

Rebuilding Our Way to a Sustainable Recovery: Making Commercial Building Retrofit Jobs into Quality Jobs for Our Communities

With record-breaking heat scorching much of the nation, California and Texas are scrambling to avoid rolling blackouts.¹ In other cities, utilities are carefully monitoring the strain on area power grids caused by prolonged high temperatures.² But the problems extend beyond any single stretch of warm weather. Indeed, the American Society of Civil Engineers warns the entire national electrical grid is in danger of breaking down, and at the height of the heat wave, power prices per megawatt-hour rose from a normal \$100 to over \$2,000.³ Building retrofits—especially in the commercial real estate (CRE) sector, where economies of scale can come into play—could provide considerable relief to the power grid. More than three-fourths of all the electricity produced in the United States is used to operate buildings,⁴ and CRE is responsible for consuming nearly 20 percent of the energy used in buildings.⁵ Normalized for weather, commercial buildings in the United States use 23 percent more Btu's⁶ per square foot than do French ones, 72 percent more than those in the UK, and 83 percent more than their German counterparts.⁷ That improving energy efficiency in these buildings would also diminish greenhouse gas emissions, make our workplaces healthier and put millions back to work makes these projects even more attractive.

As we discuss below, policy makers and private investors alike are increasingly looking at building retrofits in CRE as an opportunity to lower ongoing operating costs, attract conservation-savvy tenants, qualify for a variety of benefits ranging from tax-abatements to expedited permits, and meet energy efficiency mandates. Because retrofitting a building must be done locally, these programs also have the potential to create hundreds of thousands of job hours in a variety of occupations, making these projects a textbook example of the concept of the “triple bottom line”: profit, people and planet. Researchers calculate that federal policies to expand tax credits, strengthen state building code requirements, and provide loan guarantees for commercial energy efficiency upgrades alone could create upwards of 160,000 new jobs,⁸ with state and local policies and

Commercial Retrofits: Opportunities for Achieving Sustainability and Creating Good Jobs

Creating Demand for Energy Efficiency in CRE

- Publicly Owned CRE Taking the Lead
- Public-Private Partnerships to Meet Emissions Goals
- Using Zoning, Permit and Taxing Power to Create Incentives

Making Retrofit Jobs Good Jobs

- Potential for Millions of Jobs
- A Mixed Record for Wages and Safety

Public Officials Take the Lead

- High-Road Agreements and Setting a Good Jobs Priority

Public-Private Commitments to Good Jobs

- Responsible Investment Policies
- Private Real Estate Companies with a Good Jobs Track Record

Building Stronger Communities by Rebuilding Commercial Real Estate

private investment potentially contributing exponentially more. However, early evidence indicates that these may not all be the kind of quality jobs our communities need to trigger a robust and sustainable economic recovery. Policymakers must move quickly to implement measures that ensure high worker standards and fair access to these jobs before the retrofit industry progresses too far along well-worn paths toward jobs with high safety violations and low wages. This paper provides some background on the opportunities created by widespread retrofitting in the CRE industry and the innovative policies that municipalities have implemented to give building owners incentives to upgrade their properties. At the same time we highlight examples of measures lawmakers have taken to make these quality jobs. Our hope is that others will follow these models to help assure that “green” buildings sustain not just the environment, but also those who work on and in them.

Creating Demand for Energy Efficiency in Commercial Real Estate

There is little question that undertaking building retrofits is good business for the CRE industry. Studies have found that buildings labeled under the U.S. Green Building Council’s LEED⁹ program or the U.S. Environmental Protection Agency’s Energy Star program are able to charge higher rents, enjoy higher occupancy rates, and command a premium sales price over comparable, but unlabeled, buildings.¹⁰ As new construction slowed during the Great Recession, many owners assessed the efficiency of their older properties and looked to retrofit them for energy savings. In 2010, the amount of space certified by the LEED “Existing Buildings: Operation & Maintenance” rating system was greater than LEED-certified new construction by 15 million square feet.¹¹ “The current recession will only slow, but not fundamentally alter, the market shift to sustainable real estate,” notes one industry analyst. “Savvy, cash-rich investors will find numerous opportunities to capitalize on these trends...while owners that fail to adapt quickly to the new standards may find their viability jeopardized.”¹²

When leaders in Louisville, KY, launched their municipal energy efficiency program, CRE industry organizations partnered with them to create the [Louisville Energy Alliance](#) and issue a challenge to all commercial buildings. In just two years, 35 buildings earned Energy Star efficiency ratings, improvements to city buildings were predicted to [save the city more than \\$13 million in energy costs over 15 years, and more than 80 jobs were created.](#)

The concentration of ownership and management in the CRE industry could be beneficial to these efforts, as big companies could retrofit large parts of their portfolios simultaneously, achieving an economy of scale that smaller business can only dream of. ([Living City Block](#) is one example of an innovative effort to achieve just this scale for small businesses in several cities.) The Department of Energy found that the top ten office building owners controlled more than 522 million square feet of space in 2010, while the top ten property managers oversaw 9.45 billion square feet of space.¹³ According to one researcher, just 25 firms own nearly one-fifth of all leased office floor space in the United States.¹⁴

The challenge for CRE owners seeking to perform building retrofits is financing up-front construction and equipment costs that lead to deferred financial return, coupled with what are often split incentives between the building owner and the tenants who would actually absorb the capital investment. As a result, a number of innovative financing mechanisms have been developed by public utilities, private financing entities, and government officials to provide the initial capital with repayments coming from future energy savings. Interestingly, studies of energy efficiency activities in California have suggested that while utility-funded energy efficiency efforts tend to focus on shorter-term technology-based

programs, those funded by government focus on longer-term, more labor-intensive structural changes implementing new building codes and can create more jobs.¹⁵

At the same time, a growing number of cities are creating incentives and mandates to encourage CRE owners to contribute to limiting carbon emissions by performing building retrofits. The American Institute of Architects has found that in the first decade of this century, the number of cities and counties that had some form of “green building” policy on the books rose by more than 400 percent.¹⁶ Many of the policymakers started by committing to retrofit the buildings under their control: government buildings, K-12 schools and public institutions of higher learning. Leading by example can also pay off for these cities. According to the Department of Energy, as much as 10 percent of a local government’s operating budget can come from energy use; and much of that cost is for electricity, as is the case with most New York municipalities, which spend *half* their energy budget keeping the electricity flowing.¹⁷ At the federal level, the General Services Administration has taken the lead by committing to work with private firms to perform efficiency upgrades to the federal properties it oversees. As one of the largest owners of office space in many of the cities in which it operates, this move sets a good example for owners in the private sector.¹⁸ (Some note that the federal government could go further to affect change outside of its own buildings by giving the Department of Energy the authority to sanction states that do not upgrade their building codes to the latest standards.¹⁹ While these codes do not directly impact the retrofitting of current buildings, strong consistent standards would create a clear set of policy goals and priorities for the industry and would create a market context in which current buildings would need to compete for tenants.)

Finding Financing for Retrofitting Commercial Real Estate Properties

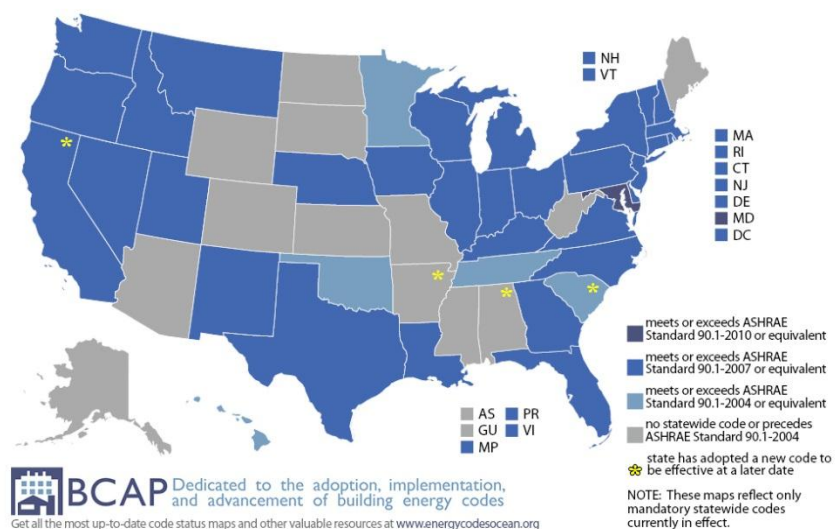
Estimates put the potential for CRE building retrofits at about \$5 billion annually, spent primarily by public entities and educational facilities. However, the potential could be far greater: an estimated \$12 billion per year if all existing private sector commercial buildings engaged in retrofitting.

Several financing structures have been developed to finance these retrofits. Energy Service Companies (ESCOs) provide energy audits and then project design and management in return for payment from the resulting energy savings. Energy Service Agreements (ESAs) require building owners to pay historical energy use, with the energy-efficiency supplier paying the actual bill and keeping any difference created by the efficiency measures they have implemented. Property Assessed Clean Energy (PACE) programs allow owners to access capital now for retrofits in exchange for higher tax assessments. On-bill arrangements finance retrofits through tariffs on utility bills.

Several useful studies and reports have examined these various funding mechanisms and assessed their applicability for different types of real estate. See especially [“United States Building Energy Efficiency Retrofits,”](#) by DB Climate Change Advisors and The Rockefeller Foundation, and [“Unlocking the Building Retrofit Market: Commercial PACE Financing,”](#) by the Institute for Building Efficiency at Johnson Controls.

Commercial State Energy Code Status

AS OF JULY 1, 2012



Commercial buildings codes are the strongest statement public officials can make about their expectations for the CRE industry regarding energy efficiency, and through the code they set the pace for building owners and their portfolios. The [1992 Energy Policy Act](#) requires the Department of Energy (DOE) to consider updates to the commercial efficiency standards as published by the American Society of Heating, Refrigerating and Air Conditioning Engineers (ASHRAE), and to determine if they are likely to result in more energy efficiency. If so, states are required to bring their building codes into compliance within two years, though they can get extensions if they demonstrate they have made a “good faith” effort to comply. Many states are now several iterations behind in adopting these standards. In October 2011, the [DOE issued a determination](#) that the 2010 standards would result in greater efficiency, approximately 18 percent, than the 2007 edition. Map courtesy of Building Codes Assistance Project, “[Code Status Maps](#),” 2012 (accessed July 12, 2012)

Several cities and two states (Washington and California) have taken the next step by mandating that building owners conduct an energy efficiency benchmark study, followed by regular updates. In some cities, such as Austin, this information must be disclosed to potential buyers; in others, such as Washington, D.C., it is made publicly available online. (For a useful comparison of various benchmarking and disclosure mandates, see [the table](#) created by the Institute for Market Transformation and BuildingRating.org.) While owners are not required to perform efficiency measures under these mandates, lawmakers hope that the ranking system will seem user-friendly to potential tenants already used to making decisions based on energy labels or fuel economy stickers and will provide a market-based incentive for potential landlords to improve their rankings. Scaled up, these policies could have a significant impact nationally. According to researchers at the Political Economy Research Institute and the Institute for Market Transformation, a national energy rating and disclosure policy for commercial and multi-family residential buildings would cut energy costs by more than \$18 billion by 2020 and would create more than 59,000 new jobs.²⁰

Other municipalities are focusing on the permit process to create incentives for green construction in CRE. At least 11 states allow localities to adopt more stringent energy efficiency requirements in their permitting than state laws require.²¹ As part of the federal stimulus law, Massachusetts and California both allowed local governments to pass “stretch” codes for energy efficiency and retrofits, targeting building energy use 20 percent lower than called for in standard codes. These stretch codes brought extra funding into the localities as part of the stimulus package and have helped to lay the groundwork for wider acceptance and adoption of more stringent codes in the future.²² In Hawaii, state law requires local counties to prioritize permitting for construction that incorporates energy efficiency design standards at no extra cost to the petitioner; and in Portsmouth, New Hampshire, LEED-certifiable projects can qualify for a higher floor area ratio.²³ Lawmakers need to apply the same kind of creativity to incentives for retrofitting existing buildings.

In Maryland, lawmakers have used the tax code to incent high performance buildings. Title 9 of its tax code allows localities to give building owners a credit against their property tax if they meet at least the LEED silver standard. As of July 2011, four counties had taken advantage of this option.²⁴ As part of his Better Buildings Initiative, President Obama and the Department of Energy seek to make similar tax credits for energy-efficient buildings apply not just to new construction but also to retrofits, a measure that analysts predict could contribute an additional 77,000 jobs to the U.S. economy.²⁵ A New York study predicts that statewide energy programs added a cumulative 23,900 jobs between 1999 and 2010, and projects that number to increase to nearly 68,000 by 2024. These jobs range from construction and manufacturing to retail trade and technical services.²⁶

Making Retrofitting Jobs Good Jobs

While CRE owners may be inclined to pursue energy efficiency retrofits primarily for profit, and policymakers may focus on incentives to meet emissions goals, as we alluded above, commercial retrofits also have the potential to help people by creating new jobs. A recent study commissioned by the U.S. Green Building Council and prepared by Booz Allen Hamilton estimates that from 2000 to 2008, 2.4 million jobs were supported by the new construction of and retrofitting of LEED-certified green buildings in various sectors, and they predict that by 2013, another 7.9 million jobs will be created by these activities.²⁷ Similarly, a projection of energy efficiency–related jobs in California found that a scenario of medium levels of policy and funding support could result in the generation of more than 52,000 new job years by 2020.²⁸ As green jobs advocates have pointed out, because retrofits are improvements made to existing buildings that otherwise may not do renovations, these projects are opportunities to create new jobs.²⁹ And an estimated \$0.54 of every dollar spent on retrofits goes toward direct or indirect employees’ compensation.³⁰

If a job improves the environment, but doesn't provide a family-supporting wage or a career ladder to move low-income workers into higher skilled occupations, it is not a green-collar job.

(Green for All, “What is a Green-Collar Job?”)

However, if these new jobs are not quality jobs—jobs that pay a decent wage, ensure the safety of workers, and provide local residents with the chance for a career path—the employment potential of CRE retrofits will be lost. A statewide study of the energy efficiency workforce in California found that many of the jobs requiring new training were middle-skill construction jobs, and the authors caution that these jobs are “in the segment of the labor market plagued by low wages, poor links between training programs and jobs, and other labor market challenges.” When assessing the rate of health coverage for the occupational groups most connected to energy efficiency work, these researchers found that on average,

28 percent did not receive insurance from their employers, with some occupations—such as building envelope construction workers, including carpenters, concrete finishers, drywall and ceiling tile installers, and construction laborers—having as little as 35 percent of workers receiving employer-provided health benefits.³¹ A 2010 study by the advocacy group Good Jobs First examined leading firms in green categories and found that they often paid less than industry standards, sometimes significantly less.³²

These jobs can also be especially dangerous. Researchers at the University of California, Berkeley, found that in green construction, new design elements and new technologies can come with an increased chance of worker injuries.³³ Workers installing rooftop solar panels face the same dangers on ladders and scaffolding as their counterparts in conventional construction, but because the panels themselves limit the walking area on the roof, there may be an increased danger of falling.³⁴ Other dangers may come from dismantling older inefficient systems; demolition and renovation workers may be exposed to asbestos or silica dust as they pull down old interiors or could be electrocuted or burned while replacing outdated HVAC equipment.³⁵

Public Officials Take the Lead in Creating Quality Jobs

Just as lawmakers at various levels of government needed to kick-start the CRE retrofit industry by committing to make the buildings they control energy efficient, and just as they are using the permitting process and the tax code to create incentives for changes in behavior by private CRE owners, so too must they set the example by prioritizing the creation of quality jobs as part of their agenda for sustainable buildings. In some cases, funding for up-front capital costs in building retrofits uses a blend of private and public funding, making it in governments' interest to ensure they are getting the best value in the form of good jobs and improvements in energy efficiency and carbon emissions. In other cases, the public is making non-monetary contributions to these projects in the form of building permits or tax abatements, and responsible stewardship of these resources demands that they be used to benefit the broader community. Studies have shown time and time again that worker standards attached to public contracts, such as prevailing wage provisions or project labor agreements, provide social benefits from higher

Include Workers Throughout the Life Cycle of the Building when Thinking “Green”

[An analysis of various green building saving categories](#) by Booz Allen for the U.S. Green Building Council found that operations and management changes came second only to energy efficiency measures for savings per square foot: \$0.32/sq. ft. versus \$0.52/sq. ft. respectively. But many buildings don't fulfill their energy efficiency promise because of bad operational decisions. As one expert notes, a lack of retraining for facilities staff can result in [“staff overriding the controls, manually operating systems, and canceling out energy savings.”](#)

In New York City, SEIU Local 32BJ—the labor union representing building service workers—has partnered with industry leaders to develop innovative new programs to get maintenance and cleaning staff the training they need to contribute to efforts to green residential and commercial real estate. The [1,000 Supers](#) program trains building superintendents to maximize efficiency in the buildings they oversee while creating a viable career ladder. In the commercial sector, 32BJ, along with unions representing building operators and laborers, have partnered with the [New York State Energy Research and Development Authority](#) to offer seminars in “Energy Efficiency Measures” and “Techniques for Water Use Reduction.”

wages, increased government revenues, and fewer workplace injuries.³⁶

Some municipalities are going further still, entering into community workforce agreements to clearly spell out expectations for job quality and access for publicly supported efficiency projects. While many of these agreements began in the residential retrofit sector, they are serving as models for commercial projects as well. For instance, the City of Seattle worked with a variety of stakeholders to draft a “Community High-Road Agreement” detailing quality standards, working conditions and contractor performance. As officials explain, “Together, these standards will ensure that the City’s program creates high-quality and broadly-accessible jobs for area residents, while maximizing the environmental benefits of the program.”³⁷ By the spring of 2012, the program had performed upgrades on more than 700 multi-

Case Study: Seattle’s Community High-Road Agreement

As part of the City of Seattle’s Community High-Road Agreement for residential and commercial retrofits, it created a contractor pool. Contractors interested in taking advantage of the business leads generated by the project demonstrate that they meet minimum standards, commit to wage and training standards, and fulfill reporting requirements. “This approach shifts what can be an inherently adversarial relationship into a collaborate one,” observes one [report](#) on the program. “Rather than relying on regulation and enforcement of standards on the back end, the contractor pool process ensures that contractors understand the program and the City’s public policy goals up front.”

Once accepted to the pool, contractors are ranked using a point system and are given a score that is available to potential clients. [Points are given](#) for being a minority- or woman-owned business, or a small business, but also for demonstrating a history of hiring from community-based job training programs, providing health or pension benefits to employees, or providing continuing education to employees.

One key measure in these efforts has been the conscious engagement of community advocates. Indeed, stakeholder input has been part of the process in determining standards for energy efficiency in the CRE

family units and 250 single-family homes, but also on 300,000 square feet of commercial property, 26 City of Seattle buildings, and four major hospitals, all contributing to more than 57,000 hours of work performed by more than 500 workers.³⁸

Similarly, in launching its program to reduce Los Angeles’ greenhouse gas emissions to 35 percent below 1990 levels, the City Council passed an ordinance specifying that project labor agreements would “minimize the possibilities for labor misunderstandings, grievances, and conflicts thereby promoting project cost containment, and timely and economical project completion.” Furthermore, the Council noted, these agreements, “have the capacity to provide additional benefits, including facilitation of efforts to target construction job opportunities to disadvantaged City residents; prompt generation of tax flow and other income to the City; and more lasting remediation of conditions of poverty and unemployment through the provision of careers in the skilled construction trades.”³⁹

In Milwaukee, officials from the city’s Office of Environmental Sustainability worked with labor, community and business leaders to craft a community workforce agreement that was attached to projects supported by their new Milwaukee Energy Efficiency (ME2) program. CRE owners receive support from the program to access financing assistance and qualify for state incentives, and in exchange, they use approved contractors who have committed to hiring from the community and adhering to quality workplace standards.⁴⁰

industry from the very beginning. When the U.S. Green Building Council was drafting its 2009 LEED guidelines, nearly 7,000 public comments were submitted during the public review phase of the project.⁴¹ Of the Seattle process, Julian Gross of the Community Benefits Law Center observed that city officials “made a long, sustained, resource-intensive effort to get people from the community to craft an agreement that they could buy into. That’s very different from most cities’ usual process.”⁴²

Public-Private Commitments to Good Jobs

Finally, in addition to best practices from public partners in spurring efficiency retrofits in CRE, there is also a history of policies regarding job quality on the private side of the industry. Specifically, dozens of the largest CRE investors have made visible and public commitments to quality jobs in their properties. Many have signed onto the global Principles for Responsible Investment, ranging from public sector pension funds, such as CalPERS and NYCERS, to private companies, such as CBRE Investors and Prudential Real Estate. Some industry organizations are beginning to focus on definitions of “responsibility” or “sustainability” that encompass environmental programs and responsible contractor policies.⁴³ Because of pension funds’ need for long-term and steady investment returns, real estate funds are often the largest vehicles for their green investing.⁴⁴

The Fund believes that the utilization of such [responsible] contractors adds value to its investments by ensuring that Services are provided by adequately-trained, experienced and motivated workers who deliver high quality products and services.

(Illinois State Board of Investment, [“Investment Policy,”](#) Amended December 16, 2011)

Some of these pension funds, and the private management companies that oversee their property investments, have crafted responsible contractor policies that clearly state their interest in the conditions of workers employed by their managers and other delegates. The CalPERS statement of investment policy provides, “CalPERS believes that an adequately compensated and trained worker delivers a higher quality product and service.”⁴⁵ The Ohio Public Employees Retirement System says that its policy “seeks to ensure that OPERS contractors will be selected based upon demonstrated ability to provide high quality services, and thereby enhance the value of OPERS Properties, as evidenced by their record of compliance with applicable statutes and payment of fair

compensation and benefits to employees, as well as by their experience, reputation, responsiveness, fees and dependability.”⁴⁶

Some advocates for green investing, such as the Clinton Global Initiative, are actively encouraging these pension funds to invest more heavily in environmental projects, including retrofits of buildings. “This [commitment] goes right at the biggest unemployment problem we have in the United States, right at the climate-change challenge and puts more disposable income into the hands of people who will almost certainly spend it,” said President Clinton.⁴⁷

At the same time, numerous major corporations have committed to occupy energy-efficient office space. Some, like Starbucks, Best Buy, Staples and the J. R. Simplot Company, have joined in President Obama’s Better Buildings Challenge, together pledging to upgrade 50 million square feet of commercial buildings.⁴⁸ CRE leaders such as Lend Lease, Transwestern, and USAA Real Estate have also signed on as partners, as have several dozen cities and states.⁴⁹ As community advocates participate in crafting local policies that guarantee that jobs retrofitting CRE are quality jobs, they should consider focusing not only on public officials who see boosting local employment as good policy, but also on real estate investors who may see

both environmental sustainability and job quality as an important element in their fiduciary responsibility, and CRE owners who may see retrofits as part of a broader corporate social responsibility policy.

Building Stronger Communities by Rebuilding Commercial Real Estate

U.S. owners of commercial real estate spend significant proportions of their operating funds on energy. Heating and cooling inefficient buildings requires cash that instead could be spent on economic activity that would help to finally bring us out of the shadow of the Great Recession. In recent decades, retrofitting these buildings to help the environment and improve companies' bottom lines has become a widely accepted strategy, and various public and private funding mechanisms have been developed to help owners pay the up-front costs of new construction and new equipment that will render energy savings in the future. These projects have the potential to create all new job hours, even if the jobs themselves are often traditional ones incorporating some new techniques or skills. Thus far, the quality of these jobs has been mixed. In too many cases, we are performing long-term energy savings projects by using short-term priorities when it comes to worker standards and worker safety.

There are precedents in some publicly funded energy efficiency efforts whereby coalitions of public officials and community activists have negotiated workforce agreements that should be assessed for applicability in the CRE context and, if necessary, adapted to address the business structures in this industry. There are also examples of leaders within the CRE community who have already begun to make the connection between environmental efforts and job quality in developing a broader ideal of responsible investing and ownership. Advocates should strive to bring all these stakeholders to the same table to develop CRE retrofitting programs that benefit the environment and ensure quality jobs for community members.

Despite some progress to date on improving energy efficiency in America's commercial building stock, we still have considerable work to do to cut emissions and save energy across millions and millions of square footage. We must not lose the opportunity to make this work consist of quality jobs that fulfill the promise of truly sustainable communities.

ENDNOTES

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⁴⁷ [“Clinton trumpets green investments for jobs,”](#) Reuters, September 20, 2011.

⁴⁸ [“36 States, Cities, School Districts Join Better Buildings Challenge,”](#) Environmental Leader, June 27, 2012.

⁴⁹ [“Obama Administration Announces 14 Initial Partners in the Better Buildings Challenge,”](#) Department of Energy Press Release, June 30, 2011.