Clean Energy Finance: On-bill Programs

OVERVIEW

Many utilities offer programs that enable customers to finance clean energy projects (energy efficiency and renewable energy) over time via their utility bills. These "on-bill programs" help expand access to clean energy to customers who lack the capital to pay for projects upfront, or for whom any increase in bill payments is a significant barrier to investing in upgrades. Because of their environmental and economic benefits, local governments have supported these programs by encouraging participation in them or creating policies that enable utilities to develop on-bill repayment options. Some local governments with municipally owned utilities have established their own on-bill programs. This paper describes what on-bill programs are, how they work, and how some local governments have supported them.

WHAT ARE ON-BILL PROGRAMS?

An on-bill program refers to a unique method of financing an energy efficiency or renewable energy investment in which the utility bill is used as the vehicle for repayment.[i] Typically, a utility or third-party lender funds customers' projects, who then repay investments through additional charges on their regular utility bills. As described on page two, repayments are usually made through two methods: an on-bill loan or an on-bill tariff.

On-bill programs have a three-decade history of success in the United States, particularly in the residential and commercial sectors. This is primarily due to the relative simplicity of the processes required for customers to participate, and the flexibility of the programs' features.

As of late 2016 there were approximately 45 on-bill programs nationwide. These programs had made more than 230,000 loans through 2014, with an average loan size of approximately $8,000.[ii] Estimates by the American Council for an Energy-Efficient Economy (ACEEE) on the dollar value of energy efficiency investments[iii] suggest these investments could yield between $2.5 billion and $8 billion in direct and indirect benefits. These benefits include avoided energy and capacity costs, lower energy costs during peak demand periods, avoided costs from building new power lines, and reduced pollution.

WHAT ARE THE BENEFITS OF ON-BILL PROGRAMS?

On-bill programs have been found to help local governments and utilities achieve their environmental and economic goals because they:

- *Make clean energy more affordable*. Customers' savings with on-bill financing are typically greater over time than the cumulative charges added to their bill. On-bill programs can also help remove financial barriers to clean energy investments for customers who otherwise could not afford them. For example, on-bill programs help customers afford the often high upfront costs of energy improvements. In addition, on-bill programs can be structured to ensure that customers' monthly repayments are less than their monthly energy savings, thus enabling them to realize energy cost savings immediately. This feature makes on-bill financing particularly appealing to local governments and utilities that are focused on reducing barriers to clean energy investments for low-income households.
- *Reduce home energy costs and increase housing stability*. Energy upgrades help customers save on their utility costs. This has been shown to lead to more housing stability for populations at risk of being evicted or defaulting on utility payments.[iv]
- *Make clean energy investments more attractive for private lenders*. Loans issued through on-bill programs are considered safer investments for third parties when compared to typical loans. On-bill program loans generally have low default rates (typically 0–3%) because customers are accustomed to paying their utility bills on time, and the fact that the programs make their energy bills more affordable.[ii]
- *Expand clean energy access to customers typically ineligible for conventional financing mechanisms*. The decreased risk for investors enables utilities to offer on-bill programs to customers who might not be eligible for conventional financing. Programs are often designed to use alternative underwriting criteria, such as history of on-time bill payments, to assess creditworthiness. This results in a wider range of customers having access to clean energy.

HOW DO ON-BILL PROGRAMS WORK?

In general, the local utility plays the central role in establishing and implementing on-bill programs. Utilities can usually design programs to suit their needs and conditions, and they often combine these programs with other incentives, like rebates. On-bill programs differ from one another in terms of:

- *Sources of capital*. Utilities typically use revenues or capital infusions from the public, ratepayers, shareholders, private investors, federal agencies, or a combination of funding sources.
- *Program administrators*. Some utilities administer their own on-bill programs, while others partner with third-party administrators (e.g., nonprofit organizations, state agencies). To bear the risk of loans and better target underserved populations, utilities sometimes partner with community development financial institutions (CDFIs), which focus on low-income and other disadvantaged populations. Other potential actors include local governments and charitable foundations that focus on energy issues.
- *Clean energy measures that are covered.* Most on-bill programs focus on energy efficiency upgrades, but some also support renewable energy installations (e.g., the NY-Sun program in New York offers on-bill repayment options to homeowners who purchase solar equipment for their homes).[v] Some programs have allotments for critical health and safety repairs, such as mold abatement. These measures can be particularly beneficial to low-income households.
- *Participation criteria.* Some on-bill programs are open to all customers, while others are restricted to customers that meet certain creditworthiness thresholds. In addition, most programs have project requirements that must be met to qualify.
- *Mechanisms by which customers receive financial support and make payments.* Repayments are typically collected through one of two methods: on-bill loans or on-bill tariffs (described below).[i, ii]
- *Bill neutrality.* Some utilities have designed on-bill programs to be bill neutral, such that repayment amounts are set lower than the property's anticipated savings from the upgrades. A customer's regular utility bill with the repayment amount included will therefore be less than their original bill before the energy upgrade. Once the upgrades are paid off, the customers' monthly savings increase substantially. This feature often makes it possible for low-income customers, for whom any increase in energy costs is a barrier to investment, to benefit from energy upgrades. The popular Pay-As-You-Save (PAYS®) model is an example of a program that requires bill neutrality.[vi] See page four for a description of a PAYS® program in Camden, Arkansas.

ON-BILL LOAN PROGRAMS

On-bill loan programs finance clean energy projects through low-interest (sometimes zero-interest[vii]) loans. Depending on how they are capitalized, on-bill loan programs can be one of two types:

1) *On-bill financing*, in which the capital for the loans can come directly from the utility, the lender.
2) *On-bill repayment*, in which the capital comes from non-utility sources. In such instances, the third-party lender (e.g., banks) attracts public and/or private capital, and the utility is a conduit for repayment.

On-bill loans are associated with an individual utility account holder. This account holder is solely responsible for the repayment and pays back the loan over time through their utility bills. On-bill loans are not typically transferable. This means that when a customer sells their property, the utility or lender generally requires them to promptly pay off the loan, regardless of whether they are moving within or out of the utility's service area. Some utilities, however, allow loans to "follow" the initial borrower after a sale. In such instances, customers are not required to immediately pay off the loan when they sell their homes. Because of this non-transferability, renters are typically ineligible to participate in on-bill loan programs.

Disconnection Concerns

Some on-bill programs allow utilities to disconnect service in the event of non-repayment. This can lead to consumer protection concerns, especially for low-income customers who are more vulnerable to having their utility services terminated. To avoid these situations, many program administrators have structured on-bill programs such that non-repayment results in collection proceedings that are independent of the standard services the customer receives.

ON-BILL TARIFF PROGRAMS

On-bill tariff programs add rates or charges to a customer's utility bill and do not charge interest. These programs are capitalized with either public or private funds, or a combination. Unlike the loans described above, tariffs are transferable because they are tied to a property, not an individual utility account holder (i.e., when an individual moves, the new resident takes on the remaining repayment). This allows for an expanded pool of participants, such as renters that pay utility bills.

HOW CAN LOCAL GOVERNMENTS SUPPORT ON-BILL PROGRAMS?

Local governments support on-bill programs in various ways depending on the type of utility that provides services in their jurisdiction. The following sections present ways in which local governments typically support on-bill programs indirectly and directly.

INDIRECT SUPPORT

Local governments have supported on-bill programs by:

- *Raising awareness* of on-bill programs available through the local utility. For example, Fayetteville, Arkansas, provides residents and businesses with information about a local electric cooperative's on-bill program on its municipal website.[viii]
- *Capitalizing or backing an on-bill program* by investing public funds and creating, for example, a loan loss reserve fund to mitigate risk for lenders. Some local governments have used tax revenue to capitalize on-bill programs. Others have assisted utilities that are considering on-bill programs by facilitating partnerships with private capital investors, including local banks and financial institutions.
- *Creating policy or legislative incentives* to promote on-bill programs, such as energy efficiency targets.
- *Assembling stakeholders* to support on-bill program development or policymaking.
- *Collaborating with state governments* to obtain funding for on-bill programs through state clean energy funds or other similar sources.
- *Working with utilities* to target on-bill programs at priority sectors, such as low-income residents.
- *Participating in on-bill programs offered by their local utility*, which can help legitimize the program and encourage local residents and businesses to participate.

DIRECT SUPPORT

Some communities with municipally owned utilities have chosen to implement their own on-bill programs. Ways in which local governments have directly supported utilities in such instances include:

- *Engaging with partners to support municipally owned utilities.* Establishing and operating on-bill programs can require a considerable amount of time and resources. If the utility lacks the administrative capacity or resources to establish and operate an on-bill program, local governments have sometimes assisted in engaging with other partners. For example, the City of Holland, Michigan, worked with the state's Michigan Saves program to help design an on-bill program for its municipally owned utility.[ix]
- *Training local contractors and service technicians.* Some utilities and local governments have trained contractors and service technicians about local on-bill programs, who can help raise awareness of the programs when they perform regular service calls.

Key Resources

- EPA Clean Energy Finance Tool
  www.epa.gov/statelocalenergy/clean-energy-finance-tool
- Department of Energy – On-bill Programs
  www.energy.gov/eere/slsc/bill-financing-and-repayment-programs
- On-bill Program Primer for Utilities in Michigan
  www.michigan.gov/documents/mpsc/April_2017_On-bill-primer_for_Michigan_Utilities_560204_7.pdf

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[i] ACEEE. 2016. On-Bill Energy Efficiency Toolkit. Available: aceee.org/sector/state-policy/toolkit/on-bill-financing. Accessed 11/29/2018.

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[iv] Oak Ridge National Laboratory. 2014. Health and Household-Related Benefits Attributable to the Weatherization Assistance Program. Available: weatherization.ornl.gov/wp-content/uploads/pdf/WAPRetroEvalFinalReports/ORNL_TM-2014_345.pdf. Accessed 11/29/2018.

[v] New York State Energy Research and Development Authority. Undated. Solar for Your Home – Incentives and Financing. Available: www.nyserda.ny.gov/All-Programs/Programs/NY-Sun/Solar-for-Your-Home/Paying-for-Solar/Incentives-and-Financing. Accessed 11/29/2018.

[vi] Clean Energy Works. Undated. About PAYS®. Available: www.cleanenergyworks.org/about-pays/. Accessed 11/29/2018.

[vii] National Conference of State Legislatures. 2017. On-Bill Financing: Cost-Free Energy Efficiency Improvements. Available: www.ncsl.org/research/energy/on-bill-financing-cost-free-energy-efficiency-improvements.aspx. Accessed 11/29/2018.

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Example On-bill Programs

Ouachita Electric Cooperative – HELP PAYS® (Camden, Arkansas)

- Established: 2013
- Investments to date: $1.6 million
- Program type: On-bill tariff
- Average participant's cost savings: 20%
- Sectors: Residential and commercial

The Ouachita Electric Cooperative piloted Arkansas's first on-bill financing program, the Home Energy Lending Program (HELP), in 2013. Additional Arkansas cooperatives began adopting the program, and in 2016 the program switched to an on-bill tariff model, renamed HELP PAYS®. By switching to a tariff model, the Ouachita Electric Cooperative tripled both their participation rate (to just over 200 single-family, multifamily, and commercial properties) and approved investments (to $1.6 million) by the end of 2016. The program caps the cost recovery charge added to customers' utility bills at 80% of the energy savings for that month.

Nearly half of the program participants are renters, a group left out of the original program. Residential properties have seen an average monthly energy savings of 20%, resulting in an average payback period of approximately 12 years. In some instances, residents' monthly utility bills have been reduced by as much as 40% to 50%. The city of Hampton, Arkansas, is a member of the cooperative, and has used the HELP PAYS® program to finance energy efficiency upgrades at one of their own facilities.

For more information, see: www.oecc.com/help

Seattle City Light On-bill Repayment Program (Seattle, Washington)

- Established: 2011
- Investments to date: $5 million
- Program type: On-bill loan
- Average participant's cost savings: 25%
- Sector: Residential

Seattle City Light partnered with the local government and Craft3, a nonprofit CDFI, in 2011 to establish an on-bill repayment program that supports residential energy efficiency upgrades in Seattle. The municipally owned utility acts as a conduit between customers and Craft3, which originates, underwrites, and services the loan portfolio with capital raised from third-party, non-utility sources. Repayment for the loan is accomplished with a line item on the property owner's Seattle City Light utility bill. In reviewing applications, Craft3 considers applicants' credit scores and bill payment history; a low credit score can be offset by a strong payment record.

At the time of writing, the program's standard interest rate for loans is 4.49%. A lower interest rate option (3.49%) is available for low-income households due to a subsidy from the City of Seattle. The maximum loan term is 20 years, and the maximum value is $30,000. On average, participants save 25% on their electricity bills after implementing the energy efficiency upgrades.

For more information, see: www.craft3.org/Borrow/home-energy/home-energy-loans-in-washington

Tallahassee Energy Efficiency Loan Program (Tallahassee, Florida)

- Established: 1983
- Investments to date: $130 million
- Program type: On-bill loan
- Average participant's cost savings: Not available
- Sectors: Residential and commercial

The Tallahassee, Florida, Energy Efficiency Loan Program provides on-bill financing for residential and commercial energy efficiency and solar projects. The program was capitalized using public funds raised through the municipal utility's rate payment structure. The utility raised these funds for several years before beginning to offer loans. Loans have interest rates up to 5%; and maximum terms of up to 5 years for energy efficiency upgrades and cool roofs, and 10 years for solar projects (e.g., rooftop photovoltaic systems and solar heaters). Customers can borrow up to $10,000 for energy efficiency upgrades, and $20,000 for rooftop solar and cool roofs. Loans are made only to property owners, and the borrower must be the account holder.

Over the course of the program's history, the default rate has been very low (approximately 1%). The program credits its success to the utility's engagement with contractors. When contractors perform service calls, they provide customers with information about the on-bill financing program. In part because of this marketing approach, 18% of customers are participating in the on-bill program.

For more information, see: www.talgov.com/you/you-products-home-loans.aspx