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Seattle’s Green Building Initiative and Housing Retrofits:
How Seattle Can Overcome the Obstacles That Face
Effective Energy Conservation in the Building Sector

Mike O’Brien and Sahar Fathi†

I. INTRODUCTION

Recognizing that federal action would be difficult under the admin-
istration of George W. Bush, Seattle Mayor Greg Nickels led an initia-
tive in 2005 to convince other U.S. Mayors to join Seattle in reducing
climate pollution by the standards set forth in the Kyoto Protocol.1 Since
then, more than 1,000 mayors from all fifty states have signed onto the
agreement.5 In order to achieve the goals of the Kyoto Protocol, Seattle
had to identify and adopt new policies dedicated to reducing greenhouse
gas emissions, primarily CO2. Because buildings represent 38.9% of
primary U.S. energy use and 38% of all CO2 emissions,3 reducing energy
use in residential and commercial buildings has become a policy priority
for Seattle.

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reporting, and forecasting. Sahar Fathi is a recent graduate of the University of Washington School
of Law. She also has a Masters degree in International Studies from the University of Washington,
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French and International Relations. The authors would like to thank Roger Valdez from the Sightline
Institute, Carrie Dolwick of the Transportation Choice Coalition, and James Irwin and Nate Ela from
the Center on Wisconsin Strategy.

1. Kyoto Protocol to the United Nations Framework Convention on Climate Change, Dec. 10,
cember 11, 1997, and entered into force on February 16, 2005. The Kyoto Protocol is an internation-
al agreement linked to the United Nations Framework Convention on Climate Change. The major
feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the
European community for reducing greenhouse gas (GHG) emissions.

2. CITY OF SEATTLE OFFICE OF SUSTAINABILITY & ENV’t, SEATTLE CLIMATE PROTECTION
cs/CPI-09-Progress-Report.pdf [hereinafter CLIMATE PROGRESS REPORT].

3. STACY HO & SATYA RHODES-CONWAY, A SHORT GUIDE TO SETTING UP A CITY-SCALE
RETROFIT PROGRAM 2 (Green For All & Ctr. on Wisconsin Strategy eds., 2011), available at
It was by no small feat that, by 2008, Seattle’s citywide emissions met the reduction target of the Kyoto Protocol.\(^4\) Carbon emissions for residential buildings were decreased to 18% below 1990 levels, a small coup for the energy sector\(^5\) as most building emissions come from commonly used items such as home heating, appliances, hot water and fuel for landscaping equipment.\(^6\) Seattle’s most significant reductions in the building sector emissions came from residential buildings because of a shift from oil to natural gas as a home energy source and Seattle City Light’s shift from natural gas and coal-derived electricity to renewable sources of energy.\(^7\)

Despite this early success, however, Seattle must continue to embrace system-wide change in order to stay on track for reaching carbon emission reduction goals.\(^8\) This includes accounting for population growth and incorporating energy efficiency measures. On June 30, 2010, the Washington State Office of Financial Management indicated that between 2008 and 2010 Seattle had a net increase of 12,500 housing units.\(^9\) The total population of Seattle in this same timeframe increased from 592,800 to 612,000.\(^10\) These statistics indicate that by 2030 new buildings will need to be carbon neutral and existing buildings retrofitted.\(^11\) Consistent with this need, the City of Seattle’s Office of Sustainability & Environment reported in its Seattle Climate Protection Initiative: Progress Report 2009 that “the city has looked to deepen the level of energy efficiency investments, while keeping an eye toward making them available to everyone—regardless of income or whether they benefit a renter or a homeowner.”\(^12\)

Seattle’s Green Building Initiative, discussed in Part II, is part of the City’s efforts to reduce emission from the building sector. Part III discusses two common implementation options that have been proposed nationally and analyzes their potential application in Washington State. Part IV analyzes the constitutional hurdles that threaten to impede energy

\(^4\) CLIMATE PROGRESS REPORT, supra note 2, at 16.
\(^6\) Id. at 3.
\(^7\) Id. at 4.
\(^8\) CLIMATE PROGRESS REPORT, supra note 2, at 17.
\(^11\) CLIMATE PROGRESS REPORT, supra note 2, at 18.
\(^12\) Id. at 9.
efficiency financing, looking in particular at House Bill 2853. Finally, this article will conclude by succinctly stating the case for the passage of legislation like HB 2853, and reiterating the ability of cities like Seattle to effectively implement a utility on-bill financing policy.

II. SEATTLE’S GREEN BUILDING INITIATIVE

In his 2008 State of the City Address, Mayor Nickels announced plans for a focused initiative to make Seattle the nation’s Green Building Capital. He proposed that this could be achieved by improving energy efficiency of residential and commercial buildings, creating job opportunities in the green economy, and saving Seattle residents and businesses money on energy costs. In accordance with this goal, he established a Green Building Task Force to provide guidance.13 Fifty stakeholders were separated into two task forces: a New Building Committee and an Existing Buildings Committee.14

Among other things, the Existing Buildings Committee reviewed financing and repayment mechanisms to promote energy efficiency retrofits and catalyze energy efficiency investments. One program born of this effort was the City of Seattle’s partnership with Puget Sound Energy (PSE) and Seattle City Light to develop and implement an eighteen-month residential energy performance audit for up to 5,000 small multifamily and single family residential customers in Seattle. Audits were subsidized to a rate of $95, down from a typical cost of $600, and the cost would be refunded when homeowners moved forward with retrofit recommendations.15

In addition to this partnership, the Green Building Task Force members reviewed issues relating to lack of access to adequate financing for efficiency improvements. Low-income residents16 are already eligible for weatherization grants through the City’s HomeWise17 program, and the Task Force recommended that the City of Seattle work with a local community development financial institution to attract and manage a pool of public and private capital to finance loans for residential energy efficiency retrofits. The City’s contribution would be in the form of Federal Energy Efficiency Block Grant funds, and the entire program would

14. Id. at 3-4.
15. Id. at 11.
16. Low income residents are defined as renters or homeowners at or below 200% of the federal poverty level.
17. HomeWise is funded by both the state and federal governments.
need to be expanded to $20-40 million in funds for loans.\textsuperscript{18} This capital could be used to stimulate homeowner investments aimed at reducing CO\textsubscript{2} emissions by upgrading lighting, furnaces, water heaters and windows. The retrofit pilot program would begin with a loan capital of $3-5 million and expected collateral in the form of a lien on the property being retrofitted.\textsuperscript{19} Because of the diversity in income levels among potential participants, the proposed loan program would utilize a tiered payment structure, prioritizing greater subsidies for the lowest income borrowers.\textsuperscript{20}

\section{II. Energy Efficiency Models}

One of the chief difficulties with energy efficiency financing programs is the method of loan repayment. In 2009 the Washington State Legislature passed legislation\textsuperscript{21} that paved the way for the state to use federal funding to provide technical assistance to weatherization pilot projects in the form of grants in various cities and municipalities.\textsuperscript{22} While this legislation was and is an important step forward, it is only the first step towards creating a comprehensive Green Building program with the potential to have the large-scale impact on job creation and energy efficiency improvements called-for by the Seattle Climate Protection Initiative.

The logical next step for the state, and for Seattle, is to move beyond grants and begin providing financing for energy efficiency retrofits. Funding for such retrofits, coming in the form of loans, has the potential to substantially increase the number of households eligible for retrofit projects. The primary obstacles to an energy efficiency financing program include eliminating the upfront capital barrier, which is especially problematic for low-income residents, eliminating the time barrier whereby a homeowner could move before paying off the retrofit but still feel the benefit of the retrofit, and eliminating the information barrier so that homeowners would have all the information needed to implement the results of an audit.

Various groups, including Green for All\textsuperscript{23} and Center on Wisconsin Strategy (COWS),\textsuperscript{24} have highlighted the importance of setting up well-
designed repayment mechanisms to the success of a retrofit program. Together, these elements will allow maximum realization of energy savings. The two models that have been pioneered elsewhere in the nation and that have gained the most traction are Utility Bill Financing and PACE.

A. Utility Bill Financing

Utility Bill Financing is a retrofit repayment mechanism that helps retrofits to occur on a large scale by allowing utilities customers to repay retrofit loans via installments on their utility bill. Utility Bill Financing in Seattle would allow for the electric utility (in this case, Seattle City Light) to loan ratepayers the capital (or services) necessary to retrofit their building, thereby eliminating the upfront capital expense that often makes retrofits unfeasible. The model differentiates between homeowners and renters, tailoring repayment plans to each group, with the goal of reaching as many residents as possible. A typical example would involve a homeowner first receiving an energy audit on his or her home. The audit would determine what kind of improvements could be made to the home to increase energy efficiency. Then, the utility would provide the capital or services to install the retrofit. Finally, the capital would be repaid to the utility by the homeowner through payments on the monthly or quarterly utility bill.

The strongest incentive to participate in this type of program is that the energy efficiencies made to the home can decrease the energy bill and counterbalance the cost of the home improvements. To be successful, the customers’ savings in utility bills would be greater than the cost of repaying the capital.

Although the benefits of Utility Bill Financing are numerous, there are a few complications with this model, beginning with the barriers to renters. Tying the retrofit costs to an energy bill could provide an enormous benefit to low-income households, particularly renters. But renters are not able to initiate energy efficiency retrofits themselves, and are instead dependent on their landlords to make the decision to implement a retrofit. Landlords do not have the basic incentive, namely decreased long-term energy costs, operating in favor of energy retrofits.


24. The Center on Wisconsin Strategy was founded by Joel Rogers at the University of Wisconsin, Madison to pursue practical, on-the-ground strategies in workforce development, green energy, transit, and healthcare. See generally Center on Wisconsin Strategy, About COWS, www.cows.org/about_index.asp (last visited Jan. 25, 2011).

Utility Bill Financing also faces challenges in effectively reaching low-income segments of the population. National statistics indicate that low-income households spend 14% of their income on energy utilities, compared to the 3.5% that median-income households spend. These statistics, coupled with the fact that low-income residents usually live in the least efficient housing stock, emphasize the need for a retrofit program that can be effectively implemented among low-income households. To this end, marketing campaigns must be specifically directed at this segment of the population, and any potential retrofit program must be able to combat the general lack of understanding about financial mechanisms. A strong marketing system, including translation into multiple languages and partnerships with local community organizations, will be essential for the success of a Utility Bill Financing retrofit program in Seattle.

A final complication that Utility Bill Financing will face in Washington involves price increases and the Washington Utilities and Transportation Commission (WUTC). WUTC is the public service commission that has jurisdiction over utilities that are not owned by municipalities, and all energy rate increases must be approved by the WUTC.

B. PACE Programs

One notable alternative retrofit repayment mechanism is Property Assessed Clean Energy (PACE) programs. PACE financing programs differ from Utility Bill Financing in that they attach the obligation to repay the cost of improvements to the property where the retrofits are installed. PACE is applied at the local government level and allows property owners to attach up to 100% of the cost of energy improvements to their property tax bill. In the event of nonpayment, the local government has the option of foreclosing on the delinquent property. Bonds to fund PACE programs can be issued by municipal financing districts or by finance companies, and the proceeds can then be used to retrofit residen-

27. Id. at 8.
29. Ho, supra note 3, at 6.
31. Id. at 2.
tial property.\textsuperscript{32} Fundamentally, property owners benefit from cash savings via energy savings that exceed the actual financing cost.

By attaching the retrofit costs to property tax bills, PACE programs create strong incentives for property owners to implement energy efficiency upgrades. PACE programs also avoid the potential conflicts with the WUTC because energy rates do not need to be adjusted. In 2008, California passed the first enabling legislation at the state level to allow for municipalities to create financing districts providing low cost retrofit capital to homeowners and building owners, secured by senior tax liens on their property.\textsuperscript{33} Indeed, many state legislators were keen to support legislation that minimized the risk of financing energy efficiencies by attaching loans to property.\textsuperscript{34} In response, on November 19, 2009, Senator John Sarbanes of Maryland introduced the PACE Tax Benefits Act to support efforts by state and local governments helping homeowners and businesses install energy efficiency upgrades and to allow for them to raise capital tax free.\textsuperscript{35} In his speech he stated,

“This is an innovative and cost-free mechanism to encourage energy efficiency. The potential for economic growth and energy savings is vast if we establish a framework that allows for them to expand more broadly. By doing so, we will create thousands of new jobs; save billions of dollars in energy costs for consumers; and make significant progress in our efforts to reduce greenhouse gas emissions.”\textsuperscript{36}

Since 2008, PACE programs have been approved in more than twenty states,\textsuperscript{37} but not in Washington.

PACE programs implemented elsewhere in the country were initially successful, but the financing mechanism operated as a senior lien on mortgage payments caused substantial push-back from the Federal Housing Finance Agency (FHFA).\textsuperscript{38} In 2010, the popularity of the model triggered the Federal National Mortgage Association (Fannie Mae), Federal Home Loan Mortgage Corporation (Freddie Mac), and the Federal Home Loan Banks to issue brief letters that suggested PACE violated standard


\textsuperscript{33} Id.


\textsuperscript{35} 155 CONG. REC. E2836-04 (2009).

\textsuperscript{36} Id.

\textsuperscript{37} PR NEWSWIRE, supra note 32.

mortgage provisions. By July of 2010 they were backed by the FHFA. Responding to regulators’ fears that PACE programs would constrain the ability of Fannie and Freddie to recover when a mortgage went into default, the FHFA instructed the entities to apply more restrictive mortgage underwriting standards for all borrowers in jurisdictions with PACE programs.

As a result of the concerns raised by the FHFA, a PACE program does not seem to be a feasible option for Washington. The repayment mechanism appears especially ill-suited to current economic condition, and would require serious reworking before any legitimate attempt at implementation could be fruitful.

III. THE RIDDLE OF ARTICLE VIII AND WASHINGTON’S CONSTRAINTS IN ADOPTING WIDE-SCALE ENERGY RETROFIT PROGRAMS

As already established, Seattle has been a pioneer in reducing energy use in buildings and has campaigned heavily to support energy conservation. Washington State’s energy efficiency legislation, passed in May 2009, leveraged federal funding to provide grants and technical assistance to weatherization pilot projects. Later in 2009, Seattle City Light and PSE partnered to subsidize home energy audits for 5000 homeowners, and in 2010, Seattle passed an ordinance requiring annual energy performance rating and performance disclosure in all multifamily buildings with five or more units. These projects have the potential of creating thousands of green-collar jobs, saving energy and money for homeowners, and cutting greenhouse gas pollution. But if Washington and Seattle are to continue on the trajectory of innovative energy conservation, the Washington State Constitution is a potentially difficult obstacle to overcome.

Although programs like PACE and Utility Bill Financing have had some success in other states, implementation may not be so easy in Washington. Article VIII of the State Constitution, for one, prohibits the loaning of credit by the state or local government to any private entity. The concern in the 19th century, when the constitutional convention was held, centered on the potential for state money, primarily public credit

40. Id.
41. Id.
42. Climate Progress Report, supra note 2, at 17.
44. Ho, supra note 3, at 4.
used to build railroad projects, to be lost when the projects ultimately failed.\textsuperscript{46} As a result, the Constitution reflects the attitude that public funds should not generally be available for the financing of private projects.

The State Constitution generally prohibits the gift or loan of public money by state or local governments, specifically stating in Section 5, “the credit of the state shall not, in any manner be given or loaned to, or in aid of, any individual, association, company or corporation.”\textsuperscript{47} This concept is reiterated in Section 7 when it is applied to local governments:

No county, city, town or other municipal corporation shall hereafter give any money, or property, or loan its money, or credit to or in aid of any individual, association, company or corporation, except for the necessary support of the poor and infirm, or become directly or indirectly the owner of any stock in or bonds of any association, company or corporation.\textsuperscript{48}

Taken together, Sections 5 and 7 form a general prohibition on the loaning of public funds to private entities and pose a substantial impediment to any program attempting to use public funds to finance energy efficiency retrofits. As a result, an innovative program like PACE might run afoul of the Washington Constitution because it utilizes money borrowed by the state or local government to cover costs of retrofits which homeowners pay back, over time, on their property tax bill.

Because the constitutionality of a PACE or Utility Bill Financing program turns on the question of whether municipal financing of retrofit projects constitutes a gift, the issue has been analyzed repeatedly in Washington. Initial disagreement among attorneys eventually prompted prosecutor to request clarification from the Office of the Attorney General of Washington.\textsuperscript{49} In its 2006 opinion, the Office of the Attorney General addressed the question of whether public financing programs similar to PACE violate the constitutional prohibition on gifts of public funds or lending of credit.\textsuperscript{50} In the opinion, the Office of the Attorney General concluded that the giving or loaning of public money was constitutional only if it furthered a fundamental government interest.\textsuperscript{51} The opinion advocated the application of the two-part test articulated by the State Su-

\textsuperscript{47} Wash. Const. art. VIII, § 5.
\textsuperscript{48} Wash. Const. art. VIII, § 7.
\textsuperscript{50} Id. at 6.
\textsuperscript{51} Id. at 1.
Supreme Court in Citizens for Clean Air v. City of Spokane, asking first if the loan or gift funds a governmental purpose. If the funds are used to finance a government purpose, the court then looks at the nature of the purpose in conjunction with the consideration and donative intent to determine whether the expenditure violates Article VIII.

As applied to energy efficiency financing, the opinion did not clearly settle the debate over the constitutionality of programs like PACE and Utility Bill Financing. As a result, the presumption against publicly funded projects, as articulated in Sections 5 and 7 of Article VIII, is still a major concern to proponents of retrofit programs.

Fortunately, however, an exception to the general prohibition articulated in Section 5 and 7 can be found in Article VIII, Section 10 of the State Constitution. Specifically, Section 10 authorizes:

any county, city, town, quasi municipal corporation, municipal corporation, or political subdivision of the state which is engaged in the sale or distribution of water, energy, or stormwater or sewer services may, as authorized by the legislature, use public moneys or credit derived from operating revenues from the sale of water, energy, or stormwater or sewer services to assist the owners of structures or equipment in financing the acquisition and installation of materials and equipment for the conservation or more efficient use of water, energy, or stormwater or sewer services in such structures or equipment. Except as provided in section 7 of this Article, an appropriate charge back shall be made for such extension of public moneys or credit and the same shall be a lien against the structure benefited or a security interest in the equipment benefited. […]54

The existing exception contained in Section 10 allows cities like Seattle to move forward with energy efficiency financing. Because Seattle owns Seattle City Light, a public utilities provider, the City may use public money to finance housing retrofits aimed at conserving energy. The relationship between the City and Seattle City Light is not universal, however, as many municipal governments do not own and operate a utilities provider. This creates a clear problem as Section 10 does not extend financing capabilities to such municipal governments.

One potential method of remedying the problem caused by Sections 5 and 7 of Article VIII is through legislative action. In 2010, House Bill

52. Citizens for Clean Air v. City of Spokane, 114 Wn.2d 20, 39, 785 P.2d 447 (1990) (holding “If the government expends funds to carry out a fundamental governmental purpose, no unconstitutional gift occurs. If the expenditures are pursuant to the government’s proprietary authority, the court focuses on consideration and donative intent to determine if a gift has occurred”).
53. Id. at 39-41.
2853 (HB 2853) was introduced to the Washington State Legislature.\(^{55}\) This bill proposed the creation of a financing mechanism that would enable all local governments to expand and improve existing energy efficiency conservation and loan programs.\(^{56}\) Specifically, it proposed to give a municipality the ability to provide energy conservation services in one of two ways.\(^{57}\) First, conservation service could be administered through the creation of an independent energy conservation services utility. This option would cover municipalities that do not already own a utilities provider. The second option would cover municipalities like Seattle, who could administer a conservation program through an existing electric, water, wastewater, solid waste, heating, or other utility system already operated by the municipality. Though HB 2853 has not yet passed out of committee, its constitutional posture highlights some interesting issues.

### A. Constitutionality of HB 2853

The controversial aspect of HB 2853 is the bill’s extension of financing capabilities to municipalities that do not currently operate a utilities provider. While cities like Seattle are already able to provide public financing when such financing is applied through city-owned utilities providers, it can be argued that Section 10 of Article VIII does not permit the establishment of new “energy conservation services utility” for the sole purpose of administering publicly-funded retrofit programs. A narrow reading of the exception articulated in Section 10 suggests that the utility providing the energy to the consumer must be publicly owned before public funds can be used to implement conservation projects involving the utility provider. Thus, the portion of HB 2853 that extends financing capabilities to municipalities who do not operate their own utilities provider potentially runs afoul of Article VIII’s general prohibition on public loans to private entities.

### IV. CONCLUSION

Regardless of the fate of HB 2853, Seattle has the ability and legal authority to proceed with energy efficiency retrofits in its efforts to reduce energy consumption from the building sector. While both Utility Bill Financing and PACE programs offer effective repayment mechanisms, it appears that PACE programs are ill-suited for implementation in the current economic climate. Further, Seattle’s ability to avoid WUTC

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55. H.R. Res. 2853, 61st Leg., at 6-7 (Wash. 2010).
56. Id. at 7.
57. Kara Durbin, Technology Energy & Communications Committee Bill Analysis, H.R. Res. 2853, 61st Leg., at 6-7 (Wash. 2010).
complications as a result of Seattle’s ownership of Seattle City Light makes Utility Bill Financing an especially attractive option.

In addition to reaping the benefits of energy conservation locally, Seattle’s implementation of an Utility Bill Financing program for energy retrofits would likely help make the case for state-wide changes. In particular, success of such a program in Seattle may help solve the problem created by the public funding prohibition contained in the State Constitution.

The best solution to the constitutional problem is to amend Washington’s Constitution to explicitly allow for state credit to be used for financing renewable energy and energy efficiency, especially for programs that make it easy for homeowners to borrow money and easy for them to pay it back. Amendments to the State Constitution are not infrequent, indeed Washington State voters have successfully voted to amend their Constitution 102 times since 1889.58 Success of Seattle’s implementation of a publicly financed energy retrofit program would certainly aid the cause. Further, analyses of the economic impacts of PACE-like programs consistently show huge economic potential. Voters would ideally see the advantages of using the state’s ability to issue bonds to achieve significant energy savings, reduce climate changing emissions, and create jobs.

In terms of Constitutional amendments to improve the ability of local governments to facilitate energy conservation, Oregon has provided a good model for Washington to follow. Faced with Constitutional provisions similar to Washington’s Article VIII prohibition on loaning public funds, Oregon created an exception which allows for the creation of “a fund to be known as the Small Scale Local Energy Project Loan Fund. The fund shall be used to provide financing for the development of small scale local energy projects.”59 This constitutional amendment has allowed Oregon greater flexibility in implementing energy conservation programs, and has helped elevate the state to a position as a leader in energy conservation.

Seattle now has the opportunity to implement innovative energy conservation programs, and in doing so, Seattle may help drive Washington towards a constitutional amendment that would result in state-wide energy savings. As it has been in the past, Seattle should be a leader in energy conservation, and the introduction of a Utility Bill Financing program is an attractive option for Seattle to continue its trend of innovative conservation techniques.

59. OR. Const. art 11-J, § 2.