TARIFFED ON-BILL: A UTILITY PATHWAY TO DECARBONIZATION

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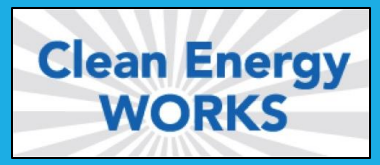

2019 Energy Optimization Advocates Meeting
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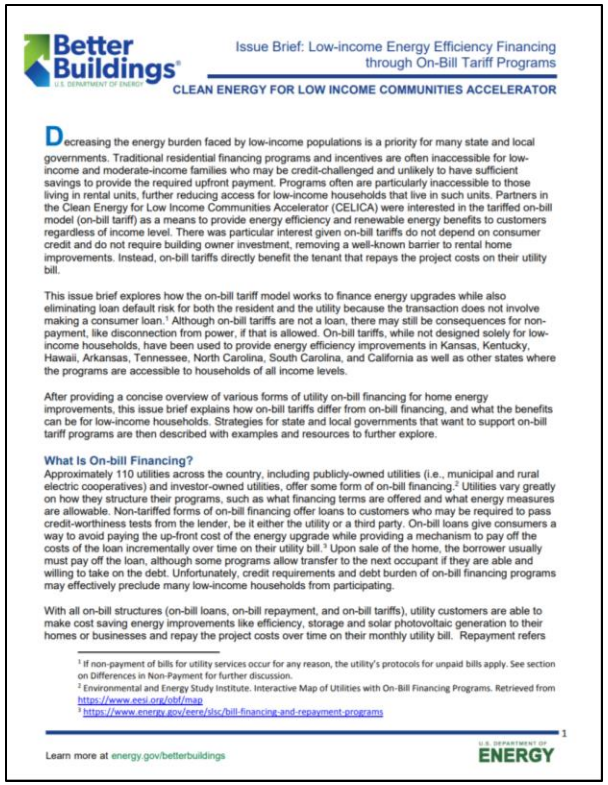
Tariffed On-Bill

- Energy upgrades capitalized up front and costs recovered through a monthly program service charge on the utility bill that is less than the estimated savings
- Proven model: Pay As You Save® (PAYS®), created by the Energy Efficiency Institute



Better Buildings
U.S. DEPARTMENT OF ENERGY

Issue Brief: Low-income Energy Efficiency Financing through On-Bill Tariff Programs

CLEAN ENERGY FOR LOW INCOME COMMUNITIES ACCELERATOR

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

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Learn more at energy.gov/betterbuildings

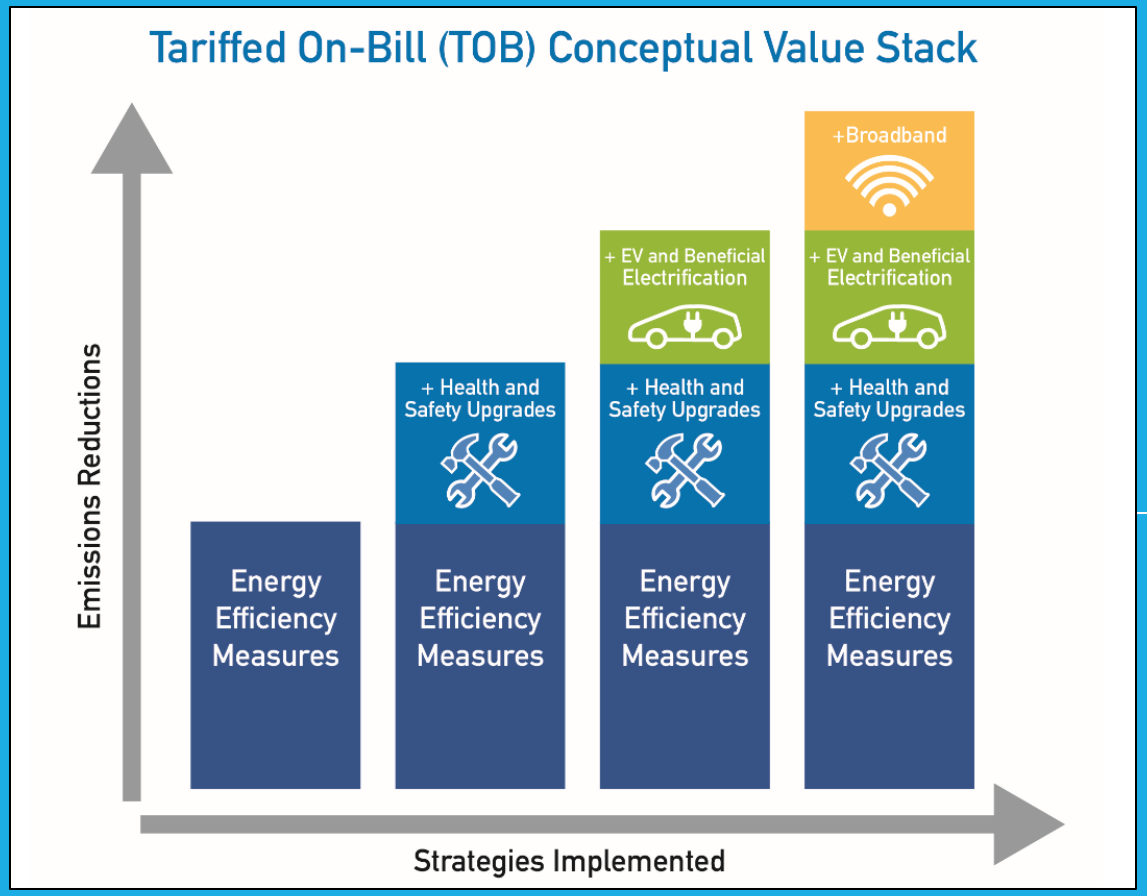
U.S. DEPARTMENT OF ENERGY

Issue brief on tariffed on-bill from the Clean Energy for Low-Income Communities Accelerator

Summary statement: Accelerating investment in tariffed on-bill (TOB) for energy efficiency and other technologies can produce a utility business value proposition that promotes energy optimization and makes the case for TOB to investor-owned utilities (IOUs).

Barriers to TOB adoption by IOUs:

- Throughput incentive
- Capital expenditure incentive
- Other increasingly perverse regulatory incentives



- **Energy Efficiency (EE) Measures**: EE is a low-cost, geographically-diverse clean energy service that paves the way for additional TOB programs.
- **Health and Safety (H&S) Upgrades:** Addressing H&S issues for low-income customers increases the number of eligible meters for TOB programs.
- **Electric Vehicle (EV) and Beneficial Electrification:** Electrifying transportation and other decarbonization strategies increases load and creates more business opportunities for the utility.
- **Broadband**: Increasing the data capacity of utilities unlocks new utility business offerings including advanced metering and multi-device management.

Decarbonization Examples

Roanoke Electric Cooperative (NC)

- Switching customer heat sources from propane to electricity
- Offering tariffed on-bill energy efficiency and community solar programs
- Exploring solar + storage, health & safety repairs and electric buses

Heat Pump Campaigns (NY & MN)

- NYSERDA's Air Source Heat Pump Program
  - Provides up to $10.95 million in incentives to participating installers
- In MN, rising interest in heat pumps as strategy to meet state carbon reductions goals.

Building Decarbonization Coalition (CA)

- Created roadmap that establishes plan for the state to cut building emissions 20 percent in the next six years and 40 percent by 2030.
- CPUC recently authorized fuel switching as a public benefit.

Discussion

How can advocates win regulatory approval to start driving oil and gas out of the retail energy mix in both transportation and buildings by opening a path for utilities of all types to make TOB investments?

Thanks!

1-Minute Pitch

- Tariffed on-bill (TOB)/PAYS®: Energy services financed up front and costs recovered through a monthly charge on the utility bill that is less than the estimated savings
- TOB can be applied to a variety of energy optimization applications to produce a business value proposition that appeals to utilities, including investor-owned utilities
- Value stacking: Integrating TOB EE with residential repairs, electric vehicles, broadband, and more
- How can advocates win regulatory approval to start driving oil and gas out of the retail energy mix in both transportation and buildings by opening a path for utilities of all types to make TOB investments?

Possible revised outline for ppt?

- Slides in this order could be added or built out more:
- 1. What is TOB
- 2. Field experience from Roanoke proving biz model for EE
- Memo mentions some results from REC like 195%
- 3. Graphic suggesting can realize significantly greater emission reductions by expanding TOB and broadband and incorporating health and safety improvements
- 4. Holmes' examples of MN and CA
- 5. Then experience with IOUs' 1%, saying all cost-effective EE is done, can't justify doing more. List disincentives to doing more that we know.
- 6. Our question for EO Advocates meeting participants: what are the challenges to adoption by IOUs under traditional cost of service regulation we aren't thinking? How can advocates win regulatory approval to start driving oil and gas out of the retail energy mix in both transportation and buildings by opening a path for utilities of all types to make TOB investments? Does IOU acquisition of natural gas utilities make this harder or easier or no different?