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Jobs Idea #6
Retrofitting Institutions

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Problem Statement:

Governments everywhere are looking for ways to create new, quality jobs, despite restricted budgets. Although many have enacted programs that facilitate energy efficiency retrofits for the residential and commercial sectors, retrofitting of public buildings has garnered little policy attention.

What's the Big Idea?

Retrofitting public buildings, universities, schools, and hospitals can create significant numbers of net new jobs while simultaneously reducing energy usage. If these retrofits are financed through cost savings achieved through efficiency, the jobs can also be created without allocating new public funds. Publicly controlled buildings account for 24 percent of all commercial space. Public entities have access to low-cost capital, companies exist to do this work, and with a few key policy interventions, decision-makers can ensure that jobs created are in fact high-road. These factors make this portion of the real estate sector uniquely attractive for deep energy retrofits that create high-quality jobs.

How Does This Create Jobs?

Local and state government buildings, universities, schools, and hospitals spend about $40.7 billion a year on energy. By upgrading this building stock for maximum energy efficiency, taxpayers could save up to $8.1 billion a year on energy costs and create between 165,000 and 428,000 jobs. These jobs are in a wide range of occupations, including production, design, construction, engineering, operations, and maintenance. The initial job impact will be primarily in the building trades.

In order to maximize both the energy cost savings and the job creation potential, it is important that local jurisdictions embrace strong job quality standards. An untrained workforce lowers the potential energy savings of specific interventions. For example, as many as 85 percent of replacement heating, ventilation and air conditioning (HVAC) systems in California are improperly installed, resulting in a loss of potential energy savings.[1] High-road agreements or other job-quality standards can help improve access and advancement for low-income workers into lifelong career paths in the building trades.

What Are the Barriers?

Many jurisdictions have implemented some energy efficiency retrofits. However, almost none of them have systematically addressed their entire building stock, and most are not doing so with job creation as a primary motivation. There are several factors that have limited the uptake of energy efficiency programs.

1) There is the problem of financing the work, which can have some significant upfront capital costs.

2) Another barrier is simply a lack of information. Many municipalities do not track how much energy they are using in their buildings, and few know how to proceed with actually implementing an energy efficiency program.

3) The final barrier is a lack of political will that results from the above barriers, and the need for someone to champion these types of projects.

Case Study: Reducing Reno's Carbon Footprint

In 2008, the City of Reno, Nevada, launched an Energy Efficiency & Renewable Energy Initiative in order to reduce its carbon footprint and lower its energy bills. The city contracted with an energy services company (ESCO) to audit the electricity, natural gas and water use in all city facilities. Based on the audit, the city approved a series of projects, including energy efficiency measures such as lighting retrofits and HVAC upgrades, as well as other investments in renewable energy. The ESCO hired local contractors to do the work, and the contract was subject to Reno's prevailing wage law.

Even though the project is not yet completed, it is expected to save the city $500,000 in 2011, a 12 percent cost reduction in just one year. At full build-out, the energy efficiency portion of the project will save the city $1.1 million a year, a reduction in energy costs of more than 25 percent. The project was financed primarily through bonds, as well as with some grants and rebates, for a total project cost of $16 million. As of April 2011, it had created or retained 191 jobs.[2]

How Can This Policy Be Implemented?

For state, city, municipal or institutional leaders, the first step is to determine how much energy the current building stock uses and what potential exists to reduce that use. Tools such as the EPA's Energy Star Portfolio Manager can facilitate this process, which can be undertaken fairly quickly with minimal cost. Once the worst-performing buildings have been identified, numerous options exist to finance and implement the work.

Nationwide, it is estimated that the initial investment to retrofit existing public building stock will be between $38 billion and $61 billion. Larger government projects could be financed through bonds, including qualified energy conservation bonds, which can be repaid with the future energy cost savings. For agencies that cannot or choose not to bond, financing options available through private lenders, including municipal lease programs offered by ESCOs, are an option. ESCOs are companies that do the work to increase energy efficiency in building stock and are paid over a period of time from the energy cost savings.

A rough but conservative estimate of costs per job — including wages, benefits, materials, overhead and other costs — is in the range of $140,000 to $230,000. A public entity has direct control over the contracting process and can make sure that the jobs created — and pathways into them — are accessible to low-income, low-skill workers. This can be accomplished by including job quality measures in contracts. Examples include wage floors, targeted or local-hire provisions, first-source hiring policies and contracting preferences for local, high-road and/or minority- or woman-owned firms.

Finally, in jurisdictions that currently lack the political will to move forward with these projects, local labor-community coalitions can be effective at raising public awareness and exerting political pressure on elected officials. Such coalitions have been successful in cities from Boston to Los Angeles, leading to the creation of community workforce agreements for energy efficiency retrofit programs.

Conclusion

America can begin to achieve the widespread, high-road job creation needed in today's economy by retrofitting the nation's public and institutional buildings for greater energy efficiency, financing these retrofits from the savings achieved and requiring local hiring and job and advancement standards for those who do the work.

Endnotes

[1] Zabin, C., Chapple, K., Avis, E. and Halpern-Finnerty, J. (2011). *California Workforce Education and Training Needs Assessment*. Berkeley: University of California, Berkeley.

[2] Geddes, J. (2011) Energy Initiative Council Update April 2011. Retrieved October 1, 2011, from City of Reno: Energy Efficiency and Renewable Energy Initiative: http://www.reno.gov/index.aspx?page=2000.