Decreasing the energy burden faced by low-income populations is a priority for many state and local governments. Traditional residential financing programs and incentives are often inaccessible for low-income and moderate-income families who may be credit-challenged and unlikely to have sufficient savings to provide the required upfront payment. Programs often are particularly inaccessible to those living in rental units, further reducing access for low-income households that live in such units. Partners in the Clean Energy for Low Income Communities Accelerator (CELICA) were interested in the tariffed on-bill model (on-bill tariff) as a means to provide energy efficiency and renewable energy benefits to customers regardless of income level. There was particular interest given on-bill tariffs do not depend on consumer credit and do not require building owner investment, removing a well-known barrier to rental home improvements. Instead, on-bill tariffs directly benefit the tenant that repays the project costs on their utility bill.

This issue brief explores how the on-bill tariff model works to finance energy upgrades while also eliminating loan default risk for both the resident and the utility because the transaction does not involve making a consumer loan.[1] Although on-bill tariffs are not a loan, there may still be consequences for non-payment, like disconnection from power, if that is allowed. On-bill tariffs, while not designed solely for low-income households, have been used to provide energy efficiency improvements in Kansas, Kentucky, Hawaii, Arkansas, Tennessee, North Carolina, South Carolina, and California as well as other states where the programs are accessible to households of all income levels.

After providing a concise overview of various forms of utility on-bill financing for home energy improvements, this issue brief explains how on-bill tariffs differ from on-bill financing, and what the benefits can be for low-income households. Strategies for state and local governments that want to support on-bill tariff programs are then described with examples and resources to further explore.

What Is On-bill Financing?

Approximately 110 utilities across the country, including publicly-owned utilities (i.e., municipal and rural electric cooperatives) and investor-owned utilities, offer some form of on-bill financing.[2] Utilities vary greatly on how they structure their programs, such as what financing terms are offered and what energy measures are allowable. Non-tariffed forms of on-bill financing offer loans to customers who may be required to pass credit-worthiness tests from the lender, be it either the utility or a third party. On-bill loans give consumers a way to avoid paying the up-front cost of the energy upgrade while providing a mechanism to pay off the costs of the loan incrementally over time on their utility bill.[3] Upon sale of the home, the borrower usually must pay off the loan, although some programs allow transfer to the next occupant if they are able and willing to take on the debt. Unfortunately, credit requirements and debt burden of on-bill financing programs may effectively preclude many low-income households from participating.

With all on-bill structures (on-bill loans, on-bill repayment, and on-bill tariffs), utility customers are able to make cost saving energy improvements like efficiency, storage and solar photovoltaic generation to their homes or businesses and repay the project costs over time on their monthly utility bill. Repayment refers

[1] If non-payment of bills for utility services occur for any reason, the utility's protocols for unpaid bills apply. See section on Differences in Non-Payment for further discussion.

[2] Environmental and Energy Study Institute. Interactive Map of Utilities with On-Bill Financing Programs. Retrieved from https://www.eesi.org/obf/map

[3] https://www.energy.gov/eere/slsc/bill-financing-and-repayment-programs

to situations in which the lending capital comes from third parties, instead of from the utility. The differences between the models is based on the transaction path—i.e., who is involved and how the money flows for the energy upgrade project. This in turn affects who has the obligation to repay and whether disconnection can occur because of non-payment. On-bill financing and on-bill repayment are structured in the form of a loan from the utility or a third party that collects repayment via customer bills and where the repayment obligation is with the customer. The customer may be required to pass credit worthiness tests or other tests like bill payment history that provide access to credit-constrained customers to qualify for the loan. With on-bill loans, the utility is the capital provider. Whereas, with on-bill repayment loans, capital is provided by a third party lender while the utility collects the debt payments. On-bill tariffs are also connected to utility bills but are unique in ways that are explored in the next section.

How Does the On-bill Tariff Model Differ?

An on-bill tariff program allows a utility to pay for energy efficiency improvements at a specific residence and recover payment for those improvements over time on the utility bill for that location. The on-bill tariff model differs from on-bill loans and repayment models in that tariffs are **not** a loan, but rather a utility expenditure for which cost recovery is tied to the utility meter according to terms set forth in a utility tariff. Similar to its investment in other types of supply equipment, the utility pays for cost effective home energy improvements, such as air sealing, LED lighting retrofits, and home heating and cooling units, and then it recovers its cost over time through a dedicated charge on the bill that is less than the estimated savings from the improvements.

The on-bill tariff model is associated with the utility meter location, not an individual household account. Utilities therefore do not have to evaluate occupant credit scores, debt to income ratios, or screen for homeownership in order to offer to pay for energy efficiency work. Utilities are authorized by utility commissions or other regulatory bodies to recover costs such as infrastructure improvements through electricity rates, which are defined in service agreements known as tariffs. A tariff (or tariff rider) can also set forth the terms of service for an investment made at a single location, with the cost recovery assigned only to the meter at that location. The tariff charge will remain attached to the meter at the improved home, regardless of who occupies the property, until utility cost recovery is complete.[4]

Because there is no customer debt obligation, the terms in the on-bill tariff apply automatically to the current customer as well as any future customers at each upgraded location. The tariffed charge for cost recovery of the utility expenditure survives foreclosure proceedings, changes in tenancy, and can be floated through periods of vacancy.[5] The terms of the tariff continue to apply to the location until utility cost recovery is complete. Residents pay utility bills that are lower than they would have been without the upgrades and, if designed with consumer protections in place, the energy savings are greater than the tariff charge that recovers the utility expenditure. This reduces risk to residents, who, if they used on-bill financing or repayment, might otherwise have been forced to pay off their debt if they wished to move before the loan repayment was complete. The on-bill tariff program is especially good for removing barriers to rental home upgrades because the program enables a utility to recover its cost for energy improvements even if renters leave before the recovery is complete.

[4] According to the Regulatory Assistance Project, a tariff is "a listing of rates, charges, and other terms of service for a utility customer class, as approved by the regulator" (the regulator could be a public utilities commission, city council or cooperative board). Retrieved from http://www.raponline.org/wp-content/uploads/2016/07/rap-lazar-electricity-regulation-US-june-2016.pdf.

[5] Decision Tool for Utility Managers, commissioned through a cooperative agreement with the USDA Rural Utilities Service, 2016. See Appendix 4, Section 6.

Differences in Non-payment – Loan and Tariff Programs

As a utility charge to the meter – not a loan obligation to the household – the financial consequences of nonpayment of a cost recovery charge in an on-bill tariff program are the same as not paying for other utility services on the utility bill. Nonpayment may lead to power disconnection where that is allowable. Some programs are designed such that in a nonpayment situation, as with any utility charge, outstanding payments would come due; however, unlike a loan, there would be no acceleration. In other words, all future cost recovery charges would not come due as would the entire amount of outstanding debt in the case of a loan default.

Differences in Repayment for Loan and Tariff Programs

Both on-bill loans and on-bill tariff programs can be structured to be cost effective—where the energy savings exceed the monthly cost recovery charges.

Figure 1: Key Differences Between On-bill Loan Model and On-bill Tariff Model

	On-bill Loan	On-bill Tariff
What is the charge on the monthly utility bill?	Debt payment	Cost recovery fee
What does a successor homeowner or occupant pay?	Some programs allow voluntary loan transfers but not automatic	Cost recovery automatically applies to successor occupants
Is utility disconnection possible for non-payment?	Yes, depending on legislative or gubernatorial policy and/or regulatory approval	Yes, depending on restrictions due to time of year
Consumer credit underwriting criteria	Necessary for many loan programs	Not applicable
Renters allowed to participate	Yes, but few do[6]	Yes

Benefits of On-bill Tariff Programs

The benefits of on-bill tariff programs include the following:
(Note: where similar benefits can be found in on-bill *loan* programs that is noted as well)

- Low-income and moderate-income households' ability to access energy efficiency and renewable energy increases when utilities pay upfront costs for projects at these households. These households have limited discretionary income and are often excluded from participating in on-bill loan programs that require creditworthiness and/or an upfront payment. Renters are also often excluded by eligibility requirements for homeownership, which affects many households with low-income or moderate-income.
- The on-bill cost recovery payment for a tariffed expenditure is attached to the meter, not the occupant. This can benefit participants who are renting as well as homeowners. If a customer moves before the cost recovery is complete, the new occupant takes over payments. The original participant does not have to keep paying for efficiency benefits they no longer receive or pay off the outstanding dollar amount of a loan. Robust consumer protections must be in place for on-bill tariff programs to notify and explain to new residents that there is an additional financial obligation associated with the property as a result of investment in upgrades that have lowered the overall bill

[6] There is a "split incentive" between a landlord and tenants when a loan is for improvements to property owned by the landlord that does not pay the utility bill and thus does not accrue the energy savings; even if the landlord allows the renter to make the improvements, the renter may face financial burden if they take out the loan and move before the loan is paid in full.

at that location.

- Many on-bill tariff programs link investment criteria to whether a project is cash-flow positive (i.e., estimated bill savings are significantly greater than the on-bill payments) because the cost recovery charges apply to successor customers, regardless of their income. This protects the low-income participant from incurring a monthly cost recovery charge larger than the savings and thereby minimizes risk of adding to their monthly financial responsibilities.
- In a good on-bill tariff program, there are protections both of the consumer and the utility, to ensure both parties fully meet their obligations.

How Can State and Local Governments Help?

Some state and local governments have helped engage utilities, low-income housing entities, and low-income energy assistance and education and outreach organizations to understand how an on-bill tariff program would best meet the needs of low-income households. They have also provided information and technical assistance to utilities including lessons learned and implementation models from other jurisdictions. States can also offer reserve funds to mitigate any perceived risks, similar to support Arkansas offered to an on-bill loan program called HELP before the utility commission approved the on-bill tariff program called HELP PAYS® in the example provided below.

Program Profile: Ouachita HELP Programs

Ouachita Electric Cooperative is a rural electric cooperative in Southwest Arkansas that first offered an on-bill loan program called Home Energy Loan Program (HELP) before switching to an on-bill tariff model through its HELP PAYS® program. For members of the electric cooperative, HELP PAYS® enables the installation of money saving efficiency measures with no up-front costs. Although this program is available to households of all income levels, it overcomes traditional barriers to low-income household participation by, for example, removing upfront costs and limiting selection of energy efficiency measures to those that are estimated to result in bill savings. Renters benefit from savings and pay off the cost of improvements on their bill, thereby addressing the split incentive issue common in rental apartment buildings where programs require that landlords pay for improvements. Consistent with the PAYS® model, the Ouachita program requires that monthly energy savings exceed the estimated monthly payments by at least 20%, providing assurances that the cost of the upgrades will not be an additional stress to the household.

To encourage on-bill loan programs like HELP, the Arkansas State Energy Office set up a loan loss reserve to mitigate the risk of losses from on-bill loan programs offered by several electric cooperatives in the state. Since establishing the loan loss reserve in 2011, there have been no losses and the reserve has not been used. When Ouachita Electric switched to offering a more inclusive on-bill tariff program through the HELP PAYS, it did not need a loan loss reserve for loan defaults but rather a reserve fund for missed payments for services. For that, it turned to the Energy Solutions Reserve Fund provided by a non-profit in North Carolina that now serves utilities in three states.

To learn more about Ouachita HELP PAYS®, read a full case study.

For More Information on Existing On-bill Programs

Below are examples of rural electric co-ops and investor-owned utilities that have worked with their oversight authorities — a board or public utility commission — to successfully put on-bill programs in place. Links are included to approved on-bill tariff schedules and regulatory filings.

- Upgrade to $ave, North Carolina
- HELP PAYS®, Arkansas
- How$martKY, Kentucky (Part 1, Part 2)

Resources

- **The Pay as You Save Program in Rural Arkansas: An Opportunity for Rural Distribution Cooperative Profits**, ArcGIS Story Map for article in the Electricity Journal.
- **On Bill (Inclusive) Financing for Energy Efficiency**, Southeast Energy Efficiency Alliance & Clean Energy Works