



EESI

Environmental and
Energy Study Institute

Weatherization and Funding

**Senate Committee on Natural Resources
State of Vermont**

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About EESI



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NON-PROFIT

Founded in 1984 by bipartisan Congressional caucus as independent (i.e., not federally-funded) non-profit organization



NON-PARTISAN

Source of non-partisan information on environmental, energy, and climate policies



DIRECT ASSISTANCE

In addition to full portfolio of federal policy work, EESI provides direct assistance to utilities to develop “on-bill financing” programs



SUSTAINABLE SOCIETIES

Focused on win-win solutions to make our energy, buildings, and transportation sectors sustainable, resilient, and more equitable

Overview of EESI Direct Assistance to Utilities On-bill Financing Program Design



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- **EESI offers technical assistance to utilities developing and launching on-bill financing or repayment programs**
 - Since 2010, EESI has provided free technical assistance to utilities in 20 states:
 - Fourteen utilities have successfully launched on-bill programs with EESI support
 - In the past year, EESI has conducted outreach to hundreds of and assisted 32
 - Many more have relied on EESI informational resources to learn about the opportunity of on-bill programs and the range of potential economic and environmental benefits to their customers, members, communities
 - Technical assistance varies by utility engagement, but typically involves:
 - Best-practices and lessons-learned informed by successful on-bill programs
 - Resource identification, including sources of low-cost capital
 - Program design templates and guidance
 - Networking and shared contacts

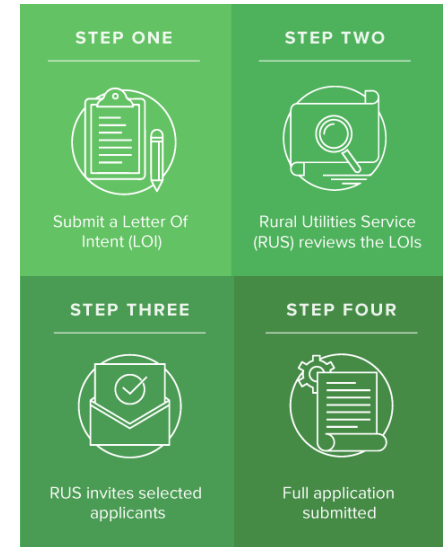
Overview of EESI Direct Assistance to Utilities

Access to Low-cost Capital



- **EESI assists utilities applying for Rural Energy Savings Program funding**

- Authorized by the 2014 Farm Bill, USDA launched RESP in 2016
 - RESP provides zero-percent interest loans to rural utilities and others (including state entities like VHFA) to expand access to affordable capital for energy efficiency, renewable energy, storage, electrification, and water efficiency projects
 - RESP-funded on-bill programs allow homeowners and small businesses to repay the projects costs as a utility bill line-item, which are collected to repay USDA
 - Green banks and other state financing entities became eligible in 2020
 - The latest RESP application cycle began in December with about \$90 million available
- EESI has helped 13 utilities secure RESP loans worth \$59 million for on-bill programs



On-bill Financing Programs Basic Design Elements...



- **More than 110 on-bill financing programs are delivering savings to customers**
 - ACEEE estimates investments worth more than \$300 million in 2019
 - Some programs are about to turn 40; many more were established in the past 10 years
 - Financed measures range from energy-efficient appliances to “cool roofs” and solar-heated pools
 - Program designs reflect evolving goals: “beneficial electrification” and resilience from renewable energy and storage installations
 - Newer programs increasingly emphasize equity and specifically target lower-income customers



On-bill Financing Programs ...Basic Design Elements...



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- **Different utilities use different financing models to achieve different goals**
- **And even within the realm of on-bill financing, different approaches are valid**
 - Programs that offer financing via on-bill loans:
 - May prefer repayment obligations that are untied to a meter
 - Often prefer traditional underwriting to evaluate customer creditworthiness
 - May offer greater flexibility for capital deployment at scale
 - Programs that offer financing via on-bill tariffs:
 - May put more emphasis on equity considerations
 - Often have regulatory approval and understanding of financing as a utility service (rather than a loan or debt)
 - May involve so-called “pay-as-you-save” requirements or not

On-bill Financing Programs ...Basic Design Elements



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- **There is no single “right way” to implement on-bill financing**
 - EESI’s consultations with utilities range from information sharing, peer-to-peer introductions, prepare needs assessments, and navigate RESP
 - Even if their answers are different, program administrators face the same questions:
 - Who do we want to reach?
 - What do we want to finance?
 - What goals do we want to achieve?
 - How will we measure success?
 - EESI documents on-bill financing program success stories (with more in the works!) available at <https://www.eesi.org/obf/case-study>:
 - Fort Collins Utilities Epic Homes Program
 - Green Energy Money Saver (GEM\$) On-Bill Program
 - Holland On-Bill Loan Program
 - Help My House Model
 - Orcas Power and Light Cooperative Switch It Up! On-Bill Program

On-bill Financing Programs

Key Hurdles to Clean Energy Upgrades



- **On-bill financing programs help overcome key hurdles to clean energy upgrades**
 - By improving affordability of cost-effective improvements
 - Removing the need for upfront capital
 - Achieving (at least) bill neutrality
 - Lowering monthly utility bills
 - By expanding accessibility to capital for more customers
 - Substituting bill-payment history for traditional underwriting
 - Removing income and credit history limitations
 - Allowing repayment to transfer to later owners or renters



- Offered by eight South Carolina electric cooperatives
- Whole-house energy efficiency
- Repayments tied to meters
- Projects realize 30% savings
- More than 800 retrofits (including manufactured homes)
- RESP loans worth \$15.5 million

On-bill Financing Programs

Focus on Equitable Program Design



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- **Program design elements that promote equity are especially top-of-mind**
 - In general, on-bill financing programs help lower household energy bills
 - Customers in rural areas spend more of their income on energy than their urban counterparts
 - Utility involvement helps ensure other available incentives are fully leveraged
 - Investments tied to a meter provide a wide range of benefits customers
 - Convenient utility bill line item
 - Automatic transfer of the obligation to subsequent owners allows longer repayment terms
 - Renters are eligible to participate—a significant expansion of traditional program eligibility
 - Solution to the “split incentive”—where those who own measures have interests at odds with those who pay the bills—in multifamily buildings
 - Multiple consumer-oriented measures help ensure savings are delivered as expected
 - Trained and certified energy auditors and contractors
 - Quality assurance process and evaluation, measurement, and verification of savings
 - Repayment terms aligned with common warranty periods
 - Loan-loss reserves can provide relief in the rare case of default

Our Understanding of Efforts in Vermont Scale and Scope



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- **On-bill financing would facilitate large-scale deployment of clean energy upgrades**
 - Existing utility programs and incentives serve as a strong foundation to support an ambitious financing program roll-out
 - Flexible financing that would accommodate offerings for energy efficiency, renewable energy, storage, and electric vehicle charging consistent with state goals
 - Potential for considerable third-party financing would provide a useful alternative for utility-sourced capital across multiple, diverse service territories
 - Zero-interest loans from RESP could be leveraged to provide low-cost capital to make clean energy accessible for a wide range of households

Our Understanding of Efforts in Vermont Clean Energy Workforce



- **Skilled auditors and contractors are critical for the success of all financing program**
 - Many years of leading-edge energy efficiency programs give Vermont an existing energy efficiency workforce and training infrastructure to leverage for financing
 - Experienced auditors and contractors help identify savings, educate homeowners, and make quality installations that deliver savings

Figure VT-8.
Energy Efficiency Employment by Detailed Technology Application

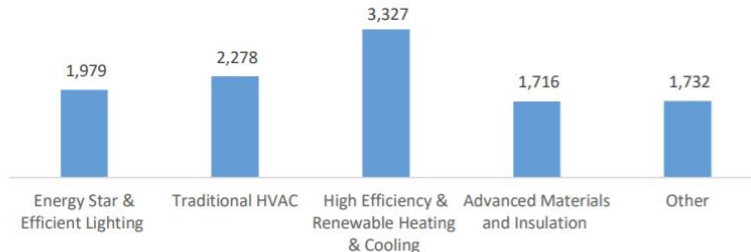
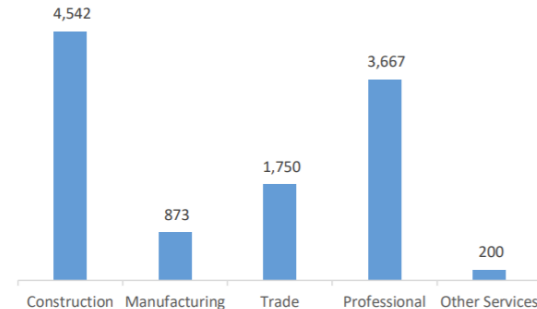


Figure VT-9.
Energy Efficiency Employment by Industry Sector



Our Understanding of Efforts in Vermont Decarbonization and Electrification



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- **On-bill financing would help target investments to decarbonize and electrify**
 - Extended repayment terms increase the number of “beneficial electrification” projects that achieve acceptable cost-effectiveness
 - Whole-house energy efficiency and electrification of heating and water heating equipment improve cost-effectiveness of renewable energy and storage installations
 - Households realize indoor air quality and comfort improvements
 - Emerging program designs focus on inclusive community-scale renewable energy projects when single-family home installations are impractical

SWITCH IT UP?

- Offered by Orcas Power and Light Cooperative
- Beneficial electrification
- On-bill tariff
- More than 150 projects since 2019
- RESP loans worth \$20 million

Our Understanding of Efforts in Vermont Rural Community Resilience



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- **On-bill financing would help target investments to decarbonize and electrify**
 - Increased distributed energy resource deployment improves community resilience in rural areas
 - Behind-the-meter energy storage installations allow for energy savings
 - Electric grid integration with renewable energy and storage installations could help boost resilience
 - Electrification measures paired with renewable energy and storage installations could help customers remain online during power outages and boost reliability
 - Green Mountain Power already has a tariff approved for energy storage programs



- Offered by Holy Cross Energy for energy efficiency and distributed energy systems
- Energy efficiency, beneficial electrification, and community resilience
- On-bill tariff
- More than 210 projects since 2013 (energy efficiency)
- RESP loans worth \$11 million



EESI

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***Thank you for
your consideration.***

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