GREEN MADISON PROGRAM REPORT

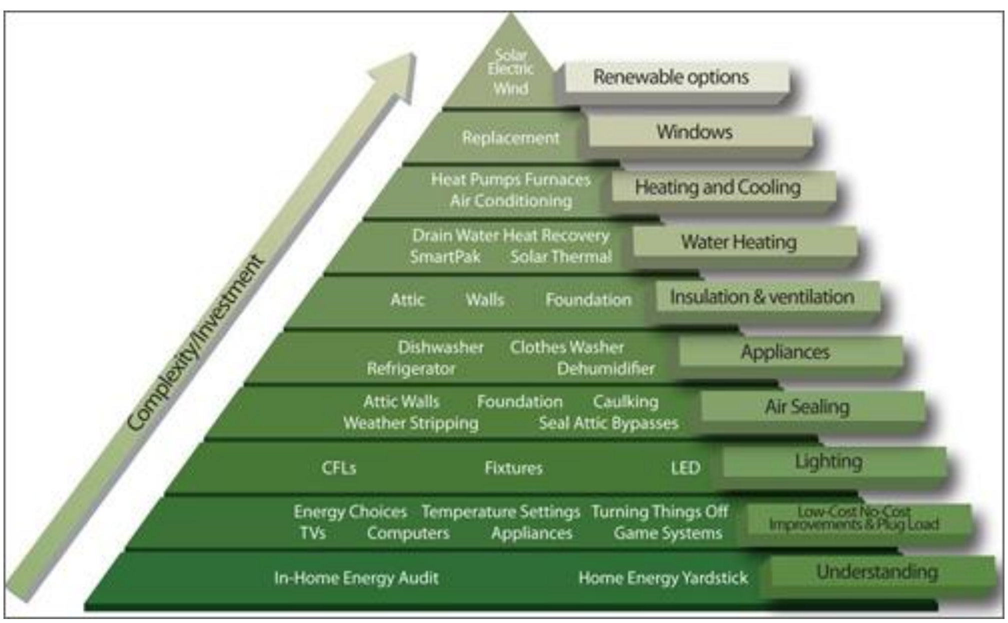
AUTHORIZED BY CITY OF MADISON RESOLUTION 30453

Purpose

This report was prepared at the request of the Madison Common Council, specifically through Resolution 30453. It provides a report on the Green Madison Program, which is administered in the City's Community Development Division, and offers some discussion around key issues pertaining to the program's future.

Background – Madison's Experience with Energy Efficiency

The City of Madison's involvement with energy programming dates to 2009. It grew out of funding opportunities provided through the federal government. Federal dollars flowed to Madison from the U.S. Department of Energy (DOE) in two separate grants. The first was awarded in 2009, a direct formula allocation of funds under the Energy Efficiency Conservation Block Grant (EECBG) Program. The second came about as the result of a competitive grant application under the Better Buildings Neighborhood Grant Program, a sub program within EECBG. This grant was awarded to a four-member collaboration led by the Wisconsin Energy Conservation Corporation and included the cities of Madison, Milwaukee and Racine.



Energy Efficiency Community Block Grant – Formula Grant

In 2009, Congress enacted the American Recovery and Reinvestment Act (ARRA) of 2009. ARRA was a wide-ranging law written to stimulate public and private sector spending, part of a broader strategy to boost the nation's struggling economy and create jobs. The EECBG Program provided formula-based grants to state and local governments to support and promote investments in projects that would reduce energy consumption. Madison received about $2.3 million and allocated that money among several uses:

1. About $1 million was directed toward several city-focused initiatives. This included:
    - $845,000 for interior lighting retrofits in city-owned buildings
    - $100,000 to purchase LED street lights
    - $55,000 toward an anaerobic digester initiative

2. Nearly $900,000 was used to develop a pilot program to promote private sector investments in energy efficiency projects. The City allocated:
    - $664,000 toward a business energy efficiency pilot program (BEEP) and
    - $234,000 for a residential energy efficiency incentive pilot program (REEIP).

3. About $445,000 was offered to the Madison Urban League to help develop a weatherization employment training initiative

4. More than $53,000 went to support a sustainable schools initiative

These efforts had some success in reducing energy usage. The lighting projects cut energy demand by 108 kW and produced annual electricity savings of nearly 450,000 kWh – the equivalent of removing 66 cars from the road or planting 8,100 trees per year. Specific energy savings realized by BEEP and REEIP participants proved more difficult to ascertain, however, the overwhelming majority of clients showed some evidence of lower energy consumption.

BEEP and REEIP

The BEEP Program targeted businesses. BEEP allocated funds through a competitive application process. It offered to finance up to 75% of eligible project costs. Half of that support came in the form of cash grants and half as 0% deferred loans. Loans were to be repaid in 5 equal annual installments and repayments were deferred until project completion. The program received forty-two requests for assistance and offered funding to sixteen applicants. Applicants were not required to accept both grant and award offers and, indeed, eight of them opted to accept only grant funds. The eight that accepted both grants and loans borrowed a total of about $200,000. At this date, all of those loans are in repayment status and all are current. They are scheduled to be repaid in full by 2017. Repayment income can be reused to support future activities that are consistent with the goals of the EECBG Program.

REEIP was set up to help homeowners. The program targeted a group of about 350 of them who had completed energy assessments under the Wisconsin Focus on Energy Home Performance Program but had not yet followed through on projects recommended in those assessments. REEIP offered loans to finance project costs at 0% interest, payable over 7 years. The program charged a 2% loan fee, which was added to the loan principal. Only twenty-four homeowners responded to this offer and submitted applications. One was deemed ineligible because of residency issues but twenty others were offered loans, totaling just over $200,000. These loans, too, are in repayment and, as with BEEP loans, can be recycled to support future program activities.

Better Buildings Neighborhood Program – Competitive Grant

In 2010, the Wisconsin Energy Conservation Corporation (WECC), in partnership with the cities of Madison, Milwaukee and Racine, applied to the DOE for funds under the Better Buildings Neighborhood Grant Program (BBNP). The group secured a $20 million grant. WECC was identified as the grant administrator and Madison, along with Racine and Milwaukee, are sub-grantees. The grant was initially scheduled to run through May 31, 2013, but was extended to September 30, 2013 and later, was extended again to November 1, 2014. These are one-time funds.

The proposal's overall objectives were to substantially increase energy savings, create (or maintain) jobs, and reduce carbon emissions. Working within the three cities, it envisioned supporting efforts that would transform the marketplace in the energy efficiency arena by helping to develop a qualified workforce, and linking service providers, financial institutions and residential and commercial customers. And, project participants committed to a goal set forth by the DOE that program activities would achieve energy savings of at least 15%.

Green Madison

Nearly $7.2 million of BBNP grant funds were allocated to efforts within the City of Madison. This supplied the resources needed to support activities that have since become identified as the Green Madison Program.

City plans were to use BBNP funds to continue and expand efforts launched under the BEEP and REEIP pilot programs. Accordingly, in 2011, the City set about to create two distinct programs, one focused on businesses and multi-unit residential buildings and a second on single-family owner occupied homes. In the early stages of their development, several challenges emerged.

It had been anticipated that the residential program would utilize a financing mechanism known as PACE (Residential Property Assessed Clean Energy), which allowed homeowners to get loans for eligible projects and repay them through their property tax bills. But the Federal Housing Financing Agency raised issues over this practice and effectively scuttled its use. This setback was followed by other program changes initiated by the DOE that further slowed program development.

The program that finally emerged proposed to support energy improvement projects through loans offered by Summit Credit Union (selected for this role by WECC through a competitive process). The loans were backed by loan loss reserves that were established and maintained by WECC. By contract, Summit was obligated to provide twenty dollars to homeowners (or business owners) for every dollar placed into Summit through Green Madison for residential and commercial loan opportunities. For their part, homeowners were required to undergo a professionally conducted energy audit at a cost of about $400. The program offered to contribute $100 toward that cost.

Homeowners were slow to respond in the early months of the program and in 2011 it reached only a small number of participants. Meanwhile, the commercial program didn't even get started until the first quarter of 2012 and didn't offer its first project approval until mid-year. The DOE, in its original agreement with WECC, had set a program goal of completing 4,500 residential and 100 commercial projects within the three-year grant period. But faced with these early struggles, the agency soon acknowledged that those goals were unrealistic.

On several fronts, this was a difficult time to be pushing businesses or homeowners to make the large investments typically required for energy improvements. Madison, like most of the country, was recovering only slowly from the Great Recession. The local housing market was stagnant and property values had softened. Moreover, mild winters and easing energy prices, particularly for natural gas, reduced the urgency for such costly investments, and lengthened payback periods. All of these factors worked to discourage what, generally speaking, were discretionary outlays. And, with market interest rates already holding steady at or near historic lows, Green Madison's loan terms just didn't offer enough incentive to change that equation.

Program design frustrated participation in other ways. One program provision, for example, imposed workforce requirements on participating contractors. It was designed to encourage the employment of city residents but instead served to alienate a broad swath of service providers, essential to the program's success, and it surely prevented them from referring potential clients to the program.

The program also faced administrative challenges. One of them involved shifting priorities. The grant had been secured with the aim of making long term improvements in the energy efficiency services market place. It would take time to develop. And that was a luxury not available under ARRA, which was created to provide short term economic stimulus. It demanded money be spent quickly and that urgency was conveyed by the DOE to its BBNP grantees. It prompted a change in tactics to induce program demand, notably the use of cash incentives.

Finally, there were difficulties with program operations, some of which stemmed from the division of responsibilities between the City and WECC, particularly around the residential program. The City was primarily responsible for public education and community outreach, while WECC managed the program's consultants, contractors and homeowners. This included marketing, project flow and technical qualifications as well as reporting and compliance responsibilities to the DOE. Suffice it to say, this arrangement reflected an uneasy working relationship between the two entities, and one that was frustrated and hampered by considerable staff and leadership turnover both with the City and at WECC. Much more pronounced within the residential program, this situation has improved of late but the lessons learned through this experience should help the City and WECC avoid similar problems in any future programming.

In the fall of 2012, an article in the Wisconsin State Journal drew attention to Green Madison's struggles. But by then, a series of program changes adopted earlier in the year were beginning to have an impact. Mostly, they involved the increase of cash incentives for both residential and commercial customers. The size of available incentives was linked to project costs but they it was also graduated to reflect the level of energy savings achieved.

In the residential program, reimbursement for the cost of an energy audit increased to $200, cash grants of up to $2,500 were available for major home improvements. As the year wore on, the program added further incentives and other promotions to further increase participation and it made specific efforts to reach out to low-income residents, and African American and Latino homeowners (through a partnership with Madison Gas and Electric) and to Hmong homeowners. These efforts, often used in concert with complementary incentives provided through Wisconsin's Focus on Energy, were instrumental in expanding program participation and convincing homeowners to invest in energy projects. Based on the payout of cash incentives, program participation grew four to five times higher than previous levels. This increased activity was most apparent during the second quarter of 2012 and again in the third quarter of 2013.

Program Outcomes

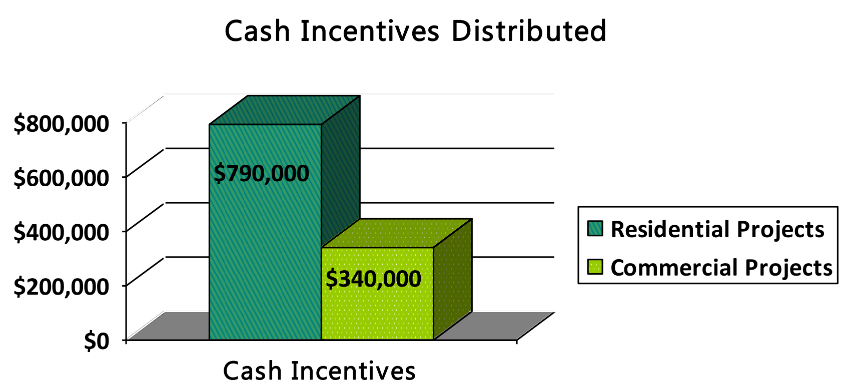
Program outcome data is collected and compiled by WECC, which provides quarterly reports to the DOE. The City receives weekly summary updates. Through August 16, 2013, WECC reported that Green Madison had committed more than $740,000 in support of 60 commercial projects. At that date, thirty-eight of those projects had been completed and had claimed cash incentives totaling more than $340,000. Individual awards have ranged from as little as $379 to $31,173.

Projects completed (through August 16, 2013)

Commercial Projects	38
Residential Projects	529

In aggregate, the completed projects reflect total investments of $1.15 million. They've ranged in size from as little as $4,000 to more than $155,000. By far, the most commonly made improvements have addressed lighting issues. Projects involving HVAC and water systems have accounted for most of the other work. To date, none of the completed commercial projects have been aided by Green Madison-backed loans.

Green Madison has made commitments to provide incentives for fourteen commercial projects that have yet to be completed. It is expected that some of these will claim incentives before the current program ends.



On the residential side, nearly 530 projects had been completed, as of August 16, 2013, and they had drawn almost $790,000 in Green Madison cash incentives. This represents an average cash rebate of $1,500 per project. The total investments reflected in these projects approach $4.5 million, an average of about $8,500 per home. Forty-six additional projects are currently in progress and will likely attract awards.

Fifty eight residential customers have financed all or part of their project costs with proceeds from loans supported by Green Madison. The combined value of those loans totals nearly $500,000.

Energy Units Saved		
	kWh	Therms
Commercial Projects	2,128,861	63,400
Residential Projects	111,443	114,123

Data which describes the energy impacts of these projects is also collected and compiled by WECC for reporting to the DOE. Data for commercial projects is available only through the end of March but it shows energy savings of more than 2.1 million kWh and 63,400 Therms. This is the equivalent, in terms of greenhouse gas reductions, of removing 380 automobiles from the road or planting more than 45,000 trees. The residential projects completed through the end of July have combined to save 110,000 kWh and 115,000 Therms – the same impact that would be produced by taking 140 cars off the road or planting 17,000 trees.

Observations

1. Despite the generally unfavorable market conditions that were present during much of the Green Madison Program, there is evidence to suggest reasonably strong public interest in considering home energy improvement projects. During the program's brief existence, nearly 2,000 homeowners had made direct inquiries about its benefits.

2. The willingness to undertake energy improvement projects is sensitive to a variety of factors, including some beyond a program's control – the large capital investments typically associated with energy retrofits, the impact (perceived or real) of weather patterns or energy costs on payback periods, and economic conditions, to name a few. That said, homeowners, more so than business owners, appear to be responsive to the availability of strong financial incentives such as those offered by Green Madison and Focus on Energy.

3. The completion of a professional energy audit seems to improve the odds that a homeowner will proceed with efficiency improvements. About one in four of the homeowners that expressed interest in working with Green Madison eventually completed energy projects. However, of the group for whom energy audits were performed, the completion rate was more than 50%.

4. For commercial and residential clients alike, the program feature most effective in eliciting participation was the offer of cash incentives. Loan products proved much less attractive. To date, though several commercial customers considered the loan products offered by the program, none have chosen to utilize them. In the residential program thus far, fewer than 15% of customers have financed projects through the program. Even BEEP and REEIP, which offered pretty attractive loan terms, struggled to gain interest from residential or business clients.

5. In terms of the number of clients and aggregate investment, the Green Madison Program proved much more popular with residential than commercial clients. From the perspective of achieving energy savings, however, the commercial projects had much greater impact.

6. The Green Madison Program model was inefficient from the perspective of putting program dollars to work in energy projects. The program was allocated $7.15 million from the BBNP grant, yet only $3.1 million was used or reserved for direct project support either in the form of cash incentives or loan loss reserves. The remaining funds paid for marketing, program support, and staffing within WECC and the City. A considerable portion of the WECC staff resources, and a smaller share of City staff resources were devoted specifically to working closely with program customers to facilitate project completion.

7. The division of responsibilities under the current program between the City and WECC poses challenges with respect to program identity, customer support and administrative efficiency. It is an area of clear opportunity for improvement and efficiency with respect to program operation and administration.

8. There are other resources within the City (the Deferred Rehab Loan Program, Project Home) and outside (State of Wisconsin's Focus on Energy Program) that can be leveraged in support of energy efficiency projects.

9. While the Green Madison Program was surely a factor in convincing both residential and commercial customers to undertake energy retrofits, it is less clear to what extent the program caused projects to occur that would not or could not have proceeded without program support.

10. In many respects, as the BBNP grant period draws to a close, the Green Madison Program is functioning better than ever and program participation is strong. And while it's difficult to pinpoint the precise reasons for this heightened interest, an improved economic climate and the rush to take advantage of expiring program benefits are likely among them.

Post-Grant Options

As previously noted, the Better Buildings Neighborhood Program Grant was initially scheduled to expire on May 31, 2013 but the DOE extended that deadline first to September 30, 2013, and later to November 1, 2014. The reason for this latter extension is to afford time for the DOE to work with grantees to revamp and refine their programs for the future. Grantees face important decisions regarding the configuration of those programs with respect to such things as program objectives, design and administrative functions.

Two things are clear. First, there are funds available if the City wishes to continue an energy program. The BBNP contract allows grantees to retain access to any uncommitted program funds for use beyond the contract end date and into the "extended grant" period. These funds continue to be subject to BBNP program requirements and DOE oversight. Also, if a participating municipality opts to cease program activities, any portion of its funding allocation that is unused will revert to those that continue. That's relevant because though the City of Milwaukee is committed to administering an extended grant period program, the City of Racine has informed WECC that it will not. Should Madison continue, funds from Racine will be divided between Milwaukee and Madison in amounts proportionate to their respective allocations of the original grant funds. The exact amount of these funds will be determined in late September or early October 2013.

Second, in the extended grant period, the DOE has expressed a strong preference for grantees to develop what it refers to as "self-sustaining" programs. In other words, the DOE is seeking programs that feature financing benefits, such as loans, rather than cash incentives. The DOE is also encouraging grantees to develop program fees to generate revenues that will help offset administrative expenses. The contract extension to November 1, 2014 has been offered primarily to afford time within which the DOE can work with grantees to develop and refine such programs. WECC submitted an application for the program extension to the DOE that focused on the efforts of creating fees, generating revenue and possibly creating a self-sustaining program. At this point, it is uncertain whether the DOE would accept a post-grant program that is not consistent with a self-sustaining model.

Available Resources

These are the potential sources of revenue available for a future energy program:

- Funds that will flow to the City through the repayment of loans made under the BEEP and REEIP pilot programs. Repayments of these loans will occur incrementally during the next six years, and total about $400,000. These funds, and the program from which they originated, are independent of BBNP funds, but could potentially be used in tandem with them.

- Any portion of the original BBNP grant funds allocated for City of Madison use that are not consumed by September 30th. The precise amount of funds remaining won't be known until currently approved projects run their course. Projections made in late July 2013 suggest that up to $1.4 million could remain for future use. This includes an estimate of the portion of unused funds allocated to the City of Racine that could be assigned to Madison (about $135,000).

- Program fee revenues. DOE is urging grantees to develop program fees to help support program costs. For example, fees could be charged to participating lending institutions, contractors or clients. There are no proven examples yet of viable fee models, however, proposals are beginning to emerge around the country and will be tested in the coming year. Some preliminary research suggests fees could cover as much as 25%-50% of administrative costs under the right conditions but a small scale program, on the order of that likely in Madison, could struggle to achieve those results.

- Local funds. The City could choose to inject local money into a program.

In sum, between BEEP/REEIP loan repayments and unused BBNP funds, the City could have immediate access to nearly $1.5 million and could see modest additional amounts materialize from continuing loan repayments or new program fees. It is important to understand that while these funds would provide the means to support future program benefits, they would also need to cover a program's administrative costs – whether incurred by City staff or a third party, such as WECC.

Program and Policy Options

The City has a range of available options but fundamentally they can be reduced to these three:

1. Decline the opportunity to retain access to unused BBNP funds and use them beyond September 30th, 2013 to support an energy program. This is the option chosen by the City of Racine. Under it, Madison would maintain responsibility for administering Energy Efficiency Community Block Grant formula funds – the approximately $400,000 in outstanding BEEP and REEIP loans, but would forego the use of about $1.4 million in unused BBNP dollars

2. Exercise the option to access unused BBNP grant funds and continue the Green Madison Program in its current form. Short of ending the program, this is the simplest course of action. It would maintain the momentum of the current program, which took a long time to build. But this is an expensive alternative, both programmatically and administratively. Costs could be tempered, perhaps, through administrative and/or benefit adjustments, but program funds would likely run out within a year or two. This course also assumes that the DOE would agree to allow the use of funds in a manner inconsistent with its stated goals.

3. Take advantage of unused BBNP grant funds, but revamp the Green Madison Program structure to try to meet DOE's goal of self sustainability. This option presents a range of program design opportunities but it presumes the replacement of cash incentives with one or more loan products. The program could be set up to function independently or it could be utilized in combination with other available city or non city resources. This is perhaps the most difficult course to follow but it holds the most promise in terms of longer term viability.

Note: If either option 1 or 2 is selected, the City must re-establish a formal relationship with WECC through contract/MOU amendment by October 1, 2013. If a formal relationship is not established, the program would be unable to continue immediately. Particularly if option 2 is selected, that could risk losing the program momentum that has been established during the last three quarters of 2013 and the familiarity with the Green Madison brand.

In evaluating these options, some basic policy and program issues need to be considered. Some of them are discussed below.

Program Goal

A first step in crafting a new program will be settling on its primary objective. In this case, should the overriding goal be to maximize energy savings or use the funds to support other policy goals? These options aren't mutually exclusive but based on past experiences, they could lead to very different program structures and even influence who the program would serve. For example, a program focused on energy savings would be most successful if it targeted commercial clients, where potential savings appear to be greatest. On the other hand, helping homeowners, particularly those of more modest means, to make energy improvements could become part of a broader strategy to help reduce the cost of homeownership, or improve the livability of existing housing stock within the city. A program could be shaped to help with a wide range of projects, from comprehensive energy retrofits to more specific measures, such as air sealing and insulation or furnace replacements. One factor that may need to be considered in this decision is the ability to meet the DOE's goal of achieving 15% energy savings.

A related question is whether it makes sense to administer energy funds separately or as part of a larger effort. They could be used, for example, in combination with other City resources dedicated to similar goals. This might offer opportunities to better serve intended clients, achieve broader policy goals and realize administrative efficiencies.

Program Benefits

Another key question pertains to program design, particularly with respect to program benefits. It's important for a number of reasons. One is the obvious link between benefit structure and sustainability. Another is the apparent conflict between the DOE's desire to establish sustainable financing programs and the Green Madison experience, which revealed little enthusiasm for loans. In a market grown accustomed to cash incentives, the return to loans will be a tough sell. To attract clients, loan terms may need to be more favorable than what's available in the private market (e.g., lower interest rates, preferred repayment options). Loans might also become more attractive if they are marketed in conjunction with continuing Focus on Energy incentives. This is an approach the City of Milwaukee is planning to implement, and which WECC supports. In other words, City funds would help finance projects that stand to benefit from Focus on Energy rebates. They would help Madison residents move projects forward, and gain Focus on Energy benefits, who might otherwise be unable to proceed. If loans are to be considered, steps to gain market acceptance through additional marketing and outreach will be necessary and, if done effectively, will require a commitment of resources.

Program Sustainability

Absent an influx of other funding from federal, state or local sources, the Green Madison Program is not currently sustainable. Even a financing- program will eventually run out of funds as administrative expenses consume program resources. To some degree, it is possible to manage this situation through program design. One way would be to ration program funds from year to year. Or, rather than providing loans directly to clients, the City could place program dollars into loan loss reserves to support private lenders. This is the approach currently used in Green Madison. But, while the potential leverage that this tactic holds some appeal, its potential has yet to be fully realized because so few loans have been made.

Program administration is another key to sustainability. Administrative overhead must be curtailed dramatically, both within the City and at WECC, and that will require difficult decisions within both agencies. WECC has projected budget needs under several different scenarios that reflect streamlined delivery and costs and proposed contract language to accommodate extended grant period activities. The DOE has hinted that it will reduce administrative burdens in the post-grant period but firm guidelines have not yet been established. They are expected in September.

Finally, despite the desire to develop program fees that might generate program supporting revenues, it is difficult to envision how that is possible in a program of modest size. Still, as programs around the country test different approaches, it is conceivable that usable models may emerge.

Conclusion - A Use for Post-Grant Funds in Madison

The City of Madison has gained valuable experience in the past four years through its administration of more than $9 million in federal energy grants. Yet the unique economic conditions that have marked that period makes it difficult to draw firm conclusions for use in future program design.

As the contract for the $7.2 million BBNP grant draws to a close, and the Green Madison Program with it, Madison retains access to about $1.5 million in mostly non-renewable funding to support continuing efforts. The City is not obligated to use these funds, but it certainly makes sense to do so.

The City could continue to administer Green Madison in its current form, a program model that at long last appears to have captured the public's interest. But it relies on generous cash subsidies and, thus, at its current pace would run out of funds within just a couple of years. What's more, a decision to continue the current program model would conflict with the DOE's expressed desire to establish and maintain sustainable programs – a model that eschews cash grants for loans.

A new program design offering loans would not be new at all, for that is where Green Madison started. And it was mostly unsuccessful. However, the economic landscape has changed and perhaps, too, the ability of loans to help induce energy investments. At least in the short term, loans will remain a tough sell. But it may be possible to structure terms in ways that are more attractive than private market alternatives. It may be possible to align them with other resources that provide added benefit to borrowers. And it may possible to use such a program to help achieve broader policy goals like reducing the cost of home ownership for low income families, improving the livability of existing housing stock, and helping to stabilize or revitalize struggling neighborhoods.

The transition to a new program will not be easy and it will not be seamless. It will inevitably cause some confusion in the short term. However, there are efforts currently underway involving a potential consolidation of existing housing programs that address housing rehabilitation and homebuyer assistance, and that makes this an opportune time to consider a complementary role for energy improvement funds.