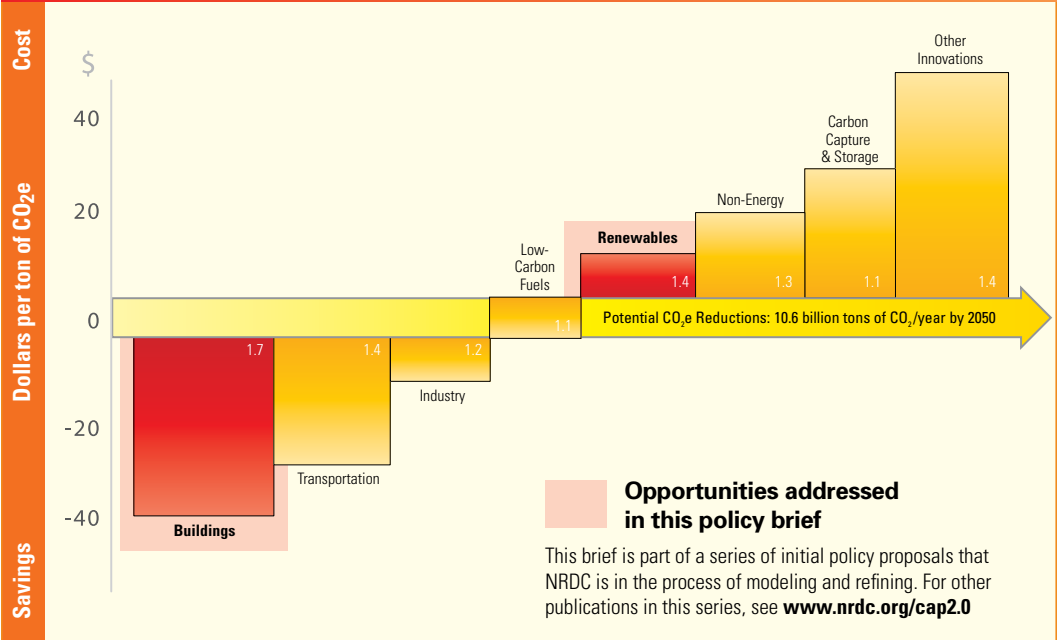


Part of a series on

**CAP
2.0**

Policy Brief

Boosting Needed Investment in Energy Efficiency and Clean Power



Scaling Up Investment in Energy Efficiency with a Federal Energy Efficiency Financing Facility (FEEFF)

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Despite the numerous benefits that stem from increasing energy efficiency and distributing clean power generation technologies in the buildings sector, current levels of investment fall far short of what is achievable and necessary. In today's economic climate, many worthwhile projects are simply unable to obtain the financing they need and it is unclear whether existing government programs such as loan guarantees will be sufficient to overcome this shortfall. Creating a complementary Federal Energy Efficiency Financing Facility (FEEFF) to support investment in efficiency projects would provide access to much-needed capital and help move our nation toward a clean energy economy.



April 2009
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Existing Barriers to Financing Energy Efficiency

Although many lenders acknowledge the potential for financing energy efficiency projects, few have yet to build a sustainable business around the maze of existing barriers: pre-existing mortgage liens, difficulty securing actionable liens, term constraints, credit constraints, and limitations of many real estate ownership arrangements are among the barriers facing lenders. The absence of standardized underwriting protocols or a track record on efficiency loan performance results in higher risk premiums. Uncertainty and insufficient data regarding the profitability, potential volume, and liquidity of loans in this sector render them unattractive to large capital providers.

How a Federal Energy Efficiency Financing Facility Would Overcome These Barriers

A FEEFF would provide a federal guarantee of repayment to pools of qualifying energy efficiency loans or financing arrangements that generate—and may be backed by—efficiency savings streams and that meet other key criteria (e.g., sound repayment mechanisms, acceptable risk, and aggressive levels of energy savings). With FEEFF credit enhancement, qualifying portfolios would be of the highest credit quality. This backing would result in better lending terms for borrowers, including a reduced cost of capital and potentially longer financing terms that would boost low-cost financing and enable investment in efficiency measures that otherwise would not occur.

The goal of the program would be to provide qualifying lenders a financing framework, risk mitigation, and an opportunity to aggregate efficiency loans into securities so that such institutions can scale up lending programs for energy efficiency retrofits. Qualifying institutions may include banks, credit unions, finance companies, energy service companies (ESCOs), utilities, states, municipalities, state and municipal energy agencies, and qualifying non-profits. To qualify for program participation, these organizations would need to meet basic criteria designed to ensure their capability to perform.

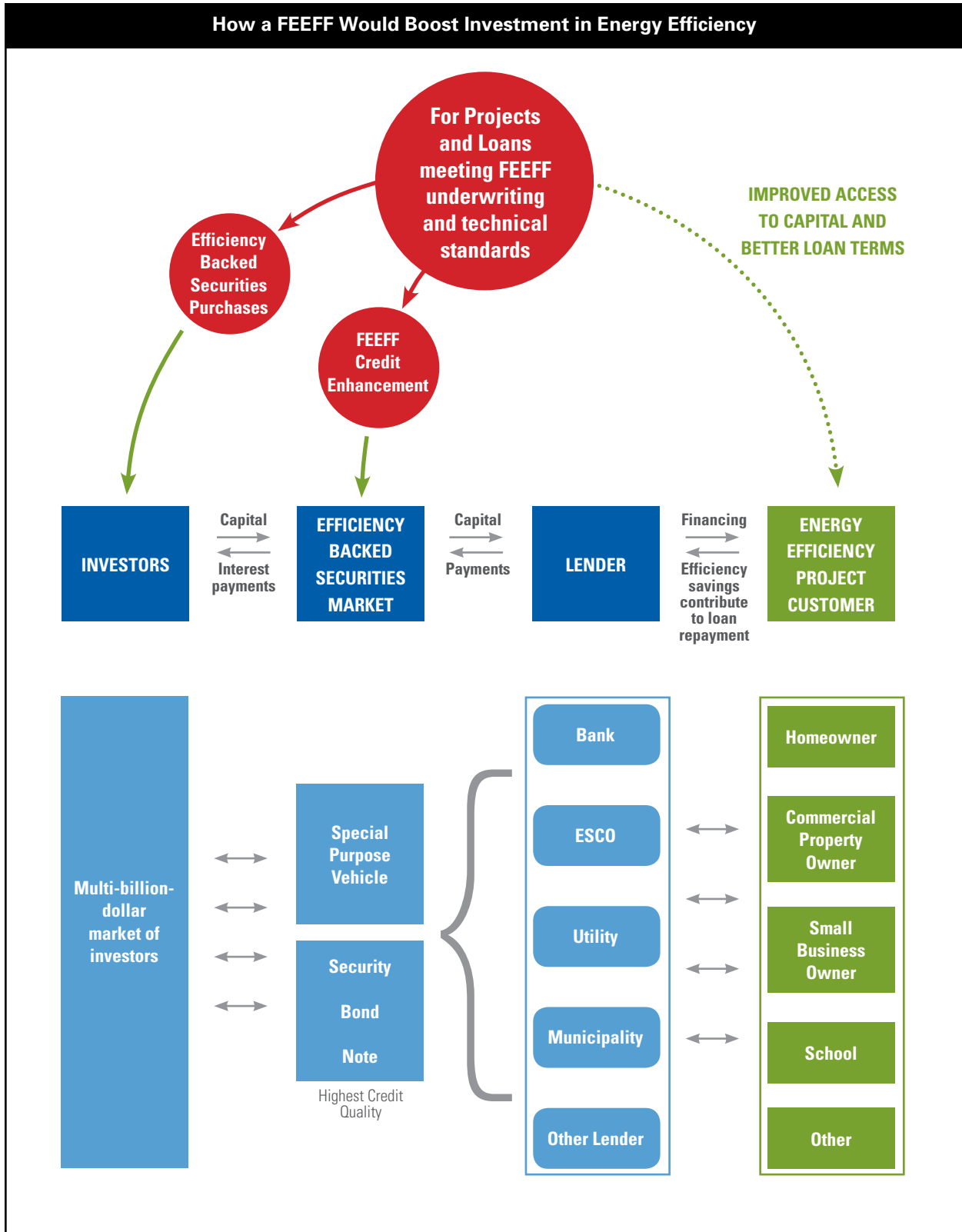
Qualifying loans must meet FEEFF technical standards for eligible measures, comply with appropriate measurement and verification protocols, and meet the necessary underwriting standards. FEEFF would establish criteria for the energy efficiency savings methodologies used, eligible contract terms regarding security interests taken and repayment procedures, and data reporting requirements.

The FEEFF would be designed to protect U.S. taxpayers against unwarranted risk, while acknowledging the need to accept a certain level of loan default risk to boost investment in energy efficiency. First, borrowers should generally be required to contribute a portion of the project cost to ensure they have an incentive to properly operate and maintain energy efficiency measures. To further align incentives, qualifying lenders should generally retain some of the risk in portfolios they create, whether in the form of deductibles, recourse arrangements, or subordination or retention of a portion of a seller or servicer's interest. The structure of such risk retention would vary based on the sector and transaction structure, and would be designed to promote appropriate due diligence by project originators while mitigating against performance risk that lenders are unable to quantify.

Designing the Right Approaches for Increasing Efficiency Investment

The barriers to energy efficiency investment and solutions for overcoming those barriers are sector specific. Unfortunately, no single approach will work across all sectors. Conventional loans based primarily on borrower credit are not always the answer; innovative financing arrangements can be more attractive to both the borrower and lender. Depending on the sector and borrower type, off-balance-sheet financing, repayment agreements attached to the property, repayment schedules tied to savings streams, and lease structures may increase the attractiveness of investing in efficiency.

The FEEFF would not seek to invent wholly new approaches; it would instead design federal credit support around sound existing financing models that are functioning or emerging in the market today. While it would take sector-specific factors into account when making credit enhancement allocation decisions, the FEEFF would not restrict



Based on a graphic produced by Booz Allen Hamilton, who provided expertise and technical assistance in the development of the concepts described within this policy brief.

support to one specific transaction structure or one building sector. Rather, for projects and programs that meet FEEFF requirements, it would offer federal credit enhancement to diminish specific risks that private capital markets cannot efficiently evaluate and absorb.

For example, ESCO financing arrangements have worked well in the “MUSH”—municipals, universities, states, hospitals—and federal sectors, but term constraints currently limit the scope for potential projects and efficiency measures, and borrower credit limitations prevent the transfer of this model to much of the commercial sector. The municipalities of Babylon, New York, and Berkeley, California, among others are using special tax or assessment districts to reduce repayment risk for efficiency retrofits and customer-sited renewables. Forward-thinking utilities have adopted efficiency financing systems connected to monthly utility bills or established tariffed installation programs. Mortgage refinancing programs incorporating efficiency measures are under development as are approaches that seek to address split incentives for commercial property owners.

While these gradual innovations are welcome, neither the environment nor the economy can afford to wait for efficiency finance to evolve to scale without federal credit support.

Transforming Regulations to Expand the Market for Efficiency

Alongside the financial barriers to increasing efficiency lies a mass of outdated regulations that also inhibit progress toward improving building efficiency. Updating appliance standards and building codes, developing new lease structures, and expanding marketing and education programs can all help transform the market for energy efficiency. See the *Kick-Starting Building Efficiency* Cap 2.0 Policy Brief for a full suite of solutions for scaling up energy efficiency. The brief and others in the Cap 2.0 series are available at www.nrdc.org/cap2.0

Filling the Data Gap

The lack of data demonstrating actual financial benefits of efficiency measures (that can be applied to individual loans or lending programs) and the lack of a track record on energy efficiency loan performance are significant barriers to establishing credible financial models and undertaking appropriate analysis of credit risks. Without such tools lenders cannot deploy at scale many of the creative financing solutions described earlier. The FEEFF should provide market leadership—working in collaboration with private sector centers of expertise—in gathering extensive and consistent data, analyzing and presenting this data in financial terms, testing and proving savings projection methodologies, refining risk management procedures, and promoting transparency, such that this data is available to all parties involved in energy efficiency investments. Over time, the private investment sector would gain a greater ability to value and manage these risks. As this occurs, the FEEFF would direct credit support to the newest technologies, the deepest retrofits, and the sectors that are the most difficult to serve, such as affordable housing. Ultimately, after a period of at least a decade, we would expect the FEEFF to sunset.

How to Build the Financing Facility

The FEEFF should be established as a special-purpose non-profit entity wholly owned by the U.S. government with the authority to bind the Treasury for purposes of loan repayment guarantees. It should be staffed by experienced professionals in energy efficiency, risk management, and credit underwriting, and have the legal status of a private entity. Employment terms should be competitive with the private sector, and not subject to Federal agency rules. An advisory board should oversee implementation, with a majority of the board representing the government and the balance from relevant private industry. Relevant data from transactions should be transparent to the public, and the General Accounting Office and private auditors should review and audit the FEEFF at least annually.

Using Federal Credit Support to Leverage Private Investment

The credit enhancement program and the standardization it would impose are key to the development of a market for efficiency-backed securities. Without primary and secondary financing markets for building efficiency measures, the overall scale of energy efficiency investment in our economy will remain constrained and certain sectors are likely to remain underserved for many years. The federal government can step in to facilitate sustainable market development and can do so on a risk-controlled basis that is designed to leverage private-sector investment. We believe that the FEEFF should be provided with \$10 billion of government capital and that doing so could leverage as much as \$150 billion to \$200 billion in private capital. This approach would:

- Remove access to capital as a primary barrier to efficiency investment for households and businesses across the country, and reduce reliance on equity capital to fund efficiency investment.
- Ensure rates and terms that render deep efficiency savings feasible.
- Facilitate growth of creative repayment mechanisms through compilation of credit risk data and scaled experience.
- Bolster efficiency awareness through active marketing and education efforts by efficiency finance providers.
- Provide transparency of data and experience across building sectors that lead to greater value attribution to energy efficiency in the real estate valuation process.
- Expand the creation of green-collar jobs beyond the numbers achievable through direct efficiency spending.
- Benefit the U.S. economy by cutting carbon emissions and reducing dependence on volatile fossil fuel energy sources.

Complementary FEEFF Services Would Help Overcome Additional Barriers

In addition to providing financing to address initial cost barriers, bundling financial products with other services (such as audits, incentives, and information products) is an effective way to overcome other barriers. Energy audits are a proven means of identifying cost-effective projects. The FEEFF may offset the cost of energy audits undertaken by program participants. It may also administer interest rate reductions in targeted sectors. The FEEFF may also leverage the ability of its financing partners to expand existing marketing and education programs.

Benefitting Local Communities with Financing Support

Numerous lending institutions have indicated that a federal credit enhancement program would open financing markets for energy efficiency retrofits. The Center for Working Families (CWF) is spearheading an ambitious program—Green Jobs/Green Homes NY—to retrofit one million homes in New York State in five years. According to Dave Palmer at CWF, “federal credit support would unlock the capital we need.”¹ Several prominent market practitioners have indicated that access to federal credit support would make a huge difference in the ability to finance commercial efficiency projects. Experts on affordable multifamily housing are seeking ways to expand underwriting criteria to incorporate efficiency, and would be greatly assisted by federal credit support.

Expanding the Market for Customer-Sited Renewables

The FEEFF should also support financing programs for customer-sited renewables such as photovoltaics, solar hot water, wind energy, and other technologies. Just as with efficiency projects, lenders interested in financing customer-sited renewables are challenged by lack of data and underwriting standards, lack of experience with the products, and lack of a mechanism to organize the investment market and support a secondary market for numerous small and disaggregated

financing arrangements. Taking lease agreements as an example, determining the residual value of leased equipment, evaluating resale markets, and identifying costs associated with redeploying a technology remain problematic from a credit perspective. The FEEFF could facilitate development of more robust financing markets for both customer-sited renewables and energy efficiency loans that are ultimately self-sustaining.

The Limitations of Revolving Loan Funds

Publicly managed revolving loan funds (RLFs) use and reuse public capital to finance a public good that cannot effectively be funded with private capital alone. Many view this approach as preferable to granting capital outright. There are some building categories (e.g., not-for-profits, historic buildings, affordable housing) for which RLFs represent a good financing solution. But RLFs do not leverage private capital as efficiently as credit enhancement and are less likely to catalyze the development of private capital markets for efficiency.

Deploying Financing Support to Build the Clean Energy Economy

We believe that any entity claiming to act as a financing facility or bank for “clean energy” should not support nuclear power, liquid coal, oil shale or tar sands projects, or any technologies that exacerbate global warming. Further, it should not “crowd out” private capital and should refrain from financing or supporting mature low-carbon technologies, unless financial market dislocation markedly reduces capital access for such sectors. The FEEFF should use government support judiciously to facilitate both development and commercial deployment of technologies and programs that deliver reductions in global warming pollution most quickly, at the lowest cost, and with the least financial and environmental risk. Energy efficiency should be a high priority, if not the first priority, of such an entity.

Endnotes

1. Based on a conversation with Dave Palmer at the Center for Working Families in New York. For more information about CWF, visit www.centerforworkingfamilies.info.