

On-Bill Financing

Overview and Key Considerations for Program Design

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On-bill financing programs are a promising way for utilities to help their customers invest in energy efficiency improvements, such as upgrading to a high-efficiency air conditioner or adding insulation. These improvements can deliver valuable efficiency to the utility, reduce customers' energy expenses, improve the value of properties, create jobs, and reduce harmful pollution.

Because efficiency delivers so much value, many cities, states, and utilities across the country are exploring on-bill programs as a way to help customers finance energy-saving upgrades to their houses and buildings.

The purpose of this issue brief is to describe key benefits and challenges to consider when exploring an on-bill program.

WHAT IS ON-BILL FINANCING?

On-bill financing refers to a loan made to a utility customer—such as a homeowner or a commercial building owner—the proceeds of which would pay for energy efficiency improvements. Regular monthly loan payments are collected by the utility on the utility bill until the loan is repaid.

On-bill programs have been used by U.S. utilities for many years.¹ National Grid has offered an on-bill program for small-business customers since the 1990s. United Illuminating in Connecticut offers on-bill loans to commercial customers. Four large utilities in California (San Diego Gas & Electric, SoCalGas, SoCal Edison, and Pacific Gas and Electric) operate on-bill loan programs for commercial customers.

An on-bill program may be administered by the utility directly or by an outside administrator (such as a state energy office or other, similar entity) in conjunction with the utility. New York State implemented an on-bill program in 2012 through the New York State Energy Research Authority (NYSERDA) in cooperation with New York utilities.

A program may be limited to particular types of customers, such as commercial building owners, commercial tenants, or residential homeowners.

In most on-bill programs operating today, the loan funds are provided directly by the utility (or program administrator), and the repayment risk is held by the same entity until the loan is paid off.

ON-BILL IS A NEW KIND OF LOAN, WITH ADVANTAGES

Merely billing a loan payment in connection with the utility bill could offer customers added convenience, but on-bill loans are also substantively different due to two factors:

- **On-bill loans are tied to utility service.** Many on-bill programs allow the utility to suspend service to customers who fail to make their loan payments.
- **The loans account for the borrower's utility savings.** Many on-bill programs require "bill neutrality." In other words, savings from the funded improvements are expected to equal or exceed the new on-bill loan payments. An energy auditor reviews the efficiency improvements and estimates the reduction in utility expenses expected after the project. In contrast, conventional lenders typically do not assess or consider the expected savings on utility bills from an improvement project.²

The two special features of on-bill loans—the tie to utility service and the bill neutrality requirement—can work to offer meaningful advantages for some customers, leading to wider adoption of energy efficiency measures. An on-bill loan:

1. Broadens Customer Eligibility. Some customers interested in investing in efficiency improvements may not be eligible for a conventional loan or may find a loan too expensive, due to factors such as being an unrated commercial entity, not having sufficient equity in the property to support a secured mortgage loan, or not having surplus income to dedicate to the loan repayment. Many of these customers may still be a good repayment risk using an on-bill loan because the loan has bill neutrality (so that his or her average monthly payments are not expected to increase) and because nonpayment would mean loss of utility service.

Some argue that by considering other credit-worthiness factors (such as traditional cash flow analysis, credit scores, and on-time utility payment history), a utility could make on-bill loans without assuming undue repayment risk. Some also argue that on-bill loans will become more attractive to financial institutions, as compared with conventional improvement loans.³

2. Gives Institutions a New Option to Invest in Efficiency. Many institutions, such as schools, local governments, and state governments, own or operate large amounts of building space and have substantial opportunities to save from greater efficiency. For many such institutions, funding capital improvements through budget expenditure or debt can require lengthy and burdensome processes, but can participate in utility-operated programs, such as on-bill, with fewer hurdles because of the utility's unique role in evaluating the legitimacy of the project and determining that energy savings are likely to exceed the associated payment. The Federal Energy Management Program has issued specific guidance related to participating in utility programs with certain features to make improvements.⁴ Some institutional customers may be able to implement efficiency projects through on-bill that would otherwise go unrealized.

3. Enables More Tenants to Invest. In many buildings, the cost of utility services are borne by tenants, either directly with separately metered space, or indirectly with the owner passing charges on to tenants on the basis of square footage or some other formula. The owner typically bears the cost of improvements, such as a new boiler or better water pumps, but the tenants realize the benefits in the form of lower utility bills. This works to discourage the owner from making sensible investments in efficiency.

On-bill can help to promote sensible investments in two ways. First, with on-bill financing, building owners and tenants can agree to invest in improvements that yield a net reduction in the total monthly bill.

Second, many commercial tenants could use on-bill to invest in building-out space to high levels of efficiency. Many tenants with multiyear leases in commercial buildings have a strong economic interest in improving the efficiency of their

space. Typically, even if a tenant is interested in efficiency, a build-out budget is limited by the owner's allowance, and if a tenant has access to funds, investing in efficiency would compete with internal uses for the same funds. Since on-bill loan proceeds may be used only for an eligible efficiency project, an efficiency investment may not be seen by the tenant as competing with other uses for the funds. Moreover, for some tenants an on-bill repayment charge might not be viewed as "debt."

4. Encourages Market Transformation. By extending credit to customers, an on-bill program can achieve direct results in the form of efficiency from financed projects, and indirect results in the form of market transformation, which can occur when such programs demonstrate to conventional lenders the advantages of supporting energy efficiency lending products.

Strong performance by on-bill loans could potentially persuade some lenders to account for energy savings in the underwriting process for conventional loans and to offer a loan product tailored to fund efficiency projects. As with any new class of loan, lenders and investors will require information on a large number of loans, seasoned over years, to identify the many lending parameters that will produce a flow of loans with regular, predictable performance.⁵

The market transformation potential of on-bill programs should be considered and valued in the program design process. There is promising evidence that this process is under way.⁶

RECRUITING LENDERS TO PARTICIPATE

One possibility is for private lenders to fund on-bill loans in concert with the utility providing payment processing, servicing, and other functions. Some have deemed such an arrangement with an external lender "on-bill repayment" to distinguish the source of funds.⁷

A lender or investor could fund the loans at the time of origination or later purchase closed loans already funded by the utility. This arrangement could help to cultivate a secondary market for on-bill loans, which would increase the number of loans an on-bill program could facilitate and free utilities from the obligations and risks associated with holding the loans.

It is not yet clear, however, what terms and conditions lenders and investors would require in order to purchase or fund on-bill loans, or what level of utility or public contribution would be required to bring finance charges to the level needed to attract customers.⁸ One possibility is to provide lenders with a credit enhancement, such as a commitment to cover a certain amount or percentage of loan losses; this enhancement could come from the utility or another entity in order to attract lender participation. Factors related to cost-effectiveness are likely to be important considerations in assessing the amount of contribution or loan insurance that makes sense.

It is worth noting that a utility may be able to perform certain loan-related functions more effectively than a traditional lender, suggesting a utility and lender working together might produce a better loan product or program than either could alone. Consider a utility's advantage in:

- assessing or reviewing the energy savings potential of a proposed efficiency project;
- managing a network of efficiency vendors and contractors;
- using a customer's utility bill payment history in credit underwriting; and
- using utility information to target efficiency services and related financing to customers.

CHALLENGES & QUESTIONS TO CONSIDER

Operating any loan program presents significant risks. There are operational risks to taking applications, closing loans, and funding them, and financial risks to managing repayment and prepayment speeds, delinquencies and defaults, interest-rate changes, and other considerations. Managing these risks will require substantial operational efforts by a utility (or any program administrator) in terms of people, systems, and processes. The challenges are manageable, as demonstrated by the utilities with existing programs, but it is important during program design to consider how each function will be performed, with which tools, and how quality will be assured. Even if a private lender were to fund the loans, the utility will likely want to remain involved in the origination process (at least with quality assurance) if its brand is involved, especially if termination of utility service is possible for nonpayment of the loan.

1. Operational Challenges.

a. Loan Production. Finding qualified customers, determining eligibility and ability to pay, managing loan documents, and delivering funds can be a labor-intensive process. It is likely that loan production will be substantially more challenging and riskier in the residential sector, given the the scale of the market, the number of applications that do not result in closed loans, and compliance obligations.⁹

b. Managing the Contractor Network. Contractors often actively help customers navigate financing options to fund proposed projects, sometimes in ways not apparent to the lender. This function can provide substantial value to the lender as a marketing channel, but it also presents risks. The experience of residential home improvement lenders suggests on-bill programs must guard against customers' being subject to pressured sales tactics or having mistaken impressions of loan terms when contractors are part of the sales activity.¹⁰ The risks appear to be lower in the commercial property sector due to the nature of the customer and the role of professional building managers.

c. Legal Compliance. Lending is governed by a complex web of state and federal requirements. Compliance can be particularly challenging in the residential property sector. The Truth in Lending Act, Equal Credit Opportunity Act, Real Estate Settlement Procedures Act, and state and federal licensing requirements plus licensing of loan officers could apply. Some statutory requirements might not apply to on-bill loans if the loans are not secured by a lien on real property. A loan operation will still raise a number of compliance questions that require ongoing and active management by the utility and could affect the terms of the product.¹¹

d. Customer Shutoff. A utility must maintain careful controls related to customer service shutoff, and these will be heightened when it is related to loan payment delinquency. Customers should be able to obtain assistance with complaints, raise legitimate issues related to the loan and the project funded by the loan, and access a dispute-resolution process. Public support for an on-bill program (and efficiency programs generally) could be undermined by instances of service shutoff where the customer is in a sympathetic position, such as a person on a fixed income with higher total bills after efficiency improvements.

2. Cost Effectiveness. A utility's fundamental purpose in operating or supporting an on-bill program is to enable more customers to implement energy efficiency measures. Since utilities have many possible efficiency programs, it is important to assess the cost of obtaining efficiency through various programs in order to allocate resources effectively. The cost of operating a program and the efficiency produced are key inputs.

These values can be difficult to estimate in advance, although information from programs in other states can be instructive. Important variables will include the customer and property types targeted, the amount of the utility or other contribution to reduce finance charges, and the value ascribed to potential market transformation through the participation of lenders.

3. Consumer Finance Charges. Some advocates predict that the finance charges for on-bill loans will be lower than for traditional loans because of the attributes of on-bill loans that might reduce delinquencies and defaults. The advantage of on-bill loans could also result in extending credit to customers who would not otherwise be eligible for conventional loans.

Note that any such reduction in finance charges will likely not materialize until lenders and investors have had time to assess loan performance as demonstrated by actual programs.

Another point to consider is that finance charges offset many lender expenses in addition to the costs associated with delinquencies and defaults, such as the cost of loan origination, the cost of capital for the lender, and the cost

of loan-related services such as energy audits to assess the energy savings associated with the loan. Even if loan performance of the class of loans is substantially better, it would likely have a limited effect on customer finance charges.

4. “Stay with the Meter.” New York’s on-bill program for residential customers includes a feature described as “stay with the meter.”¹² This feature functions as follows: The owner of a house or building, after obtaining an on-bill loan, may sell the property and have no continuing liability for the unpaid loan balance (except for any monthly payments missed prior to the sale). Instead, the unpaid loan balance would, arguably, be automatically “assumed by” (or assigned to) the new property owner when he or she obtains utility service. The new utility customer would be obligated to make the remaining payments or risk losing utility service.¹³ Some also call this a “tariff based” loan.

Advocates argue the “stay with the meter” feature would add value for the lender because in the event of delinquency or default, the lender could expect to recover some or all of the unpaid loan balance at the time the home is sold or in regular monthly payments made by the next property owner. In contrast, the holder of a subordinate-lien loan (e.g., a home equity loan) is typically wiped out in bankruptcy or left with an unsecured claim against the borrower after a home sale, which might be for less than the amount of the primary mortgage plus all fees.

A lender’s ability to recover an unpaid balance following foreclosure or sale of the property raises interesting questions for both residential and commercial property owners. In the typical home sale transaction, the buyer obtains the property “free and clear” of prior obligations. The buyer’s mortgage lender typically makes paying-off and clearing all prior obligations a condition of closing. It is not clear whether a home buyer (and mortgage borrower) would be permitted by the mortgage lender to purchase a property subject to an open loan obligation, or what effect the ongoing obligation would have on the purchase price, appraised value, or title insurance.

The results from New York’s on-bill program could inform stakeholders on these questions. One useful question to address is whether any on-bill customers have passed an on-bill loan obligation to home buyers, and in what numbers. Another question is whether any mortgage lenders have been asked to approve a homeowner incurring an on-bill obligation.

To steer clear of pitfalls, it is important for stakeholders to work closely with the real estate finance industry in the design of any on-bill program so that any on-bill loan will dovetail with other real estate financing functions and interests.¹⁴ Since the goal of on-bill programs is to enable property owners to invest in efficiency improvements, it is important to assure that the on-bill financing does not jeopardize an owner’s interests under conventional mortgage obligations.

5. Borrower’s Ability to Pay. The bill neutrality test means the expected reduction in energy expenses after the efficiency improvements is equal to or exceeds the new on-bill loan payments. If the energy estimate is correct, the customer’s net cash flow will improve after the loan, all other things being equal.

The value of this bill neutrality concept should be seen across a portfolio of loans. A program with a bill neutrality requirement could be expected to produce a portfolio with a better credit risk profile than a pool of traditional loans with similar credit metrics (e.g., credit score, loan amount, property type) because traditional loans do not consider the effect of lower utility expenses.

On an individual customer basis, however, caution is warranted. The energy expense estimate is based on averages and assumptions about the house or building, past usage patterns, rate structure, and many other factors. A given customer implementing efficiency measures may have higher savings or lower savings, depending on many variables.

Bill neutrality requirements do not mean that every individual customer will have lower total payments after a funded efficiency project, and they are not a substitute for testing the customer’s ability to pay.¹⁵ An on-bill lender must still assess the borrower’s ability to pay the loan. This concern is especially important in the residential sector.

Some argue this risk can be addressed, or reduced, by discounting the expected savings. That is, an eligible project could be required to meet a bill neutrality test even after the estimated energy savings are reduced by, say, 20 percent. While this approach will reduce the likelihood that an individual will experience an increase in total expenses after the improvements, it works to reduce the number of eligible projects.

6. Is an On-Bill Payment a Debt for the Customer?

Some have argued that on-bill payments are not debt for the customer but, instead, are part of the utility service fees and therefore “off balance sheet.” The question is relevant to some customers. For example, many companies have obligations under financing agreements triggered by undertaking a new debt obligation, and many lenders assess a company’s ability to borrow by looking at its debt load.

The determination of whether a charge is debt will likely be based upon the nature of the obligation itself and whether, for the customer, it has the attributes of debt. It is not likely to be affected by whether the utility or others label it a loan payment, debt, service charge, or tariff, but rather how it functions.¹⁶ The determination might also vary depending on the customer type, the terms of the on-bill program, and the terms of any agreement between the building owner and other vendors involved. The standards on this subject are in flux and could change at any time.

ANALYSIS & CONCLUSION

There is good reason to be optimistic about the promise of on-bill programs to enable additional customer investments in energy efficiency projects. The near-term promise for on-bill programs seems especially strong for customers whose access to conventional loans today can be difficult, such as city governments, schools, small businesses, and commercial tenants at time of build-out. Many of these utility customers might be good credit risks for an on-bill loan.

Operating an on-bill program will bring challenges and risks for any utility or program administrator, and these factors should be considered in program design. On-bill financing for commercial and institutional customers appears to present fewer operational burdens and compliance obligations. Because the loan amounts for these customers are likely to be larger and the number of loans fewer than for residential customers, certain functions can be handled manually until the program is large enough to warrant investment in systems. For a utility without an existing on-bill program, the commercial/institutional sector may be a good place to start. The on-bill programs in California may offer operational lessons.

For residential customers—an important target for any utility efficiency program—on-bill financing could demonstrate the merit of a lending model that accounts for energy expenses, which could have substantial value. A residential on-bill program will present operational challenges, and the results from the New York on-bill program should be examined for lessons and to assess likely cost-effectiveness.

Utilities should seek, where possible, to include financial institutions in on-bill programs to enable them to gain familiarity with the program, efficiency projects, and loan applicants. This could lead to deeper participation and potentially to outside lenders' funding and holding on-bill loans.

The purpose of an on-bill program is not simply to allow the utility to serve as an additional source of capital for conventional loans, but rather to use the unique attributes of on-bill loans to enable investments in efficiency that would not otherwise occur. With attention to the benefits and challenges of on-bill programs, utilities will be able to realize cost-effective energy efficiency results and help their customers make long-lasting building improvements.

Endnotes

- 1 See Catherine J. Bell, Steven Nadel, Sara Hayes, "On-Bill Financing for Energy Efficiency Improvements: A Review of Current Program Challenges, Opportunities, and Best Practices," American Council for an Energy-Efficient Economy, December 2011. Outside the United States, the U.K. Department of Energy & Climate Change has implemented an on-bill program as part of its "Green Deal." See <http://www.decc.gov.uk>.
- 2 There are other forms of financing that consider a customer's expected utility bill savings in assessing a loan applicant's income, including Energy Services Agreements, PACE, and other specialized products. The approach also bears a resemblance to traditional construction financing that is made on the basis of the appraised value of the property after or "subject to" the funded improvements.
- 3 It is important to note that because on-bill loans are not secured by property, which can reduce losses in the event of default, the cost of a single default could be substantial. How expected energy savings will relate to credit risk is likely to depend on many factors, but the data regarding delinquencies and defaults in existing commercial on-bill programs are very promising. According to a presentation by Frank Spasaro of Southern California Gas Company, the four large California investor-owned utilities have made 1,241 on-bill loans (~\$31 million in principal) to commercial and institutional customers and have had a total of 14 defaults with a total balance of \$170,000. See presentation by Frank Spasaro, February 8, 2012, PUC Energy Efficiency Financing Workshop, Day 1 Materials, <http://www.cpuc.ca.gov/PUC/energy/Energy+Efficiency>.
- 4 For details, see <http://www1.eere.energy.gov/femp/financing/uescs.html>.
- 5 Operational terms include credit score parameters, how to test income and cash flow, and how to account for energy audit predictions.
- 6 NYSEERDA began in 2012 to make loans to residential homeowners with an on-bill arrangement with the utilities operating in New York State and reportedly is planning to sell or securitize the loans using a bond structure. See NYSEERDA Request for Proposals for Investment Banking and Underwriting Services, RFP 2459, January 2012. The state of Pennsylvania operates an efficiency loan program that could produce evidence to bolster the case regarding the performance of efficiency loans relative to a pool of traditional home improvement loans. See "WHEEL: A Sustainable Solution for Residential Energy Efficiency," http://www.naseo.org/committees/financing/documents/WHEEL_Primer.pdf.
- 7 See Copithorne and Fine, "Unlocking the Energy Efficiency Puzzle in California," Environmental Defense Fund, 2011, www.edf.org.
- 8 There are also questions related to whether utility service shutoff is appropriate for a loan held by a non-utility lender, especially for low- and moderate-income residents. See Comments of the National Consumer Law Center (NCLC) on the Administrative Law Judge's Ruling Regarding Energy Efficiency Financing, Rulemaking 09-11-014, February 22, 2012, <http://docs.cpuc.ca.gov/efile/CM/160701.pdf>; and Reply Comments of NCLC Rulemaking 09-11-014, February 29, 2012 <http://docs.cpuc.ca.gov/efile/CM/160788.pdf>.
- 9 The level of work will depend on factors such as marketing environment, whether loans are secured, customer type, regulatory requirements, and investor requirements, if any. In addition, typical origination functions include taking an application for credit; obtaining information on the borrower, such as credit history and identity verification; obtaining information on the property; obtaining information on the project to be funded (the improvements); reviewing an energy estimate of the property; underwriting borrower income, expenses, and affordability of new loan payment; and more.
- 10 In many states a customer may raise claims against a lender (or other "holder" of the loan) that it could raise against the contractor (e.g., for negligent work or deception) in certain situations. See Federal Trade Commission's Holder-in-Due-Course rules (16 CFR Part 433).

11 To operate current on-bill programs for commercial customers, California utilities reportedly offer loans at zero percent interest and no fees in order to avoid triggering certain state licensing requirements. See Cal. Proposed Decision. Rulemaking 09-11-014 (filed November 20, 2009).

12 See The Power NY Act of 2011 (A. 8510/S. 5844) and www.nyserda.org.

13 It is possible that mortgage lenders generally or title insurers would require as a condition of a property purchase/sale that any open on-bill loan balance be paid off from the proceeds of the sale so that the purchaser takes the property “free and clear” of encumbrances. The questions raised by the stay-with-the-meter feature resemble questions raised by PACE programs, which also have attributes that enable a lender to recover some or all of a loan balance following foreclosure of a prior recorded mortgage loan. See Notice of Proposed Rulemaking, Federal Housing Finance Agency, Federal Register 77, No. 116, p. 36086, June 15, 2012. Also see Comments filed by NRDC related to the Advance Notice of Proposed Rulemaking, www.fhfa.gov/webfiles/23776/344_Natural_Resources_Defense_Council.pdf. Questions are also present with respect to commercial property, as commercial mortgage lenders commonly require borrowers to commit in the loan documents to not encumber the property with additional financial obligations.

14 Key parties to consult include mortgage lenders, investors, and insurers (for both residential and commercial loans), property appraisers, real estate brokers, and title insurers.

15 Another risk is that customers could also make changes to the house or building that are not part of the energy audit, such as increasing occupancy of a commercial space or adding new appliances in a renovated house. These risks appear manageable across a program portfolio of loans but could affect any individual’s estimated savings.

16 See Financial Accounting Standards Board, Statement of Financial Accounting Concepts No. 8, September 2010 (at BC3.26 “Substance over Form”).



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