

Application for Federal Assistance SF-424

Version 02

\* 1. Type of Submission:

- Preapplication
- Application
- Changed/Corrected Application

\* 2. Type of Application:

- New
- Continuation
- Revision

\* If Revision, select appropriate letter(s):

[Empty field]

\* Other (Specify)

[Empty field]

\* 3. Date Received:

12/14/2009

4. Applicant Identifier:

[Empty field]

5a. Federal Entity Identifier:

[Empty field]

\* 5b. Federal Award Identifier:

[Empty field]

State Use Only:

6. Date Received by State:

[Empty field]

7. State Application Identifier:

[Empty field]

8. APPLICANT INFORMATION:

\* a. Legal Name:

City of Seattle

\* b. Employer/Taxpayer Identification Number (EIN/TIN):

91-6001275

\* c. Organizational DUNS:

009483561

d. Address:

\* Street1:

700 5th Ave.

Street2:

Suite 2748

\* City:

Seattle

County:

King

\* State:

WA: Washington

Province:

[Empty field]

\* Country:

USA: UNITED STATES

\* Zip / Postal Code:

98104-5000

e. Organizational Unit:

Department Name:

[Empty field]

Division Name:

[Empty field]

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:

[Empty field]

\* First Name:

Amy

Middle Name:

[Empty field]

\* Last Name:

Patton

Suffix:

[Empty field]

Title:

[Empty field]

Organizational Affiliation:

[Empty field]

\* Telephone Number:

206-684-5013

Fax Number:

[Empty field]

\* Email:

amy.patton@seattle.gov

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9. Type of Applicant 1: Select Applicant Type:

C: City or Township Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

\* Other (specify):

\* 10. Name of Federal Agency:

Environmental Management Consolidated Business Cen

11. Catalog of Federal Domestic Assistance Number:

81.128

CFDA Title:

Energy Efficiency & Conservation Block Grant Program

\* 12. Funding Opportunity Number:

DE-FOA-0000148

\* Title:

Recovery Act: Energy Efficiency and Conservation Block Grants: Competitive Solicitation: Retrofit Ramp-up and General Innovation Fund Programs

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

\* 15. Descriptive Title of Applicant's Project:

Seattle???'s Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

## Application for Federal Assistance SF-424

Version 02

## 16. Congressional Districts Of:

\* a. Applicant \* b. Program/Project 

Attach an additional list of Program/Project Congressional Districts if needed.

## 17. Proposed Project:

\* a. Start Date: \* b. End Date: 

## 18. Estimated Funding (\$):

* a. Federal	<input type="text" value="25,000,000.00"/>
* b. Applicant	<input type="text" value="58,019,074.00"/>
* c. State	<input type="text" value="7,400,000.00"/>
* d. Local	<input type="text" value="0.00"/>
* e. Other	<input type="text" value="110,404,899.00"/>
* f. Program Income	<input type="text" value="1,667,302.00"/>
* g. TOTAL	<input type="text" value="202,491,275.00"/>

## \* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?

- a. This application was made available to the State under the Executive Order 12372 Process for review on
- b. Program is subject to E.O. 12372 but has not been selected by the State for review.
- c. Program is not covered by E.O. 12372.

## \* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)

Yes  No

21. \*By signing this application, I certify (1) to the statements contained in the list of certifications\*\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\*\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

 \*\* I AGREE

\*\* The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

## Authorized Representative:

Prefix:  \* First Name:

Middle Name:

\* Last Name:

Suffix:

\* Title: \* Telephone Number:  Fax Number: \* Email: \* Signature of Authorized Representative:  \* Date Signed:

**Application for Federal Assistance SF-424**

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**\* Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.

### Project/Performance Site Location(s)

**Project/Performance Site Primary Location**  I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name:

DUNS Number:

\* Street1:

Street2:

\* City:  County:

\* State:

Province:

\* Country:

\* ZIP / Postal Code:  \* Project/ Performance Site Congressional District:

**Project/Performance Site Location 1**  I am submitting an application as an individual, and not on behalf of a company, state, local or tribal government, academia, or other type of organization.

Organization Name:

DUNS Number:

\* Street1:

Street2:

\* City:  County:

\* State:

Province:

\* Country:

\* ZIP / Postal Code:  \* Project/ Performance Site Congressional District:

## 1. PROJECT OBJECTIVES

### 1.1

### GOALS AND OBJECTIVES

The City of Seattle is pleased to submit this application to the Department of Energy for \$25 million to fund Seattle's Neighborhood WEB (Weatherize Every Building) Energy Efficiency Retrofit Ramp-up initiative. Joining our submittal, over 40 public, private, and nonprofit partners bring \$175 million in leverage and supporting programs, for a 7:1 leverage ratio. Together, we are committed to the **twin goals** of 1) drastically reducing carbon emissions by fostering a clean energy economy that relies on energy efficiency as a primary "source" of power and 2) putting Americans to work in family-wage green jobs weatherizing and retrofitting the buildings where we all live and work.

Our WEB initiative takes a neighborhood and building-by-building approach to achieving energy efficiency by engaging all residents, businesses, and buildings in this historic effort—diverse communities, young and old, rich and poor, homeowners and renters, workers and business owners. To accomplish this goal, we have designed a program in which virtually everyone in our targeted district will become aware of and involved in reducing energy use and associated emissions. With the critical support of funds from this grant, within three years, we will achieve a market penetration of more than 30% for energy efficiency in our targeted markets—paving the way for up to an 80% market share within a decade as well as the rapid growth and adoption of efficiency services and practices throughout the rest of Seattle and among the 5 million people in the broader region of western Washington and beyond.

To achieve these ambitious outcomes for powering efficiency, slashing carbon, and generating jobs, we have identified **five key objectives** for the WEB initiative. We have designed our effort to achieve these objectives in the next three years and to build on and expand their impact in subsequent years.

1. **Boost our economy and environment immediately by using the EECBG funds to achieve major energy savings and create 2,000 new living-wage green jobs**—the retrofits are targeted to cost-effectively reduce energy use by 15 to 45% and cut 71,000 metric tons of CO<sub>2</sub>e emissions.
2. **Provide communities around the region and nation with a model they can adopt, including best practices to overcome the key barriers of access to information, financing, and skilled workers.** Seattle's experience with energy conservation, financing, and workforce development over the last three decades shows that an integrated approach pursued with dedication, flexibility, and vigor will achieve the desired outcomes, though no single "silver bullet" alone will transform the marketplace.
3. **Test and prove the feasibility of innovative, alternative, and game-changing solutions**, as part of building a replicable model. Through WEB, we will implement and hone the following innovations:
  - **Offer public financing for and ownership of energy efficiency improvements** in private buildings using energy efficiency Power Purchase Agreements (eePPA) where improvements pay for themselves.
  - **Deploy credit enhancement mechanisms** to attract private capital into revolving loan funds, leveraging public funds invested at ratios ranging from 3:1 to 12:1.
  - **Create on-bill utility repayment mechanisms** for both residents and businesses through Seattle City Light and ShoreBank Enterprise Cascadia. Utility on-bill repayment offers an effective alternative to PACE financing in the many places like Washington State with constitutional limits on lending of credit.
  - **Securitize energy efficiency loans and arrange for take-out financing** to provide a source of capital to sustain the program after EECBG funds are expended and to provide additional leverage.
  - **Establish a Carbon Incentive Fund**—the first of its kind in the nation—to enable local businesses and utilities to participate in an expected regional or federal cap-and-trade market.
  - **Use web-based programs** to provide residents with low-cost ways to assess energy use and take action.
  - **Test and prove a door-to-door community organizing model** to engage homeowners in learning about and acting on energy efficiency opportunities in their homes.
  - **Create jobs through collaborative partnerships** for workforce development that ensure high-quality training, certification, and access to jobs for entry-level to highly skilled workers.

## Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

4. Maximize the leverage of federal funds, providing the public with a superior return on its investment. We expect to achieve a *7:1 leverage of EECBG funds*, with \$15 million provided through existing programs and \$160 million leveraged through new funds that the grant will enable.
5. Establish a conservation program and financing facility that is durable and sustainable over time—continuing long after the EECBG funds have been used. The DOE funds will enable Seattle to build on the results it has already achieved and launch a breakthrough program that quickly achieves critical mass, fostering both ongoing sustainability and rapid market transformation.

### 1.2 OVERVIEW OF WORK PLAN FOR ACHIEVING SUCCESS

*Seattle's Office of Sustainability and Environment* will manage the project, with its Director, a cabinet-level position, serving as Principal Investigator. *Washington State University's Energy Program* will play a key role as a technical advisor throughout the project and the Monitoring and Verification leader. The WEB initiative will be implemented in close partnership with the two energy utilities: *Seattle City Light* (SCL), a City-owned electricity provider; and *Puget Sound Energy*, an investor-owned utility providing natural gas (and electricity outside Seattle). Private and nonprofit partners will deliver retrofit services, under contract to the City. Partners—from *McKinstry* and *ShoreBank* to *Earth Advantage* and many more—bring a wealth of expertise, experience, and tools to the program.

We have established 1) a clear work plan with concrete milestones and measurable results; 2) a highly skilled management team bringing in expertise from technical and policy advisory teams; 3) delivery mechanisms that build on extensive experience and program commitments to accelerate conservation and return on investment; and 4) methods to capture lessons learned, so our successes can be shared with local governments in the Northwest and elsewhere. With our talented partners, effective project management structure, and sensible work plan described in this proposal, we are confident Seattle can successfully achieve our ambitious objectives and goals.

## 2. MERIT REVIEW CRITERIA DISCUSSION

In the *Merit Review* section, we begin with our *Project Approach* (Criterion 3) for Seattle's WEB initiative. Next, we describe the *Partnership Structure and Capabilities* (Criterion 4) we will employ to complete our approach successfully. In *Leveraging and Sustainability* (Criterion 1), we explain how our project approach and partnerships will leverage the grant funds and sustain our success well beyond the three-year grant. Finally, we summarize the WEB initiative's *Project Impact* (Criterion 2) on energy savings, emissions avoided, and market transformation in, around, and well beyond the Seattle area.

### 2.1 PROJECT APPROACH (CRITERION 3)

The WEB initiative uses an intensive neighborhood-based approach to identify, finance, deliver, and monitor energy efficiency retrofits in eligible buildings within the targeted district. Figure 1 shows the target for initial deployment during the three-year grant period. The initiative retrofits single-family homes as its primary focus, and it also includes retrofit efforts for multifamily, small business, large commercial, hospital/institutional, and City facilities for a holistic energy efficiency focus. Table 1 details the building types that the initiative seeks to retrofit during the grant period, based on a target of 25% of units built before building energy performance standards were adopted in 1982.

To achieve the program's core objectives, the WEB initiative focuses on the heart of Seattle (see map), the city's most culturally and economically diverse community stretching from the downtown core and the hospitals of "Pill Hill" to Rainier Valley and the shores of Lake Washington. This community is home to 55,000 residents, and the initiative targets more than 22,000 households in single-family homes, apartments, and condos. To deliver the greatest impact and yield valuable lessons to share, we chose a demographically diverse district (56% white, 19% black/African-American, 17% Asian, 5% Hispanic/Latino, 1% American Indian/Alaska Native, 0.35% Hawaiian/Pacific Islander, and 2% other) and where 60% of residents fall below the Seattle average median income.

## Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

Table 1. Building Sectors Represented in Targeted Central Seattle District

SECTOR	Total Buildings	Targeted Buildings	Total Targeted Sq. Feet (SF)	Average Sq. Feet	Retrofit Target	Percent Retrofit
Single-Family Residential	19,000	17,000	34,000,000	2,000	3,315	20%
Multifamily Residential	4,500	270	4,050,000	15,000	87	32%
Small Commercial	385	385	1,925,000	5,000	146	40%
Large Commercial	129	129	12,900,000	100,000	27	21%
Hospitals	4	4	4,000,000	1,000,000	4	100%
Municipal Facilities	14	14	2,150,000	150,000	14	100%

**Single-Family Residential.** This component relies on multiple entry points, including technology solutions and community engagement approaches, to motivate investment in energy efficiency audits and at least 3,300 retrofits in the targeted district. It will pilot three innovative financing mechanisms: a residential energy efficiency revolving loan program and an energy efficiency service charge, both repaid on the utility bill and replenished by accessing the secondary market to ensure sustainability, as well as a residential Carbon Incentive Fund. It also will capture the value and monitor performance of investments through the Energy Performance Score rating and label.

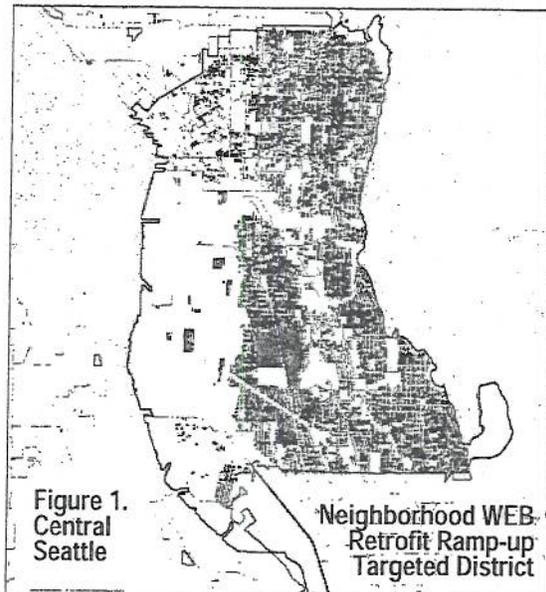
**Multifamily Residential.** The multifamily approach builds on an existing utility-delivered program through targeted marketing to buildings of 20+ units, offering audits, Energy Star Portfolio Manager energy benchmarking analysis, direct installation of measures in common areas, and piloting a carbon incentive fund and energy efficiency service charge for financing deep energy retrofits through shared investment between owners and tenants.

**Small Commercial.** Grocery stores and cold-storage facilities are the biggest users of electricity per square foot of any business sector due to high demands for lighting and refrigeration. The WEB initiative will initially target these businesses and expand over time to reach other high-intensity users. We have identified 28 such facilities in the targeted district that can realize immediate energy savings from replacement of lighting, HVAC, and refrigeration fixtures. We will target 100% of this sector and then expand to other areas of the city. In addition, we will engage over 100 small corner stores and restaurants with limited access to capital but ample opportunities for efficiency upgrades.

**Large Commercial: Seattle Steam Customers.** The WEB initiative will expand existing on-bill financing offered by Seattle Steam, a private district energy utility serving 200 buildings in and near downtown. Through a partnership with MacDonald-Miller, Seattle Steam will offer long-term financing of retrofits, leveraging private capital at a ratio of up to 11:1. This effort will finance a minimum of 25 retrofits during the grant period, each with a payback of 3-4 years.

**Institutional: Hospitals.** There are 4 hospital facilities in the targeted district. In the healthcare industry, lack of long-term sustainability planning and insufficient funding to carry out sustainability initiatives limit the adoption of efficient practices. The WEB initiative will create a *Healthcare Carbon Incentive Fund* providing hospitals a lump sum payment to support efficiency investments, leveraged roughly 8:1 to 10:1 to achieve the desired carbon reduction.

**Municipal Facilities.** In partnership with *McKinstry*, the City's ESCO, audits of City of Seattle facilities were funded in 2009 using the City's EECBG formula funds, with a commitment to finance retrofits identified through a municipal bond sale. The City will use EECBG competitive funds to identify deeper retrofit opportunities and to "buy down" program costs so that 14 projects in the targeted area may be financed through a 12-year municipal bond measure.



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## Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

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### 2.1.1 KEY ELEMENTS AND SOUNDNESS OF MANAGEMENT STRATEGY

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The City of Seattle and its partners have developed a carefully considered and comprehensive **project management** strategy. The City and its partner utilities and technical advisors from Washington State University's Energy Office bring decades of experience with delivering successful efficiency programs. In 2008, Seattle and its partners delivered \$ 136 M in conservation programs creating a 321,564 MWh conservation "power plant." Under Seattle's leadership, the core team has assembled a systematic approach to managing and overseeing multiple audit, retrofit, financing, and verification efforts across six major market sectors. As discussed under *Criterion 4*, our robust team brings the track record and skills to deliver deep efficiency gains on an ambitious timeline, and we have prepared a robust management strategy for successful on-time completion while leveraging extensive resources beyond the grant funds.

The remainder of this section summarizes our overall strategies across the six sectors for **outreach and marketing** and **funding**. We have tailored our **implementation/delivery plans** to each of the six targeted audiences and building types. We conclude this section with summaries of our overall approach to **monitoring and verification**, and **feedback and continuous improvement**.

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#### *Outreach/Marketing Strategy*

To ensure that key messages reach their intended audiences and help move them to change behavior and invest in energy efficiency, our outreach and marketing strategy for the WEB initiative will be based on proven principles and practices of community-based social marketing. Methods to reach target audiences include using earned media, utility bill inserts, web-based approaches, direct mail, community events, door-to-door canvassing, and more. The majority of the outreach and marketing will focus on the residential sector; we will use additional targeted outreach and marketing strategies to promote change in the non-residential sectors.

On the **Residential** side, the City's community engagement campaign, *Seattle Climate Action Now* (CAN), is launching a "**One Ton Challenge**," which calls on residents to calculate and then reduce their annual carbon footprints by 1 ton. The home retrofit campaign offers some of the best potential for savings, and the One Ton Challenge will link residents directly to retrofit opportunities. For multifamily housing, the existing partnership between Seattle City Light and Puget Sound Energy, will conduct an educational campaign. This effort will include direct mail and workshops for property owners, managers, homeowners' associations, and tenants. The multifamily campaign will start with the 270 properties with 20+ units before expanding to ultimately reach 1,600 multifamily buildings.

For **Non-Residential** properties, Seattle's Office of Economic Development (OED) and its partners will target grocery, cold storage, and restaurant businesses that can realize immediate energy savings from replacement of lighting, HVAC and refrigeration fixtures. The Grow America Fund and ShoreBank Enterprise Cascadia, the fund managers for the commercial energy efficiency loan program, will draw on their existing relationships with many of these store owners to promote the retrofit program. Through its partnership with Unified Grocers, the largest trade organization for Seattle-area independent grocery stores, the City will reach out to grocery stores for participation. ShoreBank will focus on outreach and assistance to small markets and restaurants owned by immigrants and minority owners in low-income neighborhoods. For the larger commercial and institutional properties, the City and its utility and ESCO partners will conduct direct and tailored outreach, working with each facility to identify the best opportunities to maximize energy and cost savings.

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#### *Funding Structure*

Despite the presence of incentives, tax credits and rebates to buy down project costs, individual building owners still need to make significant investments to secure efficiency upgrades. To date, financial institutions have been reluctant to lend resources for energy efficiency retrofits, due in part to the relatively small size of these loans as well as a lack of confidence in outcomes. To fill this gap, the City and its financing partners have developed a package of retrofit financing options to meet customers' needs paired with credit enhancement programs to attract new lenders.

The WEB initiative will establish **Carbon Incentive Funds** (CIF) to support energy retrofits in the residential, small commercial, and hospital sectors. The CIFs will make a total of nearly \$10 million available through a competitive process for organizations that can deliver measurable carbon reductions. Organizations able to leverage additional,

## Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

private resources as well as aggregate, neighborhood-wide coverage will be the most competitive in securing incentive funds. The City will follow standard offset project protocols to establish a methodology in which funds are awarded per ton of carbon reduced, calculated over the life of the project.

Residential financing options include on-bill repayment approaches and a program for low-income residents:

- **An Energy Efficiency Service Charge (EESC)**, a direct version of the energy efficiency Power Purchase Agreement (eePPA) model, will finance retrofits in approximately 800 houses with electric heating. The City will purchase, install, and monitor retrofits and enter into long-term contracts with owners (or renters) to pay monthly service charges for the upgrades, equal to the savings achieved. This tool will also extend to residents of the estimated 85% of multifamily buildings with electric heat. Among the 270 buildings targeted, we plan to finance deep efficiency upgrades in about 35 buildings. Because this model does not involve property liens or loans, it may be more attractive to property owners with credit issues. It may also facilitate upgrades in renter-occupied units—as the relationship is with the bill payer, not owner.
- **The Residential Energy Efficiency Revolving Loan Program** was created through EECBG formula funds and will be expanded through the WEB initiative to deliver loans to 2,400 gas- or oil-heated homes in the targeted district. Loans will range from \$2,500 to \$12,500 to pay for efficiency upgrades based on an Energy Performance Score audits. These loans will target 30% energy savings per home, averaging 4,000 kWh in annual reduction.
- **On-Bill Repayment.** Both the revolving loan program and the EESC rely on utility bill repayment on the customer's SCL electric bill. ShoreBank and SCL are working collaboratively to put this on-bill repayment system in place to service the existing residential loan program, which will launch in April 2010.
- **Coordination with Low-Income Weatherization Program.** HomeWise will offer weatherization grants to low-income renters and homeowners at or below 200% of the federal poverty level.

On the **Non-Residential** financing side, the WEB initiative will offer new energy efficiency loan products tailored for different business sizes. For **restaurants, grocery stores, and convenience stores**, the City has established two loan programs which are designed for "net zero" cost to the borrower when rebates, utility savings, and tax deductions are factored into loan payments. These loan programs will be expanded through the WEB initiative to finance energy system, equipment repair, or replacement costs—such as lighting, HVAC, and refrigeration—identified in an energy audit. Financing options for small businesses will include the following packages:

- **Incentive lending for creditworthy businesses.** Backed by the federal Small Business Administration (SBA), loans with attractive terms are expected to entice businesses to invest in cost-effective efficiency upgrades. This program is managed in partnership with National Development Council's Grow America Fund (GAF).
- **Lending for "higher-risk" business.** This group includes businesses deemed less creditworthy by traditional lending standards as well as "non-traditional" lending clients such as immigrant-owned small grocery stores and restaurants. Most of these businesses are considered unlikely to invest in energy efficiency even with favorable payback periods, due to insufficient financial resources and high interest rates on available loans. ShoreBank Enterprise Cascadia will work with these businesses, providing loans to support borrowers in distressed areas.

For **large commercial and institutional facilities**, the WEB initiative includes:

- **On-bill financing and a new energy efficiency project finance company** created by MacDonald-Miller Facility Solutions (MMFS), an ESCO, will be leveraged to fund additional energy efficiency upgrades in Seattle Steam's district heating territory. Customers will enter into Energy Services Agreements (ESA), and payments will be added to their existing steam utility bills. MMFS will arrange for financial incentive payments from all utilities for resource savings and load management projects.
- **The Hospital Carbon Incentive Fund** will make up to \$75,000 available to each of the 4 hospital facilities in the district as matching funds to develop Strategic Energy Management Plans (SEMPs). It will also provide incentive funding for significant retrofit projects identified in the plans. The payments would require at least a 1:1 match from the hospital, leveraging a total minimum of 8:1 to 10:1 in private investment.

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- **Bridge financing** will be provided to participating hospitals by McKinstry Capital to cover, when needed, initial project costs in advance of reimbursement of EECBG funds from DOE.

To attract private capital, provide security for investors, and ensure loans to customers at the lowest possible rates, the City will work with Shorebank, NDC, MMFS, and other engaged financial institutions to establish a reserve for loan losses and related credit enhancement purposes.

For its own **municipal** facilities, the City proposes utilizing \$2.5 million in EECBG funds to identify and buy down the incremental cost of deeper energy efficiency retrofits at these 14 sites. Projects identified through these audits will be financed through a municipal bond sale, in the range of \$20-30 million.

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### *Implementation/Delivery Plans*

This section describes our plans to implement and deliver energy efficiency retrofits in each of the six targeted sectors in central Seattle: 1) single-family residential; 2) multifamily residential; 3) small commercial; 4) large commercial (district heating customers); 5) hospitals; and 6) City facilities.

#### **Single-Family Residential Energy Efficiency Program**

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

Accordingly, the City has identified "**information on-ramps**" to initiate this education process as well as web and personal interfaces to guide customers through the retrofit process from start to finish.

- **Technology on-ramps.** Customized home energy reports and web-based tools will allow customers to track their current utility usage and connect to information about solutions, available resources, and qualified contractors (examples include O Power/Positive Energy, EnergySavvy, and Microsoft Hohm). In addition, Seattle is developing a web portal to facilitate communication among customers and contractors and to provide access to utility rebates as well as City and other financing options to enable easy, one-stop shopping.
- **Direct Install Program.** Funded through SCL and formula EECBG funds, this program will reach an estimated 8,000 residents in the targeted district to install compact fluorescent lamps and low-flow showerheads. Installers will provide homeowners with information on the retrofit program and how to participate.
- **Home Energy Performance Audits.** Seattle is partnering with PSE and SCL to implement an 18-month residential energy performance audit and home energy performance rating pilot program. Deeply subsidized audits are offered at \$95. This partnership is expected to fund approximately 2,000 audits in the district.

**Service Delivery.** The WEB initiative will make \$4 million available for organizations to compete to deliver residential retrofits using a scalable, efficient, sustainable, and community-based approach that will maximize job creation and efficiency gains. These groups will conduct community organizing, audits and consultations, and energy saving retrofits. This model was created and is currently being delivered by *SustainableWorks* in Seattle and Spokane. Other organizations, such as *EOS Alliance* and *Home Performance Washington*, are also ready to deliver such services. Key elements of the SustainableWorks approach include:

- Pre-organizing to identify community institutions to support the mission and establish a strong base of support.
- Community organizing to recruit organizers from every block in the community to engage their neighbors.
- Energy audits and customer consultations to review pre-audit results, answer questions, and schedule audit.
- Direct installation of CFLs and water-saving showerheads and aerators to capture immediate energy savings.
- Review of Energy Performance Score audit results to provide retrofit options and explain financing.
- Energy-saving retrofits performed by qualified contractors employing workers trained in approved programs.
- Follow-up organizing in the community with open houses, events, and meetings to engage more participants.

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## **Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change**

### ***Multifamily Residential Audit and Retrofit Program***

For multifamily buildings and residents, the WEB initiative will establish a competitive process making Carbon Incentive Fund dollars available to an energy conservation contractor to implement a three-phase approach:

#### ***Conduct Audits, Analysis, and Direct Install***

- Free common area audits will be provided to all qualified multifamily buildings in the target district.
- These multifamily buildings will also receive a free energy analysis, including a benchmarking score to show building owners how much energy they use compared to their competitors, an effective motivator for upgrades.
- The audit phase will include direct installation of efficiency measures, such as CFLs and insulation, in units and common areas. Savings of 5-10% from these measures are common.

#### ***Target Efficiency Upgrades for Common Areas***

- Building on existing PSE and SCL rebates for multifamily weatherization, the successful contractor will utilize Carbon Incentive Fund dollars to stimulate participation in the retrofit program.

#### ***Weatherize Individual Units***

- The initiative will focus on helping properties address issues that are barriers to efficiency investment, such as removing knob-and-tube wiring, abating asbestos on water pipes, or adding incentives for window replacement.
- The successful contractor will provide technical assistance, installation oversight, and post-construction analysis.

### ***Small Commercial Energy Efficiency Loan Program***

The Neighborhood WEB approach to the small business sector will build on an existing program launched in 2009 for small and medium-sized grocery stores and restaurants. The City's Office of Economic Development (OED) will act as an "energy advocate" for the commercial loan program—arranging for an audit, assisting with utility rebates, and identifying the appropriate loan program and amount to accomplish the retrofit.

**Loans will be the main tool for delivering retrofit assistance to the Small Commercial sector, as follows:**

- OED and its implementation partners will conduct door-to-door outreach to introduce the program; interested businesses will then apply for a loan online.
- Embedded in the application are questions that will direct the loan application to either a Grow America Fund energy efficiency loan officer or SEBC energy efficiency lender. Those loan officers will then arrange for energy efficiency audit and evaluate business for appropriate cash flow to support loan payments.
- GAF and SBEC will structure these loans to be cost-neutral, such that energy savings meet or exceed loan payments.
- OED will coordinate with utility incentive programs and connect businesses to pre-qualified retrofit contractors.
- Upon completion of the retrofit, OED will work with SCL and PSE and WSU to measure energy savings achieved as additional security on the loan.

### ***Large Commercial—Seattle Steam Customer Retrofits***

Through its partnership with Seattle Steam Company (SSC), MacDonald-Miller Facility Solutions (MMFS) will conduct projects to address steam distribution and use as well as electricity, gas, and all energy-using mechanical and electrical systems for SSC customers of Seattle Steam. This component of the WEB initiative will expand the existing program, funded in part by the State Energy Program at \$1.5 million, to support implementation of about 25 projects with total capital costs of \$15 million.

- MMFS has completed initial energy analysis of the first set of 72 customer facilities (7.5 million SF), and preliminary energy audits scoping efficiency investment potential are underway.
- MMFS is preparing proposals for energy efficiency retrofits ranging from \$250,000 to \$2 million per facility.

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## Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

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- MMFS will provide project and risk management, including coordination with the customer facilities team, savings verification, and ongoing maintenance. Savings performance guarantees also will be provided.

### *Hospital / Institutional Sector*

In Seattle, the majority of healthcare activity is focused on "Pill Hill." This small slice of the targeted district holds four major healthcare institutions: Virginia Mason Medical Center, Swedish's First Hill and Cherry Hill campuses, and King County's Harborview. These four hospitals total roughly 5 million square feet and almost 1,500 hospital beds. Assuming a minimum efficiency gain of 15-25% in each facility, this program could result in carbon emissions reductions in the range of 20,000 metric tons per year.

The WEB initiative will make funds available for healthcare retrofits through the Carbon Incentive Fund. Hospitals may partner with contractors to develop competitive project proposals for Strategic Energy Management Plans and associated retrofits. Both McKinstry and MMFS are prepared to offer interim construction financing for these projects and guide implementation and verification through standard ESCO agreements. Funds will be awarded utilizing a per-ton of carbon reduced methodology and will favor projects that leverage significant private resources.

### *Municipal Retrofit Program*

The City of Seattle has already committed \$500,000 in EECBG formula funds to support complete audits of municipal facilities, and these audits are underway through a contract with *McKinstry Company*. The City will finance these projects through a municipal bond sale, in the amount of \$20-30 million. As part of the WEB initiative, McKinstry will work with the City to buy-down costs of additional, deeper retrofits in identified facilities. Cost of this additional work will be covered with Carbon Incentive Fund dollars so that project payback, through guaranteed energy savings, remains within the 12-year margin required for municipal bond financing.

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### *Monitoring/Verification Plan*

Monitoring and verification (M&V) of retrofit results is a key part of delivering cost-effective results, saving energy and reducing greenhouse gas emissions. Effective M&V is designed to increase energy savings, document financial transactions, enhance financing methods by reducing risk, improve engineering design and facility operations, manage energy budgets, and evaluate environmental benefits of energy projects.

This project incorporates a robust plan for monitoring and verifying results and providing real-time feedback on program performance to the City and DOE. We have enlisted energy efficiency evaluation experts from the Washington State University (WSU) Energy Program to lead this effort in close consultation with our partner utilities, SCL and PSE, as well as with DOE. WSU will be responsible for selecting methodologies that strike the right balance between analytical rigor, timely reporting, feasibility, and cost. We will ensure that our methods align with the work of the Efficiency Valuation Organization and the International Protocol for Measurement and Verification Performance.

- For **single-family residential**, **Energy Performance Scores** from a post-retrofit audit will support analysis of efficiency improvements. Participating homeowners will receive a monthly statement showing energy usage so they can track savings. Two partners are prepared to provide this service (O Power and Microsoft Hohm).
- For **multifamily residential** and many **nonresidential buildings**, **Energy Star Portfolio Manager** will monitor energy performance over time. For hospitals, the **Strategic Energy Management Plans** will include recommendations for tracking and for ensuring that energy savings persist over the life of the measure.

WSU will compile and analyze the data, independently assessing program efficacy and results and identifying opportunity areas for improvements. The WSU team brings years of experience with evaluating energy efficiency programs in the Northwest and around the nation.

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### *Strategy for Feedback and Continuous Improvement across All Sectors*

Our project management strategy along with the methods for monitoring and verification are structured to provide rapid and ongoing feedback about project results and the performance of retrofits deployed. We will collect energy performance data on a regular, ongoing basis—and in real time for larger projects. WSU will analyze these data and review the findings on a regular basis. WSU will flag concerns as they arise, and the management team will meet

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regularly to review the results and focus on any problem areas. This approach facilitates adaptive management and continuous improvement of the project, rather than waiting for set intervals to elapse before flagging problems. The management team will look across all six sectors to identify lessons from one sector that can offer suggestions for improvements in other sectors. The WEB initiative is designed to be readily scalable, and we will apply lessons learned as we expand efforts to the whole city (and encourage other jurisdictions to do so) following the grant period.

### 2.1.2 CLARITY OF PROJECT GOALS AND APPROACH

In the *Goals and Objectives* and *Project Approach* sections above and *Project Plan and Timeline* below, we present a clear set of measurable goals, objectives, tasks, methods, milestones, and deliverables for the project. These will ensure that we track progress and quickly identify and redirect efforts that are not achieving their goals.

This project has been carefully designed to realize the two primary goals and five objectives presented at the outset of this submittal. Our *Project Structure and Capabilities* section explains how we will mobilize our partners to achieve these outcomes. The *Project Plan and Timeline* (Section 3) outlines the major phases of the project as well as key tasks and the milestones we will use to track progress. Finally, the *Project Impact Matrix* sets forth the deliverables we expect to achieve in terms of buildings retrofitted, energy and carbon savings achieved, leverage achieved, jobs created, and program sustainability.

The deliverables and targets set forth are, we believe, ambitious yet achievable. We have designed this program from the ground up – consulting with practitioners and experts in each sector, many with deep experience designing and implementing energy efficiency retrofit programs. Our program includes a mix of high yield, proven strategies, such as using ESCOs and bond financing to retrofit municipal buildings and innovative, game-changing initiatives, such as the Carbon Incentive Fund and Energy Efficiency Service Charge. This mix has been designed with a careful balance of risk and return to ensure that the bottom line outcomes of reduced carbon emissions and green jobs created are achieved and the program can and will be sustained after EECBG funds are expended.

### 2.1.3 IDENTIFYING AND ADDRESSING BARRIERS

The City has identified three critical barriers to conservation investments in all sectors: access to information, financing and a skilled workforce, consistent with those identified in the Vice President's Middle Class Task Force report *Recovery through Retrofit*.

#### *Addressing the Information Barrier*

Opportunities for increasing energy efficiency in existing buildings must be driven by a better understanding of how these buildings perform. Measuring and rating energy performance will help building owners and occupants identify opportunities for efficiency gains and encourage upgrades. Connecting owners to qualified contractors for energy audits and retrofits will reduce confusion in this growing marketplace. Our initiative aims to increase information available to building owners and tenants in all sectors as summarized below.

Tool	How It Addresses the Information Barrier	Sector
Home Energy Reports	Customized to home characteristics and compares with 100 neighbors in similar homes as well as "efficient" neighbors in the top 20%.	Single-Family Residential
Energy Performance Score	Enables homeowners to learn how their homes are performing with respect to energy consumption and carbon impact as well as how to make improvements.	Single-Family Residential
Technology/web portals	A combination of tools under development in the region (Microsoft Hohm, Energy Savvy and the Energy Performance Score Web Portal) to connect homeowners with audit results, energy retrofit contractors and financing options and available incentives.	Single-Family Residential Multifamily Residential

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Energy Star Portfolio Manager	Provides an objective and standardized way measure and communicate the energy performance of buildings in the U.S. and is rapidly becoming the national standard. (The City Council is scheduled to vote in January 2010 on a requirement for benchmarking and building labeling using Portfolio Manager for certain commercial and multifamily buildings.)	<ul style="list-style-type: none"> <li>• Multifamily</li> <li>• Small Business</li> <li>• Large Commercial</li> <li>• Hospital</li> <li>• Municipal</li> </ul>
Investment grade audits and energy performance analysis	Where additional information is needed beyond what Portfolio Manager can supply, these audits and analyses will detail energy performance, opportunity areas for efficiency gains, and results of upgrades made.	<ul style="list-style-type: none"> <li>• Multifamily</li> <li>• Small Business</li> <li>• Large Commercial</li> <li>• Hospital</li> <li>• Municipal</li> </ul>

### Addressing the Financing Barrier

Lack of access to adequate financing is the single greatest barrier to increased conservation. Our program includes multiple new financing tools that are key components of programs in all sectors:

Tool	How It Addresses the Financing Barrier	Relevant Sectors
Revolving Loan Program with Credit Enhancement	Provides access to capital and is part of a seamless delivery system.	<ul style="list-style-type: none"> <li>• SF Residential</li> <li>• Small Business</li> </ul>
Energy Efficiency Service Charge	Eliminates loan process and administration, ensures energy savings year after year, straightforward to implement and leverage.	<ul style="list-style-type: none"> <li>• SF Residential</li> <li>• MF Residential</li> </ul>
On-Bill Repayment	Allows owners to see impact of energy savings, ease for repayment and helps with secondary market.	<ul style="list-style-type: none"> <li>• SF Residential</li> <li>• MF Residential</li> <li>• Large Comml.</li> </ul>
Carbon Incentive Fund	Ties efficiency investment to carbon reduced to facilitate ease of entry into the coming carbon market and thus a long-term funding stream.	<ul style="list-style-type: none"> <li>• SF Residential</li> <li>• MF Residential</li> <li>• Hospitals</li> </ul>
Municipal Bond Financing	Provides low-cost, long-term, patient capital for certain retrofits and engages private capital markets in energy efficiency lending.	<ul style="list-style-type: none"> <li>• SF Residential</li> <li>• MF Residential</li> <li>• Municipal</li> </ul>
Energy Service Contracting	Builds on a well-known mechanism in the efficiency market place to utilize efficiency savings as the project repayment stream.	<ul style="list-style-type: none"> <li>• Large Comml.</li> <li>• Hospital</li> <li>• Municipal</li> </ul>

### Addressing the Workforce Barrier

The lack of a skilled workforce is perhaps the greatest non-technical barrier to the advancement of energy efficiency and renewable energy technologies. The City has been actively involved for the last year in a regional effort to develop energy efficiency training and career pathways. Our workforce development component builds on this leading effort in the following ways:

- Identifies workforce needs and skill gaps related to the types and scale of EECBG retrofit projects.
- Identifies worker pipeline sources, including dislocated workers, graduates from the area's residential weatherization and energy auditor programs, and existing supply of skilled workers.
- Develops curriculum to improve skills of incumbents or train new workers.

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- Ensures coordinated development and delivery of these training programs to eligible workers.
- Aligns energy efficiency career ladders with the EECBG program so that workers gaining experience from this funding source have future advancement opportunities.
- Establishes standards and testing protocols and provides for certification of trained workers.

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### 2.1.4 COMPLIANCE WITH EXISTING ENVIRONMENTAL, HEALTH & SAFETY LAWS

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The City of Seattle has received numerous federal awards and is in compliance with all regulations associated with this project. Preliminary plans for addressing environmental, health and safety, permitting, and compliance issues that may arise during the implementation of this grant are reflected in the *NEPA Summary Table* in *Appendix C*. City staff are well-versed in the regulations triggered by the acceptance of federal funds and have close ties with Washington State Department of Commerce staff who are responsible for directing the statewide implementation of all DOE-funded programs. Commerce staff, in addition to our WSU technical advisors, will be directly involved in the regulatory compliance planning process that will occur if the City is awarded EECBG funds. Our budget accounts for the investment of cross-departmental staff time needed to ensure the highest level of regulatory compliance.

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## 2.2 PARTNERSHIP STRUCTURE AND CAPABILITIES (CRITERION 4)

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### 2.2.1 ORGANIZATIONAL INVOLVEMENT

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Under the City of Seattle's leadership, the WEB initiative draws on extensive involvement from a broad range of partners representing public, private, educational, and nongovernmental organizations. The City of Seattle has convened more than 40 key public, private, and nonprofit partners to make the WEB initiative a success both in the next three years and over the long term. We have judiciously identified a dynamic team of innovators and implementers who are ready to begin work and deliver results. As outlined below and described further in *Roles of Participants* (Section 5), our team consists of a large and diverse group of organizations that, together, bring the expertise, people power, commitment, and resources to achieve the program's objectives.

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### 2.2.2 ORGANIZATIONAL ROLES AND RESPONSIBILITIES

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Our project plan specifically identifies partners as well the specific commitments each will bring to the effort. We have carefully matched existing organizations and their skills to project needs, tasks, and deliverables.

The City has assembled a **Project Management Team** that consists of senior conservation managers from our two utility partners as well as **Washington State University's** Energy Extension program. The *City of Seattle* will lead and manage the overall project, drawing on its extensive experience delivering successful environmental and economic development programs. Our two utility partners, public *Seattle City Light* and investor-owned *Puget Sound Energy*, will be responsible for directing implementation and service delivery in each of the sectors. Partner organizations, many of whom are listed in section 5, will be contracted to implement the outreach, workplace development, finance, audit, and retrofit activities. WSU will serve as a technical advisor and lead for the monitoring and verification of energy efficiency savings achieved through the retrofits.

In addition we anticipate creating a small **Technical Advisory Group** led by WSU, consisting of experts that will convene to assist with program start-up and initial deployment and provide objective outside review of program performance and suggestions for improvements. Finally, we will convene a **Stakeholder Advisory Group** that will meet regularly to receive status reports on progress, and provide feedback and guidance to the Management Team.

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### 2.2.3 PROJECT TEAM EFFECTIVENESS AND QUALIFICATIONS

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The City of Seattle Project Management Team represents some of the most highly qualified and experienced individuals and organizations within the energy conservation field in the Pacific Northwest. Key personnel from the City of Seattle—including the Principal Investigator, **Michael Mann**—have a breadth of experience developing, managing, and implementing community-wide change campaigns that produce compelling results. For example, the

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City set a goal in 2005 to reduce greenhouse gases 7 percent below 1990 levels by 2012. Just last week, a report measuring 2008 emissions was released showing that the goal was met—4 years ahead of schedule.

Key utility team members collectively have decades of experience managing residential and non-residential conservation programs. Both Seattle City Light and Puget Sound Energy are known for their award-winning and nationally recognized energy efficiency programs. SCL Conservation Director, **Robert Balzar**, led his team to exceed conservation goals by almost 25 percent last year, and SCL's current five-year plan aims to double savings between 2008 and 2012. **Cal Shirley**, Vice President of Energy Efficiency Services at PSE, is also expanding the utility's energy conservation programs with the goal of saving 440 average-megawatts of electricity and 70 million therms of natural gas over the next two decades.

**Jacob Fey**, our key technical advisor, has served as the Director of the WSU Extension Energy Program for almost ten years. The WSU Energy Program is a national leader and catalyst for creating powerful energy efficiency solutions, and it runs the U.S. Department of Energy's Energy Efficiency/Renewable Energy Information Center.

The City of Seattle brings a long track record of successful collaboration with our utility partners, WSU, and the numerous other partners to this program. Please see the **Resumes** section for more detailed information.

### 2.3 LEVERAGING AND SUSTAINABILITY (CRITERION 1)

#### 2.3.1 LEVERAGING FUNDS AND ALTERNATIVE REVENUE STREAMS

The WEB initiative employs project delivery and financing approaches that are durable and sustainable over time. Because these programs are built on a long history of conservation and proven program delivery, this influx of funds from DOE will allow us to quickly and easily scale up to achieve critical mass and market transformation. These same funds will establish new, long-term financing options that can be replenished with municipal investment, and leverage over \$175 million in private resources.

- **City-Funded Programs.** The WEB initiative builds upon \$3.5 million in investments that the City has already made through general fund and EECBG formula dollars—**\$2.8 million** of which will directly leverage new funding—to support development of the Energy Performance Score, the Direct Install Program, and other program investments.
- **State-Funded Programs.** Through the State Energy Program, Washington State has allocated **\$4.8 million** dollars for low-income weatherization, **\$2 million** to support a SustainableWorks pilot project in a Seattle neighborhood, **\$1.66 million** to support a retrofit at the SeaFreeze cold storage facility; and **\$1.5 million** for the Seattle Steam/MacDonald-Miller partnership, resulting in over **\$7 million** in direct leverage for the WEB initiative.
- **Utility Incentive Programs.** Seattle City Light and Puget Sound Energy will invest a total of **\$26 million** in rebate dollars to support retrofit projects in target building sectors. In addition, over **\$6 million** in program dollars will benefit SCL and PSE customers in the district.
- **Revolving Loan Program.** Through a recently awarded, competitively bid contract, ShoreBank Enterprise Cascadia (SBEC) is managing two revolving loan programs that will be available to residential and small business owners. The proposed **\$3.9 million** in Retrofit Ramp-Up funds will build on nearly **\$7 million** in existing seed funding and an additional **\$2 million** proposed to the Washington State Energy Program for these two loan programs, to leverage nearly **\$9 million** in existing funding.
- **Credit Enhancement.** The **\$5 million** in proposed credit enhancement dollars will build on **\$2 million** in credit enhancement dollars recently approved through the Washington State Energy Program to leverage an additional **\$23 million** in private investment in residential, small business and large commercial loan programs.
- **Energy Efficiency Service Charge.** During the 3-year grant period, the City will utilize over **\$7 million** in municipal bond revenues to finance single-family retrofits multifamily building upgrades. Upon completion of the grant period the City will evaluate expanding this opportunity to gas and oil-heated units.

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- **Owner financing.** The WEB anticipates building owners across the 6 vertical sectors will contribute **\$80 million** toward retrofits of their homes, businesses and facilities. This includes **\$20 million** in municipal bond revenues to support retrofits in City-owned facilities.

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### 2.3.2

### MARKET TRANSFORMATION AND SUSTAINABILITY

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The neighborhood WEB initiative has been designed to achieve long term market transformation by overcoming the barriers to information, finance, and workforce development through social marketing, community organizing, new technology solutions, creative financing structures, and innovative workforce development strategies. In addition, long term sustainability will be achieved through the mechanisms put in place in the first three years to provide funding after EECBG resources are expended. Key elements of the approach to achieve market transformation and sustainability include:

- **Investing in a skilled workforce.** By building on innovative workforce development strategies and successful training partnerships already in place, the project will create a sustainable energy efficiency workforce that is scaled to demand, while also responding to the marketplace that will exist after initial public investments have exited. This new workforce will be trained so that skills match the jobs created; workers are hired out of certified training programs and are paid livable wages.
- **Proven finance models.** The funding structure described in section 2.1 leverages significant private investment, while substantially growing the number of entities involved in energy efficiency finance, jump starts the local carbon market in preparation for a national regulatory structure; and creates opportunities at the municipal level for scalable and sustainable financing. Importantly, these tools are appropriate for localities without access to PACE financing.
- **Energy Efficiency Service Charge.** Because this funding source is financed with municipal bonds, the City can continue, at its discretion, to provide this service after the EECBG funds are expended. This model was originally developed by Equilibrium Resource Management (EqRM) as a private sector initiative. Our proposal involves management by the City in the early years, and looks to involving EqRM and other private vendors in the future to achieve scale.
- **Take-out financing.** In addition to leveraged private and public capital in the primary market, the City intends to "take-out" the residential loans by selling an aggregated, securitized portfolio of loans secured by credit enhancement dollars to private investors in the secondary market. This could happen via a bond sale or private placement. Take-out financing is projected to yield **\$30 million** in year 3, replenishing the revolving loan fund. Take-out financing essential doubles the leverage factor, multiplies the amount of funding available for retrofits and replenishes the revolving loan fund.
- **On-bill repayment.** On-bill repayment **provides loan security** in areas of the country where property assessed financing is not available, thereby allowing fund managers to attract private investment. This tool also provides the most direct link for the consumer between loan or charge payments and utility savings.
- **Jump-starting the carbon market.** The WEB initiative's new Carbon Incentive Funds will create incentives to conduct deep retrofits and secure private investment in energy conservation, while simultaneously tying those gains to carbon reductions. The CIFs will prepare Seattle businesses and utilities for participation in the future carbon market—creating a long-term, sustainable way to foster investment in retrofits and energy savings.
- **Innovative technology solutions.** One of this region's competitive advantages is access to innovative new technology. Seattle will partner with Microsoft, EnergySavvy.com, O Power and others to pilot new energy performance rating, information, and monitoring systems. These tools will serve as information on-ramps to future, deeper retrofits in the rest of the City and surrounding jurisdictions.
- **Recognized building performance scoring systems:** Seattle's lessons learned customizing, marketing, and implementing the EPS will help to inform an industry standard for residential energy performance labeling.
- **A forum for regional information sharing:** City of Seattle staff members are committed to sharing lessons learned with other jurisdictions throughout the State of Washington and beyond.

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### 2.4

### PROJECT IMPACT (CRITERION 2)

#### 2.4.1

#### ECONOMIES OF SCALE AND RISK MITIGATION

For the past decade, the City and its utility partners have moved forcefully and creatively to develop and implement leading-edge energy efficiency programs for single-family, multifamily, commercial, and institutional customers. Today, Seattle is approaching critical mass and sees this EECBG award as vital to accelerating progress, realizing significant economies of scale, and ultimately reaching a tipping point in just a few years where investing in energy efficiency is the norm not the exception.

As a direct result of EECBG funding, economies of scale are expected to occur in 1) **workforce development**—with a broad-based, highly skilled, well-trained, and certified labor pool in place to provide retrofit services throughout the region; 2) **contractor mobilization**—with many companies now in the building trades retooled to deliver energy efficiency services to their customers; 3) **energy efficiency financing**—with the mechanisms in place and engagement of a wide range of financial institutions in this space; and 4) **building owner demand** for energy efficiency services—with a high level of knowledge of and interest in implementing cost-saving, affordable retrofits.

We do not anticipate a significant increase in foreclosures or defaults as a result of this program. For all sectors and all customers, we will adhere to the "pay for itself" principle, offering customers net zero loans where the payment will be equal to or less than the reduction in their energy bill as a result of the retrofit. In addition, the required audit and Home Performance Score will provide the basis for selected energy efficiency measures that provide a high return on investment for the property owner. Finally, property owners who participate in this program and take advantage of one of the financing options offered will be required to hire pre-approved, registered contractors. This measure will protect homeowners against fraud or substandard work.

#### 2.4.2 ENERGY SAVINGS AND EMISSIONS AVOIDED

The *Project Impact Table* included in *Appendix G* details the projected energy saved and emissions avoided resulting from the program. As can be seen, as a direct result of the EECBG grant if awarded, we expect to create or retain over 2,000 jobs in the first 3 years and 3,700 jobs by year 6. We anticipate leveraging every EECBG dollar 7:1 for a total investment in 3 years of just over \$200 million. We project retrofitting 3,700 buildings totaling 18.6 million square feet saving 71,000 metric tons of CO<sub>2</sub>. Finally we estimate saving on average 23% energy in retrofitted buildings and achieving a market penetration of over 30% within 3 years.

#### *Reasonableness of Projected Market Penetration, Buildings Retrofitted & Utility Savings*

These projections, developed for each sector and then averaged for the entire program, were based on a review of past programs and in close consultation with our implementation partners. These projections are, we believe, both ambitious and eminently achievable.

- For **single-family residential** retrofits, we consulted with experts at SCL, WSU, the Washington Department of Commerce's (WADOC) Energy Office, and SustainableWorks. We assumed that through our marketing, canvassing, and direct outreach efforts, we will reach 80% of qualified homeowners; 40% of qualified homes will receive audits; and that 26% will be weatherized or retrofitted (selecting measures that average in cost from \$3,000 to over \$13,000 and achieve 21 to 41 % energy savings).
- **Multifamily** projections are based on the performance of ongoing PSE programs, which have demonstrated a high level of interest in and adoption of efficiency measures resulting in 10-15% savings at low cost. Based on these results, we project that 33% of property owners targeted will invest in a retrofit, costing on average \$2.63 square foot and saving on average 10-42% on their utility bills.
- For the **small business** program targeting grocers, restaurants, and cold storage, we used projections developed by Seattle's Office of Economic Development (OED) in consultation with SCL and PSE to develop

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estimates of savings ranging from 26% to 36%. Through community-based marketing and outreach as well as with incentives and concessionary financing we project that 35% of this marketplace will invest in lighting and refrigeration upgrades, with paybacks of as short as 3-5 years in many cases.

- For the **hospital, municipal, and large commercial** sectors, projections are based on data provided by McKinstry and MacDonald-Miller, based on their intensive experience with these building types. Annual savings of 15-30% are anticipated with a payback of 10-12 years, using EECBG funds leveraged with owner and private capital.

The projections all assume that EECBG monies are leveraged substantially with utility rebates and private funds providing adequate resources for the incentives, contractor services, and financing needed to reach the outcomes.

Projections for performance and outcomes beyond the 3-year EECBG program period are more speculative but are based on our initial best estimates given expected resource availability, anticipated successes in the pilot phase, and the likely adoption of cap and trade or another similar framework that will make investing in energy efficiency even more attractive than it is today. Please note that our forward projections are conservative in that they only consider continuation of the program in the target area with available funds. We did not project outcomes based on likely expansion of the WEB program into other communities both within and outside of Seattle.

### 2.4.3

### EXPANDING TO OTHER COMMUNITIES

Seattle's WEB model was designed for easy replication to other communities. Indeed, many of our regional partners are counting on funding of this Retrofit Ramp-Up effort so that the initiatives can be readily replicated at relatively low start-up cost in their jurisdictions. Core elements of the model that we expect to reach critical mass and/or prove their viability as innovative approaches include: 1) use of *O Power*, *EnergySavvy*, and *Microsoft Hohm* as web-based on-ramps for homeowner retrofits and as highly effective tools for tracking performance and savings; 2) the integration of the Energy Performance Score (EPS) into audit protocols to provide residents with a tool similar to Energy Star for homes and the linkage of EPS to the multiple listing service to enable owners to reflect the value of an energy efficient home in the selling price of their house, 3) the community-based door-to-door outreach model to engage and sign up residential retrofit customers; 4) the utility on-bill payment mechanism as a viable alternative to PACE; 5) the establishment of the Carbon Incentive Fund; 6) city/utility financing and ownership of energy efficiency measures repaid through an energy efficiency service charge, 7) the effectiveness of loan loss reserves and other credit enhancement mechanisms at attracting private investors; 8) take-out financing as highly effective means of providing for program sustainability over time and 9) bringing together community organizations, business and industry associations, social justice advocates, research institutions and the labor community to identify opportunities, engage training and job placement programs, and deliver retrofits.

## 3. PROJECT PLAN AND TIMETABLE

This section presents our proposed *Work Breakdown Structure* of major tasks, milestones, deliverables, and project phases as well as the *Quarterly Spend Plan*, which depicts how EECBG grant funds and leveraged resources will be applied over the three-year grant period. The *Project Organization* section summarizes key players on our team and their roles; additional information on the team, our partners, their roles, and overall organization appears above in the *Partnership Structure and Capabilities* section 5.

### 3-1 WORK BREAKDOWN STRUCTURE

The Work Breakdown Structure consists of four phases and five primary tasks. The phases characterize the sequence of efforts and activities over time: I. **Mobilization/Start-up**; II. **Initial Deployment**; III. **Full-scale Implementation**; and IV. **Transition to Sustainability**. The five major tasks—1) **Management**, 2) **Sector Implementation and Finance**, 3) **Workforce Development**, 4) **Marketing and Education**, and 5) **Monitoring and Verification**—cut across these phases. These tasks and associated subtasks are outlined in the table for each quarter based on when they will be implemented. Key milestones and deliverables are discussed below.

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*Phase I, Mobilization/Start-up* will begin with the DOE award to Seattle, even before an agreement is in place, and is expected to last for approximately six months. In this phase, the Project Management Team, supported by staff, will begin work in all task areas. Key deliverables in this phase include:

- Completing a detailed work plan and budget.
- Selecting and contracting with implementation partners through a competitive bidding process.
- Establishing management systems, accounting systems, communication protocols, and sector teams.
- Developing financing mechanisms, the workforce development program, the marketing/education campaign, and the detailed measurement and verification methodologies—ready for initial implementation in Quarter 3 and full-scale implementation thereafter.

*Phase II, Initial Deployment*, is critical to the success of the program. In this phase, implementation partners overseen by the management team will engage target audiences, soliciting interest and demand for audits and retrofit services. Implementation partners will begin delivery of retrofit services where audits have been completed, such as the municipal facility upgrades, and test many of the innovative strategies at a pilot level. In the financing subtask, the City expects to issue bonds in quarter 3 to raise the funds needed to complete the municipal retrofits and pay for residential retrofits through the City's Energy Efficiency Service Charge pilot effort. At the conclusion of this phase, the goal is to be ready for full-scale implementation. However, the City plans a major check-in and decision point near the end of phase II, where progress will be evaluated and changes made to programs and strategies based on how well they have performed to date.

In *Phase III, Full-Scale Implementation*, partners in each sector will continue outreach and audits but will focus primarily on financing and installing retrofits. To provide the financing, Shorebank, NDC, Seattle Steam and other partners will be arranging for loans for retrofits secured in part by the EECBG credit enhancement funds. Within each sector, partners and certified and trained workers will weatherize buildings, upgrade appliances, replace HVAC systems, and provide other retrofit services as identified through the audits. Partners will also put in place performance monitoring systems to enable data collection to verify outcomes and evaluate program performance.

This work will all be overseen and tracked by the Project Management Team, supported by staff and both a technical and partner advisory team. WSU will play a key role here, providing objective feedback on successes and setbacks and offering recommendations for midcourse corrections and adaptive management.

Finally, in *Phase IV, Transition to Sustainability*, the Project Management Team and implementation partners, while completing the EECBG funded retrofits, will shift attention to transitioning to sustainability. Performance in each sector will be carefully evaluated and decisions made as to where and how to continue the retrofit programs. We expect at this point to expand the program to other communities both within Seattle and in neighboring jurisdictions. Other key activities in this phase include 1) arranging for securitization of loans and take out financing to replenish the loan funds available to building owners for retrofits 2) expanding, if proven successful, the City's initiative to fund building owner retrofits, repaid through the energy efficiency service charge, 3) sharing lessons learned and best practices both regionally and nationally to allow for rapid adoption of Seattle's Neighborhood Web model by others, and 4) preparing a final report documenting all activities, outcomes, and evaluation findings.

Throughout all phases of the program, the Project Management Team will monitor the status of EECBG-funded retrofits in progress and completed as well as jobs created and retained – the key metrics for assessing program performance and outcomes. Milestones, expressed as percent of retrofits completed and expected jobs created, are presented in the Work Breakdown Structure table on the following page.

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## Work Breakdown Structure

TASKS	MILESTONES	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
		Mobilization /Start-up		Initial Deployment		Full-Scale Implementation				Transition to Sustainability			
	% of EECBG funded retrofits completed				10%		25%		50%		75%		100%
	Number of jobs created				238				1031				2009
1. MANAGEMENT	Detailed project and budget planning												
	Formalize organizational structure & management teams		✓										
	Establish communication protocols		✓										
	Select & contract with service providers/partners			✓									
	Ongoing management and oversight												
2. SECTOR IMPLEMENTATION /FINANCE	Initial Deployment												
	Mobilize sector teams and resources				✓								
	Initial customer outreach												
	Conduct audits												
	Initial pilots/rollouts of innovative strategies												
	Program performance review /adjustment												
	Full-scale Implementation												
	Assemble financing & leverage												
4. WORKFORCE DEVELOPMENT	Issue loans for retrofits												
	Securitize loans; arrange take-out financing												
	Establish/expand workforce development program												
	Adopt hiring standards to link training to jobs												
5. MARKETING AND EDUCATION	Provide training and certification												
	Recruit and place workers in jobs												
	Develop marketing plan												
	Conduct initial outreach and awareness building												
6. MONITORING & VERIFICATION /SHARING	Ongoing advertising and marketing												
	Implementation of social marketing strategies												
	Performance reporting to customers												
	Develop M&V methods and protocols												
6. MONITORING & VERIFICATION /SHARING	Establish DOE-specific performance feedback metrics												
	Performance tracking and analysis												
	Reporting; Lessons learned & sharing												

\* = Decision Point    ✓ = Deliverable

## Quarterly Spend Plan

TASKS	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	TOTALS
	Mobilization/Start-up		Initial Deployment		Full-Scale Implementation				Transition to Sustainability				
<b>1. MANAGEMENT</b>													
EECBG	50,355	50,355	50,355	50,355	10,710	10,710	10,710	10,710	10,710	10,710	10,710	10,710	\$1007,089
Leverage	0	0	0	0	0	0	0	0	0	0	0	0	\$0
<b>2. SECTOR IMPLEMENTATION / FINANCE</b>													
EECBG	1061395	1061395	1061395	1061395	2,122,790	2,122,790	2,122,790	2,122,790	2,122,790	2,122,790	2,122,790	2,122,790	\$21227,901
Leverage	4,337,309	4,337,309	4,337,309	4,337,309	14,099,730	14,099,730	14,099,730	14,099,730	17,353,870	17,353,870	17,353,870	17,353,870	\$143,103,032
<b>3. WORKFORCE DEVELOPMENT</b>													
EECBG	57,000	57,000	57,000	57,000	114,000	114,000	114,000	114,000	114,000	114,000	114,000	114,000	\$1140,000
Leverage	232,926	232,926	232,926	232,926	757,96	757,96	757,96	757,96	931953	931953	931953	931953	\$7,689,305
<b>4. MARKETING / EDUCATION</b>													
EECBG	41250	41250	41250	41250	82,500	82,500	82,500	82,500	82,500	82,500	82,500	82,500	\$825,000
Leverage	168,565	168,565	168,565	168,565	547,971	547,971	547,971	547,971	674,440	674,440	674,440	674,440	\$5,969,904
<b>5. MONITORING &amp; VERIFICATION &amp; SHARING</b>													
EECBG	40,000	40,000	40,000	40,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	80,000	\$800,000
Leverage	163,457	163,457	163,457	163,457	531366	531366	531366	531366	654,002	654,002	654,002	654,002	\$5,395,300
TOTALS	YEAR 1				YEAR 2				YEAR 3				TOTALS
EECBG	\$5,000,000				\$10,000,000				\$10,000,000				\$25,000,000
Leverage	\$19,609,027				\$63,745,052				\$78,457,051				\$161,811,140

# Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

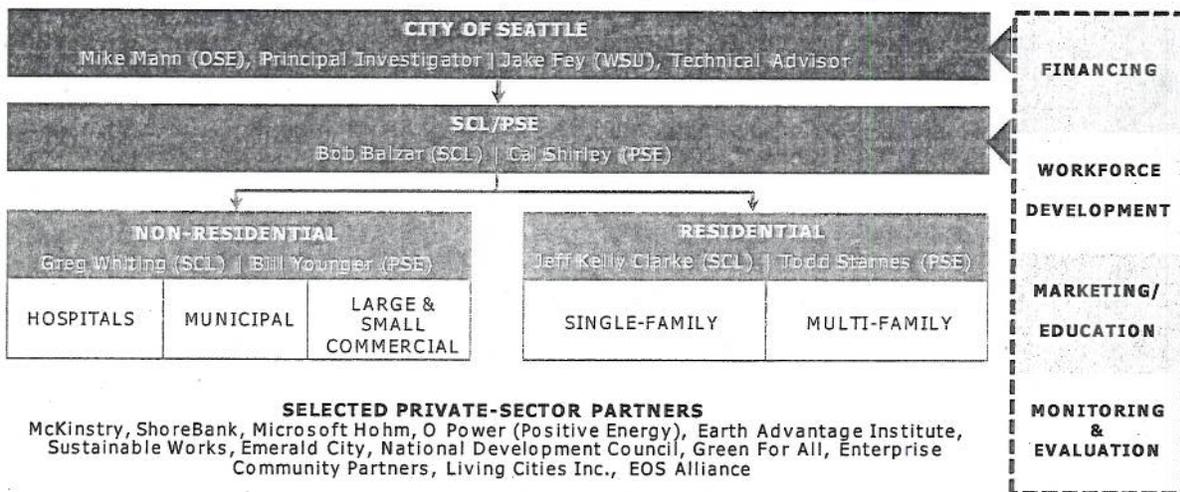
## 3.2 QUARTERLY SPEND PLAN

The table on the previous page presents the quarterly spend plan for EECBG funds and direct leverage. Spending is aligned with the tasks outlined in the *Work Breakdown Structure*. Our program modeling anticipates spending 20% of EECBG funds in year one and 40% in years 2 and 3 respectively. For directly leveraged funds, we expect to expend 12% in Year 1, 40% in Year 2, and 48% in Year 3.

## 3.3 PROJECT ORGANIZATION

The City developed the project management and organizational structure for this program in close consultation with partners and by examining how other grant programs of this magnitude have been managed. The proposed organizational structure is presented in the figure below. The City of Seattle will lead this effort. The Project Management Team, consisting of Mike Mann, Jake Fey, Bob Balzar and Cal Shirley will direct the work of the conservation managers from SCL and PSE responsible for non-residential and residential programs respectively. Those managers in turn will be responsible for forming sector teams consisting of implementation partners and a designated leader responsible for coordination, management, and sector level performance. Finally staff and partner leads will be assigned to the cross-cutting functions of financing, workforce development, marketing, and M&V.

This structure is designed to ensure success by 1) fully engaging the utilities as the lead conservation organizations in the project, 2) provide for clear leadership and accountability, 3) provide essential technical input, and 4) engage the partners and stakeholders, who are so essential to achieving outcomes, on an ongoing basis.



## 4. RELEVANCE AND OUTCOMES/IMPACTS

The City and its partners have painstakingly designed the WEB initiative to comprehensively meet the goals, objectives, and underlying purpose of the EECBG program. Our application creates or retains over 2,000 jobs, garners approximately \$175 million in leverage dollars, realizes 30% penetration of energy efficiency within our target market, saves building owners 15-45% on their energy bills, and eliminates 71,000 mtCO<sub>2</sub>e of greenhouse gasses. The EECBG funded effort will also establish a viable, replicable program that demonstrates to other governments, utilities and the private sector *how* to make efficiency the first source for new energy, that pilots a variety of innovative, potentially game-changing, financing, outreach, and workplace development strategies to address the key barriers to implementation. In addition, through the engagement, service delivery and financing mechanisms deployed, WEB provides a durable foundation for market transformation and ongoing, sustainable investment in energy efficiency in this region and beyond.

Importantly, this program has been intentionally designed to reach an unusually diverse community of beneficiaries; we intend to engage *all* populations of Seattle's most diverse district, from immigrants and multifamily tenants, to

## Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

small business owners, to middle-class families trying to save on their energy bills and do the right thing for the environment, to commercial property managers seeking to ride out the recession, to hospitals striving to reduce operating costs. Finally, the breadth of this effort and the ability of Seattle to involve so many partners—with almost 80 letters of support attached to this application—attests to the value and importance of this initiative to this region. This support provides a powerful start to achieving sustainability and market transformation through these funds.

### 5. ROLES OF PARTICIPANTS

The City has secured commitments from a wide range of partner organizations to deliver program services, including performing audits and retrofitting buildings. Some of these partners are currently under contract with the City, SCL, and/or PSE. Others will be selected through a competitive bidding process. Still others have offered in-kind services, committed to providing funding to leverage EECBG monies, or both.

The table below lists many of the key organizations that have engaged so far in this effort, volunteering as partners. Each of these entities brings impressive qualifications and capabilities to ensure success for the WEB initiative. Once selected and under contract, the work of these partners will be managed by the Project Management Team and the sector leads, as described in Section 3.3.

<b>Residential Sector (Single-Family and Multifamily) Participants and Roles</b>	
SustainableWorks	Establish a \$1 million credit enhancement program working with credit unions and banks throughout Washington State to arrange for EE loans. <b>\$200,000</b> of this \$1 million dedicated to WEB initiative.
Microsoft Hohm	Market and provide services for ongoing monitoring of energy savings.
EnergySavvy.com	Connect homeowners with contractors and financing via web resource.
Earth Advantage Institute	Deliver the Energy Performance Score for home audits, construct web interface portal, and provide training.
Enterprise Community Partners	Leverage up to <b>\$2 million</b> to support a pilot financing program for retrofits of multi-family housing.
ECOS	Utilize over 15 years of direct install expertise to provide outreach and direct install services to multifamily sector.
Home Performance Washington	Members—including residential energy professionals and service providers—are prepared to offer energy audit and whole-house retrofit contracting services.
<b>Non-Residential Sector (Small, Large, Hospital/Institutional, and Municipal) Participants and Roles</b>	
ECOSS (Env. Coalition of South Seattle)	Market the small business retrofit program to corner markets and small restaurants throughout the targeted district during the period of the grant
Seattle Steam	Offer on-bill financing to facilitate retrofits for customers in target district.
MacDonald-Miller Facility Solutions	Perform, purchase, and monitor energy efficiency retrofits for Seattle Steam customers in the target district. Commit <b>\$3 million</b> to support program.
SeaFreeze Cold Storage	Leverage <b>\$1.6 M</b> in Washington SEP funding and private leverage for cold storage facility energy efficiency upgrades.
McKinstry Company	Provide audit and retrofit services to Seattle municipal facilities in the target district and supply <b>\$250,000</b> of in-kind services to support program.
Green For All & Community Benefits Law Center	Support community engagement process to result in 'high road' hiring and contractor standards.
Cascadia Consulting	Provide outreach to small businesses under existing City contract.

## Seattle's Neighborhood Weatherize Every Building (WEB) Initiative to Power Change

Finance Sector	
ShoreBank Enterprise Cascadia (CDFI)	Manage residential and small business loan programs. Leverage loan dollars at a minimum of 3:1.
National Development Council (CDFI)	Leverage low-cost funds from the Grow America Fund via Small Business Administration guarantee, resulting in below-market financing terms and rates for borrowers. Leverage loan dollars at a minimum of 9:1.
Seattle Northwest Securities	As financial advisor to the city structure sector finance programs and take-out financing.
Workforce Development	
Workforce Development Council of Seattle-King County	Convene and conduct workforce planning process; manage home weatherization and commercial energy efficiency curriculum development (leverage \$8 million in pending Department of Labor Green Job development grants).
LIUNA	Conduct weatherization skills training and work with the City to establish certification and hiring standards.
Puget Sound SAGE	Assisting the City in creating low-income weatherization hiring standards.
Seattle Jobs Initiative (SJI)	Recruit and prepare candidates for job vacancies and provide case management and placement for trained workers upon completion of certified training programs.
Living Cities, Inc.	Provide \$455,000 to support development of an employer-driven workforce intermediary that will increase access to family-supporting jobs for low-income people.
Emerald Cities Partnership	Help Seattle monitor and communicate savings and job creation; broaden the group of stakeholders already assembled in support of this application; provide direct technical assistance and pilot Seattle approach in other cities.

## 6. ARRA INFORMATION

The Seattle Neighborhood WEB initiative is built on real-world experience that proves it truly is possible to induce economic recovery through investment in energy efficiency retrofits. Current policy and program initiatives have already led to creation of a nationally recognized workforce development approach in the energy efficiency sector.

With funding secured through a grant from Living Cities, Inc., the City of Seattle is partnering with Seattle Jobs Initiative and the Workforce Development Council to fund the Northwest Energy Efficiency Opportunity Project (NEW OP) which will establish residential weatherization curriculum, training and placement services. In addition, NEW OP is the only project in the country to expand these efforts to the commercial energy efficiency sector.

In addition, the City of Seattle has also established high-road hiring standards for its DOE-funded, low-income weatherization program and is poised to expand these standards into other programs.

Seattle's investment in the energy efficiency retrofit industry has already resulted in the following significant achievements: 1) 150 new graduates expected to be trained by June 2010; 2) Over 100 applicants screened and 60 interviewed for new green jobs; 3) 14 workers hired by 4 companies; 5) 100% of new hires qualify as low-income; 6) expected regional demand for new workers over the next six months totals 50 jobs.

The Seattle Neighborhood WEB initiative represents the employment demand driver that the industry has been waiting for: the influx of funding to support the WEB initiative will build on local workforce development initiatives to create **2,000 new, local, green jobs** in Seattle. Because the program will live well beyond the initial three-year grant period, these are jobs that will remain in Seattle, aiding in the long-term economic recovery of this region.

**Budget Justification**

This main budget table provides detail on expenditures by object class category for each of the six sectors the program encompasses.

Verticals	Single-Family	Multi-Family	Municipal	Health Care	Small Business	Large Commercial	Program Total
<b>OBJECT CLASS CATEGORIES</b>							
Personnel	\$564,322	\$110,893	\$164,417	\$96,154	\$92,751	\$63,462	\$1,091,999
Fringe Benefits	\$169,297	\$33,268	\$49,325	\$28,846	\$27,825	\$19,038	\$327,599
Travel	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Equipment	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Supplies	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Contractual	\$5,891,381	\$1,855,839	\$2,786,257	\$2,875,000	\$1,254,424	\$127,500	\$14,790,401
Construction	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Other - Revolving Loan Fund	\$4,000,000	\$400,000	\$0	\$0	\$500,000	\$0	\$4,900,000
Other - Credit Enhancement	\$1,875,000	\$100,000	\$0	\$0	\$625,000	\$1,290,000	\$3,890,000
<b>TOTAL EECBG FUNDING:</b>	<b>\$12,500,000</b>	<b>\$2,500,000</b>	<b>\$3,000,000</b>	<b>\$3,000,000</b>	<b>\$2,500,000</b>	<b>\$1,500,000</b>	<b>\$25,000,000</b>

In the tables provided on the following pages, we have justified object class categories based on total expenditures in each sector portrayed in the table above.

**Personnel and Fringe Benefits**

**Single-Family Sector**

Task	Position Title	BUDGET PERIOD 1			BUDGET PERIOD 2			BUDGET PERIOD 3			Total Project Hrs.	Project Total Dollars	Rate Basis
		Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 1	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 2	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 3			
1. Manage and implement community education campaign and direct marketing	Office of Sustainability and the Environment Program Manager (1)	385	\$50.00	\$19,231	1538	\$50.00	\$76,923	1923	\$50.00	\$96,154	3846	\$192,308	Technical Estimate
		444	\$50.00	\$22,201	1776	\$50.00	\$88,806	2220	\$50.00	\$111,007	4440	\$222,014	Technical Estimate
		77	\$65.00	\$5,000	308	\$65.00	\$20,000	385	\$65.00	\$25,000	769	\$50,000	Technical Estimate
		91	\$55.00	\$5,000	364	\$55.00	\$20,000	455	\$55.00	\$25,000	909	\$50,000	Technical Estimate
		455	\$55.00	\$25,000	364	\$55.00	\$20,000	91	\$55.00	\$5,000	909	\$50,000	Technical Estimate
Personnel Total: 1451			\$76,432	4350		\$225,729	5073		\$262,161	8286	\$564,322		
Fringe Benefits (30%) Total:			\$22,930			\$67,719			\$78,648		\$169,297		

Total of Personnel and Fringe Benefits:

\$99,362

\$293,447

\$340,809

\$733,619

**Personnel and Fringe Benefits**

**Multi-Family Sector**

Task	Position Title	BUDGET PERIOD 1			BUDGET PERIOD 2			BUDGET PERIOD 3			Total Project Hrs.	Project Total Dollars	Rate Basis
		Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 1	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 2	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 3			
1. Manage and implement community education campaign and direct marketing	Office of Sustainability and the Environment Program Manager (1)	96	\$50.00	\$4,808	385	\$50.00	\$19,231	481	\$50.00	\$24,038	962	\$48,077	Technical Estimate
2. Overall sector implementation	Office of Sustainability and the Environment Program Managers (2)	86	\$50.00	\$4,282	343	\$50.00	\$17,127	428	\$50.00	\$21,408	856	\$42,816	Technical Estimate
3. Oversee Carbon Incentive Fund and Revolving Loan Fund	Climate Protection Advisor (1)	27	\$55.00	\$1,500	109	\$55.00	\$6,000	136	\$55.00	\$7,500	273	\$15,000	Technical Estimate
4. Address all environmental, health and safety, permitting and compliance issues.	Department of Planning and Development Policy Specialist (1)	9	\$55.00	\$500	36	\$55.00	\$2,000	45	\$55.00	\$2,500	91	\$5,000	Technical Estimate
Personnel Total:		218		\$10,589	873		\$42,357	1091		\$52,947	2182	\$110,893	
Fringe Benefits (30%) Total:				\$3,177			\$12,707			\$15,884		\$33,268	
<b>Total of Personnel and Fringe Benefits:</b>				<b>\$13,766</b>			<b>\$55,064</b>			<b>\$340,809</b>		<b>\$144,161</b>	

**Personnel and Fringe Benefits**

**Municipal Sector**

Task	Position Title	BUDGET PERIOD 1			BUDGET PERIOD 2			BUDGET PERIOD 3			Total Project Hrs.	Project Total Dollars	Rate Basis
		Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 1	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 2	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 3			
1. Manage and implement employee education campaign	Office of Sustainability and the Environment Program Managers (1)	23	\$50.00	\$1,154	92	\$50.00	\$4,615	115	\$50.00	\$5,769	231	\$11,538	Technical Estimate
2. All aspects of retrofit implementation	Fleets and Facilities Managers (2)	136	\$50.00	\$6,788	543	\$50.00	\$27,152	679	\$50.00	\$33,939	1358	\$67,879	Technical Estimate
3. Issue municipal bonds	Finance Department Debt Issuance Specialist (2)	382	\$85.00	\$32,500	306	\$85.00	\$26,000	76	\$85.00	\$6,500	765	\$65,000	Technical Estimate
4. Address all environmental, health and safety, permitting and compliance issues.	Department of Planning and Development Policy Specialist (1)	182	\$55.00	\$10,000	145	\$55.00	\$8,000	36	\$55.00	\$2,000	364	\$20,000	Technical Estimate
Personnel Total:		541		\$50,442	941		\$65,767	871		\$48,209	2353	\$164,417	
Fringe Benefits (30%) Total:				\$15,133			\$19,730			\$14,463		\$49,325	
<b>Total of Personnel and Fringe Benefits:</b>				<b>\$65,574</b>			<b>\$85,497</b>			<b>\$62,671</b>		<b>\$213,743</b>	

**Personnel and Fringe Benefits**

**Health Care Sector**

Task	Position Title	BUDGET PERIOD 1			BUDGET PERIOD 2			BUDGET PERIOD 3			Total Project Hrs.	Project Total Dollars	Rate Basis
		Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 1	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 2	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 3			
Manage and implement marketing to healthcare facilities	Office of Sustainability and the Environment Program Managers (1)	23	\$50.00	\$1,154	92	\$50.00	\$4,615	115	\$50.00	\$5,769	231	\$11,538	Technical Estimate
Overall sector management	Office of Sustainability and the Environment Program Manager (1)	109	\$50.00	\$5,462	437	\$50.00	\$21,846	546	\$50.00	\$27,308	1092	\$54,615	Technical Estimate
Carbon Incentive Fund management	Climate Protection Advisor (1)	55	\$55.00	\$3,000	218	\$55.00	\$12,000	273	\$55.00	\$15,000	545	\$30,000	Technical Estimate
Personnel Total:		187		\$9,615	747		\$38,462	934		\$48,077	1869	\$96,154	
Fringe Benefits (30%) Total:				\$2,885			\$11,538			\$14,423		\$28,846	
<b>Total of Personnel and Fringe Benefits:</b>				<b>\$12,500</b>		<b>\$50,000</b>		<b>\$62,500</b>		<b>\$125,000</b>			

**Personnel and Fringe Benefits**

**Small Business Sector**

Task	Position Title	BUDGET PERIOD 1			BUDGET PERIOD 2			BUDGET PERIOD 3			Total Project Hrs.	Project Total Dollars	Rate Basis
		Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 1	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 2	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 3			
Manage and implement marketing to small businesses	Office of Economic Development Program Managers (2)	80	\$60.00	\$4,808	385	\$50.00	\$19,231	481	\$50.00	\$24,038	946	\$48,077	Technical Estimate
Overall sector management	Office of Sustainability and the Environment Program Managers (2)	57	\$50.00	\$2,867	229	\$50.00	\$11,470	287	\$50.00	\$14,337	573	\$28,674	Technical Estimate
Loan program/Carbon Fund management	Office of Economic Development Business Development Finance Manager (1)	29	\$55.00	\$1,600	116	\$55.00	\$6,400	145	\$55.00	\$8,000	291	\$16,000	Technical Estimate
Personnel Total:		167		\$9,275	730		\$37,100	913		\$46,376	1810	\$92,751	
Fringe Benefits (30%) Total:				\$2,783			\$11,130			\$13,913		\$27,825	
<b>Total of Personnel and Fringe Benefits:</b>				<b>\$12,058</b>			<b>\$48,230</b>			<b>\$60,289</b>		<b>\$120,576</b>	

**Personnel and Fringe Benefits**

**Large Commercial Sector**

Task	Position Title	BUDGET PERIOD 1			BUDGET PERIOD 2			BUDGET PERIOD 3			Total Project Hrs.	Project Total Dollars	Rate Basis
		Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 1	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 2	Time (hrs)	Pay Rate (\$/hr)	Total Budget Period 3			
Manage and implement marketing to large businesses	Office of Sustainability and the Environment Program Managers (2)	10	\$60.00	\$577	46	\$50.00	\$2,308	58	\$50.00	\$2,885	113	\$5,769	Technical Estimate
Carbon Incentive Fund management	Office of Sustainability and the Environment Program Managers (2)	55	\$50.00	\$2,769	222	\$50.00	\$11,077	277	\$50.00	\$13,846	554	\$27,692	Technical Estimate
Carbon Incentive Fund management	Office of Sustainability and the Environment Director	23	\$65.00	\$1,500	92	\$65.00	\$6,000	115	\$65.00	\$7,500	231	\$15,000	Technical Estimate
Carbon Incentive Fund management	Office of Economic Development Business Development Finance Manager (1)	18	\$55.00	\$1,000	73	\$55.00	\$4,000	91	\$55.00	\$5,000	182	\$10,000	Technical Estimate
Carbon Incentive Fund management	Climate Protection Advisor (1)	9	\$55.00	\$500	36	\$55.00	\$2,000	45	\$55.00	\$2,500	91	\$5,000	Technical Estimate
Personnel Total:		88		\$6,346	360		\$25,385	450		\$31,731	898	\$63,462	
Fringe Benefits (30%) Total:				\$1,904			\$7,615			\$9,519		\$19,038	
<b>Total of Personnel and Fringe Benefits:</b>				<b>\$8,250</b>			<b>\$33,000</b>			<b>\$41,250</b>		<b>\$82,500</b>	

**Contractual**

**Single-Family Sector**

Sub-Recipient Name/Organization:	Purpose/Tasks:	Costs			Project Total
		Year 1	Year 2	Year 3	
Washington State University Extension Energy Program (WSU)	Residential portion of subawardee budget.	\$37,500	\$150,000.00	\$187,500	\$375,000
<b>Sub-total:</b>		<b>\$37,500</b>	<b>\$150,000.00</b>	<b>\$187,500</b>	<b>\$375,000</b>
Vendor Name/Organization:	Purpose/Tasks:	Costs			Project Total
		Year 1	Year 2	Year 3	
Marketing/Education vendors will be selected through city RFP process. Potential respondents include, Colehour and Cohen and Pyramid Communications, Microsoft Hohm, and Energy Savvy.	Community education campaign as well as direct marketing of residential retrofit opportunities.	\$25,000	\$100,000.00	\$125,000	\$250,000
Workforce vendors will be selected through city RFP process. Potential respondents include, Workforce Development Council, Seattle Jobs Initiative, Puget Sound SAGE, Got Green, Emerald Cities Partnership Green For All, and Community Benefits Law Center.	Build upon and extend green workforce development efforts being undertaken currently.	\$62,500	\$250,000.00	\$312,500	\$625,000
Carbon Incentive Fund. Possible applicants include: Sustainable Works, Home Performance Washington, EOS Alliance, Energy Savvy, Got Green, and O Power.	The city will establish a carbon incentive fund and make awards to applicants based on their ability to deliver aggregate neighborhood energy reductions.	\$464,138	\$1,856,553.00	\$2,320,691	\$4,641,381
<b>Sub-total:</b>					<b>\$5,516,381</b>

**TOTAL CONTRACTUAL:**

**\$5,891,381**

**Contractual**

**Multi-Family Sector**

Sub-Recipient Name/Organization:	Purpose/Tasks:	Costs			Project Total
		Year 1	Year 2	Year 3	
Washington State University Extension Energy Program (WSU)	Multi-family portion of subawardee budget.	\$10,000	\$40,000.00	\$50,000	\$100,000
<b>Sub-total:</b>		<b>\$10,000</b>	<b>\$40,000.00</b>	<b>\$50,000</b>	<b>\$100,000</b>
Vendor Name/Organization:	Purpose/Tasks:	Costs			Project Total
		Year 1	Year 2	Year 3	
Marketing/Education vendors will be selected through city RFP process. Potential respondents include, Colehour and Cohen, Pyramid Communications, and ECOS.	Community education campaign as well as direct marketing of multi-family retrofit opportunities.	\$6,250	\$25,000.00	\$31,250	\$62,500
Workforce vendors will be selected through city RFP process. Potential respondents include, Workforce Development Council, Seattle Jobs Initiative, Puget Sound SAGE, Got Green, Emerald Cities Partnership, Green For All, and Community Benefits Law Center.	Build upon and extend green workforce development efforts being undertaken currently.	\$10,000	\$40,000.00	\$50,000	\$100,000
Carbon Incentive Fund. Possible applicants include: Home Performance Washington, ECOS, Energy Savvy, Got Green, McKinstry, Enterprise Community Partners, and O Power.	The city will establish a carbon incentive fund and make awards to applicants based on their ability to deliver aggregate neighborhood energy reductions.	\$159,334	\$637,336.00	\$796,669	\$1,593,339
<b>Sub-total:</b>					<b>\$1,755,839</b>

**TOTAL CONTRACTUAL:**

**\$1,855,839**

**Contractual**

**Municipal Sector**

Sub-Recipient Name/Organization	Purpose/Task:	Costs			Project Total
		Year 1	Year 2	Year 3	
Washington State University Extension Energy Program (WSU)	Municipal portion of subawardee budget.	\$9,000	\$36,000.00	\$45,000	\$90,000
<b>Sub-total:</b>		<b>\$9,000</b>	<b>\$36,000.00</b>	<b>\$45,000</b>	<b>\$90,000</b>
Vendor Name/Organization:	Purpose/Task:	Costs			Project Total
		Year 1	Year 2	Year 3	
Marketing/Education vendors will be selected through city RFP process. Potential respondents include, Colehour and Cohen, and Pyramid Communications.	Employee education campaign and community outreach to share efficiency gains.	\$1,500	\$6,000.00	\$7,500	\$15,000
Workforce vendors will be selected through city RFP process. Potential respondents include, Workforce Development Council, Seattle Jobs Initiative, Puget Sound SAGE, Emerald Cities Partnership, Green For All, and Community Benefits Law Center.	Build upon and extend green workforce development efforts being undertaken currently.	\$12,000	\$48,000.00	\$60,000	\$120,000
McKinstry	City will buy down the cost of deeper efficiency projects to achieve a net twelve year payback and can be financed with a municipal bond.	\$256,126	\$1,024,503.00	\$1,280,629	\$2,561,257
<b>Sub-total:</b>					<b>\$2,696,257</b>

**TOTAL CONTRACTUAL:**

**\$2,786,257**

**Contractual**

**Health Care Sector**

Sub-Recipient Name/Organization	Purpose/Tasks	Costs			Project Total
		Year 1	Year 2	Year 3	
Washington State University Extension Energy Program (WSU)	Health care portion of subawardee budget.	\$9,000	\$36,000.00	\$45,000	\$90,000
<b>Sub-total:</b>		<b>\$9,000</b>	<b>\$36,000.00</b>	<b>\$45,000</b>	<b>\$90,000</b>
Vendor Name/Organization	Purpose/Tasks	Costs			Project Total
		Year 1	Year 2	Year 3	
Marketing/Education vendors will be selected through city RFP process. Potential respondents include, Colehour and Cohen, and Pyramid Communications.	Marketing to healthcare facilities in target area to raise awareness of carbon fund.	\$1,500	\$6,000.00	\$7,500	\$15,000
Workforce vendors will be selected through city RFP process. Potential respondents include, Workforce Development Council, Seattle Jobs Initiative, Puget Sound SAGE, Emerald Cities Partnership, Green For All, and Community Benefits Law Center.	Build upon and extend green workforce development efforts being undertaken currently.	\$12,000	\$48,000.00	\$60,000	\$120,000
Carbon Incentive Fund	The city will establish a carbon incentive fund and make awards to applicants based on their ability to deliver significantly leveraged investments in energy efficiency and carbon reductions.				\$2,650,000
<b>Sub-total:</b>					<b>\$2,785,000</b>

**TOTAL CONTRACTUAL: \$2,875,000**

**Contractual**

**Small Business Sector**

Sub-Recipient Name/Organization	Purpose/Tasks	Costs			Project Total
		Year 1	Year 2	Year 3	
Washington State University Extension Energy Program (WSU)	Small business portion of subawardee budget.	\$10,000	\$40,000.00	\$50,000	\$100,000
<b>Sub-total:</b>		<b>\$10,000</b>	<b>\$40,000.00</b>	<b>\$50,000</b>	<b>\$100,000</b>
Vendor Name/Organization	Purpose/Tasks	Costs			Project Total
Marketing/Education vendors will be selected through city RFP process. Potential respondents include, Cascadia Consulting, ECOSSE, and Unified Grocers.	Marketing to small grocers, restaurants, and cold storage facilities in target area to raise awareness of retrofit program.	Year 1	Year 2	Year 3	
		\$6,250	\$25,000.00	\$31,250	\$62,500
Workforce vendors will be selected through city RFP process. Potential respondents include, Workforce Development Council, Seattle Jobs Initiative, Puget Sound SAGE, Emerald Cities Partnership, Green For All, and Community Benefits Law Center.	Build upon and extend green workforce development efforts being undertaken currently.	\$10,000	\$40,000.00	\$50,000	\$100,000
Small Business Carbon Fund	The city will establish a carbon incentive fund and make awards to applicants based on their ability to deliver significantly leveraged investments in energy efficiency and carbon reductions.	\$99,192	\$396,769.00	\$495,962	\$991,924
<b>Sub-total:</b>					<b>\$1,154,424</b>

**TOTAL CONTRACTUAL:**

**\$1,254,424**

**Contractual**

**Large Commercial Sector**

Sub-Recipient Name/Organization:	Purpose/Tasks:	Costs			Project Total
		Year 1	Year 2	Year 3	
Washington State University Extension Energy Program (WSU)	Large commercial portion of subawardee budget.	\$4,500	\$18,000.00	\$22,500	\$45,000
<b>Sub-total:</b>		<b>\$4,500</b>	<b>\$18,000.00</b>	<b>\$22,500</b>	<b>\$45,000</b>
Vendor Name/Organization:	Purpose/Tasks:	Costs			Project Total
		Year 1	Year 2	Year 3	
Marketing/Education vendors will be selected through city RFP process. Potential respondents include, Cascadia Consulting, ECOSSE, and Unified Grocers.	Marketing to large commercial building owners in target area to raise awareness of retrofit program.	\$750	\$3,000.00	\$3,750	\$7,500
Workforce vendors will be selected through city RFP process. Potential respondents include, Workforce Development Council, Seattle Jobs Initiative, Puget Sound SAGE, Emerald Cities Partnership, Green For All, and Community Benefits Law Center.	Build upon and extend green workforce development efforts being undertaken currently.	\$7,500	\$30,000.00	\$37,500	\$75,000
<b>Sub-total:</b>					<b>\$82,500</b>

**TOTAL CONTRACTUAL:**

**\$127,500**

**Other - Revolving Loan Fund**

**Single-Family Sector**

Vendor Name/Organization:	Purpose/Tasks:	YR 1 Costs	YR 2 Costs	YR 3 Costs	Project Total
Shorebank Enterprise Cascadia	Issue loans to single family homeowners for residential energy efficiency retrofits.	\$4,000,000			\$4,000,000

**Total Revolving Loan Fund:**

**\$4,000,000**

**Multi-Family Sector**

Vendor Name/Organization:	Purpose/Tasks:	YR 1 Costs	YR 2 Costs	YR 3 Costs	Project Total
City will determine through an RFP process.	Issue loans to multi-family building-owners and tenants for residential energy efficiency retrofits.	\$400,000			\$400,000

**Total Revolving Loan Fund:**

**\$400,000**

**Municipal Sector**  
n/a

**Health Care Sector**  
n/a

**Small Business Sector**

Vendor Name/Organization:	Purpose/Tasks:	YR 1 Costs	YR 2 Costs	YR 3 Costs	Project Total
Shorebank Enterprise Cascadia	Issue loans to small businesses for energy efficiency retrofits.	\$500,000			\$500,000

**Total Revolving Loan Fund:**

**\$500,000**

**Large Commercial Sector**  
n/a

**Other - Credit Enhancements**

**Single-Family Sector**

Vendor Name/Organization:	Purpose/Tasks:	YR 1 Costs	YR 2 Costs	YR 3 Costs	Project Total
Shorebank Enterprise Cascadia	Establish a loan loss reserve fund to secure private investment.	\$1,875,000			\$1,875,000
<b>Total Credit Enhancements</b>		<b>\$1,875,000</b>			

**Multi-Family Sector**

Vendor Name/Organization:	Purpose/Tasks:	YR 1 Costs	YR 2 Costs	YR 3 Costs	Project Total
City will determine through an RFP process.	Establish a loan loss reserve fund to secure private investment.	\$100,000			\$100,000
<b>Total Credit Enhancements</b>		<b>\$100,000</b>			

**Municipal Sector**

n/a

**Health Care Sector**

n/a

**Small Business Sector**

Vendor Name/Organization:	Purpose/Tasks:	YR 1 Costs	YR 2 Costs	YR 3 Costs	Project Total
Shorebank Enterprise Cascadia	Establish a loan loss reserve fund to secure private investment.	\$406,250			\$406,250
Grow America Fund	Establish a loan loss reserve fund to secure private investment.	\$218,750			\$218,750
<b>Total Credit Enhancements</b>		<b>\$625,000</b>			

**Large Commercial Sector**

Vendor Name/Organization:	Purpose/Tasks:	YR 1 Costs	YR 2 Costs	YR 3 Costs	Project Total
Carbon Incentive Fund. Possible applicants include: McKinstry and Macdonald Miller/Seattle Steam.	The city will establish a carbon incentive fund and make awards to applicants based on their ability to deliver significantly leveraged investments in energy efficiency and carbon reductions.	\$1,290,000			\$1,290,000
<b>Total Credit Enhancements</b>		<b>\$1,290,000</b>			

Residential

SECTOR Non-Residential

TOTALS

Sector Market Funding & Leverage

	Single-Family	Multi-Family	Municipal	Health Care	Small Business	Large Commercial	Total
<b>Total</b>							

Funding by Sector

	50%	10%	12%	12%	10%	6%	100%
Vertical Allocation %	\$12,500,000	\$2,500,000	\$3,000,000	\$3,000,000	\$2,500,000	\$1,500,000	\$25,000,000
Achieved Leverage Ratio	2.7	5.3	8.2	16.9	7.6	22.9	7.0
Achieved Leverage \$	\$33,414,317	\$13,155,175	\$24,742,307	\$50,849,200	\$18,940,448	\$34,347,525	\$175,448,973
<b>Total Funding Available</b>	<b>\$45,914,317</b>	<b>\$15,655,175</b>	<b>\$27,742,307</b>	<b>\$53,849,200</b>	<b>\$21,440,448</b>	<b>\$35,847,525</b>	<b>\$200,448,973</b>

Funding by Source

City Contributions (Including ARRA funds)	\$1,046,000	\$636,300	\$523,800	\$399,200	\$186,700	\$0	\$2,792,000
State Contributions	\$2,700,000	\$1,200,000	\$0	\$0	\$1,125,000	\$0	\$5,025,000
Utility Contributions (Excluding Rebates)	\$3,569,100	\$1,459,000	\$0	\$0	\$1,001,900	\$0	\$6,030,000
Other Contributions	\$247,083	\$2,080,000	\$100,000	\$100,000	\$1,662,000	\$63,750	\$4,252,833
Revolving Loan, Credit Enhancement, City on Bill	\$13,053,268	\$2,325,500	\$0	\$0	\$9,593,168	\$14,521,620	\$39,493,555
City Bonds	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Interest & Principal repayment	\$5,071,511	\$859,379	\$0	\$0	\$1,516,898	\$0	\$7,447,788
Tax Credits/Deductions	\$2,145,010	\$425,153	\$905,861	\$1,898,400	\$414,423	\$1,137,780	\$6,926,627
Utility Rebates & Direct Payments	\$3,676,631	\$3,835,233	\$2,667,976	\$7,420,000	\$3,346,012	\$1,693,125	\$22,638,977
Owner Financing	\$1,905,714	\$334,611	\$20,544,670	\$41,031,600	\$94,347	\$16,931,250	\$80,842,192
<b>Total Funding</b>	<b>\$33,414,317</b>	<b>\$13,155,175</b>	<b>\$24,742,307</b>	<b>\$50,849,200</b>	<b>\$18,940,448</b>	<b>\$34,347,525</b>	<b>\$175,448,973</b>

Servicing of Markets

Sq Ft in Vertical Market	34,000,000	4,050,000	2,156,812	4,000,000	1,945,000	12,900,000	59,051,812
Projected Sq Ft Serviced	11,220,000	3,280,500	2,156,812	4,520,000	1,651,912	2,709,000	25,538,224
Market Penetration, Serviced	33%	81%	100%	113%	85%	21%	43%
Projected Sq Ft Retrofitted	6,630,000	1,312,200	2,156,812	4,520,000	1,259,800	2,709,000	18,587,812
Market Penetration, Retrofitted	20%	32%	100%	113%	65%	21%	31%

Sq Ft Serviced by Level of Effort

O Power/Energy Savvy/Holm	1,020,000	0	0	0	0	0	1,020,000
Audit Only	3,570,000	1,968,300	0	0	392,112	0	5,930,412
Retrofit - Light	1,326,000	393,660	0	0	546,156	0	2,265,816
Retrofit - Low	1,657,500	262,440	0	0	109,231	1,354,500	7,383,671
Retrofit - Moderate	1,989,000	262,440	0	0	240,309	0	2,491,749
Retrofit - High	1,657,500	393,660	2,156,812	520,000	364,104	1,354,500	6,446,576
<b>Total Sq Ft Serviced</b>	<b>11,220,000</b>	<b>3,280,500</b>	<b>2,156,812</b>	<b>4,520,000</b>	<b>1,651,912</b>	<b>2,709,000</b>	<b>25,538,224</b>

Residential

SECTOR

Non-Residential

TOTALS  
Total

Market Impacts

	Single-Family	Multi-Family	Municipal	Health Care	Small Business	Large Commercial	Total
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Baseline Energy Consumption/Costs

Average Energy Cost/Sq Ft	\$1.40	\$1.20	\$1.07	\$3.65	\$4.25	\$3.65	25,538,224
Average Kwh Consumed/Sq Ft	5.32	13.67	19.45	33.69	43.04	22.46	55,358,864
Average BTU Consumed/Sq Ft	0.75	0.09	0.15	1.12	0.65	1.68	430,690,250
Sq Ft Serviced	11,220,000	3,280,500	2,156,812	4,520,000	1,651,912	2,709,000	19,802,953
Total Energy Cost	\$15,708,000	\$3,936,600	\$2,307,789	\$16,498,000	\$7,020,625	\$9,887,850	469,460
Total Kwh Consumed	59,650,633	44,847,342	41,959,797	152,289,231	71,094,940	60,848,308	1,064,205
Total BTU Consumed	8,458,154	302,815	321,957	5,076,308	1,080,096	4,563,623	3,797,668

Cost Savings by Level of Effort

O Power/Energy Savvy/Holm	\$42,840	\$0	\$0	\$0	\$0	\$0	42,840
Audit Only	\$149,940	\$236,196	\$0	\$0	\$83,324	\$0	469,460
Retrofit - Light	\$389,844	\$70,859	\$0	\$0	\$603,502	\$0	1,064,205
Retrofit - Low	\$672,945	\$72,433	\$0	\$2,190,000	\$120,700	\$741,589	3,797,668
Retrofit - Moderate	\$1,002,456	\$119,673	\$0	\$0	\$265,541	\$0	1,387,670
Retrofit - High	\$951,405	\$198,405	\$576,947	\$569,400	\$464,233	\$1,235,981	3,996,371
Total Annual Cost Savings	\$3,209,430	\$697,566	\$576,947	\$2,759,400	\$1,537,300	\$1,977,570	10,758,213
Cost Savings %	20%	18%	25%	17%	22%	20%	19.4%

Climate Impact

Annual Kwh Saved	12,187,709	7,946,949	10,489,949	25,471,385	15,567,598	12,169,662	83,833,251
Annual BTU Saved	1,728,155	53,659	80,489	849,046	236,508	912,725	3,860,581
Metric Tons of CO2 Equivalent Saved	16,617	5,056	6,727	19,852	10,613	12,215	71,080



**City of Seattle**

Gregory J. Nickels, Mayor

**Office of Sustainability & Environment**

Michael Mann, Acting Director

Karen Bahan,  
Contracting Officer DOE,  
Environmental Management Consolidated Business Center Chiquita Center  
250 East 5th Street, Suite 800  
Cincinnati, OH 45202

**RE: American Recovery and Reinvestment Act of 2009, P.L. 111-5 (Recovery Act) Additional Budget Justification Information for Davis-Bacon Act**

Dear Ms. Bahan:

This document is intended to provide information validating that the City of Seattle is and will continue to be in full accordance with the requirements of the Davis Bacon Act as determined by subchapter IV of Chapter 31 of title 40, United States Code (Davis-Bacon Act).

The City of Seattle is aware that all laborers and mechanics on projects funded directly by or assisted in whole or in part through funding appropriated by the Recovery Act must be paid wages at rates not less than those prevailing on local projects of a similar character.

The City of Seattle will ensure the highest level of compliance with the Davis-Bacon Act. In our Retrofit Ramp-Up application we have included funding for a fulltime employee who will—among other things—be responsible for fulfillment with all city, local, state, and federal laws. This staff member will represent the Office of Sustainability and the Environment and will uphold all requirements related to the acceptance and disbursement of EECBG 'Retrofit Ramp-Up' funds. This staff member will ensure that all participating organizations and subawardees are fully aware and in compliance with the Davis-Bacon Act requirements.

The city is aware that Washington State prevailing wages may in some cases supersede the Davis Bacon wages. This staff member will work closely with the Washington State Department of Commerce. Department of Commerce staff will be used as a resource to help ensure the appropriate application of Davis Bacon wages and other Washington State statutes about prevailing wage.

Please contact the City of Seattle's Office of Sustainability and the Environment at 206.684.3214 with any additional questions you may have about the City's ability to comply with the Davis-Bacon Act.

Sincerely,

Michael Mann, Acting Director

Office of Sustainability & Environment  
700 Fifth Avenue Suite 2748 PO BOX 94729  
Seattle, WA 98124

Tel: (206) 615-0817, Fax: (206) 684-3013, <http://www.seattle.gov/environment>

Project Impact Metrics Metric	Project Period			Post Project Period		
	Y1	Y2	Y3	Y4	Y5	Y6
Avg Utilities Savings	\$1,075,821	\$5,379,107	\$10,758,213	\$13,822,270	\$16,886,327	\$19,950,383
Avg Emissions Reductions per Sq Ft	0.0038	0.0038	0.0038	0.0038	0.0038	0.0038
Emissions Reductions (mtCO2e)	7,108	35,540	71,080	90,864	110,649	130,433
# of Buildings Retrofitted	370	1,850	3,700	4,795	5,891	6,986
Total Square Footage of Retrofitted Transportation Impacts Avoided	1,858,781	9,293,906	18,587,812	23,777,644	28,967,475	34,157,307
Renewable Energy Capacity Installed						
Cumulative Jobs Created or Retained	238	1,031	2,009	2,608	3,167	3,726
Cumulative EECEBG Funds Expended	\$2,500,000	\$12,500,000	\$25,000,000			
Cumulative Lev. Funds & In-Kind Resources Exp.	\$24,646,638	\$92,829,301	\$175,523,973	\$ 240,297,490	\$ 292,746,066	\$ 345,194,642
Cumulative energy savings (mm btus)	28,604	143,021	286,043	363,831	441,619	519,408
Market penetration: % of targeted buildings retrofitted	3%	16%	31%	41%	50%	60%
% Annual Energy Savings Achieved per sq ft retrofitted	23%	23%	23%			
btus energy saved per \$ of EECEBG funds	11,442	11,442	11,442			

**Appendix C – NEPA FORM For Completion**

**U.S. DEPARTMENT OF ENERGY**

**ENVIRONMENTAL SUMMARY**

**(To Be Completed by Potential Recipient)**

The Department of Energy (DOE) is required by the National Environmental Policy Act (NEPA) of 1969 as amended (42 U.S.C. 4332(2), 40 CFR parts 1500-1508) and DOE implementing regulations (10 CFR 1021) to consider the environmental effects resulting from federal actions, including providing financial assistance. Please provide the following information to facilitate DOE's environmental review.

**PART I: General Information**

Title: EECBG Competitive Solicitation: Retrofit Ramp-Up

FOA Number: DE-FOA-0000148

**1. Please describe the intended use of DOE funding in your proposed plan. For example, would the funding be applied to the entire project or only support a phase of the project? Describe the activity as specifically as possible, i.e. planning, feasibility study, design, data analysis, education or outreach activities, construction, capital purchase and/or equipment installation or modification.**

EECBG 'Retrofit Ramp-Up' funding would finance and incentivize energy efficiency building retrofits in the residential, multi-family, municipal, health care, small business, and large commercial sectors. EECBG 'Retrofit Ramp-Up' funding would be applied throughout the 36 month project period to support management costs, education and outreach, workforce development, building energy efficiency retrofits, energy efficiency incentives/rebates, revolving loan funds, and credit enhancement.

**2. Does any part of your project require review and/or permitting by any other federal, state, regional, local, environmental, or regulatory agency?**

Yes.

**3. Has any review (e.g., NEPA documentation, permits, agency consultations) been completed?**

No.

**4. Provide information about the potential environmental issues, concerns, and impacts associated with your proposal. Please provide as much detail as possible in the following areas: specifics of proposed activities, project locations, size, layout, commitments to waste management and historic preservation. If project specific information is unknown, describe your plan for obtaining this information.**

All proposed activities will be performed in building interiors and will not alter the footprint of buildings. Therefore, the City of Seattle expects there to be minimal environmental issues or other impacts resulting from proposed projects. We are aware, however, that proposed projects are not categorically excluded

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from NEPA. If funded, the City of Seattle is prepared to submit additional NEPA review documents regarding the impacts of the proposed program.

Furthermore, the City of Seattle is aware that all federal funding recipients must meet review requirements under Section 106 of the National Historic Preservation Act. The City of Seattle is committed to historic preservation and will meet all requirements of Section 106.

The City of Seattle is dedicated to sound waste management practices and will take every opportunity to recycle and reuse materials throughout the implementation of the program. All hazardous waste that is generated through program activities will be disposed of in accordance with local, state, and federal laws.

All contractual agreements related to the City of Seattle's EECSBG program will include language requiring contractors to meet specific environmental, waste management, and historical preservation guidelines—in addition to all other American Recovery and Reinvestment Act (ARRA) regulations mandated.

If funded, budget allocations have been made for a City of Seattle staff member to create a plan for and enforce NEPA regulations, as well as all other ARRA requirements.

**J. Michael Mann**  
**Principal Investigator**  
Acting Director, Office of Sustainability and Environment  
Mike.Mann@seattle.gov

**PROFESSIONAL EXPERIENCE**

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**Acting Director, Office of Sustainability and Environment**

September 2008 to present

Managing OSE's personnel and programs, including the development of the Green Building Capital Initiative, the City of Seattle's \$6.1 million Energy Efficiency and Conservation Block Grant program, the creation of an innovative direct-install energy efficiency campaign, the growth of Climate Action Now and Seattle Climate Partnership, and the implementation of the Urban Forest Management Plan. OSE directs many interdepartmental initiatives to ensure sustainable environmental practices and to meet the City's carbon reduction goals.

**Deputy Director, Office of Policy and Management, City of Seattle**

June 2003 to September 2008

Managed an interdepartmental team on city infrastructure with oversight responsibilities for the City's transportation, electric and water utilities, representing a budget of over \$2 billion. Directed the implementation of the \$350 million South Lake Union Action Plan and the development of the the \$50 million financing plan for Seattle's first modern streetcar. Managed the City's relationship with the Port of Seattle and University of Washington.

**Director of Council Relations, Office of Mayor Greg Nickels, City of Seattle**

January 2002 to June 2003

Directed and provided oversight of the legislative agenda for Mayor Greg Nickels, served as the point of contact between the Mayor's office and the Seattle City Council.

**District Director, U.S. Representative Jay Inslee**

January 1999 to January 2002

Managed state office for Congressman Jay Inslee. Duties included: government and community relations, strategic planning and staff development.

**Legislative Assistant, Seattle City Councilmember Richard McIver**

February 1997 to January 1999

Served as staff member to Seattle City Council member with a special emphasis in transportation, housing and community economic development.

**Operations Director, Unified Community Economic Development Association**

January 1994 to August 1996

Co-founded and developed this Central Area community development corporation. Duties included board recruitment and training, fiscal management, fundraising, grant writing, organizational development and housing development.

**Campaign Manager, Norm Rice for Mayor**

May 1993 to November 1993

Managed Mayor Rice's successful re-election campaign. Duties included personnel hiring and management, budget development and management, fundraising, and voter contact program.

**Campaign Consultant**

1993 to 2007

Served as a paid or volunteer consultant for numerous regional civic initiatives including:

Sound Move – Regional Transportation Authority ballot measure

Mass Transit Now

No on 912

Yes for Homes – Seattle Housing Levy Campaigns

Schools First – Levy campaigns

**SYNERGISTIC ACTIVITIES**

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**Board Member, Puget Sound Clean Air Agency**

February 2009 to present

**Board Member, Seattle Pony Baseball and Softball**

2006 to 2009

**Commissioner, King County Redistricting Commission. 2001, 2005**

Successfully completed the redistricting process for the 2001 and 2005 King County Council.

**Co-Chair, New School @ South Shore Parent Alliance Group, 2005**

Served as a co-chair of the parent group for Seattle School District elementary school.

**Advisory Committee Member, Fannie Mae, Puget Sound Partnership Office**

2000-2002

Served on this advisory committee for Fannie Mae's efforts to develop housing finance products and programs for the Puget Sound area.

**EDUCATION**

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**Master of Arts, University of Notre Dame**

Obtained a Masters Degree in International Peace Studies. This multi-disciplinary degree combined curriculum in world order studies, conflict resolution and global governance with an inter-cultural residential program made up of twelve students from around the world.

**Bachelor of Arts, Whitman College**

Major curriculum focus in economics and minor emphasis in political science.

**Amanda Eichel**

Climate Protection Advisor, City of Seattle Office of Sustainability and Environment

**PROFESSIONAL EXPERIENCE**

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**Climate Protection Advisor, City of Seattle Office of Sustainability & Environment**

2007 – Present

- Advance Seattle's climate protection initiative and implement the Seattle Climate Action Plan with a particular focus on development, energy, and land use.
  - Lead intradepartmental teams to develop strategies for increasing resource efficiency in existing buildings and new development
  - Initiate, manage and staff the Mayor's Green Building Task Force – engaging 50 area stakeholders including affordable housing and environmental justice advocates, to identify policies to increase efficiency of Seattle's building stock by 20 percent.
  - Draft and implement new City policies to advance the Green Building Capital Initiative and Energy Efficiency and Conservation Block Grant funded programs (including energy performance disclosure, innovative financing and workforce development)
- Promote climate protection policies and programs at the regional, state and federal levels and identify, initiate & deliver on opportunities for collaboration across jurisdictions; Serve as lead staff to the US Conference of Mayors Climate Protection Task Force, including drafting and managing adoption of the of the US Mayors' federal climate policy agenda and delivery of the National Mayors Climate Protection Summit.
- Advise Mayor and Cabinet on local, regional, state and federal climate protection policy.

**Special Assistant to the Speaker, California State Assembly, Office of Speaker Fabian Núñez**

2004-2005

- Staffed the Assembly Housing and Community Development Committee: monitored, analyzed, and made policy recommendations to the Speaker.
- Developed, negotiated, and staffed environmental policy consistent with the Speaker's priorities including comprehensive legislation to address chrome plating pollution in California; work with grassroots environmental justice and community organizations and coordination with Administration, Senate and Assembly on green building, purchasing and development issues.
- Served as liaison between Capitol and district offices for various activities.

**Senior Consultant, California State and Consumer Services Agency**

2002-2004

**Sustainable Building Policy Assistant, California State and Consumer Services Agency**

July – September 2002

- Worked on various project, policy, and legislative in support of the Governor's Green Building Program, including oversight of state green building activities.
  - Staffed and facilitated agency-chaired environmental task forces, including the Sustainable Building Task Force, the Sustainable Procurement Task Force and the Green Fleets Task Force, partnerships of more than 50 governmental agencies.

- Coordinated and drafted Agency response for the State of California's Joint Agency Climate Team.
- Developed and directed green building curriculum project for alternative high school architecture program.

#### **Sustainability Intern, The Sustainability Project, Santa Barbara CA**

2004-2005

- Conducted research for Santa Barbara County Green Building Guidelines.
- Edited and revised Guidelines for content and syntax.
- Assisted in grant reporting to Santa Barbara County Solid Waste Management Division.

#### **Project/Recycling Coordinator, Accent Construction**

1999-2001

- Secured \$20,000 grant to purchase capital assets to initiate construction and demolition debris recycling program for multi-million dollar construction company.
- Organized comprehensive environmental plan for waste reduction, recycling, and reuse.
- Established environmental goals through EPA WasteWise partner program resulting in waste reduction of approximately 25 tons in the first six months of implementation.

#### **EDUCATION AND TRAINING**

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MESM; Bren School of Environmental Science and Management, University of California – Santa Barbara, 2002

BS; Appalachian State University, Boone, North Carolina, 1998

PhD Candidate, Public Policy, University of Maryland, College Park (Leave of Absence)

#### **SYNERGISTIC ACTIVITIES**

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- Co-Chair, Urban Sustainability Directors Network  
2008 – Present
- Convener, Directors Climate Network & Existing Buildings Energy Efficiency working group  
Multi-jurisdictional networks engaging staff from over 30 local governments nation-wide to collaborate on key local, state and federal policy initiatives.  
2007-Present
- Member, Energy Efficiency and Green Buildings Implementation Working Group of Governor Gregoire's Washington State Climate Advisory  
2008- Present
- Member, University of California steering committee to develop a system-wide Green Building & Clean Energy Policy.  
2005

**Greg S. Whiting**  
Commercial/Industrial Conservation Manager, Seattle City Light

**PROFESSIONAL EXPERIENCE**

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**Manager Conservation Resources, Seattle City Light**

2007-Present

- Manage activities of 34-person group. Responsible for implementation, at commercial and industrial (C/I) customers, of a strategy aimed at tripling energy conservation facilitated by Seattle City Light (with that group of customers) over the five year period 2008 - 2012.
- Directed development of trade ally program aimed at encouraging contractors to bring conservation projects directly to City Light. Within this framework, envisioned and managed development of Quick Lighting Upgrade Initiative (QLUI), aimed principally at historically underserved customers. Within the first six months, this program alone accounted for about a 33% increase in results from the previous year (11 million kWh QLUI; 33 million C/I kWh total in 2008).
- Hired or promoted 10 people and reorganized group priorities to optimize pursuit of high-potential opportunities. Overall results are up approximately 85% from 2008 – 2009.

**Chief Executive Officer, Module Resources, Inc.** *(Mining company traded on Canadian NEX exchange)*

2007

- Responsible for positioning company to apply for promotion from NEX (Canadian equivalent of pink sheets) to TSX Venture Exchange, Tier 2 (Canadian equivalent of OTC bulletin board).
- Negotiated acquisition of previously producing gold mining property in British Columbia via two separate transactions. Managed compliance with regulatory requirements associated with property.
- Identified, hired and managed consultants to develop technical reports (43-101) required for stock exchange and fundraising. Developed marketing materials and provided board with draft website.
- Initiated private placement of stock to raise money for further exploration of property.

**Global Product Line Manager, The Stanley Works, PROTO Division**

2004 - 2007

- Responsible for P&L and all aspects of marketing and product development for several hand tool product lines sold under five brands (Proto, Blackhawk, FACOM, Stanley and John Deere), totaling \$40 million in annual sales.
- Managed development and introduction of 14 new product lines, and updated 10 mature product lines. Developed and managed new pricing strategy for more than 3000 products in two brands, to make pricing more consistent with competition and better reflect value. Increased sales and net margin for mature products by more than \$3 million per year without reducing volumes.
- Managed development of improved marketing communications for new and existing products, such as literature, catalogs, and consumer-level packaging.

**Manager, Innovative Products (Technology Exploration), TXU Energy**

2001 - 2002

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- Managed four-person group responsible for developing innovative products and services for retail consumers, such as energy-efficient products, new billing and payment services, home energy management systems, power reliability devices and alternative generation systems (e.g., fuel cells).
  - Directed market research project to identify product development opportunities.
  - Created and managed strategic plan to create new products and services that had the potential to add significantly to the bottom line by addressing needs identified by market research.
  - Led the development of, and managed, \$1+ million product development budget.
  - Managed development of initial business plans for innovative consumer products and services.
  - Managed development of business plan to start selling products via an Internet-based store.

#### **Sr. Product Development Manager, FPL Energy Services**

1999 - 2001

- Responsible for initiating development of new products based on energy-efficient technologies.
- Developed business plans to create value-added businesses through the use of innovative energy technologies, including principally HVAC efficiency and distributed generation technologies.
- Managed \$1+ million R&D budget. Implemented business strategy to redirect state-mandated energy efficiency R&D funding from basic research to projects with commercial potential. Negotiated R&D contracts with outside vendors, including universities and consulting firms. Renegotiated a contract to save \$400,000.

#### **General Manager, Steinberger Guitars & Tobias Basses, Gibson Guitar Corp.**

1997 - 1998

- Responsible for developing and implementing turnaround plan for \$3.5 million bass guitar division.
- Introduced new products; developed new retail channels (distributors and dealers) and an Internet-based distribution channel, a new marketing communications plan, sales promotions, consumer promotions, and new pricing. Improved sales in two product lines and profitability in all three product lines.
- Managed project to improve manufacturing operations. Achieved a 90% decrease in units rejected for quality, a 10% reduction in labor and a 94% decrease in the warranty service backlog.

#### **Product Manager, Electromechanical Products, SATEC Systems Inc.**

1996 - 1997

- Responsible for P&L, and all marketing, for several product lines of computer-controlled electromechanical strength testing systems, totaling \$5 million in sales.
- Initiated and managed project to redesign and relaunch company's largest product line. Managed engineering project that reduced manufacturing time by 50% and raw materials costs by 10%. Sales of this product line increased 30% in the year following its introduction.

#### **EDUCATION**

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MS, Marketing, Daniels College of Business, University of Denver, 2004

MBA, Transportation & Logistics, University of Tennessee, 1989

BS, Metallurgical Engineering, University of Alberta, 1987

**Robert M. Balzar**  
Conservation Resources Director, Seattle City Light

**PROFESSIONAL EXPERIENCE**

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**Seattle City Light - Director, Conservation Resources**

June 2007-Present

- Responsible for planning, design, marketing, implementation and verification of residential, commercial and industrial conservation and demand response programs
- Responsible for customer renewable programs, solar pv program and renewable power content program (Green Up)
- Directed the efforts of a staff of 65 FTE, with four managers, two supervisors and a strategic advisor as direct reports—increasing to 91 FTEs in 2010
- Responsible for total program budgets of \$41M per year. Responsible for 5 Year Plan which will increase spending to over \$51M in program content by 2012.
- Exceeded 2007 goal by 4% and achieved 65,000 Mwhr in verified savings. Exceeded 2008 goal of 73,500 Mwhr by almost 25%. New 5 Year Plan will double savings goals from 2008 targets by 2012.
- Responsible to Superintendent, City Council and Mayor for planning, implementation and verification of conservation and customer renewable programs
- Responsible for external relationships with community leaders, regional advocates, large customers and other key stakeholders in the Northwest.

**Pinnacle Homes Las Vegas – Director, Marketing and Product Development**

4/06 - 5/07

- Designed and implemented short term marketing plans for four separate new housing communities
- Led team that selected new sales company
- Participating in new land acquisition and product development
- Leading efforts for next generation of Energy Star and Water Smart homes

**Nevada Power Co. and Sierra Pacific Power Co. – Director, Energy Efficiency and Conservation**

1/85 - 4/06

- Developed, designed and implemented new conservation department for multi-utility company, Sierra Pacific Resources, for its operating companies, Sierra Pacific Power Company, Reno Nevada; and Nevada Power Company of Las Vegas Nevada---over 1,000,000 meter points and 7000 Mw summer peak demand
- Built program from initial approval of \$2,000,000 in 2001 to over \$40,000,000 in 2006. Over 20 employees and 6 major contractors with the equivalent of another 20 full time staff.
- Managed internal staff and external contract and contractors in team based and results oriented environment
- Responsible for internal budget and staffing approvals, responsible for external regulatory approval of program design, budget and results with Nevada State Public Utilities Commission.
- Developed new cost-benefit model to allow for multiple year return and cost of capital accounting treatment

- Responsible for developing SolarGenerations and Green Power tariff programs--- SolarGenerations is state funded residential solar photovoltaic rebate program. Over 1700 kw delivered from 315 individual projects.
- Results and budget control driven. Each year, budgets were within 5% of actual expenditures. Energy and peak reduction savings exceeded original goals. By 2005 our programs saved Nevada over 200 Mw of peak demand reduction and \$100,000,000 in cumulative annual energy costs. (about 3% of total annual revenues).

#### **Sierra Pacific Power Company - Various Engineering and Management Positions**

6/75-1/85

- Director Energy Solutions--Lead multi-discipline team that formed un-regulated subsidiary, e3, focused on bringing large customer performance contracting energy savings
- Director of Resource Planning—1990-1995, submitted and obtained regulatory approval for three comprehensive resource plans
- Director of Energy Technologies—responsible for investigation of solar and wind energy solutions—most specifically as they relate to on-site solutions
- Project Engineer for small electrical consulting firm designing electrical facilities for commercial and industrial customers
- Sales Engineer for small manufacturer's representative company selling industrial and electrical control products
- Nuclear Engineer for US Department of Navy at Mare Island Naval Shipyard refueling nuclear submarines

#### **EDUCATION AND TRAINING**

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##### **University of Nevada Reno**

B.S. in Electrical Engineering, 1975

##### **Boards and Commissions:**

- Northwest Energy Efficiency Alliance-Portland—2007-present—Also serving on Strategic Planning Committee
- Nevada State Task Force on Renewable Energy and Energy Conservation—2001-2006--past
- SWEEP (Southwest Energy Efficiency Project)—Boulder Co—Past Chair and Board Member—2002-2006
- YMCA of Southern Nevada—2002-2007 Board Member and Chair of Facilities Committee
- Provided testimony before State Commissions in Nevada, California, Arizona and Arkansas

#### **SYNERGISTIC ACTIVITIES**

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- Northwest Energy Efficiency Alliance representative and Board of Directors Member
- Advisory Committee Member for 6th Power Plan of the Northwest Power and Conservation Council- Regional Resource Plan
- Served as Seattle City Light representative and have fully participated in the National Action Plan for Energy Efficiency lead by the US EPA and DOE
- Received National Awards from Energy Star in 2003/2004/2005 and Association of Energy Service Professionals in 2005
- Served on multiple boards and commissions providing utility representation and advocacy

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**Jeff Kelley-Clarke**  
Community Conservation Manager, Seattle City Light

**SUMMARY OF QUALIFICATIONS**

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Senior Utility manager with extensive experience in conservation and people and project management.

- Experienced in delivering challenging, high visibility, projects on time, on budget.
- Proven Program Manager – successfully managed and delivered a diverse set of programs and projects with complex staffing (including a large volunteer component), budget and timeline constraints.

**PROFESSIONAL EXPERIENCE**

---

**Manager Conservation Resources, Seattle City Light**

2009 - Present

Responsible for management of a 20-person team of planners and energy analysts in developing and carrying out energy conservation and retrofit programs for residents and small businesses.

- Develop work programs and set priorities.
- Develop and control group budget.
- Lead recruitment and hiring efforts.
- Coordinate City Light efforts to use Federal Stimulus funds.
- Give talks to local community groups to expand outreach efforts.
- Negotiate agreements with private companies and local jurisdictions.

**Country Director, United States Peace Corps, Chisinau, Moldova**

2005 – 2009

Managed the Peace Corps Post in the Republic of Moldova in Eastern Europe, with overall responsibility for 125 American Volunteers and an in-country staff of 38 (3 American, 35 Moldovan.)

- Determined program direction and evaluated progress.
- Assured the health and safety of Volunteers living in remote villages.
- Designed and helped carry out effective training programs.
- Met with Moldovan officials to build local support for Volunteer programs.
- Coordinated efforts with Embassy and Non-Governmental Organization representatives.
- Turned initiatives from Washington into functional field programs.
- Supported Volunteers and Staff with resources, counseling, and direction.

**Solid Waste Division Director, Snohomish County Public Works**

1992 – 2005

Responsible for management of a 130-person, \$45 million (operating) budget system of waste prevention and recycling programs, transfer stations, hazardous waste drop-off sites, and landfill monitoring, serving a population of 600,000 people and handling 440,000 tons of waste per year.

- Developed work and capital construction programs and set priorities.
- Developed financial and funding plans; developed and controlled budget.
- Instigated and guided efficiency efforts.
- Negotiated contracts with private companies and local jurisdictions.

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- Guided communications plan for elected officials, the media, and citizens and built public support for a once-controversial program.

#### **Solid Waste Planner/Assistant Director**

1989 – 1992

Performed variety of assignments for an organization undergoing rapid change during political crises. Developed and controlled division budgets. Resolved financial and operational problems.

#### **Environmental Planner/Group Supervisor**

1984 - 1989

Created and supervised the public information and environmental planning section for the department. Developed new strategies for gaining public input and acceptance of public works projects.

#### **Snohomish County Planning - Senior Planner**

1979 – 1984

- Processed land use permit applications, including plats, rezones, variances, conditional use permits, and shoreline permits. Redesigned the zoning code and permit process.
- Developed a comprehensive land use plan for northwest portion of the county, and led the public outreach process for its adoption.

#### **Volunteer, Ministry of Housing, United States Peace Corps, Manama, Bahrain**

1976-1978

Coached Ministry employees on budget control methods; designed and carried out a mini-census to assess demand for housing size based on demographics.

### **EDUCATION**

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#### **Massachusetts Institute of Technology**

Bachelor of Science, Urban Studies and Planning, 1976

### **SYNERGISTIC ACTIVITIES**

---

- **Washington State Solid Waste Advisory Committee, Chair (1997-2004)** Advised the Department of Ecology, worked with legislators on bills, spoke at state and national conferences on solid waste issues.
- **Washington Solid Waste Policy Forum, Steering Committee (1994-2004)**. Helped found and direct a statewide coalition of solid waste program managers to advocate for programs and coordinate regional efforts.
- **Everett Youth Symphony, Board Member & Board President (1991-1997)**. Directed operations of a 150-member community music organization.
- **Massachusetts Institute of Technology, Educational Counselor (1984 – 1999)**. Interviewed high school students as part of the MIT admissions process. Served three years as regional coordinator.

**John N. Forde Jr.**  
Residential Program Manager at Puget Sound Energy  
2223 Rockefeller Ave  
Everett WA 98201  
425-356-7797

## **PROFESSIONAL EXPERIENCE**

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### **Residential Program Manager, Puget Sound Energy**

2006-Present

Planned & implemented a gas/electric multifamily weatherization program. Reviewed the Requests for Proposals, evaluated them and awarded the contract. Reduce the proposal costs by \$78,000.00. Developed 2 year budget to include staffing, marketing and outside services. Coordinated with several existing residential and commercial programs to incorporate them into a comprehensive program offer.

### **Energy Management Analyst, Seattle City Light**

2004-2005

Conducted lighting surveys for small businesses & identified potential energy savings. Completed lighting spreadsheets based on SCL cost saving analysis and assisted business owners in determining appropriate energy efficient lighting upgrades. Worked with the regional Lighting Design Lab to identify new lighting products and their application for small commercial businesses.

### **Built Smart Program Manager, Seattle City Light**

1999-2004

See Built Smart Program job description below.

### **Utility Cost Watch Product Manager, Seattle City Light**

1998-1999

Was the lead planner implementer and sales rep for a utility accounting software service (the Utility Manager) that provided a comprehensive utility tracking system for multi site commercial companies. Conducted sales presentations to customers and oversaw customer database population of utility consumption (water/sewer, electricity, natural gas, recycling etc.)

### **Built Smart Program Manager, Seattle City Light**

1996-1998

Conducted presentations to developers, architects, general contractors & trade associates. Evaluated architectural/mechanical drawings to identify potential program compliance/incentive amounts. Evaluated 3rd party energy calculations & analysis to determine buildings qualification. Conduct on site inspections during the construction process and completed building commissioning. Was the SCL liaison to the State. Energy Code Technical Group and was on the initial steering committee of the Built Green planning team for the Master Builders Association of King/Snohomish counties.

### **Energy Planning Analyst, Seattle City Light**

1997-1997

Was selected to implement a new construction energy savings program in SCL after BPA ended SGC funding to utilities. Worked closely with SBW Consulting building industry professionals, the Business & Industry

recycling venture, and SCL staff to develop program components, specifications, energy savings, solid waste guidelines and program delivery. Was selected for the Light Power & Pride award through SCL.

**Super Good Cents Program Manager, Seattle City Light**

1992–1996

SCL liaison to developers, architects, general contractors & others to successfully incorporate energy efficiency design in newly constructed low/mid rise mixed use complexes. Performed computer analysis of buildings to develop compliance path for participation. Was part of the original interdepartmental City of Seattle Green team that incorporated the “green” building ethic in the Seattle service area. Oversaw customer database population of utility consumption (water/sewer, electricity, natural gas, recycling etc.)

**Energy Planning Analyst, Seattle City Light**

1991–1992

SCL negotiator with BPA, WA. ST. Energy Office & other electric utilities to implement a Long Term Super Good Cents, a regional energy efficient multifamily residential new construction program. Was utility liaison to deputy superintendent and city council during planning.

**Energy Conservation Representative, Seattle City Light**

1990–1991

Conducted BPA certified energy audits for SCL customers in single family homes/multiplex complexes.

**Energy Conservation Representative, Dept. of Human Resources**

1988–1990

Conducted BPA certified energy audits for low income SCL customers. Developed contractor work orders for installed measures. Conducted gas furnace testing, blower door & other energy tests.

**Project Manager, F&E Enterprises Inc.**

1983–1988

Installed all types of insulation, ventilation & minor home repairs. Handled customer service issues, developed crew schedules and performed inspections of all installed work

**Installer, Evergreen Insulation**

1981–1983

Performed all types of weatherization, ventilation & minor home repairs in Snohomish, King, Pierce and Thurston counties.

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**EDUCATION**

**Fort Steilacoom CC, Tacoma, WA**

1971–1975

**US Army, Europe**

1976–1980

**BPA Certified Auditor/Inspector, Portland OR**

1988–1988

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**Calvin E. Shirley**

Vice President, Energy Efficiency Services at Puget Sound Energy

Calvin E. Shirley is vice president, Energy Efficiency Services for Washington-based Puget Sound Energy (PSE), the utility subsidiary of Puget Energy (NYSE: PSD), a Fortune 1000 company. Shirley leads PSE's award-winning and nationally-recognized energy-efficiency programs that are serving the region's growing energy needs by helping customers conserve electricity and natural gas.

Prior to joining PSE in 2002, Shirley held senior-level positions with Snohomish County Public Utility District, Seattle City Light, the City of Seattle, and King County.

He is a member of the board of the Northwest Energy Efficiency Alliance and Leadership Tomorrow.

Shirley is a graduate of the University of Washington.

**Bill Younger**

CEM, Manager, Business Energy Management at Puget Sound Energy  
bill.younger@pse.com

**PROFESSIONAL EXPERIENCE**

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**Manager, Business Energy Management at Puget Sound Energy**

February 2007 -Present (2 years 11 months)

Manager position within the Energy Efficiency Services department, with leadership responsibility for development and all aspects of delivery of PSE's demand-side programs and services for all of commercial and industrial markets. Responsible for annual budget in excess of 30 million dollars and for achieving approximately 12 aMW and 3 million therms annually to meet company resource goals. Manage staff of 25 professional and technical employees who are responsible for delivery of specific efficiency programs and projects for the company. Analysis and planning of demand-side programs and policy initiatives, including energy efficiency, demand response, and fuel conversion while assuring compliance with Company policies and program tariffs. Actively collaborate with State Utility Transportation Commission advisory group and constituents to incorporate their interests into the design and implementation of efficiency programs.

**Sr. Energy Management Engineer at Puget Sound Energy**

2003 -2007 (4 years)

Responsible for the development and management of PSE's Resource Conservation Management (RCM) program. The program works with facility operations and maintenance staff to identify low cost measures that can be implemented to reduce expenditures across all resources including energy, water, wastewater, and solid waste. Provide technical support for a wide range of demand side management projects, facility energy and resource audits, utility tracking software and monthly customer downloads, and manage PSE's web-based energy interval data presentment system. Develop and present a variety of Energy Management training programs for customers and internal staff.

**Director of Facilities at Lineo Inc.**

2000 -2002 (2 years)

Provide oversight of facility operations and contracted facility support services for 20 facilities in 10 countries worldwide. Central point of contact for all space requests and assignment of workspace locations. Work with department heads or designated representatives on space planning for current operations and projected growth, assignment of employee locations, department moves, and coordinate with Information Services Department on the installation of phone and data systems to assigned spaces. Negotiate lease agreements and provide supervision of all contracted services for space planning, design, and construction of build-outs and remodels.

**Senior Associate at Macro International**

1999 -2000 (1 year)

Developed and implemented motor systems management training programs and support tools for US Department of Energy's Motor Challenge program. Conducted on-site evaluation of industrial motor management practices and provided technical assistance in development of motor repair/replace decision policies. Provided instruction to commercial facility operators and utility customer representatives on the energy efficient operation of commercial facilities. Supervised a staff of eight employees and managed the Seattle, Washington field office.

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**Senior Director at Enron Energy Services**

1997 -1999 (2 years)

Coordinated the development and operation of regional support offices to provide engineering services, coordination with vendor partnership program, proposal development for energy conservation projects, and technical support for sales staff. Coordinated the implementation of value-added services to complement utility tracking and facility management software products offered through Enron Energy Services. Services included FASER software implementation, energy management planning, utility bill and rate auditing, facility benchmarking, custom reporting, utility representation, deregulation preparation, and education and training programs. Responsible for management and supervision of 15 staff members, development and tracking of budgets, and providing technical support, evaluation of customer needs, pricing, and deal structuring in support of sales department.

**Energy Specialist 4 at Washington State Energy Office**

1990 -1996 (6 years)

Managed the Education and Training Unit and the Seattle field office of the Washington State Energy Office. Directed operations and supervised a staff of 15 in the planning, development, and implementation of energy education and training programs. Developed and maintained cooperative relationships with federal, state, and local governments, professional associations, and utilities and represented the agency in professional, local, state, regional, and national meetings. Senior level technical position responsible for the planning, curriculum development, coordination, marketing, and implementation of educational courses for various commercial client groups. Provided classroom instruction to a variety of commercial client groups on topics such as commercial energy code, energy accounting, energy auditing, energy management, and preventive maintenance.

**EDUCATION**

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**University of Washington**

Construction Management, 2001 -2002

**Lane Community College**

Energy Management, 1983 -1984

**SYNERGISTIC ACTIVITIES**

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Energy Managers' Hall of Fame -2007

Certified Energy Manager (CEM) -1991

Certified Energy Procurement Professional (CEP) -1997

Certified Business Energy Professional (BEP) -2004

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## **Todd Starnes**

Manager Residential Energy Efficiency, Puget Sound Energy

Todd Starnes has been at Puget Sound Energy for the last eight years. Four years overseeing business development, sales and marketing. The past 4 years Todd has led PSE's Residential Energy Efficiency programs through double digit growth, introducing the region to some of the most innovative and successful programs in the country. That innovation has resulted in over 15 aMw saved each year. PSE is based in the Pacific Northwest with over 1.2 million electric customers and over 600,000 gas customers.

### **PROFESSIONAL EXPERIENCE**

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#### **Manager Residential Energy Efficiency, Puget Sound Energy**

2004-present

Oversees 30 employees and a \$50 million annual residential energy efficiency budget. Energy Efficiency programs for both Gas and Electric Customers.

#### **Manager Business Development, Puget Sound Energy**

2001-2004

Responsible for evaluation and development of new business opportunities, which included PSE's Contractor Referral Service, Integrated Customer Solutions and PSE's Leasing Business. Additional responsibilities included managing the Marketing Department, the Energy Advisor call center and PSE's environmental education program, "Powerful Choices" which reaches 14,000 middle school children each year.

### **EDUCATION AND TRAINING**

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#### **University of Washington**

Masters of Business Administration, 2004

#### **Seattle Pacific University**

Bachelor of Science, 1989

### **SYNERGISTIC ACTIVITIES**

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Todd serves on the Residential Expert Committee for the Northwest Energy Efficiency Alliance.

**Jeff Kelley-Clarke**  
Community Conservation Manager, Seattle City Light

**SUMMARY OF QUALIFICATIONS**

---

Senior Utility manager with extensive experience in conservation and people and project management.

- Experienced in delivering challenging, high visibility, projects on time, on budget.
- Proven Program Manager – successfully managed and delivered a diverse set of programs and projects with complex staffing (including a large volunteer component), budget and timeline constraints.

**PROFESSIONAL EXPERIENCE**

---

**Manager Conservation Resources, Seattle City Light**

2009 - Present

Responsible for management of a 20-person team of planners and energy analysts in developing and carrying out energy conservation and retrofit programs for residents and small businesses.

- Develop work programs and set priorities.
- Develop and control group budget.
- Lead recruitment and hiring efforts.
- Coordinate City Light efforts to use Federal Stimulus funds.
- Give talks to local community groups to expand outreach efforts.
- Negotiate agreements with private companies and local jurisdictions.

**Country Director, United States Peace Corps, Chisinau, Moldova**

2005 – 2009

Managed the Peace Corps Post in the Republic of Moldova in Eastern Europe, with overall responsibility for 125 American Volunteers and an in-country staff of 38 (3 American, 35 Moldovan.)

- Determined program direction and evaluated progress.
- Assured the health and safety of Volunteers living in remote villages.
- Designed and helped carry out effective training programs.
- Met with Moldovan officials to build local support for Volunteer programs.
- Coordinated efforts with Embassy and Non-Governmental Organization representatives.
- Turned initiatives from Washington into functional field programs.
- Supported Volunteers and Staff with resources, counseling, and direction.

**Solid Waste Division Director, Snohomish County Public Works**

1992 – 2005

Responsible for management of a 130-person, \$45 million (operating) budget system of waste prevention and recycling programs, transfer stations, hazardous waste drop-off sites, and landfill monitoring, serving a population of 600,000 people and handling 440,000 tons of waste per year.

- Developed work and capital construction programs and set priorities.
- Developed financial and funding plans; developed and controlled budget.
- Instigated and guided efficiency efforts.
- Negotiated contracts with private companies and local jurisdictions.

- Guided communications plan for elected officials, the media, and citizens and built public support for a once-controversial program.

#### **Solid Waste Planner/Assistant Director**

1989 – 1992

Performed variety of assignments for an organization undergoing rapid change during political crises. Developed and controlled division budgets. Resolved financial and operational problems.

#### **Environmental Planner/Group Supervisor**

1984 - 1989

Created and supervised the public information and environmental planning section for the department. Developed new strategies for gaining public input and acceptance of public works projects.

#### **Snohomish County Planning - Senior Planner**

1979 – 1984

- Processed land use permit applications, including plats, rezones, variances, conditional use permits, and shoreline permits. Redesigned the zoning code and permit process.
- Developed a comprehensive land use plan for northwest portion of the county, and led the public outreach process for its adoption.

#### **Volunteer, Ministry of Housing, United States Peace Corps, Manama, Bahrain**

1976-1978

Coached Ministry employees on budget control methods; designed and carried out a mini-census to assess demand for housing size based on demographics.

### **EDUCATION**

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#### **Massachusetts Institute of Technology**

Bachelor of Science, Urban Studies and Planning, 1976

### **SYNERGISTIC ACTIVITIES**

---

- **Washington State Solid Waste Advisory Committee, Chair (1997-2004)** Advised the Department of Ecology, worked with legislators on bills, spoke at state and national conferences on solid waste issues.
- **Washington Solid Waste Policy Forum, Steering Committee (1994-2004)**. Helped found and direct a statewide coalition of solid waste program managers to advocate for programs and coordinate regional efforts.
- **Everett Youth Symphony, Board Member & Board President (1991-1997)**. Directed operations of a 150-member community music organization.
- **Massachusetts Institute of Technology, Educational Counselor (1984 – 1999)**. Interviewed high school students as part of the MIT admissions process. Served three years as regional coordinator.

**John N. Forde Jr.**  
Residential Program Manager at Puget Sound Energy  
2223 Rockefeller Ave  
Everett WA 98201  
425-356-7797

## **PROFESSIONAL EXPERIENCE**

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### **Residential Program Manager, Puget Sound Energy**

2006-Present

Planned & implemented a gas/electric multifamily weatherization program. Reviewed the Requests for Proposals, evaluated them and awarded the contract. Reduce the proposal costs by \$78,000.00. Developed 2 year budget to include staffing, marketing and outside services. Coordinated with several existing residential and commercial programs to incorporate them into a comprehensive program offer.

### **Energy Management Analyst, Seattle City Light**

2004-2005

Conducted lighting surveys for small businesses & identified potential energy savings. Completed lighting spreadsheets based on SCL cost saving analysis and assisted business owners in determining appropriate energy efficient lighting upgrades. Worked with the regional Lighting Design Lab to identify new lighting produces and their application for small commercial businesses.

### **Built Smart Program Manager, Seattle City Light**

1999-2004

See Built Smart Program job description below.

### **Utility Cost Watch Product Manager, Seattle City Light**

1998-1999

Was the lead planner implementer and sales rep for a utility accounting software service (the Utility Manager) that provided a comprehensive utility tracking system for multi site commercial companies. Conducted sales presentations to customers and oversaw customer database population of utility consumption (water/sewer, electricity, natural gas, recycling etc.)

### **Built Smart Program Manager, Seattle City Light**

1996-1998

Conducted presentations to developers, architects, general contractors & trade associates. Evaluated architectural/mechanical drawings to identify potential program compliance/incentive amounts. Evaluated 3rd party energy calculations & analysis to determine buildings qualification. Conduct on site inspections during the construction process and completed building commissioning. Was the SCL liaison to the State. Energy Code Technical Group and was on the initial steering committee of the Built Green planning team for the Master Builders Association of King/Snohomish counties.

### **Energy Planning Analyst, Seattle City Light**

1997-1997

Was selected to implement a new construction energy savings program in SCL after BPA ended SGC funding to utilities. Worked closely with SBW Consulting building industry professionals, the Business & Industry

recycling venture, and SCL staff to develop program components, specifications, energy savings, solid waste guidelines and program delivery. Was selected for the Light Power & Pride award through SCL.

**Super Good Cents Program Manager, Seattle City Light**

1992–1996

SCL liaison to developers, architects, general contractors & others to successfully incorporate energy efficiency design in newly constructed low/mid rise mixed use complexes. Performed computer analysis of buildings to develop compliance path for participation. Was part of the original interdepartmental City of Seattle Green team that incorporated the “green” building ethic in the Seattle service area. Oversaw customer database population of utility consumption (water/sewer, electricity, natural gas, recycling etc.)

**Energy Planning Analyst, Seattle City Light**

1991–1992

SCL negotiator with BPA, WA. ST. Energy Office & other electric utilities to implement a Long Term Super Good Cents, a regional energy efficient multifamily residential new construction program. Was utility liaison to deputy superintendent and city council during planning.

**Energy Conservation Representative, Seattle City Light**

1990–1991

Conducted BPA certified energy audits for SCL customers in single family homes/multiplex complexes.

**Energy Conservation Representative, Dept. of Human Resources**

1988–1990

Conducted BPA certified energy audits for low income SCL customers. Developed contractor work orders for installed measures. Conducted gas furnace testing, blower door & other energy tests.

**Project Manager, F&E Enterprises Inc.**

1983–1988

Installed all types of insulation, ventilation & minor home repairs. Handled customer service issues, developed crew schedules and performed inspections of all installed work

**Installer, Evergreen Insulation**

1981–1983

Performed all types of weatherization, ventilation & minor home repairs in Snohomish, King, Pierce and Thurston counties.

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**EDUCATION**

**Fort Steilacoom CC, Tacoma, WA**

1971–1975

**US Army, Europe**

1976–1980

**BPA Certified Auditor/Inspector, Portland OR**

1988–1988

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**Calvin E. Shirley**

Vice President, Energy Efficiency Services at Puget Sound Energy

Calvin E. Shirley is vice president, Energy Efficiency Services for Washington-based Puget Sound Energy (PSE), the utility subsidiary of Puget Energy (NYSE: PSD), a Fortune 1000 company. Shirley leads PSE's award-winning and nationally-recognized energy-efficiency programs that are serving the region's growing energy needs by helping customers conserve electricity and natural gas.

Prior to joining PSE in 2002, Shirley held senior-level positions with Snohomish County Public Utility District, Seattle City Light, the City of Seattle, and King County.

He is a member of the board of the Northwest Energy Efficiency Alliance and Leadership Tomorrow.

Shirley is a graduate of the University of Washington.