

Emerging State & Local Energy Financing Models

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Renewable energy, energy efficiency, clean energy technology, green development, and the new energy economy have become catch phrases for boosting economic development throughout the country. Nearly every federal official and politician, scientist, policy advocate, corporation, utility company, military representative, environmental advocate, housing developer, technology lab, manufacturer, and small business owner is now engaged in the practice of reducing energy costs and consumption through advancements in the energy sector.

Energy development, however, is incredibly complex, and state and local officials work to build place-based renewable and clean tech energy models to power communities, create green/clean jobs, reinvigorate Main Street, and rebuild large scale industry. The scope of projects can be overwhelming, the changing pace of technology unpredictable, and the simple act of financing daunting.

There is no doubt that energy development is the fastest growing sector of the U.S. economy. According to Lewis Milford of the Clean Energy Group, there are now more jobs in wind and solar than coal mining by about 150,000 to 80,000.¹ Milford notes that states provide a number of incentives to encourage the clean

energy sector, including rebates, grants, performance-based incentives, feed-in tariffs, and direct loan programs. There are a variety of emerging financing tools, such as credit enhancements, interest-rate buydowns, property assessed clean energy bonds, and on-bill financing structures.

Examples of innovative financing solutions are emerging throughout the country with models demonstrating that regardless of size or proximity, state and local government can have a profound impact on energy development.

Exploring Energy Efficiency Financing

Energy efficiency programs are generally geared towards financing efforts that improve the energy consumption of existing buildings, homes, and infrastructure.

Many energy efficiency or renewable energy programs are funded through System Benefit Charges (SBCs), which are surcharges (¢/kWh) on a ratepayers' utility bill. According to Milford, 18 states and the District of Columbia have state- or third-party-administered Public Benefit Funds, which are funded with the SBCs, for renewable energy (RE), and 19 states have them for energy efficiency (EE). Many utilities also offer EE/RE programs within

their service territories, usually funded through cost recovery or SBCs. In 2009, these stakeholders spent \$5.3 billion for EE programs and \$550 million for RE programs.²

State and local development finance agencies throughout the country have been implementing Energy Efficiency Loan Programs (EELPs). A recent report by the American Council for an Energy-Efficient Economy (ACEEE) found that EELPs typically finance building upgrades by providing funding directly to building owners for projects that lower energy bills and reduce annual energy costs by an average of 12-17%. The benefits of an EELP are numerous, including stable and low risk investment options and the potential to support large scale projects.

The ACEEE report reviewed 24 EELPs and found the default rates for these programs to be extremely low, with a range of 0-3% throughout the life of the average financing program.³ In fact, default rates for EELPs have remained relatively unchanged during the economic downturn. The near mitigation of risk has allowed the traditional EELPs interest rate environment to remain, on average, 3-5%. In an economic recession, the availability of low-cost and reliable capital at attractive rates is a considerable

competitive advantage that encourages economic development and industry investment.

Unfortunately, EELPs have been hampered by low participation rates. Most programs have less than one percent of their targeted borrower engaged as the tool as been slow to develop. One cause for concern with EELPs is the lack of investment from major banks, as smaller commercial banks and credit unions have been the chief partners in these funds. With small loan sizes, typically around \$9,000, the large financial institutions have been reluctant to engage.

Clean Energy Works Oregon

ACEEE's report highlights a handful of successful and highly replicable programs, including Oregon's Clean Energy Works program, which was a featured financing model at CDFA's 2010 Annual Summit.⁴ This highly successful program, thriving now in Portland, has become a model for building participation amongst home owners while simultaneously reducing energy costs for consumers.

The program was launched in 2009 to provide long-term, low-interest financing to homeowners for whole-home energy upgrades. An energy advocate performs an audit to tailor the work to each home. Within just a few years, the program has reached its participation goal of 500 loans and offers loans with rates from 3.99% to 5.99%, with a term of up to 20 years. The average loan size is \$12,500, with monthly payments of approximately \$70. A key component of the program is that the city takes a subordinate position on the property as collateral and collection is made through the primary heat source utility bill. A 10% loan loss reserve has been funded to handle defaults.

Management of the fund is under a community development financial institution, and contractors selected for the program must agree to hire workers from a pool specifically trained for the program. As an additional economic development opportunity, local companies that can provide component products, such as windows, insulation, or gaskets, are utilized. The approximate annual energy savings has been estimated at \$500 for each home, and this innovative, flexible, and affordable program has thrived while building a more environmentally friendly housing stock. For more information on this program, view three presentations online at www.cdffa.net.

Clean Energy Financing Programs

Throughout the country, clean energy financing programs are also taking shape to help transform outdated and struggling economies. This movement, driven by an investment in clean energy technology and development, is taking root through the northeast with innovative programming in Connecticut and Massachusetts.

In Connecticut, the new Clean Energy Finance and Investment Authority (CEFIA) is the nation's first full-scale clean energy finance authority. This innovative entity has merged the clean tech industry with the public finance sector to create a

strategic approach for addressing growth. The result of this initiative is a creative partnership between finance and technology that—while speculative and risky—is highly rewarding and focused on job creation. The ultimate goal of CEFIA is to leverage public and private funds to drive investment and clean energy deployment in the state.

In Massachusetts, the Massachusetts Clean Energy Center (MassCEC) is a creative initiative aimed at accelerating the success of clean energy development. MassCEC is the first state agency in the nation dedicated solely to facilitating the development of the clean energy industry with a focus on creating high-quality jobs and long-term economic growth. MassCEC makes direct investments in what they term “game-changing” clean energy technologies that help high-potential companies establish

themselves in Massachusetts. The Center awards grants up to \$40,000 to support efforts leading to the demonstration of the commercial viability of clean energy technologies and will make growth capital investments that support the expansion of a clean energy company's operations and employment in the state. MassCEC also makes venture capital equity investments, of up to \$500,000, in promising early-stage clean energy companies that are contributing to the advancement of 20 different clean energy sectors.

Moving Forward on Energy Finance

Perhaps the most intriguing energy finance activity is actually rooted in a popular innovation finance model. The New York State Energy Research and Development Authority (NYSERDA) has funded six business incubation programs, which have raised \$26 million in private investment and \$10 million in federal funding, assisted client companies in raising \$16.5 million in private capital, and created 217 jobs at client companies within the incubators. This example of innovation and creative thinking is driving a new energy economy in New York and creating a potential model of best practices replicable throughout the country.

For decades, the U.S. energy sector has been moving forward with renewable and energy efficiency technology advancement. Until recently, the development finance industry has been slow to keep pace. This is starting to change however, as more states become engaged in the development finance side of energy advancement and take steps towards providing capital access to the emerging clean, renewable, and energy efficiency industries.



¹ CDFA-BNY Mellon Development Finance Webcast, Lewis Milford, Clean Energy Group, October 18, 2011

² CDFA-BNY Mellon Development Finance Webcast, Lewis Milford, Clean Energy Group, October 18, 2011

³ What Have We Learned from Energy Efficiency Financing Programs?, ACEEE Research Report, September 2011

⁴ CDFA Spotlight: Renewable Energy Finance Solutions, CDFA, Jerry Arkebauer, May 2011, www.cdffa.net