signature on Application
Use Community Power Works pre-approved contractors for weatherization work as subcontractors (when feasible).	Signature on Application

Upon successful completion of three jobs, **Approved** Contractors must apply to continue to the next step as Community Power Works **Certified** Contractors. Certified Contractors are eligible for program-provided job leads, marketing and sales tools, training opportunities, and additional support services.

COMMUNITY POWER WORKS FOR HOME

COMMUNITY HIGH-ROAD APPROVED CONTRACTOR POOL APPLICATION

UPDATED SEPTEMBER 2012

SECTION III : TERMS OF PARTICIPATION

Applicant agrees to comply with the following Terms of Participation in performance of all Program Work, as a condition of initial and continued status as a Community High-Road Contractor.

1) **Customer workflow.** All Community Power Works customers must follow a specified workflow that includes signing up for the program at www.communitypowerworks.org, conducting a home energy assessment with a Seattle City Light-approved Energy Auditor before any work is done in the home, and scheduling a Community Power Works quality assurance inspection once the work is complete.

2) **General Contractor Role.** Community Power Works requires that whole-house energy upgrades be managed by a single general contractor. Applicant agrees to act as general contractor for all aspects of energy upgrade work being done in the home. Due to funding restrictions, rebates cannot be spread across work done in phases or by multiple contractors (unless under one general contractor).

3) **Subcontractor Standards.** Applicant shall ensure that all subcontractors working on Program Work comply with the following standards:
   a) Be licensed and bonded and meet all requirements of Washington State law;
   b) Comply with Community Power Works wage requirements;
   c) Comply with reporting and recordkeeping requirements established by the City's Office of Sustainability and Environment (OSE);

4) **Data collection and reporting.** At the conclusion of each upgrade project, applicant shall provide to OSE all information requested. The City, in consultation with the Mayor's Stakeholder Evaluation and Implementation Committee (SEIC), will develop reporting and recordkeeping requirements applicable to members of the Contractor Pool and Program Work. These requirements will include information needed to evaluate the success of the Community High Road Agreement, including information on wage payment, hiring, use of referral systems, use of subcontractors, and validity of continued status in the Contractor Pool.

5) **Indemnification.** Applicant and applicant's subcontractors agree to defend, indemnify and save harmless the City of Seattle, and Seattle City Light, and each of their officers, employees and agents, from every claim, risk, loss, damage, demand, suit, judgment and attorney's fee, and any other kind of expense on account of injury to or death of any and all persons, or on account of property damage of any kind, whether tangible or intangible, or loss of use resulting therefrom arising out of or in any manner connected with Applicant's or applicant's subcontractors' performance of Program Work, except as to the proportional extent that the claim, suit, or action for injuries, death, or damage is caused by or results from the contributory negligence of the City of Seattle or Seattle City Light or their officers, agents, or employees. Applicant and applicant's subcontractors hereby assume all risk of damage to their property, or injury to their officers, directors, agents, subcontractors, or invitees, related to performance of Project Work and from any cause, and hereby waive all claims against the City of Seattle and Seattle City Light. For purposes of performance of Program Work, Applicant and applicant's subcontractors further waive any immunity under RCW Title 51, Industrial Insurance.

6) **Implementation through Relevant Contracts.** Applicant agrees that where this application contemplates applicant imposing responsibilities on entities that are not applicants to the Contractor Pool (such as subcontractors) applicant shall ensure that relevant contracts: (i) impose such responsibilities on such entities; (ii) require such entities to impose such responsibilities on second-tier subcontractors or other parties involved in the Program Work; (iii) require all such entities to comply with datakeeping and reporting requirements established by OSE for performance of Program Work.

7) **Acceptance of Terms.** By submitting application materials for the Contractor Pool, applicant accepts all terms and conditions specified herein, as well as all City, State and Federal regulations and requirements pertaining to the performance of Program Work.

8) **Compliance with Laws.** Applicant shall comply with all federal, state and local laws and regulations applicable to performance of Program Work.

9) **Further Assurances and Additional Requirements.** Applicant agrees to abide by any additional requirements, specifications, and quality control requirements for Program Work and for the Community High-Road Contractor Pool established by the City, granting agencies, or other Community Power Works partners.

COMMUNITY POWER WORKS FOR HOME

COMMUNITY HIGH-ROAD APPROVED CONTRACTOR POOL APPLICATION

UPDATED SEPTEMBER 2012

By signing this Signature and Authorization page, I certify the following:

1) The company has not had excessive violations of workplace laws in the past three years. Workplace laws include all state and federal laws and regulations regarding workplace conditions and employment relationships, including the Occupational Safety and Health Act (OSHA) and wage and hour laws. Excessive violations of workplace laws is defined as final determinations of:
   a) One or more "willful" violations, three or more "serious" or "repeat" violations, or five or more overall violations of OSHA regulations.
   b) Two or more finally-determined violations of other federal and state regulations regarding workplace conditions and employment relationships.
2) The company will not receive leads from the program under Approved Contractor status but is allowed to bring up to three energy efficiency projects into the Program to take advantage of Community Power Works for Home incentives.
3) I understand that my company does not have full standing in the Community Power Works for Home contractor pool until three jobs have successfully been completed and my company has applied to be a Certified Contractor with full standing in the contractor pool.
4) The company has not been debarred from bidding on public contracts by any jurisdiction, or been decertified, debarred, or removed from eligibility for participation in any public weatherization or upgrade program in the past three years.
5) The company has received no more than one civil judgment for failure to pay wages and/or subcontractors in the past three years.
6) I am duly authorized to submit this application on behalf of the business applying for admission.
7) The information provided in this application and any other documents submitted to the City is and continues to be true, accurate and complete.
8) I understand and accept the terms and conditions contained in this Application.
9) I understand and agree that all information submitted as part of this application, and all information that is later submitted for compliance and monitoring purposes, is public information.
10) I understand and accept that all such terms and conditions continue to apply and control upon the applicant's approval as an Approved Contractor. I further understand and accept that approval or rejection of this application is in the sole discretion of the City and that only upon receipt of an Approved Contractor Pool Admission Notice will the applicant be a member of the Approved Contractor Pool.

Signature _____

Name _____

Title _____

Date _____

COMMUNITY POWER WORKS FOR HOME

COMMUNITY HIGH-ROAD APPROVED CONTRACTOR POOL APPLICATION

UPDATED SEPTEMBER 2012

EXHIBIT A : COMMUNITY HIGH-ROAD CONTRACTOR STANDARDS

1. **Minimum Standards.** For all Program Work, each Contractor shall comply with the following requirements, as interpreted and detailed by the City, in consultation with the SEIC.

   a) Be licensed and bonded and meet all requirements of Washington State law;

   b) Ensure that Key Staff performing work in the company possess BPI, NATE or LiUNA certification or comparable certification, and ensure that for subcontractors performing general weatherization work, Key Staff will possess such certification for work performed by that subcontractor;

   c) Perform complete warranty service on all program upgrades, for a period of one year from completion of each upgrade;

   d) Satisfy commitments and representations made in the application process to the Contractor Pool;

   e) Comply with additional program requirements adopted by the SEIC;

   f) Report all data required by the City and Washington State University (WSU) to demonstrate compliance with these Community High-Road Contractor Standards;

   g) Maintain status as a Community High-Road Contractor in good standing as a member of the Contractor Pool.

2. **Wage and Training Requirements.** For all Program Work, each Contractor and sub-contractor must comply with the wage and training standards set forth in this section.

   a) Base Pay Rate. Employees performing weatherization work not fitting into one of the categories described below must be paid at least $21.50 per hour plus $2.50 per hour in benefits or additional wages.

   b) Exception for Entry-level Workers that are not enrolled in State-registered Apprenticeship Programs:

   1. Entry-level Workers who are graduates of Qualified Training Programs and who are not enrolled in State-registered apprenticeship programs must be paid at least $15.50 per hour, plus $2.50 per hour in benefits or additional wages.
   2. No individual may be compensated under subsection 2.b1 for more than one year's worth of work for one or more Contractors that are in the program's Contractor Pool.
   3. A Contractor compensating an Entry-level Worker under subsection 2.b1 must pay for or provide at least 80 hours of classroom training to that worker during the first year of employment of that worker.

   c) Exception for Workers Enrolled in State-registered Apprenticeship Programs:

   1. Workers who are enrolled in state-registered apprenticeship programs may be paid at rates specified by the state-registered program.

2. Workers who are enrolled in state-registered apprenticeship programs shall receive employer-funded training as specified by the program.

d) **Higher Pay Rates for Specialized Work.** Certain types of work required in some home energy upgrade projects are highly specialized and require particular licensing and training. For these specialized types of work, Contractors shall pay wage and benefits level specified in Washington State prevailing wage laws.

3. **Hiring Requirements.** Each Contractor shall ensure that 100% of New Entry-Level Hires are graduates of Qualified Training Programs. The City will provide a list of Qualified Training Programs. Each Contractor will comply with any additional standards or processes required by the SEIC to promote hiring and retention of Targeted Workers.

Certified Contractor Application

COMMUNITY POWER WORKS FOR HOME
COMMUNITY HIGH-ROAD CERTIFIED CONTRACTOR POOL APPLICATION

UPDATED SEPTEMBER 2012

Please complete and sign the following to apply to become part of the Community Power Works for Home Certified Contractor pool. Community Power Works for Home is the City of Seattle's energy efficiency upgrade program that delivers whole-house energy efficiency solutions to Seattle's single-family homes and duplexes.

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All information submitted as part of this application is public, and is submitted under penalty of perjury.

Applications and questions about the application should be directed to:

City of Seattle, Office of Sustainability and Environment
Attn: Andrea Petzel
Community Power Works for Home Project Manager
Questions: 206.233.0079 or Andrea.Petzel@seattle.gov

SECTION 1 : GENERAL INFORMATION

Company Name _____

Contact Name _____

Address (Street, City, Zip) _____

Phone Number(s) _____

Email _____

State of Washington Contractor Registration Number _____

State of Washington UBI Number _____

City of Seattle Business License Number _____

Name of bonding company and dollar amount for which bonding is provided _____

_____

COMMUNITY POWER WORKS FOR HOME

COMMUNITY HIGH-ROAD CERTIFIED CONTRACTOR POOL APPLICATION

UPDATED SEPTEMBER 2012

SECTION II : WEIGHTED FACTORS

To be considered for admission into the Certified Contractor Pool, contractors must have already met the minimum qualifications to enter the Approved Contractor Pool. Certified Contractors are eligible for program-provided job leads, marketing and sales tools, training opportunities, and additional support services. To apply, provide documentation that demonstrates how your company meets the following minimum requirements.

Contractors must earn 50 points from the following categories to be accepted into the Certified Contractor Pool:

CATEGORY	DOCUMENTATION	Points Available	Points Claimed
Proven Quality of Work Three CPW QA inspections passed, or passed with corrections.	Photocopies of CPW QA reports for jobs completed as an Approved Contractor	15	
Local Business Primary operations in King, Snohomish, or Pierce County.	Letterhead, business card, or other documentation of primary office address	10	
Small Business Less than 50 employees.	Tax return or other filings showing number of employees	5	
Opportunities for Women, Minority, or Veteran-owned businesses Registered W/MBE, Veteran-owned business, or established relationships with W/MBE	a) State certification number of WBE or MBE status b) Documentation of owner's status as a US Veteran. c) Letters (on company letterhead) from two W/M/VBEs documenting business relationship	10 5 10	
Opportunities for Targeted Workers* Workers who have worked 20+ hours/ week for 6+ months shall be counted.	Statement describing employees' targeted worker status and any relevant documentation	1 pt/ 10% qualifying workforce	
Career Pathways a) 1 point each for crewmembers above and beyond the crew chief/supervisor who has received both Lead RRP and OSHA 10 certification b) At least 80 hours of classroom/ workshop training in energy efficiency- or construction-related training provided to each employee.	a) Photocopies of employees certifications. b) Spreadsheet documenting training provided (See exhibit B for format). Prorated for provision of less than 80 hours, or less than 100% of employees	1-5 5	

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Quality-assurance Certifications a) Maintenance of a 100% certified workforce, defined as 100% of technical hours performed by workers with certifications for "general weatherization work" under BPI, NATE, or LiUNA; **OR** b) BPI accreditation with associated quality control provisions; **OR** c) History as a registered contractor for programs funded by the Weatherization Assistance Programs.	Provide relevant documentation, accreditation and/or certification numbers.	10	
Track record of quality performance 50 jobs completed under an external inspection regime such as HomeWise or Puget Sound Energy (PSE); **OR** 10 jobs independently verified by a 3rd party.	Identify the inspection regime, or provide contact information of 3rd party verifier. Provide documentation of passed QAs.	10	
Family supporting jobs Employer-paid benefits to workers: If employer payment is less than, 100% points are prorated by percentage of employer subsidy.	Documentation of: a) Health insurance consisting of Major Medical/traditional plans; HMO/managed health care; PPO; or POS. "Mini-med" insurance is not included. b) Dental insurance. c) Vision insurance. d) Health insurance for employee's dependents. e) Pension or other retirement plans constituting at least 5% of employee wages.	10 2 2 5 2	

* Targeted Worker shall mean any of the following: (i) a Low-income Individual; (ii) a veteran or current member of the National Guard and Reserves; and (iii) an Individual with Barriers to Employment, including homelessness; being a custodial single parent; receiving public assistance; lacking a GED or high school diploma; having a criminal record or other involvement with the criminal justice system; or being historically disenfranchised or disadvantaged by previous policies and practices and as a result being disproportionately represented in dropout rate, unemployment, lack of business ownership and criminal justice systems.

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By signing this Signature and Authorization page, I certify the following:

1) The company has not had excessive violations of workplace laws in the past three years. Workplace laws include all state and federal laws and regulations regarding workplace conditions and employment relationships, including the Occupational Safety and Health Act (OSHA) and wage and hour laws. Excessive violations of workplace laws is defined as final determinations of:
   a) One or more "willful" violations, three or more "serious" or "repeat" violations, or five or more overall violations of OSHA regulations.
   b) Two or more finally-determined violations of other federal and state regulations regarding workplace conditions and employment relationships.
2) The company will continue to be bound to all agreed-upon Terms of Participation as outlined in Section III of the Approved Contractor Application.
3) The company has not been debarred from bidding on public contracts by any jurisdiction, or been decertified, debarred, or removed from eligibility for participation in any public weatherization or upgrade program in the past three years.
4) The company has received no more than one civil judgment for failure to pay wages and/or subcontractors in the past three years.
5) I am duly authorized to submit this application on behalf of the business applying for admission.
6) The information provided in this application and any other documents submitted to the City is and continues to be true, accurate and complete.
7) I understand and accept the terms and conditions contained in this Application.
8) I understand and agree that all information submitted as part of this application, and all information that is later submitted for compliance and monitoring purposes, is public information.
9) I understand and accept that all such terms and conditions continue to apply and control upon the applicant's approval as a Certified Contractor. I further understand and accept that approval or rejection of this application is in the sole discretion of the City and that only upon receipt of an Approved Contractor Pool Admission Notice will the applicant be a member of the Approved Contractor Pool.

Signature _____

Name _____

Title _____

Date _____

COMMUNITY POWER WORKS FOR HOME

COMMUNITY HIGH-ROAD CERTIFIED CONTRACTOR POOL APPLICATION

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EXHIBIT A : COMMUNITY HIGH-ROAD CONTRACTOR STANDARDS

1. Minimum Standards. For all Program Work, each Contractor shall comply with the following requirements, as interpreted and detailed by the City, in consultation with the SEIC.

a) Be licensed and bonded and meet all requirements of Washington State law;

b) Ensure that Key Staff performing work in the company possess BPI, NATE or LiUNA certification or comparable certification, and ensure that for subcontractors performing general weatherization work, Key Staff will possess such certification for work performed by that subcontractor;

c) Perform complete warranty service on all program upgrades, for a period of one year from completion of each upgrade;

d) Satisfy commitments and representations made in the application process to the Contractor Pool;

e) Comply with additional program requirements adopted by the SEIC;

f) Report all data required by the City and Washington State University (WSU) to demonstrate compliance with these Community High-Road Contractor Standards;

g) Maintain status as a Community High-Road Contractor in good standing as a member of the Contractor Pool.

2. Wage and Training Requirements. For all Program Work, each Contractor and sub-contractor must comply with the wage and training standards set forth in this section.

a) Base Pay Rate: Employees performing weatherization work not fitting into one of the categories described below must be paid at least $21.50 per hour plus $2.50 per hour in benefits or additional wages.

b) Exception for Entry-level Workers that are not enrolled in State-registered Apprenticeship Programs.

1. Entry-level Workers who are graduates of Qualified Training Programs and who are not enrolled in State-registered apprenticeship programs must be paid at least $15.50 per hour, plus $2.50 per hour in benefits or additional wages.
2. No individual may be compensated under subsection 2.b1 for more than one year's worth of work for one or more Contractors that are in the program's Contractor Pool.
3. A Contractor compensating an Entry-level Worker under subsection 2.b1 must pay for or provide at least 80 hours of classroom training to that worker during the first year of employment of that worker.

c) Exception for Workers Enrolled in State-registered Apprenticeship Programs

1. Workers who are enrolled in state-registered apprenticeship programs may be paid at rates specified by the state-registered program.

2. Workers who are enrolled in state-registered apprenticeship programs shall receive employer-funded training as specified by the program.

d) **Higher Pay Rates for Specialized Work.** Certain types of work required in some home energy upgrade projects are highly specialized and require particular licensing and training. For these specialized types of work, Contractors shall pay wage and benefits level specified in Washington State prevailing wage laws.

3. **Hiring Requirements.** Each Contractor shall ensure that 100% of New Entry-Level Hires are graduates of Qualified Training Programs. The City will provide a list of Qualified Training Programs. Each Contractor will comply with any additional standards or processes required by the SEIC to promote hiring and retention of Targeted Workers.

EXHIBIT B : EXAMPLE OF DEMONSTRATING PROVISION OF CONTINUING EDUCATION TO ALL WORKERS

**** Applicants MUST use this template to document training Hours****

Staff Name	Training Provided	Training Provider	Dates	Hours	Total Hours	Hours Paid?
Jane Doe	First Aid BPI Training Safety Training	Acme College BPI S. Seattle Community College	1/1/2011 2/14/2010 3/31/2011	20 40 20	80	

Appendix 9:

High Road Agreement

Community High-Road Agreement:

for Seattle's Residential Retrofit Programs

INTRODUCTION

The City of Seattle is developing a program for weatherization of the city's single family homes, using federal stimulus dollars to support local efforts. The key elements of the residential program include subsidized home energy performance audits and a revolving loan program to finance retrofit work. The Seattle Neighborhood WEB (Weatherize Every Building) Initiative will save energy, reduce carbon emissions, and create green jobs and training opportunities.

In early 2010, Mayor Michael McGinn charged a diverse group of Seattle stakeholders with the task of coming to agreement on a set of high-road standards for this program. High-road standards are program requirements that (i) ensure broad access to the program's economic opportunities for all types of businesses and workers; (ii) support quality training programs that set trainees on long-term, sustainable, career paths; and (iii) ensure high-quality work and efficient program operation. This Stakeholder Committee met regularly for three months and developed the set of standards set forth in this Community High-Road Agreement.

The high-road employment and contracting standards in this Agreement will direct employment and training opportunities to community residents, while imposing quality standards on training programs, working conditions, and contractor performance. Together, these standards will ensure that the City's program creates high-quality and broadly-accessible jobs for area residents, while maximizing the environmental benefits of the program. In addition, the Agreement creates mechanisms for stakeholders to play a central role in the ongoing implementation, evaluation, and adjustment of the program. This ensures that the program benefits from diverse expertise in the community, while also strengthening accountability and democracy.

The City hopes to create a national model for high-road residential conservation programs, combining strong, workable employment and contracting standards with substantial and measurable environmental, economic, and consumer benefits.

The Agreement

Whereas, the City of Seattle aims to be a national model for saving energy, creating jobs, improving homes, reducing carbon emissions and promoting equity by creating economic opportunities and career pathways for low-income people, people of color, women, veterans and other historically underrepresented-groups; and

Whereas, the City and the Stakeholder Committee are committed to growing green businesses and a green economy that puts people back to work and provides new employment opportunities to disadvantaged communities; and

Whereas, the City and the Stakeholder Committee recognize that well-trained workers earning decent wages and benefits produce quality work as they contribute to the good of the community; and

Whereas, the City and the Stakeholder Committee support creating contracting, subcontracting, training and employment policies that will strive to:

- Provide pathways to prosperity for all workers;
- Offer family-supporting wages that lead to a lasting career-track;
- Involve stakeholders and community members in developing and enacting policies and processes;
- Drive accountability and continuously evaluate performance towards goals; and

Whereas, the City and the Stakeholder Committee believe that green jobs are a key component of the regional economy, with products and services related to clean energy providing living-wage jobs throughout the area; and

Whereas, the City and the Stakeholder Committee have worked hard in a short period of time to identify the ways in which the City's residential retrofit programs can maximize environmental benefits and save residents money on energy bills, while setting high standards for inclusive economic development and broad community benefits; and

Whereas, the Stakeholders' process has been marked by an impressive degree of collaboration among and contributions from public, private, nonprofit, community, and labor institutions; and

Whereas, the Stakeholder Committee's recommendations are consistent with the Obama Administration's goals for implementation of the American Recovery and Reinvestment Act (ARRA); and

Whereas, by incorporating high-road standards into its programs Seattle will be a leading example of 21st century sustainability practices – practices that focus simultaneously on environmental protection, economic development, and equitable opportunity; and

Whereas establishing high-road standards in the City's residential retrofit programs can serve as a model for other programs around the country as well as other City-sponsored energy efficiency projects and programs;

NOW, THEREFORE, it is the determination of the undersigned parties that the following high-road standards and practices should be adopted by the City of Seattle for use in residential retrofits initiated through the Seattle Neighborhood WEB Initiative.

I. High-Road Goals for the Program.

The Stakeholder Committee agreed on the following high-road goals for program, which will be advanced through the standards and program elements set forth in this Agreement:

A. Maintain sustainability and consistency of job and sector growth and investment;

B. Keep the program simple and predictable, especially for Contractors;

C. Maintain balance between creating jobs for entry-level Targeted Workers and for the existing skilled workforce, so that at least 33% of technical work hours are performed by Targeted Workers;

D. Achieve business participation rates of: 80-100% Small Business participation, at least 30% Minority-owned Business participation; at least 10% Women-owned Business participation; and close to 100% Local Business participation; and increase opportunities for employee-owned and Veteran-owned Businesses;

E. Ensure that Contractors provide high-quality work;

F. Ensure that program jobs lead to Career Pathways; and

G. Ensure that program jobs pay a family-supporting wage.

II. Definitions.

A. Auditor means an individual or business retained to perform an inspection of a home, conduct diagnostic tests, generate a report containing recommendations, and possibly to evaluate performance after retrofit work is complete; and not to perform or direct the performance of retrofit work.

B. Barriers to Employment means homelessness; being a custodial single parent; receiving public assistance; lacking a GED or high school diploma; having a criminal record or other involvement with the criminal justice system; or being historically disenfranchised or disadvantaged by previous policies and practices and as a result being disproportionately represented in dropout rate, unemployment, lack of business ownership and criminal justice systems.

C. Career Pathway means a stepwise progression in training, skill and compensation in a particular field that allows lower skilled workers to achieve self-sufficiency and long-term sustainability within that field. Adequate and clear articulation of training, as well as clear opportunities to advance, are critical to successful pathways.

D. Contractor means an individual or business that enters into a contract (aka, the prime contractor, or general contractor) to perform retrofit work under the City's WEB Residential Programs, and that is not an Auditor.

E. Crew Chief means a supervisory worker with credentials and responsibilities as determined by the Mayor's Stakeholder Evaluation and Implementation Committee (SEIC).

F. Entry-level Worker means an individual who has less than one year's experience working on weatherization, retrofit, or home performance work and is working at the installer/technician level under a crew-lead or crew chief.

G. Key Staff means leadership positions within the company, including supervisors, managers, and/or owners.

H. Local Business means a business whose primary operations are located within King, Pierce or Snohomish Counties.

I. Low-Income Individual means an individual living at or below 200% of Federal Poverty Level.

J. Low-Income Neighborhood means a neighborhood where 51 percent or more of resident households have incomes which are less than or equal to 80 percent of area median income (based on Census tract or other identified source).

K. Minority-owned Business means a business that is at least fifty-one percent owned by minority (including, but not limited to, African Americans, Native Americans, Asians, and Hispanics) group members.

L. New Entry Level Hire means an Entry Level Worker that has not worked for the hiring Contractor in the last twelve months.

M. Stakeholder Evaluation and Implementation Committee (SEIC) means a committee appointed by the Mayor to work with City staff to implement, evaluate, and adjust the programs and standards described in the Community High-Road Agreement.

N. Similar Job means a residential energy retrofit or other home renovation project completed as a licensed Contractor, and that required one or more skills that comprise major components of residential retrofits, including: (a) installing insulation; (b) air sealing; and (c) duct sealing.

O. Small business means a business that employs less than fifty individuals.

P. Subcontractor means an individual or business that enters into a contract with a Contractor to assist in performance of work under the City's WEB Residential Programs.

Q. Targeted Worker has the meaning set forth in Section V.B., below.

R. Woman-owned Business means a business that is at least fifty-one percent owned by women.

S. Workplace Laws mean state and federal laws and regulations regarding workplace conditions and employment relationships, including the Occupational Safety and Health Act and wage and hour laws.

T. Veteran-owned business means a business that is at least fifty-one percent owned by veterans.

III. Contractor Standards.

A. Contractor Pool. The following standards will be implemented by the City's maintenance of a pool of Contractors prequalified to participate in the program. This system is essential to advancing high-road standards in the City's program. The system involves the following:

1. Contractors apply to become part of Contractor Pool;
2. In the application process, Contractors demonstrate that they meet Minimum Standards in order to be admitted (minimum standards are described below);

3. Contractors are awarded points in the application process for different attributes and commitments (described below);
4. The City admits Contractors to the pool who satisfy the minimum standards and also attain a certain number of application points; and
5. Contractors must comply with established program requirements in order to stay in the pool.

B. Minimum Standards. In order to be admitted to the Contractor Pool, each Contractor must:

1. Be licensed and bonded and meet other applicable Washington State requirements;
2. Agree to comply with the hiring standard described in Section III, below;
3. Demonstrate that Key Staff performing work in the company possess BPI certification or comparable certification (as determined by the SEIC), and agree to ensure that each Subcontractor's Key Staff will possess such certification for work performed by that Subcontractor;
4. Demonstrate as part of application that it has successfully performed at least two Similar Jobs (Staff experience with Similar Jobs may qualify under standards to be determined by the SEIC);
5. Demonstrate that it is has not had excessive violations of Workplace Laws in the past three years, nor been debarred from bidding on public contracts by any jurisdiction in the past three years;
6. Agree to perform complete warranty service on all program retrofits, for a period of one year from completion of each retrofit.
7. Agree that for all program work it will pay wages and provide or pay for training as follows and as detailed in Wage and Training Requirements, Section C, below, and require Subcontractors to do the same.
    a. Payment of Davis-Bacon wages is not currently required for this program by the federal government, nor are Washington State prevailing wages required for this program. Rather, the wage standards will be adopted voluntarily by the City in operation of this program.
    b. The program will develop enforcement mechanisms for this standard that are efficient, non-burdensome, and effective.

c. As with standard prevailing wage systems, Contractors may either provide specified employee benefits or pay an increased wage if benefits are not provided.

C. Wage and Training Requirements

1. Base Pay Rate: Employees performing weatherization work not fitting into one of the categories described below must be paid at least $21.50 per hour plus $2.50 per hour in benefits or additional wages.
2. Exception for Entry-level Workers that are not enrolled in State-registered Apprenticeship Programs.
    a. Entry-level Workers who are graduates of Qualified Training Programs and who are not enrolled in State-registered apprenticeship programs must be paid at least $15.50 per hour, plus $2.50 per hour in benefits or additional wages.
    b. No individual can be compensated under subsection 2.a for more than one year's worth of work for one or more Contractors that are in the program's Contractor Pool.
    c. A Contractor compensating an Entry-level Worker under subsection 2.a. must pay for or provide at least 80 hours of classroom training to that worker during the first year of employment of that worker. The SEIC will determine standards for training to meet this requirement.
3. Exception for Workers Enrolled in State-registered Apprenticeship Programs
    a. Workers who are enrolled in state-registered apprenticeship programs may be paid at rates specified by the state-registered program.
    b. Workers who are enrolled in state-registered apprenticeship programs shall receive employer-funded training as specified by the program.
4. Higher Pay Rates for Specialized Work.
    a. Certain types of work required in some home energy retrofit projects are highly specialized and require particular licensing and training. For these specialized types of work, Contractors shall pay wage and benefits level specified in Washington State prevailing wage laws.
    b. The SEIC will list and circulate to Contractors the specific, specialized tasks that trigger the wage requirements described in Subsection 4.a. above, and the

corresponding minimum pay rates and licensing requirements. The SEIC will not list tasks falling into the following "general weatherization work" definition: "minor repairs, batt insulation, blown insulation, window and door repair, weather stripping, solar film insulation, air sealing, caulking, minor or incidental structural repairs, duct sealing, air sealing, installation of light bulbs, and installation of smoke detectors." All tasks not listed by the SEIC as triggering heightened wage requirement are subject only to the Base Pay Rate.

c. As these requirements are imposed by the City through this program, rather than through state law, the Washington State Department of Labor and Industries will not be involved in enforcing these requirements or resolving jurisdictional disputes. Enforcement and specifics of wage requirements will be established by the City and the SEIC.

D. Points in Application Process. The point system should be used in three ways: 1) to set a reasonably high-bar for entry into the pool of qualified Contractors; 2) to create a diverse pool of Contractors that bring different strengths to meeting the different high-road goals of the program; and 3) to provide consumers with information about the Contractors beyond their essential qualifications.

Contractors applying to the qualified Contractor Pool will get additional points in the application process for the following factors (exact standards for achieving extra points, and the amounts of extra points, will be determined by the SEIC):

1. being Local Businesses;
2. being Small Businesses;
3. being Minority-owned Businesses;
4. being Women-owned Businesses;
5. being Veteran-owned Businesses;
6. being an employee-owned cooperative business;
7. being a nonprofit corporation or social enterprise;
8. quality-assurance certifications beyond the program minimums, including employing a certified workforce and other quality indicators ;
9. demonstrating substantial subcontracting relationships with Minority-, or Women-owned Businesses that will be utilized in work performed under this program;

10. demonstrating a history of employing Targeted Workers (Targeted Workers as defined in Section IV, below), especially Targeted Workers drawn from community-based job training programs;
11. demonstrating that they provide continuing education to all employees;
12. demonstrating utilization of state registered apprentices;
13. providing specified benefits to employees, with additional points awarded for each of the following:
    a. Provision of fully-employer paid health insurance to employees
    b. Provision of dental and vision insurance to employees
    c. Provision of health insurance for workers' families
    d. Provision of pension benefits for employees;
14. demonstrating a track record of quality performance of residential retrofits.

E. City Outreach and Technical Assistance. The City will conduct outreach and provide technical assistance to targeted businesses listed above, and historically underrepresented business entities in an effort to increase their participation in the program. In addition the City will develop financial and other support mechanisms for participating Contractors.

IV. Hiring Standard.

A. Hiring From Qualified Training Programs. Program goals related to employing Targeted Workers can best be advanced by ensuring that Contractors are drawing new workers from designated, Qualified Training Programs, and ensuring that these training programs are training and graduating Targeted Workers. This allows the program to advance targeted hiring goals and also ensure quality job training for Targeted Workers.

B. Hiring Standard. Each Contractor must ensure that 100% of New Entry-Level Hires are graduates of Qualified Training Programs. Training programs are designated as qualified by the City as described in Section V, below. Qualified Training Programs can be a component of a state-registered apprenticeship programs or other training programs, as long as they meet training program standards. The SEIC will consider how this standard could apply to Subcontractors and ensure that participating Subcontractors are aware of opportunities to hire from Qualified Training Programs.

C. Hiring & Retention Standard. The SEIC will develop standards and practices to ensure the hiring and retention of Targeted Workers in accordance with the goals of this Agreement.

V. Training Program Standards.

A. Qualified Training Programs. In order to be designated by the City as qualified for this program, a training program must:

1. Agree to take all available steps within the program's admissions requirements to recruit and support progress of Targeted Workers, with a goal of having Targeted Workers as at least 50% of the program's metro Seattle area graduates.
2. Provide weatherization technician training that meets competencies set by the Weatherization Assistance Program (WAP) and includes an appropriate level of "job readiness" training.
3. Have defined partnerships with pre-apprenticeship programs or community organizations that provide wrap-around services, including case management and assistance with access to housing and transportation (including re-licensure), aimed at providing Targeted Workers the background to maximize chance of success in vocational training and construction careers. These partnerships should be set forth in writing; should require the pre-apprenticeship programs or community organizations to perform the primary recruitment and outreach services for program applicants; and should require that recruitment and outreach services be focused primarily on Targeted Workers.
4. Ensure that all graduates pass an approved test of WAP competencies until an appropriate national test is identified.
5. Provide training that includes health & safety, including lead safety and OSHA 10 for participants who lack experience in these areas.
6. Ensure that the program charges no fee or a modest fee (comparable to course fees for community colleges) to Targeted Workers.
7. Offer or refer participants to programs that offer mentoring, follow-up monitoring and/or other support to assure retention of participants in the program and in weatherization and/or construction careers.
8. Offer the possibility of continued skill development along an education/training pathway in which skill sets build upon each other in a sequentially-ordered career

pathway, and technical content that aligns with third-party, industry specific certifications.

These standards will apply to both apprenticeship programs and other training programs. The SEIC and the City will work together to develop criteria and qualifications for training programs that meet the standards, and to release a Request for Qualifications from programs wishing to be designated as Qualified Training Programs, and to review responses from potential programs. The SEIC will make recommendations to the City regarding which programs should be designated as Qualified Training Programs. Standards will be reviewed and adapted over time. At all times the list of training competency standards will build off the work of Northwest Energy Efficiency Workforce Opportunity Project (NEW OP) Residential Subcommittee and be consistent with the federal Home Star program.

B. Definition of Targeted Workers. For purposes of the program, "Targeted Workers" shall mean any of the following:

1. Low-income Individuals;
2. veterans and current members of the National Guard and Reservists;
3. individuals with Barriers to Employment.

The SEIC will consider how to target employment opportunities to Targeted Workers in the target district for the WEB Program.

VI. Audit program standards. The SEIC will develop standards for the audit program. These will include quality assurance, training requirements, and other high-road standards. Other standards delineated in this document apply only to retrofits financed through the City's WEB Initiative.

VII. Accountability.

A. Stakeholder Evaluation and Implementation Committee. In order to promote achievement of high-road goals for this program, Mayor McGinn will appoint a Stakeholder Evaluation and Implementation Committee (SEIC) to assist the City in implementation of the program and this Agreement. This Committee will work to develop consensus recommendations and advice for the City staff for program implementation.

1. The signatory parties to this agreement will nominate members from among themselves for the SEIC.
2. The Mayor will appoint a committee of up to 15 people, maintaining balance of four stakeholder interest groups: a. Contractors;

b. Training Providers;
c. Labor Unions; and
d. Community-based organizations

3. The Mayor will give the committee assignments and responsibilities, including working through remaining details of this Agreement, evaluating the operation of the program (including any unintended consequences), developing recommended minor adjustment of the program over time, and full evaluation of the program and recommended changes in one year, in accordance with the goals of this Agreement.
4. The Mayor and other signatory agencies will assign staff to support the work of the SEIC, including staff from the Office of Sustainability and Environment, Office of Economic Development, and others.
5. With the assistance of the SEIC, the City will put in place data collection and evaluation systems to track program progress, compliance with high-road standards, and fulfillment of all program objectives.
6. With the assistance of the SEIC, the City will put in place quality control systems to ensure high quality retrofit work and energy conservation, including requirements for post-retrofit audits and Energy Performance Scores for all City financed retrofits.
7. The City and the SEIC, working collaboratively, shall be accountable for progress toward, and enforcement of, the standards and commitments in this Agreement.

VIII. In Conclusion.

It is the determination of the undersigned parties that the standards and program tools described in this Agreement should be adopted and utilized by the City of Seattle in residential retrofits initiated through the Seattle Neighborhood WEB Initiative. In addition, the undersigned parties pledge to work cooperatively and in good faith to make the program a success for all stakeholders and the City as a whole.

Charles Rolland
A. Phillip Randolph Institute

Keith Weir
Building Trades Council

Hilary Stern
Casa Latina

Christina Gallegos
Community Coalition for Environmental Justice

Stacia Jenkins
Cement Masons & Plasters
Sisters in the Building Trades

Callie Ridolfi
ecoFAB

Michael Woo
Got Green

Jeremy Hays
Green For All

David Vollan
Home Performance, Inc.

Tony To
HomeSight Washington
NeighborWorks

David Freiboth
King County Labor Council

Dale Cannon
Laborers Local 242

Mano Frey (Steve Marquart)
LIUNA NW Region

John Littel
NW Council of Carpenters

Mike Warren
Northwest Laborer's Training Fund

Chad Smith
Painters and Allied Trades

Howard Greenwich
Puget Sound Sage

Robert Watt
Restoration Resources

Anne Keeney
Seattle Jobs Initiative

Diane Davies
Seattle Vocational Institute

Sue Taoka
ShoreBank Enterprise Cascadia

Tom Veatch
Sound Alliance

Ellen Gordon
South Seattle Community College

Stephen Gelb
SustainableWorks

K. Wyking Garrett
K. Wyking Garrett
Umojafest P.E.A.C.E. Center

James Kelly
Urban League of Metropolitan Seattle

Bryan Gaither
USI

Jermaine Smiley
Washington Northern Idaho District
Council of Laborers

Morgan Zantua
Washington National Guard

Sherry Rials
Youth Care / YouthBuild

Grace Kong
Youth Source, King County

Appendix 10:

Background, Research Methodology and Recommendations for Measure framework for Seattle City Light

Recommended Measure Framework for CPW 2.0 Planning

Overview

To support the narrative of recommendations for the CPW Business and Operations Plan and set the stage for Seattle City Light (SCL) planning, the CPW planning team has constructed a recommended framework for treating projects with multiple measures (e.g., weatherization, heating systems, and water heating systems). An analysis of historical CPW projects shows that measure groupings are too diverse to make the previously conceived "bundle" approach the right strategy for estimating penetration, savings, and costs for home energy upgrades in SCL territory. Instead, the team recommends estimating aggregate program savings by the expected frequency of individual measures (e.g., air sealing 54%, wall insulation 43%, ductless heat pump 34%, etc.) by analyzing historical CPW program data and NEEA's Residential Building Stock Assessment (RBSA) data. This assessment will then be cross-referenced with the Northwest Power and Conservation Council's Regional Technical Forum (RTF) to estimate measure energy savings and costs, which will ultimately be used to calculate program-wide energy impacts and utility cost-effectiveness. It is important to note, however, that while bundles might not be the most appropriate approach to planning, they do present program design opportunities to encourage the adoption of more measures and, particularly, the most cost-effective measures.

Context & Recommendations

The planning team highlights a number of factors and opportunities that will be the foundation for developing a measure framework.

Savings

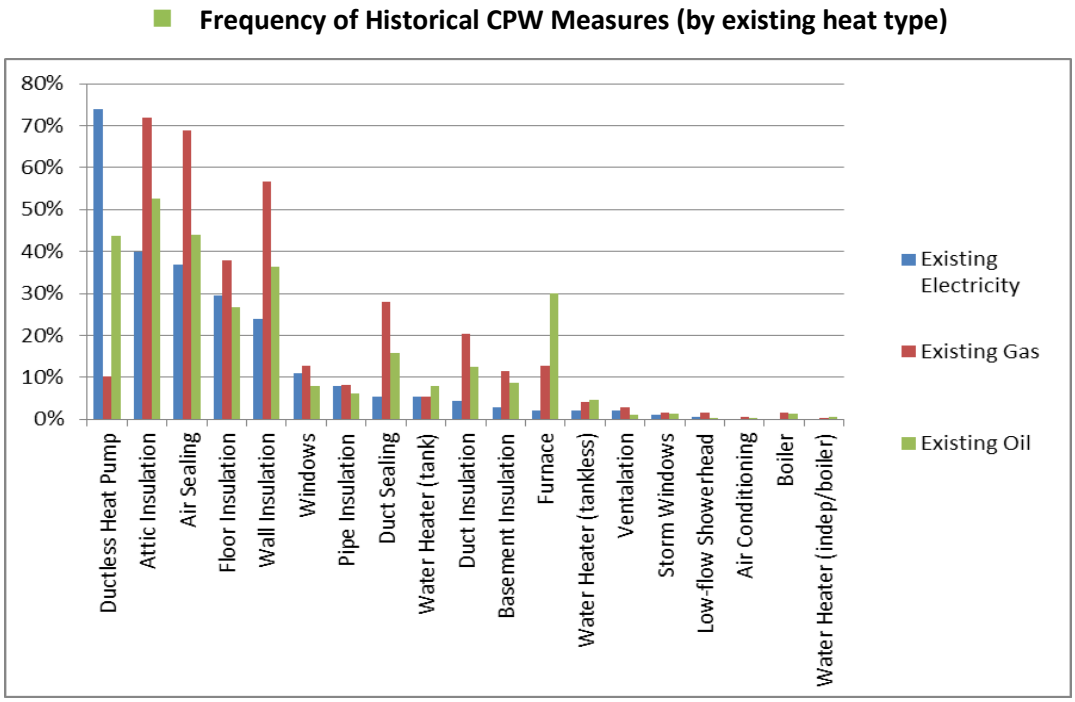
- SCL claims savings in accordance with the RTF and therefore this should be the basis for savings in CPW 2.0.
  - The EarthAdvantage EPS tool (CPW's current savings reference) seems to generally yield energy savings that are higher than RTF's. This is likely because the methodologies for calculating savings are quite different between the EPS and RTF.
  - The RTF's unit energy savings (UES) are largely based on modeling with "SEEM" (a software program designed to model small scale residential building energy use), billing analysis, and metering studies.
  - For the most part, the RTF uses a conservative last-in measure philosophy. This implies that any given measure is the last measure to be installed in the house. This has the effect of lowering estimates over approaches that assume a particular measure is the only measure being installed.
  - Interactive savings affects (e.g., insulation's impact on heating savings) are not accounted for because of the "last-in" methodology.
  - Depending on the measure, RTF savings are either based on the energy delta between original conditions and new conditions or a code conditions and new conditions. Cost-effectiveness depends on both this savings estimate and the incremental cost of the installed measure. Higher efficiency measures are not always more cost-effective since the cost of higher efficiency measures may be disproportionately greater than the savings (often the case).
  - The UES tables give a variety of estimates for a given measure, based factors such as climate zones, initial R-values, existing heat types, and the conditioning of installation spaces. Care must be taken to select the right UES as the label of the UES can often be confusing. Users of these tables must always read the measure description to double-check the right UES is being used.

- Some measures currently in the CPW program do not have UES estimates, including duct insulation, storm windows, and pipe insulation.
- The RTF's air sealing UES is complicated and is based on actual results achieved, which may make educating the homeowner more difficult.
- The UES tables give an estimate of the cost of each measure and it would be prudent to reconcile these UES estimates with *actual* costs from program data whenever possible.
- The RTF's UES tables show levelized costs and cost-effectiveness ratios for each measure, which will heavily inform measure priority. SCL's levelized cost goal is $.078/kWh.

- SCL ultimately judges cost-effectiveness on a portfolio basis, rolling up from programs, projects, and measures (portfolio ← programs ← projects ← measures). There may be cases where individual measures do not need to be cost-effective if projects or the program on the whole is cost-effective.

Measure Mix

- The CPW program will allow stand-alone measures, per SCL's preference, but pursue bundles to maximize savings.
- It is assumed that the existing CPW measures will be viable in the program's next iteration, although a decision will need to be made for non-RTF measures.
- Without any significant new program interventions, a base assumption is that homeowners would install measures at a similar rate as they do within the CPW program to date. The graph below shows historical frequency of CPW measures, segmented by existing home heat types. Of course, there may be some pent-up demand for single measures that will naturally change this mix.



- Given the goal of optimizing the CPW program, the most cost-effective measures (and strategic combinations of them) should be encouraged by program design and marketing.

- As noted previously, RTF's UES does not have duct insulation, pipe insulation, or storm windows as measures. Certain investor-owned utilities (such as PSE) do, however, public utilities cannot take credit for non-RTF measures. CPW and SCL may want to work with the RTF to develop an approach to adding these measures.
- RTF rules make some measures (e.g., duct sealing) mandatory alongside other measures even though it does not offer savings for all of these mandatory measures. A strategy to build in savings could perhaps be to bundle them with other measures to form single prescriptive measures (e.g., duct seal that includes duct insulation).
- Given the use of RTF UES measure savings estimates (as discussed above), bundling does not affect savings estimates (vs. treating each individually).
- Bundling can, however, encourage homeowners to go deeper and install more measures per home. As one tactic, bonus incentives can be given for projects that include multiple measures.
- Incentives for measures should be primarily based on cost-effectiveness. CPW should aim to meet SCL's levelized cost goal of $.078/kWh by prioritizing measures on their cost-effectiveness. Program design and marketing should promote the most cost-effective measures. There could also be a case for adopting a "savings hierarchy" to inform a recommended order for including measures in projects.
- There is often a "logical sequence" for measure installation and many measures naturally fit together in the same project. For example, attic insulation should probably include air sealing and duct sealing. Some insulation measures are easy to bundle because the same contractor can install the work, delivering marketing and logistical economies of scale. Program parameters can require such natural bundles so that future opportunities are not missed ("future proofing"). For example, if attic insulation is installed over HVAC ducts without sealing the ducts, it is very unlikely that these ducts will be sealed in the future. Studies show that customers who have made energy efficient decisions once are 80% more likely to make them again, so opportunities should not be closed.
- The CPW measure methodology should not complicate the program or force homeowners into situations where they feel the program does not reward them for making smart decisions. Measures must make sense in a home so there is only so much a homeowner (and their contractor) will practically do. Forcing measures could in fact backfire by having homeowners back out of projects altogether or avoid installing other more cost-effectives measures due to budget limitations.
- Consider requiring test-ins only for homes that need them—based on home profile parameters such as age. It is possible that knowledge of these homes will also help to isolate certain measures or suggest natural bundles. Some initial thoughts include:
    - Single space and water heat projects may not require test-ins
    - Single measure homes may only require a walk through "inspect-in"
    - Some measures and measure bundles warrant alternatively instrumented diagnostics; not all homes need a blower-door test
- The Residential Building Stock Assessment (RBSA) presents the following data, which will be used to corroborate project and measure penetration estimates:
    - Electric heat by type by *primary* heating system type - heat pump, zonal, forced air furnace
    - Electrically heated homes built prior to 1980, # homes with basements, slabs and crawlspaces
    - Electrically heated homes built prior 1980 number of homes in R-value bin wall, attics and floors over crawl space
    - Organize Homes built by decade, i.e., pre 1940, then 1940-1949, 1950-1959, and so on through 1981
    - Build out percentage tables based on data
- Bundles of multiple measures reflect a "whole house" approach, although perhaps terms such as "home performance" or "comprehensive home energy upgrades" are more representative.

Measure Framework Development Process

The team proposes that the following steps be taken within the upcoming SCL scope of work to develop a more concrete set of assumptions about expected penetration, savings, and program cost-effectiveness:

1. Review RBSA data to understand the population of homes and measures in SCL territory. The planning team will analyze the RBSA database focusing on homes within the City of Seattle to ensure that projections are based in market reality. At the highest level, it is expected that the data will be statistically significant, although certain sub-strata (e.g., Seattle homes with electric heat) might not have enough sample to be statistically significant.
2. Compile RTF UES data for "busbar" (at generation source) energy savings estimates, incremental costs, and other parameters. This data will give visibility into measure cost-effectiveness and levelized costs.
3. Review historical CPW data to cross-reference energy savings (from EPS estimates), project costs (based on contractor invoices), past incentive indicators, and other relevant variables.
4. Project measure penetration in future CPW projects based on historical trends as a benchmark.
5. Optimize measure mix based on cost-effectiveness modeling and devise strategies for encouraging installation of these measures (e.g., incentives and marketing).
6. Formulate program design considerations based on optimization modeling. Create a set of explicit program design parameters that add natural and practical bundling considerations to basic cost-effectiveness prioritization.

Appendix 11:

CPW Customer Management Platform

EnergySavvy Steps & Required Documents

This appendix describes the CPW program's customer management online software platform, EnergySavvy, by explaining how stakeholders interact with it from the beginning of a project through its completion.

Intake

1. Customer fills out application (with referral code if applicable).
2. CPW processes application, creates a new site within the Energy Performance Score (EPS) system and generates a coupon number that is entered into EnergySavvy.
3. CPW assigns customer to an Energy Auditor.
4. If the customer had a Seattle City Light (SCL) audit prior to CPW, their audit must be moved over into the CPW platform. This transfer may incur delays. If a homeowner had an audit done outside of the SCL audit program, the customer must have an SCL audit performed or opt out of the program.

Test-In Stage

1. Auditor receives email notification of a "New" Test-In Assessment Task.
2. Auditor logs into EnergySavvy and clicks on the Test-In Assessment Task to make it "In-Progress" rather than "New" and observes the CPW-assigned coupon number.
3. Auditor contacts the homeowner and schedules a day/time for the audit. If the customer does not respond after at least three calls and two emails, the auditor may mark the task as unable to be completed.
4. Auditor completes and finalizes the audit in the EPS system, uploads all necessary information to EnergySavvy and completes the Test-In Assessment Task. The Test-In Model Task will auto-complete. In the event that the Test-In Model Task does not auto-complete, CPW contacts Earth Advantage Institute to request manual completion.
   1.

Bid Stage

1. Contractor receives email notification of a “New” Bid Task.
2. Contractor logs into EnergySavvy and clicks on the Bid Task, which makes it “In-Progress” rather than “New.”
3. Contractor contacts the homeowner and schedules a day/time for the bid consultation.
4. Contractor prepares a bid, and uses the appropriate tool for calculating estimated energy savings on proposed measures. Bid should include all CPW and utility rebates for which the project is eligible.
5. Customer approves and signs the final bid.
6. Contractor uploads the final signed bid to EnergySavvy and enters required inputs.
7. If SCL weatherization rebates apply, contractor should include square footage and R-values of the before and after area(s) on the bid, as specified by SCL. Contractor checks the box that states “Is the customer receiving SCL weatherization rebates?”
8. Contractor must mark the homeowner’s financing decision in EnergySavvy (Craft3, PSCCU, unidentified loan, or self-financing) in order for the EnergySavvy to correctly connect the homeowner to his or her chosen lender.
9. Contractor completes the Bid Task.
10. CPW reviews bids for signatures, rebate accuracy, and consistency before moving the contractor to either the Loan Selection or Contractor Work Stage.

SCL Bid Review Stage

Projects with SCL weatherization rebates only

1. Approved CPW bid is sent to SCL.
2. SCL reviews the bid and approves the SCL rebate amount.
3. SCL completes the SCL Bid Review task. If SCL does not approve the bid, they close the task as incomplete and leave a note explaining why. HRC rolls the project back to the Bid Stage so the contractor can make corrections as needed.

Loan Stages

Loan Selection

CPW unidentified-loan customers only

1. Customer is prompted via an automated email to indicate their financing option.
2. The selected lender receives task notice and approved bid through EnergySavvy.

Loan Application

All CPW loan customers

1. Customer submits the appropriate application to the corresponding lender of choice. If loan application has been submitted previously, no action is needed from the homeowner.
2. Lender completes the Loan Application Task.

Loan Approval

All CPW loan customers

1. Customer is evaluated by the lender and either approved or denied for a CPW loan.
    a. If denied, customer must either choose to finance the project outside CPW, put the project on hold, or abandon the project until self-financing is an option
    b. If approved, customer is advanced to Loan Signing Stage.

Loan Signing

All CPW loan customers

1. For Craft3, the lender sends preliminary loan documents to the homeowner and schedules a loan signing.
2. For PSCCU, the lender reviews bid and determines a date for signing.
3. Once the homeowner has signed loan documents, the lender marks the Loan Signing Stage completed.
4. CPW advances contractor to Contractor Work Stage.

Down Payments: Craft3 offers up to a 50% advance on projects receiving a Craft3 loan. PSCCU offers a down payment. Please contact the appropriate lender for details.

Contractor Work Stage

1. Contractor receives email notification of a “New” Retrofit Task.
2. Begin retrofit work.

3. Contractor inputs the completed energy efficiency measures, downloads the SCL Weatherization Coupon form (if applicable), and uploads the change order document, if applicable.
4. Contractor completes the Contractor Work Stage.
5. CPW moves the customer to Test-Out Stage.

Change Orders

Change orders must represent any changes in scope, price, and rebate amount from the original signed proposal. For CPW purposes, a signature is not required on the change order.

- **CPW rebates**: If a change order is uploaded at retrofit stage, CPW will review and approve rebates at Invoice Stage.
- **SCL rebates**: If a change order is uploaded at retrofit stage, SCL will review and approve rebates at Invoice Review Stage.
- **PSE rebates**: Management of PSE rebates and changes are not connected to CPW processes. CPW only checks (at bid stage) that the contractor is aware of potential PSE rebates and that they are included on the bid if applicable.
- **PSCCU loan**: PSCCU will process change orders at the loan disbursement stage.
- **Craft3 loan**: Craft3 will process change orders at the loan disbursement stage. If a contractor has significant concerns about a potential delay in the process of loan re-signing, the contractor may email CPW, requesting to have the change order reviewed by CPW and sent to Craft3 to jump-start the process of updating the Craft3 loan amount.

Test-Out Stage

2. The CPW Quality Assurance (QA) team coordinates with the homeowner and performs the test-out.
    - This task will not start until the contractor completes the Contractor Work Stage on EnergySavvy.
    - Test-Out auditors are expected to contact the homeowner at least 3 times by phone and email within 30 days of receiving the assignment. If a homeowner is unresponsive after 30 days, the auditor may complete the EPS post-construction report based on information in EnergySavvy.
3. The CPW QA team will present any issues or required changes to contractor.
4. Contractor must make necessary changes and corrections (if any) as specified by the CPW QA team as soon as possible to receive a rating of “Pass.”
5. Once repairs are complete, the CPW QA team finalizes the passing post-construction EPS report and completes the Test-Out Task!
6. CPW moves the customer to the Invoice Stage.

Invoice Stage

1. Contractor and homeowner both sign a final Participant Agreement. Final amount should equal original amount (+/-) change order amounts, if applicable. CPW should have documentation of all changes (including rebate changes) made to the original bid at this stage. If the Participant Agreement is that from October 2012 or later, the invoice itself does not need to be signed.
2. Contractor uploads the invoice and a signed version of the Participation Agreement, which must match the invoice.
3. If Seattle City Light weatherization rebates were applied to the bid, contractor must upload the signed SCL Weatherization Coupon form, the signed Assignment of Vendor form, and any pertinent warranties and certificates as specified by Seattle City Light, into the "SCL Project File."
4. Contractor completes the Invoice Task.
5. Contractor completes Workforce Documentation (see Directions for Workforce Reporting).

SCL Invoice Review Stage

Projects with SCL weatherization rebates only

1. Approved CPW invoice is sent to SCL.
2. SCL reviews the invoice and confirms the SCL rebate amount.
3. SCL completes the SCL Invoice Review task.

Loan Disbursement Stage

All CPW loan customers

1. Craft3 or PSCCU receives the Loan Disbursement Task assignment along with the final invoice and signed Participation Agreement.

2. Lender remits electronic payment (or check, by contractor's preference and lender's ability) to contractor within 3-8 business days of receipt of approved final documents.

Rebate Disbursement Stage

PSCCU is CPW's fund manager and processes ESI and CPW incentive payments for both loan and non-loan customers.

1. PSCCU receives the Rebate Disbursement Task assignment along with the final invoice and Participation Agreement.
2. PSCCU remits electronic payment or check to contractor within 3-8 business days of receipt of approved final documents.

Closed-Complete

CPW marks the customer as Closed-Complete.

Appendix 12:

Notes on Reporting and Data Collection

Community Power Works for Homes

Notes on Reporting and Data Collection

Washington State University Energy Program - September 30, 2013

Background: The Washington State University Energy Program had a three and half year contract for providing evaluation and reporting services for Community Power Works program. Reporting and evaluation services were provided for Homes, Small Business, Homewise Single Family, Homewise Multi-family, Large Commercial, Hospitals and Municipal. The total WSU EP for reporting and evaluation services was $730,000 or about 3.5% of the grant. It also likely that another $100-250,000 of staff time at OSE and the implementation team were expended to meet reporting requirements.

WSU EP evaluation and reporting budget covered the following services:

DOE required reporting consumed about $150-200,000. This cost covered building reports, negotiating reporting with DOE, filling out and submitting reports, preparing revisions and capturing and formatting utility data. This cost was split about 50/50 CPW for Home vs. the other CPW sectors. Most of this cost can be cut.

Workforce reporting contracts for CPW for Home totaled $140,000 over two and half years. This included setting up reporting systems, providing backend review and support of web-based reporting systems, five web surveys of contractors, monthly compilation of technical hours, 1-2 quarterly site visits and regular review and resolution of wage compliance issues and some informal reporting. This system can be maintained for about $25-50,000 / year depending on the depth of services and review. There may be some possibilities for cost sharing and using Seattle's workforce reporting system for establishing workforce compliance for other Washington Community-Based Energy Efficiency programs. It is not clear whether this system will be accepted as an alternative for establishing compliance to Washington State Prevailing Wage certification requirements

Evaluation data collection and reporting for CPW for Home totaled $250-300,000 or about $100,000/year. This covered production of a detailed set of monthly indicators, participant, non-participant and partial participant surveys, contractor surveys, and 180 day, mid-project and a final summary of program results. As the program moves out of the pilot stage to maturity, significantly fewer resources will need to be dedicated to the program. As discussed below, the right resource level is a function of program design and scope.

What worked?

- The evaluation model emphasized sharing early results and preliminary data and informal (memo or PowerPoint) reports as opposed to formal written reports. WSU EP was "on-call " to provide data to support program design and outreach strategies. There were some challenges on managing access and budgets in the three way relationship between OSE (contract manager), implementation partners, and WSU EP (evaluation contractor). This issue can be managed by a closer integration of reporting and implementation roles (see recommendations).

- Ongoing participant surveys which included contractor and auditor feedback were an important source of feedback and quality improvement. The web/phone model generated strong returns and response rates (>60%). This was costly (~$50K). Lower cost surveying options can be . effectively integrated with the Energy Savvy platform using the tools and approaches developed by CEWO.
- The regular production of a standard set of progress indicators was useful in tracking progress and program disposition. The indicators should be reviewed and standardized and steamlined. Key metrics should be automated using the tools developed by CEWO for extracting and summarizing data from the Energy Savvy platform.
- The CPW for Homes Summary (Source) file was a valuable tool for integrating data and quick summary analysis. A central repository for critical data on all projects (dates, status, measures, costs, firms, and test in results. Production could be automated, and table streamlined.
- Web surveys for contractors were a great source of quick and inexpensive feedback from contractors.
- Workforce reporting was very effective and efficient. It is essential to make it a condition of payment. Contractors were generally OK with reporting – especially if they saw it was being used for enforcement. The collection and compliance tools worked pretty well. More could have been done to share information back to contractors.

What could be done work better?

- Definition of completed project as project passing test-out is too complex and required several data updates and revisions (project costs and hours and measure were not finalized at test-out). Wait until projects are closed and all data is in before counting as complete. This will reduce reporting costs and decrease uncertainty.
- CPW experimented with live public facing reporting of key metrics. It was costly, difficult to maintain, and generally not that high value or visibility.
- Data collection strategy for upgrade measures . Upgrade measure data of moderate to poor quality because it is captured too soon (before change orders) and reported by contractors who don't have a stake in getting it right. A random sample of 102 completed upgrades found that reported and actually measures did not agree in 32% of the cases. As shown in the table the tendency is to under – rather than over report. The underreporting tends to be greater for lower cost measures and ventilation. Cost data was also inconsistently reported. Five percent of bids included . non-energy related costs ranging from 2 to 50% of upgrade costs. 15% of the projects had health and safety costs (asbestos, knob and tube, electrical service) which averaged 18% of project costs. This data was not isolated.

    - WSU EP did not use measures bid data. If this data is not used for project review and QC it should be dropped.
    - Measure checklist needs to be refined with a little more detail and if possible associating cost data would be associated with measures

    - Final review and capture of upgrade measures (and costs) should be centralized and conducted by the program to ensure consistent reporting and accurate capture.
- EPS audit data and use of kWhe is confusing.
    - Energy savings need to be reported in native units to be useful for utilities and federal and state energy agencies. Need to do a better job of extracting data from audits to populate reports. CEWO has made better progress on this than CPW.
    - The use of test-in and test-out to determine energy savings was both expensive and not always reliable. There is wide variation in the quality of test in audits, poor capture of information on when supplemental methods were used, and savings for some measures were likely overestimated.
    - Consider using a variation of deemed savings calculations drawing on Regional Technical Forum calculations.
- Include square footage as an extracted field. This is essential for RTF calculations and generally is useful for most other reporting to State and DOE
- Loan reporting was not well integrated between Craft3, PSCCU and Energy Savvy. Reporting to the Department of Commerce or third parties was difficult and inconsistent. More work needs to be done to link/centralize reporting.
- Workforce reporting could be streamlined. Employee specific data on insurance status and status as a "targeted worker" was not reliable. The data on hours, wages and worker classifications was under-utilized. The critical questions for workforce data is whether the City of Seattle is willing to pay for collection and compliance work. If not collection of demographic data on workers should be reduced significantly.
- WSU EP and Cascadia Consulting tested whether g customer ratings of contractor performance could be factored in to contractor compensation. Contractor ratings provided valuable feedback to contractors and the implementation team on performance but is generally not timely or consistent enough for determining compensation or to include as an element in performance-based contracting. There may be an opportunity to include online customer ratings and review of contractors on the CPW website in the future.

RECOMENDATIONS

The First Step: Get clear on purpose and priorities for Evaluation and Reporting.

There are four primary constituents for CPW for Home evaluation and reporting

<u>The implementation team for program management and operations:</u>

What and how much you collect really depends on the delivery model

- CEWO: A centrally operated / controlled model where the implementer is the general contractor (CEWO) supports more data collection. Under this approach data collection is
    - More rigorous and reliable
    - Much more costly
    - Likely to push some contractors out
    - Can improve contractor practice

    - May have lower systems cost (data is collected once)
    - Does not work well with independent auditors
- CPW for Home current model is a more market – based approach – providing support to a set of program contractors and auditors
    - Is more inclusive (wide vs. deep)
    - Lower cost for both the program (does not require detailed review by "program staff"
    - Results less more inconsistent information

There simply isn't enough $ to run CEWO contractor / audit workbook model unless CEWO is willing to cover most of the costs. On the other hand the current CPW for Homes data collection model could benefit from tighter control and more central review of data to improve reliability.

- *Will CPW offer incentives? If so, how will incentives be structured?*

The structure of program incentives also drives reporting requirements. If incentives based on "estimated energy savings" are planned there will need to be some mechanism to determine and document the benefit to establish the incentive level. This may be cost-prohibitive. Given more limited funding a measure-based or measure package incentive may make more sense.

<u>City of Seattle:</u>

The City's core reporting requirements are pretty basic. How many projects have been completed and are in the works, customer satisfaction and some method to calculate energy and carbon savings .

Basic record keeping and counts from the Energy Savvy database should be sufficient to meet most reporting needs. As discussed above more work is needed to specify the measures and to set up systems collect and report data consistently. Customer surveys are helpful – though not critical.

The City is the main driver for detailed collection of data on worker level data to establish compliance to and progress towards maintaining High Road Agreement standards. How much occurs is based on the Cities "willingness to pay".

<u>Washington State CEEP:</u>

Reporting requirements for community based energy efficiency programs are straightforward. Most project specific data can be captured from the Energy savvy platform:

- Addresses for audits and upgrades
- Key dates (first contract, assessment, bid signed (work started), project complete)
- Direct installation costs
- Incentive amounts (program and utility)
- Measures installed
- Heating fuel
- Square footage

- Companies / firms providing services
- Energy savings estimates (optional)

In addition to project specific reporting grantees will need to report some program-wide metrics addressing budgets, staffing, leverage and delivery costs. This data should be available from existing program budget tracking systems.

Utility partners

This is an unknown. This really depends on what services the program provides to utilities.

Determine how much measurement can you afford given the scale of the program?

Scale data collection to budget and risk. As a general rule measurement and evaluation should run-- 2-5% of the total program budget, with the lower range for a mature program and the higher end for cases where new approaches and delivery methods are being planned. Given that CPW 2.0 does involve testing new models and approaches – the higher end of the range makes sense.

Include evaluation and reporting as a line item in all grant proposals. If you don't budget for it explicitly it won't be there.

Integrate data collection and reporting more closely with implementation.

Reporting and data collection should be moved from an external organization (WSU EP) to the implementation team (CEWO/Cascadia). Someone needs to be responsible for data collection and cleaning who owns the process. WSU EP has not had the resources or long-term horizon to invest in developing automated reporting systems that would improve reporting efficiency and provide better project management tools. CEWO has developed or is developing automated tools and systems for monitoring and extracting data from Energy Savvy and EPS audit for it work in Oregon because it has a longer term orientation and clear mission to support implementation .

There does not appear to be a driving need for "outside" independent evaluation of outcomes and results.

Move from EPS TI vs TO to Deemed Savings Calculations drawing on the RTF frame work.

With better capture of upgrade measures and square footage reasonably reliable estimates of energy savings by fuel can be generated using fairly straight forward calculations that could be integrated into Energy Savvy or other reporting software.

WSU EP has a fair amount of experience in developing this type of calculation and building it into larger software systems. This may be a 'continuing role' for WSU EP.

Appendix 13:

Financial Model

Financial Model – The planning team utilized a detailed, Excel-based business model to support its efforts to project financial and energy performance of CPW 2.0. The model used data from historical CPW program performance, RTF energy savings values and measure costs, "bottom-up" expense estimates, and other inputs to give visibility to the prospective program period from 2014 to 2016.

Screenshot of part of the CPW Business Planning Model

BUSINESS AND OPERATIONS PLAN

DRAFT–November 2013

Appendix 14:

Funding Strategy Memo

To: Jill Simmons, Christie Baumel - OSE

cc: Glenn Atwood - SCL

From: Tim Miller, Derek Smith, Marc Daudon, Ruth Bell, John Morris - CEW/Cascadia/Fluid

Date: September 11, 2013

Subject: **CPW 2.0 Funding Strategy**

We are midway through the CPW transition planning process and funding needs are coming clearly into focus. We write this memo to provide a strategy framework and direction for pursuing near and long term funding for CPW 2.0. In parallel, the transition team is developing a detailed 2014 budget specifying all program expenses as well as revenue by funder tied to specific expenses (i.e. SCL for electrically-heated homes). We look forward to discussion about the funding development strategies we propose and the collaborative pursuit of a future program that is, as defined by the transition team, *financially viable and offers a value proposition that customers appreciate*. We've organized this memo into the following sections:

1. Current funding sources
2. Near term strategies to maximize funding
3. Value propositions
4. Relevancy to potential funders
5. Long term strategy

Current Funding Sources

Secured program funding currently consists of: 1) **CPW carry over** funds – remaining ARRA dollars available until the extended grant period ends in March 2014; 2) WSU-managed **CEEP** funds, beginning in January 2014, if not before; and 3) **SCL** support for whole-house and single measure residential efficiency and weatherization beginning in January 2014.

Near Term Strategies to Maximize Funding

The transition team is currently constructing program scenarios that include alternative levels of program expenditures (total and assignable) and potential funding sources (see the draft scenario table in the Sept 6 meeting materials). In addition, and to ensure maximum funding from currently secured sources, we recommend completing the following activities over the next 1-2 months:

1. **Maximize CEEP funding**. As we understand it, WSU is deciding on allocations of CEEP funds without an understanding of CPW 2.0 needs or a specific ask from CPW. We think we would be better positioned if we provide WSU with a preliminary scope and budget that clearly defines the gap we seek to fill with CEEP funds. We will likely develop a more detailed version per WSU's request later this fall. For now, our interest is in defining the CPW program need at a high level to provide context as WSU negotiates funding amounts with other CEEP grantees.

2. **Develop a PSE value proposition.** PSE has asked that we clearly and convincingly state the benefit to the utility of participating in CPW2.0. Accordingly we are convening a strategy session involving, at a minimum, Jill, Christie, Glenn, Scot, Dan, and Marc/Ruth to develop and submit the CPW value proposition to PSE by Sep 20th. This session should include an identification of other influencers/stakeholders who could help encourage PSE to participate and a strategy to engage those individuals. The value proposition will address opportunities for:
    - **Increased customer satisfaction** achieved by fuel blind program and strong customer-contractor interface.
    - **Positive community positioning**, especially if we successfully attract corporate partners to provide employee benefit offering.
    - Successfully managing and integrating with CEEP programs throughout PSE's service territory resulting in PSE getting credit for deep EE savings.
    - **Lead generation**.
    - **Energy savings**.
3. **Develop a Corporate Energy Efficiency Benefit.** The Clinton Initiative sponsored (Home Energy Affordability Loan) HEAL program offers the potential to obtain corporate support for CPW2.0 and to substantially reduce the cost of obtaining qualified leads. The next step here is to develop a written value proposition for HEAL and the overall employee benefits model, meet and discuss with major employers, refine offering, and work toward partnerships.
4. **Explore opportunities with Seattle general funds.** We understand that OSE has a limited request for general funds to support CPW in the next fiscal year. We would like to discuss the potential to obtain additional funds, crafting a value proposition and a strategy to build support from stakeholders, the Council, and the Mayor's office.
5. **Explore opportunities with State dollars (beyond WSU).** The Inslee administration secured funds in from the capital budget for clean energy development, including energy efficiency. We understand that most of these funds are earmarked for a revolving loan fund and research grants, but perhaps there are opportunities for direct program support as well. The next step here is to discuss ideas and potential with various stakeholders.

Value Propositions

Taking CPW to potential funders requires the development of strong value propositions that resonate with utilities, governments, non-profit organizations, and corporate partners. We have identified four overarching value proposition categories for CPW:

Living-Wage Jobs	CPW offers new approaches and stimulates continued investments, for training, creating, and retaining sustainable, living-wage jobs.
Moderate-Income Support	CPW benefits moderate-income residents not typically eligible to receive services provided by the established low-income safety-net.

Energy Savings, Climate Impact	CPW achieves deeper, more comprehensive, longer-lasting energy savings and carbon emission reductions than traditional utility and single-measure energy efficiency programs.
Cost-effective Energy Savings	CPW provides a non-profit platform for connecting customers to a broad range of energy efficiency solutions by "brokering" cost-effective utility measures and delivering rebates, selling solar and other renewables, and, potentially, delivering value on monetized carbon.

Table 1 summarizes elements associated with each of these value propositions and the potential funders/stakeholders interested in each.

Table 1: Value Propositions and Relevancy to Potential Funders

Value Propositions	**Living-Wage Jobs**	**Moderate-Income Support**	**Energy Savings, Climate Impact**	**Cost-effective Energy Savings**
Across all: - Momentum - Innovation - Regionalization, bringing to scale	- High Road - Labor equity - Job training - Job retention - Green, clean economy - Local ownership	- Customer satisfaction - Employee satisfaction through corporate programs - Service equity - Healthy homes - Radon, seismic, fire prevention	- Oil conversions - Oil savings - Monetizing & selling carbon savings - Corporate benefit - Solar, renewables - Positive community positioning through sponsorship	- Single & bundled measures - Financing mechanisms, eg guaranteed savings - Program-driven revenue - Loan administration - Policy-driven offerings
Potential Funder				
Utilities				✓
Customers				✓
Contractors				✓
Lenders				✓
Corporations		✓	✓	
Foundations	✓	✓	✓	
Federal SBA	✓			
FEMA		✓		■
EPA		✓		
Equipment Mfg & Vendors			✓	
State workforce development	✓			
Governor Clean Energy Fund	✓		✓	
City	✓	✓	✓	

Relevancy to Potential Funders

CPW has made significant strides through innovation towards establishing a home performance industry and demonstrating the viability of deep energy retrofits. CPW also has strong momentum towards the ultimate goal of achieving scale that results in sustainability. This innovation and momentum has the potential to attract funders such as the Enterprise Foundation. Additionally a variety of funders may support value propositions that more specifically align with their core missions. For example, utilities may fund single or bundled measures to achieve **cost-effective energy savings**. This model could also provide opportunity for creative financing mechanisms through Qualified Energy Conservation Bonds (QECBs) micro capital, program-driven revenue ("pay to play"), or new approaches such as payment for guaranteed savings.

CPW is also an ideal platform for fulfilling potential policies to stimulate demand for home performance, such as a referendum to allocate property taxes to support an energy efficiency fund, or point of sale disclosure initiatives. There may also be some potential to allocate state or federally funded loan program dollars current allocated to Craft3 and other lenders to pay for program operations and administration.

Corporate employee benefits programs, such as the Home Energy Affordability Loan (HEAL), would provide **support to moderate-income** residents and could also cover a "per unit" administrative cost for program delivery**.** Some foundations may be interested in supporting energy efficiency service equity. And CPW could potentially provide value to insurance companies, healthy homes initiatives, FEMA, and EPA by serving as a delivery mechanism for radon, seismic, and fire prevention services.

Corporations like Wells Fargo or Safeco Insurance may support **Energy Savings and Climate Impacts** with sponsorship and advertising that builds recognition and positive positioning within the community. Equipment manufacturers and vendors of insulation, sealant, and other products critical to home performance may also support the program for the marketing value it brings. In addition, foundations and mission investors may make program related investments to support climate impacts, particularly those with significant impacts such as oil-furnace upgrades. The support of clean, green, **living-wage jobs** and small, locally-owned businesses could attract funds from the federal Small Business Administration, state workforce development programs, the Governor, and the Labor Foundation.

Seattle Councilmembers may see the benefit in allocating city general funds beyond utility-driven energy efficiency for several value propositions including the opportunity to achieve service equity by supporting energy efficiency for moderate-income residents as well as sustaining living-wage quality jobs through support of High Road, and achieving carbon emissions reductions.

Long Term Strategy

Long term funding efforts should happen in parallel, and will rely on conversations with a variety of stakeholders to 1) gather creative funding ideas and 2) assess potential going forward.

1. To begin, we propose convening a small group of key individuals (ideally 5-6) in a **CPW funding strategy session** to explore future funding opportunities. Participants could include members of the original CPW

"brain trust" such as Mike Mann and others who support CPW's long term success, such as Climate Solutions and the NW Energy Coalition. We would develop the final participant list and discussion format as a team. Other possible participants are:

- Rob Harmon, Preservation Green Lab
- Steve Gelb, Emerald Cities
- Desiree Sideroff, Adam Zimmerman, or Sue Taoka, Craft3
- Amy Solomon, Bullitt Foundation
- Representative, One Pacific Coast
- Martin Goebel, Sustainable NW
- Rashad Morris, Councilmember Mike Obrien's office

2. When (and if) the timing is appropriate, and funding needs and strategies are further defined, we could conduct a **utility roundtable** to further identify utility interests and opportunities going forward. Again, the timing, participation, and agenda for such a meeting would be developed together as a team.

In sum, we believe now is the time to move forward vigorously to secure additional funding sources for CPW. We look forward to working collaboratively with OSE and SCL to achieve the goals we all share of a fully funded, highly successful CPW 2.0 that sustains the region's home performance industry, delivers energy and carbon savings, and achieves shared workforce development and equity goals.