

Pennsylvania On-Bill Financing Working Group Questions

Response prepared by the Energy Efficient Buildings Hub

1. In order to determine the success of a pilot program, performance metrics will need to be established. **Please provide detailed comments as to what metrics would allow a pilot to be deemed successful.** Additionally, please include in these comments responses as to whether there should be a minimum or maximum number of projects included in the pilot and also if said projects should have a set monetary cap. And what should the length of the pilot be?

Response

Any pilot should incorporate a variety of measurements that can contribute to an evaluation of the approaches to on-bill financing that are being tested. These would include tracking number of applications, number of project initiations, total project implementation costs, projected energy savings, actual energy savings, and number of defaults. Standard program evaluation methods should also inform the measurement of cost effectiveness. Care should be taken, however, in setting any hard targets associated with the metrics that would dictate success or failure. A pilot should be designed to test, learn and improve upon the initial design so that the final implementation will be successful.

Controlling the number of variables (e.g., geography, customer sector) will also facilitate the implementation of a pilot. This may help set the scale of the pilot in terms of the number of projects and project values. Program goals for some pilot programs (as reported by Bell et al., 2011) range from 20 to 25 multifamily homes (MPOWER pilot) up to 1,000 loans (Indianapolis Super Bowl Legacy BetterBuildings Project). Available capital will also place constraints on the number of projects.

Looking across other pilots conducted in the U.S., one finds durations in the one to three year range. A shorter pilot with favorable results would allow full implementation sooner, producing greater energy savings. On the other hand, too short of a pilot could fail to demonstrate the viability of OBF, with a longer pilot allowing for program flaws to be identified and corrected.

The challenge likely lies in defining what this initial program design should be, given the variety of approaches to on-bill financing. The Hub believes that this process could be aided through some pre-pilot analysis, and has in place a team that has applied a "market model" to analyze a variety of market mechanisms and policy options in the region. The model allows us to simulate how the building stock would respond to these alternatives, and vary different parameters to help triangulate on designs that are more advantageous. We could discuss this with you in greater detail soon.

2. Please comment as to some possible timelines for the deployment and implementation of a pilot program.

Response

The Hub would advocate for a targeted pilot so that it is simpler and quicker to deploy (e.g., one utility, one customer segment). Once the pilot is up and running, at least one year but preferably two years would be a reasonable time frame for implementation. If confidence in the success of a program design is established, the possibility of cutting the pilot short and moving on to broader implementation should be considered. Considerable learning available from the pilots that have already occurred or are currently underway elsewhere should be leveraged.

3. Should it be decided that OBF is possible beyond a pilot program, to the best of your ability, please detail what you believe would be the key cost components of a long-term program. What would the cost of full implementation of OBF look like? Please provide an itemization/categorization of costs as much as you are able (e.g. the costs of updating systems could be one cost in an overall cost breakdown).

Response

The EEB Hub lacks specific information on full implementation costs and itemization of costs. Again, we refer to past work on OBF, which suggests what the implementation costs could be for a program aimed at commercial building owners. A report on the California OBF process (The Cadmus Group, 2012) suggests that additional staffing needed is quite modest for the participating utilities, on the order of one to four FTEs. Outside of core OBF staff, billing and engineering departments also are needed to support implementation. In California, costs external to the utilities are borne by vendors who have to wait for OBF payments to be disbursed.

For further consideration on evolving the PA PUC's OBR program design, the Hub possesses modeling and analysis capability that could be applied to characterizing the full implementation costs and targeted penetration of the proposed or refined OBR approach.

4. Please comment as to how to handle partial payments and termination (please consider issues such as those that would pertain to a commercial master-metered multifamily unit where termination of electric services to the building due to non-payment by the building owner would adversely affect tenants of said building).

Response

Partial payments can be handled in different ways, although most programs the Hub is aware of ensure that the utility is paid first. In California, the partial payments are handled by applying proportional amounts to the utility bill and to

the loan. The customer may be considered in default of both the energy bill and the loan obligation. For the specific case of a commercial master-metered multifamily unit, we would suggest that an initial pilot should address other market segments, as this is a special circumstance.

5. Please consider and comment on how an energy audit would be paid for. If an audit was conducted and the project was deemed not qualified to take part in the OBF program, would the business owner cover the cost of the audit separately? If a project is qualified, should the audit be included in the OBF loan or paid for separately?

Response

An up-front audit cost incurred by the customer could dampen enthusiasm for participation. Therefore many existing programs have chosen to offer energy audits free of charge. One option is to establish a fixed non-refundable application initiation fee that would apply to the project cost if the project goes forward.

6. Please respond to an additional consideration, similar to the previous question. Would safety and repair be included in an OBF loan or would that cost be incurred separately by the business owner?

Response

The cost of incorporating safety and repair in an OBF loan is a risk that an OBF program should not address. Other programs should be investigated to deal with lead paint abatement, asbestos abatement, and safety concerns. Keeping repair costs outside of loans incentivizes the owner to properly maintain equipment.

7. Please provide suggestions as to how/if the proposed model could be modified to include government/nonprofit/multifamily entities. Should there be a separate model for multifamily? If yes, please describe or provide said model. Should there be a separate model for government/nonprofit? If yes, please describe or provide said model.

Response

The Hub recommends the pilot exclude multifamily properties, and that the potential adoption of the piloted model by this segment be evaluated as the pilot advances or is completed. Government and non-profit entities would be appropriate to include in the pilot. In California, government customers are permitted to request larger loan amounts (\$250k vs. \$100k for commercial) and longer payback projects (10 years vs. 3-5 years for commercial). Variations such as this may be appropriate to include in the pilot.

8. At the meeting, bill neutrality was discussed. **Please comments as to how bill neutrality would best be determined.** Please consider (but do not limit

discussion to) the following: Should it be based on estimated energy savings? How would changes in circumstances be accounted for? Should the payback period be taken into consideration?

Response

Bill neutrality should be evaluated prior to project initiation, and therefore will need to rely on estimated energy savings and past energy bills. Bill neutrality, however, while meant to help ensure the customer's ability to repay a loan, is not a substitute for other tests of creditworthiness. Bill neutrality should be a goal on an individual project basis, but not a guarantee. If a leased property becomes vacant, the program administered by Midwest Energy suspends repayment until a new customer moves in and accepts the charges, illustrating one example of handling a change in circumstances.

An issue related to the preservation of bill neutrality is the difficulty of achieving deep retrofits due to the typically longer payback periods associated with such measures. The Hub is particularly interested in designing programs that encourage rather than discourage deep retrofits. The Hub would also be interested in administering surveys to better understand the need of decision makers for neutrality in terms of initial decision criteria and program changes in terms of ownership and other circumstances.

9. Please comment as to whether or not OBF should be only available to energy efficiency projects that qualify under Act 129. If it is restricted to Act 129 projects, should there be coordination with interested gas companies to allow them to participate as well? If it is not restricted to Act 129 projects, please provide suggestions for cost-recovery options.

Response

For the purposes of a pilot, to maintain simplicity it may be appropriate to restrict OBF to Act 129 projects. This approach should allow the pilot to test financing for a range of energy efficiency measures from basic conventional packages to deeper, integrated approaches. From the Hub's perspective the path to achieving deep energy retrofits is not rooted in specific technologies or fuel sources. Ideally, therefore, a holistic view of building energy efficiency would be desirable in an OBF program to maximize efficiency improvements that can be attained by subscribers. Other OBF programs that include natural gas technologies can provide useful insights on this.

References:

Bell, C.J., S. Nadel, S. Hayes. 2011. On-Bill Financing for Energy Efficiency Improvements: A Review of Current Program Challenges, Opportunities, and Best Practices. American Council for an Energy Efficient Economy, Report No. E118.

The Cadmus Group. 2012. California 2010-2012 On-Bill Financing Process Evaluation and Market Assessment. Prepared for the California PUC.

Henderson, P. 2012. On-Bill Financing Overview and Key Considerations for Program Design. NRDC Issue Brief.

Existing on-bill programs addressing commercial buildings:

Name	State	Administrator	Funding sources	Start year	Loans to date (\$M)	# of loans	Interest rate	Participation	Applicability	Max loan	Total funding (\$M)
Green Jobs, Green NY	NY	NYSERDA	Private lenders Federal funds Carbon market	2011	6.4	781	3.6%	0%	Residential Multi-family Small business & non-profit	\$13k tbd \$26k	\$39 \$16 \$24
Small Business Services Program	MA NH NY RI	National Grid	Municipal loan	1992	30	16000	0%	<1%	<200 kW demand <483,000 kWh/yr	NA	NA
Commercial Energy Conservation Program	MA	Holyoke Gas & Electric	NA	NA	NA	NA	0%	NA	Commercial Multi-family	>\$5k requires approval	NA
SDG&E on-bill finance	CA	San Diego Gas & Electric	Utility surcharge	2010	13.5	506	0%	<1%	Government Commercial	\$250k \$100k	No hard limit
SMUD loans	CA	SMUD	NA	NA	NA		7%	NA	Commercial Industrial Multifamily	\$10k	NA
Zero Interest Loan Program	CA	City of Palo Alto Utilities	City of Palo Alto Utilities	NA	NA	NA	0%	NA	Non-residential	\$50k	NA
On-Bill Financing	CA	Southern California Edison	Utility surcharge	2010	2.0	78	0%	NA	Government Commercial	\$250k \$100k	\$16
Zero Percent On-Bill Financing	CA	Southern California Gas	Utility surcharge	2010	0.46	15	0%	<1%	Government Commercial	\$250k \$100k	No hard limit
Energy Efficiency Retrofit Loan Program	CA	Pacific Gas & Electric	Utility surcharge	2010	0.21	4	0%	NA	Government Commercial	\$250k \$100k	\$18.5
E-advantage	CT	CT Energy Efficiency Fund	Private lenders Municipal loan	2003	21.4	10588	0%	8.2%	Small commercial and industrial	\$100k \$500k/ municipality	NA
Zero Percent Financing	CT	Norwich Public Utilities	Private lenders	NA	NA	NA	0%	NA	Commercial Industrial Government	NA	NA
How\$mart	KS	Midwest Energy	Municipal loan	2008	3.7	627	4.5%	1.3%	Residential Small comm'l	NA	NA
SmartSTART	NH	NH Electric Co-op, PSNH	Municipal loan	2004	0.6	27	0%	<1%	Commercial Residential	NA	NA

NA = not available

Compiled from program web sites, dsireusa.org, Bell et al. (2011)