

# Creating Jobs, Reducing Waste and Saving Money in Government Buildings

*A guide for state lawmakers, government officials and advocates*

*July 2014*

**COWS**

BUILDING THE  
HIGH ROAD

If there was a way to save money, improve the workplaces of state employees, create jobs and reduce pollution all at once, wouldn't you want your state to do it?

Buildings consume more than 40 percent of energy used in the United States.<sup>1</sup> We waste a tremendous amount of this energy on heating and air conditioning that escapes the building, on illuminating vacant spaces, and on running machinery constantly. Reducing this waste creates jobs for those increasing the building's efficiency, saves money for the building operator, increases occupant productivity and health, and reduces climate and air pollution. Even more impressive, it is an idea that can pay for itself: You can capture the value of the energy wasted and use that to pay for the cost of the building upgrades over time.

Publicly controlled buildings—office buildings, universities, and all other buildings controlled by state governments—waste a lot of energy. States are perfectly positioned to promote efficiency and reduce utility bills in their own and other institutional and government buildings. This guide will discuss how state-level policies and practices can impact state-owned or -leased buildings, and buildings owned by municipal governments, school districts and institutions such as universities or hospitals.

## Why?

States collectively spend billions of dollars on energy bills for the buildings they own and lease. Many of these buildings are old, or inefficient, or both, and thus use more energy than they need to. Energy efficiency upgrades for these buildings can pay for themselves and save money in the long run. Performing this work requires skilled labor, and increased demand for these professions sustains and creates family-supporting jobs. Reducing energy use also reduces the air and water pollution that often accompanies energy generation. Retrofitting buildings extends their useful life, and workers in energy efficient buildings have lower rates of absenteeism and higher productivity.

## How?

There are five basic steps to improving the energy efficiency of building stock. Not all projects will follow this precise sequence, but all are necessary components:

1. Assess and prioritize buildings and projects. A quick review of the size and energy use of buildings will help identify where to focus first.
2. Get an investment-grade audit to determine the specific energy upgrades needed by each building, and an assessment of the cost and payback period of each upgrade.
3. Determine how you are going to finance the project(s). It's possible to do this as a straightforward public works contract, funded by bonding (consider QECBs<sup>2</sup>), but many states use energy performance contracting (see below), sometimes in conjunction with bonding.
4. Determine who is going to do the work and the type of contract you will use.

### About COWS

Based at the University of Wisconsin-Madison, COWS is a national think-and-do tank that promotes "high road" solutions to social problems. These treat shared growth and opportunity, environmental sustainability, and resilient democratic institutions as necessary and achievable complements in human development. COWS is nonpartisan but values-based. We seek a world of equal opportunity and security for all.

### The MUSH Series

This document is one of several designed to help Government/ Municipal, University, School and Hospital (MUSH) entities implement energy efficiency upgrades of their building stock. For a comprehensive look at the sector, please see [MAKING M.U.S.H. ENERGY EFFICIENT: Energy Efficiency in the Governmental and Institutional Sector](http://www.cows.org/making-mush-energy-efficient), available at <http://www.cows.org/making-mush-energy-efficient>. For information about residential and commercial building energy efficiency programs, please see [www.energycities.org](http://www.energycities.org).

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5. Capture the benefits of doing the work. This includes energy use reduction, which should be verified by a post-construction audit and ongoing building energy management; job creation, which should be secured via contract provisions and workforce development policies; and financial savings, which should be tracked, used to cover costs, and then banked for future projects.

We won't go into details here about this process,<sup>3</sup> but rather will focus on some key policies and actions you can take to advance it. Depending on what your state has already done, the following should be considered as policies or state programs:

- Enabling and implementing Energy Savings Performance Contracting
- Benchmarking energy use and setting savings goals
- Providing technical and financial assistance to departments, building managers, etc.
- Setting job quality standards
- Supporting municipal and regional governments, and other institutions in energy efficiency work

For each of these, we provide more detail on the policy, examples, and sources of additional information.

## Case Study: Minnesota

Ranked among the top ten states for energy efficiency by the American Council for an Energy-Efficient Economy (ACEEE), Minnesota has enacted a variety of programs and laws to ensure economic and environmental sustainability in the MUSH sector while creating high-road employment opportunities. The Minnesota State Legislature laid the groundwork in 2002 with the creation of the B3 Benchmarking program, which provides State agencies the tools necessary to monitor energy consumption in the buildings they control.<sup>38</sup> Minnesota Session Law 2001 212-1(3), in which B3 originated, also mandated the creation of energy conservation goals for existing public buildings and a comprehensive plan to meet these goals through conservation measures.<sup>39</sup> In May 2008, Minnesota adopted "Sustainable Building 2030" standards, designed to reduce energy consumption in new State-bonded construction and renovation projects by 60% in 2010 (using a 2003 baseline), increasing 10% every five years towards an ultimate target of 100%, net-zero reductions by 2030.<sup>40</sup> Also in 2008, the State Legislature initiated the Public Buildings Enhanced Energy Efficiency Program (PBEEEP), which provides government agencies the technical assistance and funding to investigate their buildings' energy consumption and implement recommissioning/retrofitting projects to maximize energy savings.<sup>41</sup> In 2011, Governor Dayton issued Executive Order 11-12, which requires each state agency to establish site-specific goals of no less than 20% for reducing energy usage in state-owned buildings.<sup>42</sup> This order additionally created the Office of Guaranteed Energy Savings Program, which provides technical, contractual, and financial assistance to State agencies, local units of government, and school districts that elect to implement improvements through guaranteed energy savings contracts.<sup>43</sup>

Minnesota's MUSH sector energy policies have saved taxpayers millions of dollars through sustainable development while providing opportunities for quality employment. PBEEEP has cut the costs of energy usage in participating government buildings by 6.3% since 2010, reducing annual State energy costs by \$1.4 million. PBEEEP projects also created over 140 jobs over the course of the program, which officially ended in February 2014.<sup>44</sup> Of the 60 projects that have been held under Sustainable Building 2030 standards, 92% have met the goal of a 60% reduction of energy consumption, while the remaining 8% fall just shy of the goal.<sup>45</sup> Executive Order 11-12 requires that all contracts for energy efficiency improvement projects adhere to Minnesota's prevailing wage law, which requires employees working on such projects to be paid wage rates comparable to wages paid for similar work in the project's geographical area.<sup>46</sup> This policy prevents destructive wage competition and helps retain skilled and experienced workers in the project area. The state also sets participation goals for women, minorities, and apprentices on state-funded construction projects. These groups must contribute to a certain percentage of total project hours, and these requirements vary throughout the state according to regional demographics.<sup>47</sup> Minnesota policymakers have demonstrated a clear commitment to improving the energy efficiency of the MUSH sector through programs that invigorate the economy, encourage long-term sustainability, and create abundant, quality jobs.



St. Paul, MN

Source: Todd Kehrberg, CC BY-NC-SA 2.0

## Allow Energy Savings Performance Contracts

Energy services companies (ESCOs) are companies that work to increase the energy efficiency in building stock, usually entering into a contract with a property owner whereby they install a suite of energy saving measures, providing the building owner with guaranteed energy cost savings, and are paid for their work over time from the savings. ESCOs also traditionally perform monitoring and verification of the work themselves (a possible conflict of interest) and hold the maintenance and operations contracts for specialized equipment. ESCOs frequently use Energy Savings Performance Contracts (ESPCs) in which they guarantee a certain level of financial or energy savings, removing the risk to the building owner and tying their compensation to performance. Although the majority of states allow ESPCs, a few do not.<sup>4</sup> If your state is one of these, enabling legislation<sup>5</sup> will be required to make this tool available.

## Benchmark your Buildings

This requires gathering and entering data about state buildings into a benchmarking system.<sup>6</sup> EnergyStar Portfolio Manager,<sup>7</sup> developed by the U.S. EPA, is an online building energy management tool that can be used to track energy and water use across a portfolio of buildings. The State of Michigan provides technical support to their agencies that want to use portfolio manager,<sup>8</sup> and has an incentive program that will help pay for an engineer to verify the building energy use.<sup>9</sup> The Lawrence Berkeley National Laboratory has a similar system, EnergyIQ,<sup>10</sup> for non-residential buildings. These and similar systems allow states to determine the least efficient buildings in their portfolio for improvements. They also allow comparison to other portfolios, either in the state or nationally. Data from these systems can be made publically available – and doing so has a positive accountability element that bolsters energy savings.

## Require Departments to Evaluate Building Stock and Improve Efficiency

In many states, buildings are controlled by different agencies or departments, each of which would undertake their own energy upgrade project. State policy makers should require departments and agencies to at least evaluate the infrastructure they control for energy efficiency, and to upgrade it where appropriate. Colorado set a goal of 20% reduction in energy use below 2006 levels by 2012, and required agencies that manage buildings to conduct a feasibility study to determine if performance contracting is warranted. Public higher educational institutions are expected to follow the requirements as well.<sup>11</sup>

## Set the Parameters for Using ESCOs

Although the Department of Administration or State Energy Office will likely not manage each individual project, they can and should offer guidance on the structure of projects and contracts. States can pre-qualify a pool of ESCOs, establish master contracts or standard contract language, and offer technical assistance to departments (and other entities, see below) on how to negotiate and implement an ESPC.<sup>12</sup> The Facility Conservation Improvement Program in Kansas provides technical assistance to public agencies, including pre-qualifying ESCOs and providing negotiated contract language and cost structures.<sup>13</sup>

## Policy Options

### Executive Actions

1. Benchmark your buildings
2. Require departments to evaluate building stock and improve efficiency

### Legislative Actions

1. Allow energy savings performance contracts
2. Benchmark your buildings
3. Require departments to evaluate building stock and improve efficiency
4. Provide funding and capture financial savings
5. Capture the benefits: job creation
6. Encourage or require benchmarking
7. Provide funding

### Administrative Actions

1. Benchmark your buildings
2. Require departments to evaluate building stock and improve efficiency
3. Set the parameters for using ESCO's
4. Provide funding and capture financial savings
5. Capture the benefits: job creation
6. Encourage or require benchmarking
7. Provide technical assistance
8. Aggregate projects

## Provide Funding and Capture Financial Savings

Departments and agencies will likely need support in identifying funding sources for these projects as well. While ESCOs can often provide financing, some states prefer to use a low-or no-interest revolving loan fund or Green Bank model. Loans made to agencies are repaid out of the savings generated by projects. Alaska established an energy efficiency revolving loan fund, using general obligation bonds, which can be used for improvements to buildings owned by the State, municipalities, the University of Alaska, and school districts.<sup>14</sup> Kentucky has a Green Bank, established with American Recovery and Reinvestment Act (ARRA) funds, which provides low interest loans to state agencies for projects that “reduce operating costs [and] energy use...and create new

### Case Study: Maryland

Since 1991, the Maryland State Agency Loan Program has used federal funding to provide zero-interest loans to state agencies for making energy efficient improvements in their buildings and facilities, typically through the use of Energy Performance Contracting (EPC).<sup>48</sup> The Department of General Services employs Energy Service Companies (ESCOs) from a pre-approved list for these projects. In 2001, Executive Order 01.01.2001.02 created the Maryland Green Building Council and called for a 10% reduction of energy use in state-owned buildings by 2005 and a 15% reduction by 2010 (relative to a 2000 baseline).<sup>49</sup> The Green Building Council evaluates current high performance building technologies and recommends cost-effective improvements in the construction of state facilities.<sup>50</sup>



Baltimore, MD.

The State Buildings Energy Efficiency and Conservation Act of 2006 mandated that each state agency conduct energy audits of its buildings and reduce energy consumption 5% by 2009 and 10% by 2010.<sup>51</sup> In 2008, Maryland enacted the High Performance Buildings Act, which requires that capital projects involving the construction or major renovation of buildings financed solely with state funds achieve a LEED Silver or equivalent rating.<sup>52</sup> In 2013, the Maryland Energy Administration (MEA) announced over \$8 million dollars in grant funding to 34 local governments for the Maryland Smart Energy Communities Program. These municipalities received grant funding and technical assistance from MEA for energy efficiency improvements in their buildings. To receive funding, these governments had to pass laws that either mandated a 15% reduction of energy consumption in government buildings within five years or required 20% of their buildings' electric energy consumption to be replaced by renewable energy sources by 2022.<sup>53</sup>

Maryland's lead-by-example initiatives in the MUSH sector have resulted in substantial improvements in energy efficiency and job creation. By 2013, total energy consumption of state facilities decreased 11.1% from a 2008 baseline. Through dozens of EPC projects, the state is now saving around \$21.3 million annually through avoided energy costs, while cutting carbon dioxide consumption by 130,000 tons per year. An EPC retrofitting project at the Spring Grove Hospital Center will avoid \$5,556,336 in utility costs, which is \$1.4 million greater than estimated savings.<sup>54</sup> The State Agency Loan Program and the Smart Energy Communities Program have been very successful, creating or retaining over 50 full time jobs in fiscal year 2012 alone, while ensuring over \$10 million in energy savings over the next 15 years.

Maryland promotes high-road employment through laws that require substantial minority representation in the workforce and payment of living and prevailing wages. At 25%, Maryland has one of the country's highest requirements for Minority Business Enterprise (MBE) participation on public works projects. On projects valued above \$50,000, minimums of 7% and 10% of the total dollar value of these projects must be provided by certified African American- or women-owned businesses, respectively.<sup>55</sup> As of 2012, the state has set a new target of 29% MBE participation.<sup>56</sup> All workers on state-funded construction projects valued at or above \$100,000 must receive a living wage dependent on project location, and workers on projects valued at \$500,000 or more are required to earn prevailing wages and benefits.<sup>57, 58</sup> Through these policies and programs, Maryland continues to stand out as a state thoroughly dedicated to MUSH sector energy efficiency and high-road employment.

‘Green Collar Jobs’...<sup>15</sup> The most recent innovation in this field is the Delaware Sustainable Energy Utility, an independent and financially self-sufficient entity established by the State. It is responsible for delivering energy efficiency, energy conservation, and customer-sited renewable energy to end users across all sectors and fuels. The Delaware SEU issued \$67 million in energy efficiency revenue bonds to fund guaranteed savings projects at five state agencies.<sup>16</sup>

Agencies may also want to “bank” the savings internally by tracking avoided costs and using the savings to cover the costs of projects and to fund new projects. Hawai‘i guarantees agencies that conduct energy efficiency building retrofits a stable budget appropriation for energy costs at least until the project is paid for.<sup>17</sup>

### Capture the Benefits: Job Creation

In order to ensure your state receives the full benefit from upgrading your buildings, you’ll want to have some basic policies in place to make sure that the work done is done by residents of your state, and that the jobs created are good jobs. Requiring adequate training and certification for workers is important to ensure that the work is done well. A wage floor, and living or prevailing wage requirements for state contracting will contribute to both the quality of the work done and the robustness of the local economy. Minnesota, for example, requires that workers on state-funded construction projects be paid a prevailing wage.<sup>18</sup> Other job quality improvement measures include requiring recipients of state contracts to provide health insurance and/or offer paid sick leave. New Mexico requires contractors to provide health benefits to their in-state employees.<sup>19</sup> These provisions should apply to part-time and contract positions as well as full time ones.

To ensure that jobs are available first to state residents, contract provisions can require that the companies doing the work hire local residents or other targeted groups. First-source hiring requires that workers from key training programs are considered before others.<sup>20</sup> Washington State has this kind of requirement for its low-income weatherization program.<sup>21</sup> Firms that are minority- or woman-owned can be given preference when evaluating bids, as can those who use such firms as subcontractors, or demonstrate a mentoring relationship to them. For example, Maryland requires 29% of the dollar value of all procurement to go to women and minority owned businesses.<sup>22</sup>

These types of requirements are often included in a Community Workforce Agreement (CWA). CWAs address the interests of under-represented communities, targeting hiring by geography and/or economic status, as well as specifying percentages of the workforce on a given project from a) those targeted categories of workers; b) jointly-administered registered apprenticeship programs; and c) the first-year apprentices and/or total apprentice workforce that come from targeted categories of workers. CWAs can also contain clear mechanisms for accountability.<sup>23</sup>

Oregon’s Clean Energy Works residential program has established a set of high-road goals,<sup>24</sup> including an 80% local hire goal, a wage floor, and a requirement that contractors offer health insurance or pay a wage that allows workers to afford it. Contractors are required to have staff with specific certifications or training. The program also requires contractors to have first-source hiring agreements to meet a goal of 30% of trade and technical hours going to “historically underrepresented and economically disadvantaged people”. In addition, business owned by the same group should make up 20% of the contracted dollars. The program initially had no contractors from those communities, but as part of the Community Workforce Agreement they negotiated, contractors who subcontracted with targeted firms and mentored targeted firms received preferential access to work in the program. New contractors had access to business support and training. By the conclusion of the pilot, 23% of the Clean Energy Works work was being completed by contractors from targeted groups.<sup>25</sup>



Source: ECOTRUST, cc by 2.0

## Supporting Institutional Building Owners

State government should lead by example and improve the energy efficiency of its own building stock, but it should also facilitate other units of government and large non-profit institutions such as hospitals in doing so. There are a number of policies that can support and encourage this practice. The basic process is the same (see the five steps above), so again we will focus on key policy or administrative actions your state can take.

### Ensure that performance contracting is legal for all public and non-profit entities

As noted above, enabling legislation may be required in order to conduct performance contracting. This legislation should cover all the relevant entities – municipal government, school districts, hospitals, etc. – in addition to state agencies and departments. Oak Ridge National Laboratory hosts a website with information about which entities each state’s law covers.<sup>26</sup>

### Case Study: Washington

*For decades, the State of Washington has proven its commitment to developing an energy efficient MUSH sector while providing high-road employment opportunities. Since 1984, Washington’s Department of Enterprise Services (DES) Energy Program has utilized EPC to commission and retro-commission MUSH sector buildings. The DES maintains a list of pre-qualified ESCO’s and offers a range of financing options and intimate technical support. With a staff of over 15 full-time program managers, analysts, and engineers, the DES “provides the experience and expertise for quality assurance, project negotiation, overall project management, and monitoring and verification procedures” during EPC commissioning and retro-commissioning projects.<sup>59</sup>*



Seattle, WA.

*These projects reflect a series of legislative directives aimed at benchmarking and reducing MUSH sector energy consumption. A 2005 Executive Order mandated state agencies to reduce energy use by 10% by September 2009 (using a 2003 baseline).<sup>60</sup> The state legislature enacted a High Performance Green Buildings law that requires all construction or major renovation of state agency facilities to meet at least the LEED silver standard through building commissioning.<sup>61</sup> In 2009, state lawmakers established energy benchmarking requirements for public facilities of at least 10,000 square feet – including government buildings, colleges, and universities – through the use of the EPA Energy Star Portfolio Manager.<sup>62</sup> A 2012 Executive Order set a timeline for these benchmarking requirements and directed state agencies to implement preliminary energy audits and all cost effective efficiency measures to achieve a 20% reduction in energy consumption by 2020.<sup>63</sup> Buildings found to use greater than average amounts of energy for the building type are required to complete a full auditing and retrofitting process.*

*Washington encourages high-road employment through laws that require apprentice utilization and prevailing wage payments. On public works projects valued at \$1 million or more, at least 15% of the labor hours must be performed by apprentices in state-approved programs.<sup>64</sup> Apprentice utilization requirements help to build a skilled workforce capable of producing quality work as energy efficient technologies evolve. Washington also requires that laborers on public works projects be paid prevailing wages and fringe benefits based on project locality.<sup>65</sup> Seattle’s Residential Retrofit Program, although outside of the MUSH sector, contains a variety of exemplary high-road employment goals that could be applied to MUSH projects, including career guidance, payment of family-supporting wages, and high participation rates for MBE’s and small and local businesses.<sup>66</sup>*

*As of 2012, Washington’s DES has tracked 125 state-funded construction and renovation projects, representing more than \$2 billion in construction costs.<sup>67</sup> The DES reports that “91 percent of state agency, university, and college projects are participating, with a large percentage of the projects seeking and achieving LEED Gold.” These projects are saving between 12% and 46% of the buildings’ annual energy costs, and over 75% of the commissioning and re-commissioning projects will pay for themselves within 18 years. The DES Energy Program has completed over \$500 million in public facility efficiency projects, saving MUSH sector customers nearly \$30 million annually. All of these projects have created local jobs by utilizing recycled materials from nearby projects and by creating demand for EPC work.<sup>68</sup>*

## Encourage or Require Benchmarking

Municipalities, school districts, hospitals and other institutions can use the same tools available to states to track their building energy use and identify buildings that are priorities for improvement. States may want to provide their own inventory tool, or may want to provide incentives to conduct benchmarking. For example, access to funding for improvements or technical assistance for performance contracting should be tied to a requirement to evaluate the entities' entire building stock. Massachusetts makes a web-based tool, MassEnergyInsight,<sup>27</sup> available for free to municipalities, school districts and other regional government entities. This program helps to develop an energy baseline for buildings, fleets and other infrastructure (such as streetlights and water or wastewater systems). Governments can then use it to forecast energy costs, pinpoint high energy users, inventory greenhouse gases, and track the impact of energy efficiency projects. This is part of the State's Green Communities Program, which supports cities and towns in reducing their energy use.<sup>28</sup>

## Provide Technical Assistance

The process of benchmarking buildings, choosing which need upgrades, prioritizing projects, finding funding, choosing a contractor, and negotiating a contract can be complex, and institutional building owners, particularly

### Case Study: Oregon

Since 1981, the Oregon Department of Energy (ODOE) has provided low-interest loans to individuals, local governments, schools, and non-profits for development projects that promote energy conservation and utilize renewable energy sources. Through this State Energy Loan Program, the ODOE provides financial and technical support to borrowers through every step - from loan application to project design and implementation - to ensure the projects' feasibility and quality.<sup>69</sup> In 1991, Oregon established the State Energy Efficiency Design program (SEED). Through this program, the ODOE provides technical assistance to state agencies and institutions of higher education to ensure cost-effective energy conservation measures are included in new and renovated public buildings. In 2001, the law was revised to mandate that all state facilities exceed the energy conservation provisions of the Oregon State Building Code by 20% or more.<sup>70</sup>



Executive Order 06-02, issued in January 2006, directed the Oregon Sustainability Board to develop a "sustainable practices toolbox" for local governments and promote sustainable economic development and investment in the private and MUSH sectors.<sup>71</sup> Executive Order 06-02 also created an Energy Efficiency Interagency Team of state agency personnel and tasked the Team with developing strategies to achieve energy savings of 20% in state government and education facilities within ten years. These strategies will include the use of Energy Performance Contracting.

In 2011, Governor John Kitzhaber's Cool Schools initiative centralized access to financial and technical support for Oregon schools seeking energy efficient upgrades.<sup>72</sup> Administered by the ODOE, Cool Schools offers K-12 schools access to low-interest financing and technical assistance. The initiative allows schools to save money on energy costs while making educational environments more conducive to learning.

Recently, Oregon began implementation of Governor Kitzhaber's 10-Year Energy Action Plan.<sup>73</sup> One of the Plan's core components declares that "every occupied state-owned building will establish baseline energy use, undergo an energy audit and identify cost-effective retrofits in the next ten years, improving the performance of up to four million square feet of identified office space and using the state as a market driver for greater energy efficiency and conservation projects." The State Building Innovation Lab will be responsible for benchmarking, identifying retrofitting opportunities, and coordinating the retrofitting projects.

Oregon's energy efficiency initiatives have allowed the state to drastically reduce energy consumption in the MUSH sector. To date, the State Energy Loan Program has provided over \$500 million to over 850 projects "that, together, have saved enough electricity, natural gas and oil to heat more than 150,000 Oregon homes each year."<sup>74</sup> These loans have assisted projects that now save or produce \$45 million worth of energy each year. Through the Cool Schools initiative and prior school efficiency programs, the ODOE has audited over 1,000 schools, identifying over \$100 million in energy efficiency project opportunities.<sup>75</sup>

those with small staffs (like smaller municipalities) or a specialized function (like school districts or hospitals) may not have the expertise or capacity to manage the process on their own. States should, at a minimum, provide a guide to energy efficiency upgrades and performance contracting. For example, Florida provides information and model documents to use in the performance contracting process.<sup>29</sup> Your state may want to provide additional technical assistance. Some states have on staff experts in negotiating ESCO contracts that they make available to other entities for free or for a nominal fee. Other states negotiate master contracts that subsidiary units of government can join, or extend their pre-qualified list of ESCOs to other entities. States also can provide assistance in measurement and verification, to ensure that the projects were completed correctly and that energy savings are achieved. Colorado provides technical assistance on performance contracting to local governments and schools in addition to state agencies. This includes a list of pre-qualified ESCOs, assistance in selecting one, help negotiating a contract and guidance on measurement and verification.<sup>30</sup>

## Provide Funding

Accessing the up-front capital for these projects can be a major barrier for cash-strapped cities and school districts. Again, ESCOs may provide funding, and some local governments may have access to bonding, including QECBs, but others may need assistance from the state. This can be as simple as opening up an existing revolving fund or green bank to other units of government and/or non-profit institutions. Oregon has a comprehensive State Energy Loan Program<sup>31</sup> that is available to all governments and public agencies, in addition to individuals, businesses and non-profits. Eligible projects include energy efficiency and renewable energy measures and waste heat projects. In addition, the Oregon Cool Schools program is specifically targeted at K-12 public school districts and provides both low-interest financing and technical assistance.<sup>32</sup>

*Many states have done some work in this area, but few have implemented a full suite of policies to ensure that all buildings are evaluated, that all upgrade projects are financed and well managed, and that the jobs created are good jobs for state residents.*

## Aggregate Projects

Another way of addressing the lack of expertise and funding is for the state to act as a project manager and aggregate projects in buildings that are geographically proximate but owned by different entities. For example, if the state has an office building located in a city, they might aggregate the office building, the local library, the high school, and the hospital into one project. Each owner would still be financially responsible for their building, but they would all benefit from the expertise of the state in running the project and any economies of scale. Alaska aggregated state-owned buildings with the University of Alaska-Fairbanks and negotiated performance contracts with three ESCOs to complete the work.<sup>33</sup>

## Capture the Benefits: Job Creation

Just like at the state level, cities and school districts should ensure these projects are done by skilled labor, and that local residents benefit from the jobs created by this work. In addition to the tools discussed above, which can be used directly by local governments, states should require job quality standards as a condition of receiving technical assistance or funding.

## Supportive Policies to Consider

States should consider creating a policy environment that promotes energy efficient buildings across the board. We referenced above the importance of benchmarking your building portfolio; energy use disclosure, or “building labeling”, policies require that all buildings over a certain square footage make their energy use data publically available so that potential renters or buyers can anticipate utility costs and compare buildings on that basis. Washington State<sup>34</sup> requires commercial buildings over 10,000 sq. ft. to use Portfolio Manager and disclose the

data and ratings to prospective buyers and lessees. At a minimum, states should disclose their own building energy data, as Maryland does.<sup>35</sup>

Another facilitative policy is an energy efficiency resource standard,<sup>36</sup> which sets an energy use reduction goal for all utility providers in a state, sometimes phased in over a number of years. Utilities usually work with energy users, including building managers, to facilitate the reduction in use by providing incentives, rebates, or funding. Massachusetts has an energy efficiency resource standard that requires annual reductions in use for both electricity (~2.5%) and natural gas (~1%), and has taken a particularly progressive approach with its Green Communities Act, which requires electric and gas utilities to invest in all cost-effective energy efficiency that is cheaper than new or existing generation resources.<sup>37</sup>

## Conclusion

There are plenty of reasons a state should lead by example and upgrade the buildings it owns for energy efficiency, including energy and financial savings, reductions in greenhouse gas and other damaging emissions, and job creation. Many states have done some work in this area, but few have implemented a full suite of policies to ensure that all buildings are evaluated, that all upgrade projects are financed and well managed, and that the jobs created are good jobs for state residents. We have outlined here the policies we believe are important for states to adopt. In addition, we believe it is important for states to do what they can to make it easier for other levels of government (municipal, school district, etc.) and large institutions (universities, technical colleges, hospitals, etc.) to conduct similar improvements. Fewer states have established such programs, so there is room for improvement almost everywhere. Given the challenges faced by the nation, states and municipal governments, there is really no excuse not to implement such straightforward policies with such important benefits.

## Endnotes

1. Department of Energy, "Buildings Share of U.S. Primary Energy Consumption (Percent)," available at <http://buildingsdatabook.eren.doe.gov/TableView.aspx?table=1.1.3> (last accessed May 2011).
2. Qualified Energy Conservation Bonds are a type of taxable bond subsidized by the Federal Government. See "Qualified Energy Conservation Bond," US Department of Energy, May 2013, available at <http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/qecb.html>.
3. For more detailed information, see "Energy Performance Contracting in State Facilities," US Environmental Protection Agency, April 2008, available at <http://www.epa.gov/statelocalclimate/documents/pdf/background041008.pdf>; and "Resources," Energy Services Coalition, 2014, available at <http://www.energyservicescoalition.org/resources/>.
4. Oak Ridge National Laboratory hosts a website with the current status of enabling legislation for all states: "Performance Contracting by State," Oak Ridge National Laboratory, available at <http://www.ornl.gov/info/esco/legislation/newesco.shtml>.
5. The Energy Services Coalition has developed model energy performance contracting legislation: "Model Energy Performance Contracting Legislation," Energy Services Coalition, available at [http://energyservicescoalition.org/Data/Sites/1/documents/resources/tools/practice02/Model\\_EPC\\_Legislation.pdf](http://energyservicescoalition.org/Data/Sites/1/documents/resources/tools/practice02/Model_EPC_Legislation.pdf).
6. For more on benchmarking policy and practice, see "Energy Benchmarking, Rating, and Disclosure for State Governments," US Department of Energy, May 2012, available at [http://www1.eere.energy.gov/seeaction/pdfs/commercialbuildings\\_factsheet\\_benchmarking\\_stategovt.pdf](http://www1.eere.energy.gov/seeaction/pdfs/commercialbuildings_factsheet_benchmarking_stategovt.pdf).
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