

Memo



To: Energy Efficiency & Resource Management Council
From: Adrian Caesar, Mike Guerard, Sam Ross
CC: Becca Trietch
Date: June 1, 2020
Subject: Cross-jurisdictional Financing Program Comparisons

CONSULTANT TEAM

INTRODUCTION

The up-front cost of efficiency upgrades represents a meaningful barrier to participation in Energy Efficiency programs for many households and businesses. Low-income, moderate-income, and small business customers typically lack access to capital necessary to complete projects, while large commercial customers are often constrained by cash flow requirements. While incentives within efficiency programs help to mitigate this issue, especially in the low-income space where 100% of costs are typically covered, the costs that remain when incentive levels are below 100% can still represent a challenge. Well-designed financing programs can mitigate such participation barriers for many customer segments.

In order to address these financial barriers moving forward, a comprehensive set of comparisons between existing Rhode Island financing programs and those in other jurisdictions was created. By comparing and contrasting financing options across states, potential program modifications for Rhode Island can be identified. This document begins with a summary of Rhode Island's core financing programs, followed by comparisons of each to programs in other states (links to program websites and descriptions are included). The Consultant Team will facilitate discussions with stakeholders such as the Rhode Island Energy Efficiency & Resource Management Council (EERMC), National Grid, the Division of Public Utilities & Carriers (DPUC) and the Office of Energy Resources (OER) to support development of a comprehensive, five-year financing plan.

SECTION 1. RHODE ISLAND FINANCING PROGRAM OVERVIEW

Table 1. Rhode Island Financing Programs

Rhode Island						
Program	Administrator	Interest Rates	Loan Term	Capital Source	Customers	Eligible Projects
HEAT Loan	National Grid	0% for up to 7 years	Up to 7 years	Third-party/Ratepayers	Res	Energy Efficiency, Pre-weatherization
DoubleGreen Loan	Capital Good Fund	0%	2-5 Years	Third-party/Ratepayers	Res (Moderate Income)	Energy Efficiency, Pre-weatherization
On-Bill Repayment (<1,000 MWh)	National Grid	0% for up to 5 years	Up to 5 years	Ratepayers	C&I	Energy Efficiency

On-Bill Repayment (>1,000 MWh)	National Grid	0% for up to 5 or 10 years	Up to 5 or 10 years	Ratepayers	C&I	Energy Efficiency
On-Bill Repayment (Gas)	National Grid	0% for up to 3 or 5 years	Up to 3 or 5 years	Ratepayers	C&I	Energy Efficiency
C-PACE (Commercial Property Assessed Clean Energy)	RIBB	Property-assessed, typically 6.5%-8.5%	Up to 25 years, project dependent	Third-party	C&I/MF Res	Energy Efficiency, Renewables
Ascentium Rental Agreement	National Grid and Ascentium	0-6%	7 years (C&I), 10 years (Muni)	Third-party/Ratepayers	C&I, Municipal	Energy Efficiency
Efficient Buildings Fund	RIBB and OER	Low interest (~20% below mkt. rate)	Up to 20 years	Ratepayers/Third-party	Municipal/Quasi-public	Energy Efficiency, Renewables
Energy Efficient Mortgage Program	Federal Housing Authority (FHA)	2.50%-4.75%	Up to 30 years, typically	Third-party	Res	Energy Efficiency, Renewables, Pre-weatherization
Home Improvement Loan	Bay Coast Bank	4%-6%	7-10 years	Third-party	Res	Energy Efficiency
Warwick LMI Home Improvement Loan	City of Warwick	Max of 4% for SF and 6% for MF Res	Depends of Borrower financials	Public/State	Res	Energy Efficiency, Pre-weatherization
Energy Service Performance Contract	Ameresco	6% - 8%	15 – 20 years	Third party	C&I, Municipal	Energy Efficiency
Energy Service Agreement	Renew Energy Partner	Embedded in the monthly fee	Up to 10 years	Third party	C&I	Energy Efficiency, Renewables
Equipment Lease	HBC	7%-15%	Up to 10 years	Third party	C&I	Energy Efficiency
Traditional Bank Loan	Town of Barrington, HBC	4.75% - 5.5% for non-profit; 6%-8.5% for C&I	10-12 years for C&I; 15–20 years for municipal	Third party	Res, C&I	Energy Efficiency, Pre-weatherization, Renewables
Municipal Bonds	State of Rhode Island	3%-5%	Up to 30 years	Public/State	Municipal	Energy Efficiency, Pre-weatherization

RI HEAT Loan: Weatherization/heating equipment financing for qualified residential customers, must be a residential customer with 1 to 4-unit property; must meet EnergyWise requirements/perform Home Energy Assessment; \$500-\$2,000 loan amounts for 2 year micro loans for Owner Occupied properties;

\$2,001-\$25,000 standard loans for Owner Occupied 1-4 unit properties; \$5,000-\$25,000 and up to 7 year term for Non-Owner Occupied 1-4 unit rental properties; up to \$1,000 may be used for knob and tube wiring remediation, which falls under the “Pre-weatherization” upgrade category, more broadly this category includes any Technical Barrier Mitigation for EE projects; [certain conditions vary based on lender](#); loans greater than \$15,000 have a minimum FICO Score requirement of 660 and maximum debt to income ratio of 45%, based on net income; ratepayer contributions are used for interest buydowns, but closing fees and down payments customers cover may vary between participating lender that is selected

[RI DoubleGreen Loan](#): in partnership with National Grid, the Capital Good Fund expands HEAT Loan access to moderate and middle-income customers, especially those with imperfect credit histories, \$500-\$25,000 loan volumes; applicants must be Rhode Island residents and homeowners; meant to cover wall insulation, window replacements, duct sealing, removal of knob and tube wiring – knob and tube wiring falls under the “Pre-weatherization” upgrade category (this category also includes any health/safety repairs that serve as barriers to weatherization; ratepayer contributions are used for interest buydowns; Capital Good Fund programs also charge no closing fees or down payments as a part of the application process

[On-Bill Repayment \(<1,000 MWh\)](#): Repayment of efficiency upgrades through utility bill for up to five years; financing comes from a revolving loan fund which capitalized by ratepayer funds, as well as loan repayments; max loan term of 5 years and loan amounts from \$500-\$50,000; no formal credit checks are required for approval and energy assessments are provided at no cost; information on all C&I financing strategies found in the 2020 Annual Plan PDF Page 342-357 (or Page 86-101 of the C&I Programs Section); ratepayer contributions are used to provide capital infusions to the revolving loan fund when necessary

[On-Bill Repayment \(>1,000 MWh\)](#): Repayment of efficiency upgrades through utility bill for up to five years; financing comes from a revolving loan fund capitalized by ratepayer contributions; loan amounts from \$1,000-\$100,000, but Strategic Energy Management Plan (SEMP) projects may receive larger loans; loan terms up to 5 years for commercial customers and 10 years for State buildings; no formal credit checks are required for approval; information on all C&I financing strategies found in the 2020 Annual Plan PDF Page 342-357 (or Page 86-101 of the C&I Programs Section); ratepayer contributions are used to provide capital infusions to the revolving loan fund when necessary

[On-Bill Repayment \(Gas\)](#): Revolving loan fund capitalized by ratepayer contributions for all commercial Gas accounts; loan volume from \$1,000-\$100,000 but SEMP may qualify for higher amounts; max loan term of 3 years and 5 years for commercial and State facilities, respectively; no formal credit checks are required for approval; information on all C&I financing strategies found in the 2020 Annual Plan Page 342-357 (or Page 86-101 of the C&I Programs Section); ratepayer contributions are used to provide capital infusions to the revolving loan fund when necessary

[Ascentium Rental Agreement](#): National Grid, in partnership with Ascentium and other partner banks, offers leasing, purchasing, and renting of equipment for C&I/Municipal customers; 95% customers engage in finance agreements where they own the equipment; C&I customers can borrow between \$10,000 and \$1,500,000, though other lenders can provide more capital; Municipal customers can borrow \$10,000 or greater; interest rates range from 0-6% depending on whether borrowers want to allocate more incentive money toward the interest buydown or rebates for equipment; max loan term is 7 years for C&I and 10 years for municipal; ratepayer contributions are applied to interest buydowns or rebates

[Efficient Buildings Fund](#): Funding pool capitalized by ratepayer contributions where low-interest rates are given to municipalities and quasi-public agencies for energy efficiency projects; customers must complete application and energy audit of facilities; max term of 20 years; loan amounts typically up to \$5,000,000; interest rates are no lower than 20% of the market rate; information on all C&I financing strategies found in the 2020 Annual Plan PDF Page 342-357 (or Page 86-101 of the C&I Programs Section)

[C-PACE \(Commercial Property Assessed Clean Energy\)](#): Financing for EE, renewable energy, and health and safety upgrades in commercial and industrial properties; this kind of financing is secured by a property tax assessment that is placed on the property's tax bill; typically, annual energy savings are greater than the annual assessment payment; max loan term is based on project and average measure life of installed measures; minimum loan amount of \$50,000; EE funds are not used to capitalize C-PACE financing; information on all C&I financing strategies found in the 2020 Annual Plan PDF Page 342-357 (or Page 86-101 of the C&I Programs Section)

[Federal Housing Authority \(FHA\) Energy Efficient Mortgage Program](#): any homeowner with a FHA-insured mortgage can finance cost-effective energy efficiency improvements; borrowers only need to qualify for the loan used to purchase or refinance a home, not the total loan amount with the EE upgrade cost included in it; the max amount to be added to the FHA loan is the lesser of the cost of improvements determined by a home energy assessment OR the lesser of 5% of: the adjusted mortgage value, 115% of the median area price of a single-family dwelling, or 150% of the national conforming mortgage limit (raised from \$484,350 in 2019 to \$510,400 in 2020); for some lenders these amounts are capped at \$25,000 for single-family homes and \$12,000 per unit up to \$60,000 for multifamily properties; up to \$3,500 can be used for weatherization upgrades; borrowers can have a higher mortgage amount to fund new solar or wind systems; over 100 FHA-approved lenders operate in Rhode Island; an energy efficient mortgage may be combined with the [Section 203\(k\) Rehabilitation Mortgage Insurance Program](#) FHA Title II loans in order to finance home repair and modernization projects (23 lenders in Rhode Island offer this service); interest varies between customers, but rates range between 2.5-4.5% depending on the mortgage term

[Home Improvement Loan](#): third-party lenders offer loans for energy efficiency and other home improvements; loans range from \$2,500-\$25,000 for energy smart home improvement loans, interest rates are 5.75% for energy smart home improvement loans which can be repaid over a 10-year period; these loans are offered by Bay Coast Bank to residents of RI and MA

Warwick LMI Home Improvement Loan: low- and moderate-income (LMI) homeowners in single and multifamily (2-4 units) homes, rented properties (1-4 units), and owners of affordable housing units are eligible for energy efficiency and pre-weatherization upgrade financing; max interest is 4% for owner-occupied buildings and 6% for rental units; loan terms and max loan amount are negotiated to ensure affordability for borrowers

Energy Service Performance Contract: Ameresco covers all audit and installation fees while energy upgrades are paid for by resulting energy cost savings; these contracts are typically for projects above \$500,000 with interest rates between 6%-8%; loan terms range from 15-20 years; all projects that result in energy savings are eligible as long as they are cash flow positive or neutral

Energy Service Agreement (ESA): Renew Energy offers ESA's to fund energy efficiency projects in off-balance sheet transactions; project size typically ranges between \$250,000-\$12,000,000 with payback period up to 10 years; monthly payments are based on confirmed energy savings once projects are completed; interest is embedded into the monthly payments during the ESA period; the ESA charges are based on the cost savings generated by projects; HBC also offers ESA's with loan amounts as low as \$20,000 and loan terms between 2-10 years

Equipment Lease: HBC leases energy efficiency and renewable equipment with interest as low as 4.99%, though interest is commonly between 7%-15% depending on loan size/term and customer type; loan amounts are between \$1,000 and multi-million dollar projects; customers retain ownership of equipment after loan terms, which are typically limited to 4-7 years but can be as long as 10-12 years in some cases; tax exempt municipal leases with \$250,000 caps, loan terms between 3-15 years, and 2-5% interest rates are offered to municipal buildings such as schools and hospitals

C&I/Municipal Bank Loan: HBC and the Town of Barrington offer traditional bank loans that can be used for any upgrades including those which result in energy savings; non-profit entities can get interest rates between 4.75-5.5% while other C&I customers receive 6-8.5% interest; interest can be as high as 15% for 1-year loan terms; max loan term is typically 10-12 years for C&I and 15 years for municipal, but projects larger than \$1,000,000 can be repaid for up to 20 years; most C&I borrowers have loan terms of 4-7 years unless projects are larger than \$150,000

Municipal Bond: The State of Rhode Island offers municipal bonds for financing various public projects, including those related to infrastructure improvements; municipal bonds are sold in increments of \$5,000 (which is the minimum amount); funding amounts for various municipal capital projects range from \$500,000-\$20,000,000; the interest rates on the various components of the Consolidated Capital Development Loan of 2017 ranged from 3%-5%, while maturities went up to about 25 years (municipal bonds typically have a maturity between 1-30 years); any authorized Rhode Island capital projects or entities responsible for them, such as RIIB, may be financed by municipal bonds

SECTION 2. RHODE ISLAND HEAT LOAN

Table 2. HEAT Loan Comparisons

Program	Administrator	Interest Rates	Loan Term	Capital Source	Customers	Eligible Projects
RI HEAT Loan	National Grid	0% for up to 7 years	Up to 7 years	Third-party/Ratepayers	Res	Energy Efficiency, Pre-weatherization
MA HEAT Loan	MassSAVE	0% for up to 7 years	Up to 7 years	Third-party/Ratepayers	Res	Energy Efficiency
Energize CT Heat Loan Program	Energize CT	0.99%	3-10 years	Third-party/Ratepayers	Res	Energy Efficiency
CT Low-Income Multifamily Energy Loan Program	CT Green Bank and Capital for Change	6.00%-6.99%	5-20 years	Public/State	Res	Energy Efficiency, Renewables, Pre-weatherization
VT Home Energy Loan	Efficiency Vermont	0-6.99%, income/loan term dependent	Up to 15 years	Third-party/Ratepayers	Res	Energy Efficiency, Pre-weatherization
VT Gas Residential EE Loan Program	Vermont Gas	0% for 3 years, 2% for 5 years, 4% for 10 years	Up to 10 years	Third-party/Ratepayers	Res	Energy Efficiency
NY Residential On-Bill Recovery Loan	NYSERDA	3.49%-7.49%	5, 10, or 15 years	Third-party/Ratepayers	Res	Energy Efficiency, Renewables
NY Smart Energy Loan	NYSERDA	3.49%-7.99%	5, 10, or 15 years	Third-party/Ratepayers	Res	Energy Efficiency, Renewables
ME Home Energy Loans	Efficiency Maine	4.99%-5.99%	3, 5 or 10 years	Third-party/Ratepayers	Res	Energy Efficiency, Renewables, Pre-weatherization

Section 2a. Comparable Programs

MA HEAT Loan: Weatherization/heating equipment for low-income residential customers; \$500-\$25,000 loans (up to \$50,000 for some expanded HEAT offerings supported by US Department of Energy Grants); customers must perform Home Energy Assessment and submit application; loan applicant must be homeowner; customers can be eligible for financing of services such as asbestos, knob and tube wiring, and vermiculite removal if necessary – [full list of eligible services](#); barrier mitigation grants provide qualified customers up to \$7,000 in incentives can be used for knob and tube wiring and vermiculite removal and up to \$4,000 for asbestos removal; ratepayer contributions are used for interest buydowns

Energize CT Heat Loan Program: Low-interest (0.99%) loans for homeowners of 1-4 unit buildings to purchase energy efficient heating systems (up to 90% of installation costs may be financed); must be an Eversource/United Illuminating (UI) customer; financing can range from \$1,350-\$15,000; ratepayer contributions are used for interest buydowns and waiving contractor fees; a minimum down payment of 10% is required when replacing heating furnaces or boilers; other than being current on utility bills for the

prior 6 months or having no more than two late payments in the past year, there are no other credit requirements and owner-occupancy is not required

[CT Low-Income Multifamily Energy \(LIME\) Loan Program](#): Unsecured financing for EE and renewable renovations for multifamily property owners (5+ units); up to 25% of loan may be used for eligible non-EE improvements (these include any structural, health or safety improvements); At least 60% of housing units must be designated affordable for tenants at 80% of area median income or below, terms from 5 to 20 years, administered by Capital for Change; property owners must show evidence that cash flows are sufficient to make loan payments; interest rates are 3% higher than Capital for Change's blended cost of funds; a 2% origination fee and closing fee are required

[VT Home Energy Loan](#): Efficiency Vermont offers financing through credit unions for home weatherization and heating improvements, loan volumes up to \$40,000, customers are able to refinance existing Efficiency VT residential loans; health and safety repairs needed for the efficiency improvements can constitute up to 50% of the total loan volume; interest rates vary based on both household income and loan term, households with income below \$90,000 have 0% interest for terms 5 years or less, households with income over \$90,000 have 4.99% interest on loan terms of 5 years or less; interest rates for 5-15 year loans range from 1.99% for low- and moderate-income residents to 6.99% for household incomes above \$90,000; ratepayer contributions are used for interest buydowns and waiving closing costs

[VT Gas Residential EE Loan Program](#): Vermont Gas offers zero/low-interest financing through local lending institutions (primarily [Green Mountain Credit Union](#)) for residential customers to upgrade to high-efficiency space and water heating systems; max loan volume of \$10,000; interest depends on loan term; ratepayer contributions are used for interest buydowns

[NY Residential On-Bill Recovery Loan](#): can be used in conjunction with other financial incentives for energy efficiency and renewable upgrades (e.g. Assisted Home Energy Performance with Energy Star, NY Sun Program, Renewable Heat NY), monthly loan payments must not exceed estimated monthly energy cost savings, loan payments are built into utility bills; loan amounts from \$1,500-\$25,000 with loan terms from 5-15 years, [interest rates](#) are variable and depend on customer credit qualifications and location, market rate customers see rates up to 6.99%-7.49%, [certain locations eligible for lower interest financing](#); loan balances may be transferred to new owner if a home is sold; ratepayer contributions are used to provide lower interest rates for low-income customers

[NY Smart Energy Loan](#): can be used in conjunction with other financial incentives for energy efficiency and renewable upgrades (e.g. Assisted Home Energy Performance with Energy Star, NY Sun Program, Renewable Heat NY); traditional loan that can be repaid by check or automatic electronic payment; interest rates subject to change; payments made to NYSERDA's loan provider; loan amounts from \$1,500-\$25,000 with terms of 5-15 years; responsibility for loan balance may not change with home ownership changes; minimum credit score of 540 and no bankruptcies or foreclosures or repossessions in past 2 years; interest rates between 3.49%-7.49%; ratepayer contributions are used to provide lower interest rates for low-income customers

ME Home Energy Loans: Efficiency Maine offers low-interest financing for residential customers making energy efficiency and renewable upgrades to their homes; minimum loan size of \$1,000, max loan size of \$15,000; homeowner must be Maine resident and use an Efficiency Maine Residential Registered Vendor; there are minimum credit score requirements [depending on the loan type](#) which range from 580-720; up to 25% of loan can be used for necessary pre-weatherization upgrades (such as moisture mitigation, vermiculite removal, knob and tube wiring removal, leaky roof repair, chimney lining, and electric panel upgrades); ratepayer funds are used for interest buydowns

Section 2b. Summary of Comparisons:

- **HEAT Loans are not always applicable for funding weatherization and heating system barrier removal in Rhode Island; the exception is that up to \$1,000 may be used for knob and tube wiring remediation if an electrician provides a proposal.**
 - The Vermont Home Energy Loan Program allows up to 50% of administered loans to apply to structural and safety improvements.
 - In Connecticut, the Low-Income Multifamily Energy Loan Program allows 25% of loan funds to be used for barrier removal in multifamily properties with five or more units.
 - 25% of Home Energy Loans in Maine can be applied to barrier mitigation beyond knob and tube wiring work.
 - MASS Save HEAT Loans allow homeowners to finance asbestos, knob and tube wiring, and vermiculite removal if they are deemed necessary for heating system and weatherization upgrades.
- **Multifamily renters and property owners must be served by Rhode Island’s multifamily or C&I-specific programs, so they do not have access to HEAT Loans.**
 - Connecticut has an array of Multifamily Residential financing offerings including:
 - Multifamily Energy Conservation Loans for emergency repairs such as leaky roofs and broken heating equipment
 - Multifamily Navigator Pre-Development Energy Loans cover costs of any necessary pre-development expenses including assessments, audits, design and engineering work, and any costs for securing project financing
 - Low-Income Multifamily Energy Loans for multifamily properties with five or more units; these may be used for energy efficiency, renewable, and pre-weatherization upgrades
 - Capital for Change offers Landlord Loans for single family and multifamily (2-4 family) properties to finance equipment retrofits and replacements.
 - The classification of some multifamily buildings as C&I customers as opposed to Residential customers determines which financing options they can access

SECTION 3. RHODE ISLAND ON-BILL REPAYMENT

Table 3. On-Bill Repayment

Program	Administrator	Interest Rates	Loan Term	Capital Source	Customers	Eligible Projects
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RI On-Bill Repayment (<1,000 MWh)	National Grid	0% for up to 5 years	Up to 5 years	Ratepayers	C&I	Energy Efficiency
RI On-Bill Repayment (>1,000 MWh)	National Grid	0% for up to 5 or 10 years	Up to 5 or 10 years	Ratepayers	C&I	Energy Efficiency
RI On-Bill Repayment (Gas)	National Grid	0% for up to 3 or 5 years	Up to 3 or 5 years	Ratepayers	C&I	Energy Efficiency
CT Small Business Energy Advantage Loan Program	Energize CT	0%	Up to 4 years	Third-party/Ratepayers	C&I, Government	Energy Efficiency
VT Commercial On-Bill Financing	Burlington Electric Department (BED)	75% of WSJ prime published rate, max of 4%	1-6 years	Ratepayers	C&I; must be BED customer	Energy Efficiency
CA SCE Non-Residential OBF	So. Cal Edison Company	0%	Up to 5 or 10 years	Utility and/or Ratepayers	Non-Res	Energy Efficiency
CA Lodi C&I Energy Efficiency Loan Program	Lodi Electric Utility	0%	2 years	Utility and/or Ratepayers	C&I	Energy Efficiency
NY Small Commercial On-Bill Recovery Loan	NYSERDA	WSJ Prime Rate +2%	Up to 10 years	Third-party/Ratepayers	C&I	Energy Efficiency, Renewables

Section 3a. Comparable Programs

CT Small Business Energy Advantage Loan Program: Energize Connecticut provides financing for small commercial and industrial customers to make EE improvements; combination of rebates and loans; on-bill repayment option included, must have max average monthly peak demand of 200 kW; loans range from \$500-\$100,000; includes free energy assessment and incentives up to 50% of the installed cost; loans are payable on monthly electric bills; ratepayer contributions are used for interest buydowns and waive energy assessment fees

VT Commercial On-Bill Financing: Burlington Electric Department (BED) revolving loan fund; commercial business customers can apply for financing for any electric efficiency upgrades; no out-of-pocket expenses and monthly loan repayment can be designed so monthly energy savings are greater than monthly loan repayment; loan volume between \$2,500 and \$50,000 per building; standard loan underwriting to determine eligibility; interest rates are 75% of the Wall Street Journal's prime published

rate or a max of 4%; monthly loan repayments remain with BED in order to support the revolving loan fund

[CA So. Cal Edison Non-Residential On-Bill Financing](#): non-Residential customers with active service accounts for over two years are eligible for the OBF program; monthly loan payments will be added to the customer's electric and/or gas bills; Government and institutional customers may finance up to \$1,000,000 in efficiency upgrades per account, while businesses and multifamily property owners can finance up to \$250,000 per account; all non-Residential customers can borrow a minimum of \$5,000; ratepayer contributions are used to buy down interest and waive assessment/application fees

[CA Lodi C&I Energy Efficiency Loan Program](#): Lodi Electric Utility provides an on-bill financing program for the commercial and industrial customers; to participate, the customer must receive a rebate through the utility's rebate program, and submit a contractor's proposal associated with an energy efficiency audit; max loan volume of \$50,000 for G1 (Small Commercial) and G2 (Medium Commercial) rate customers; max loan volume of \$150,000 for G3 (Large Commercial 400-500 kW), G4 (Large Commercial 500-1,000 kW), G5 (Industrial, > 1,000 kW), or I1 (Industrial 1,000-4,000+ kW kW) rate customers; [full rate list](#); customers must be in good standing for past 18 months; ratepayer contributions are used for interest buydowns

[NY Small Commercial On-Bill Recovery Loan](#): small businesses work with a participating lender to secure a loan for EE and renewable upgrades, NYSERDA finances 50% of the principal up to \$50,000; max loan size of \$50,000 or \$100,000; interest rate is published Wall Street Journal Prime Rate +2%; minimum loan term is set to ensure estimated annual energy cost savings from the project(s) will exceed the borrower's annual loan payments; max loan term of 10 years; small businesses with 100 employees or less and not-for-profits are eligible; ratepayer funding contributions are used for interest buydowns. NYSERDA also allows a [Residential On-Bill Recovery](#) program that offers loans between \$1,500 and \$25,000 with loan terms from 5-15 years that can be used for solar installations; the unpaid balance for any loans can transfer to new homeowners; interest rates are dependent on customer credit qualifications and typically range from 3.49%-7.49%; ratepayer contributions are used for interest buydowns

Section 3b. Summary of Comparisons

- **Interest rates for On-Bill Repayment in Rhode Island are comparable to other jurisdictions.**
 - Most States offer on-bill repayment options to their non-Residential customers with zero interest, but this mainly applies to small business customers.
 - Vermont and New York are two states where interest rates are charged. These rates are based on the Wall Street Journal Prime Rate. Vermont has an interest rate cap of 4%, while New York adds 2% to the WSJ Prime Rate.
- **Most jurisdictions do not offer On-Bill Repayment for Residential and/or C&I renewable upgrades.**
 - In New York, OBR financing can be used in tandem with incentives for renewables offered by NY-Sun for both homeowners and business owners. Homeowners can finance up to \$25,000 of their energy efficiency or solar projects.

- Cape Light Compact is developing a program that will combine home weatherization with battery storage and solar PV arrays to support heating electrification in Massachusetts. A third-party ownership (TPO) strategy/Power Purchase Agreement will be implemented where the TPO's will monetize tax credits and other incentives (federal investment tax credit, Clean Peak Standard, etc.) for the installed systems for up to 10 years. During this ownership period, the TPO will oversee system maintenance; the program participant then receives full ownership at no cost after the TPO period. The program will offer 100% incentive for heat pump, solar, and storage installation for customers at or below 60% state median income (SMI), while customers between 61-80% of SMI will have a contribution cap of \$5,000 for solar and storage installation (they still receive 100% incentive for HP installation, but 75% incentive for solar PV and storage installation).

SECTION 4. RHODE ISLAND EFFICIENT BUILDINGS FUND

Table 4. Efficient Buildings Fund

Program	Administrator	Interest Rates	Loan Term	Capital Source	Customers	Eligible Projects
RI Efficient Buildings Fund	RIIB and OER	Low interest (~20% below mkt. rate)	Up to 20 years	Ratepayers/Third-party	Municipal/Quasi-public	Energy Efficiency, Renewables
CT Small Business Energy Advantage Loan Program	Energize CT	0%	Up to 4 years	Third-party/Ratepayers	C&I, Municipal	Energy Efficiency
CT Low Interest EE C&I Loan Program	Energize CT	2.99%-4.99% for first \$100k, Market rate	Up to 5 years	Third-party/Ratepayers	C&I, Government, Municipal, MF Res	Energy Efficiency
CT Muni. Loan for Public Housing Authorities	Energize CT	0%	Up to 4 years, on-bill financing option	Third-party/Ratepayers	Public Housing Authorities	Energy Efficiency
VT Commercial Energy Loan Program	VT Economic Development Authority (VEDA)	Fixed or variable rate options	Up to 20 years; project-dependent	Third-party	C&I, Municipal	Energy Efficiency, Renewables
CA PG&E Non-Residential EE Financing	Pacific Gas and Electric	0%	5-10 years	Utility and/or Ratepayers	C&I, Government	Energy Efficiency
CA SCE Non-Residential OBF	So. Cal Edison Company	0%	Up to 5 or 10 years	Utility and/or Ratepayers	Non-Residential	Energy Efficiency

Section 4a. Comparable Programs

[CT Small Business Energy Advantage Loan Program](#): Energize Connecticut provides financing for small commercial and industrial customers to make EE improvements; combination of rebates and loans; on-bill repayment option included, must have max average monthly peak demand of 200 kW; loans range from \$500-\$100,000; includes free energy assessment and incentives up to 50% of the installed cost; ratepayer contributions are used for interest buydowns and waive energy assessment fees

[CT Low Interest EE C&I Loan Program](#): Energize CT provides subsidized low-interest financing for Eversource and UI municipal/C&I customers making EE investments; \$2,000 to \$1 million loan volume; customers must participate in qualifying Energize CT EE improvement programs ; [multifamily residential](#) property owners are also eligible – 2.99% interest for first \$100,000 for comprehensive projects implementing more than one measure for different end uses (i.e. multiple heat pumps and multiple lighting fixtures), 4.99% interest on the first \$100,000 for projects that do not meet the comprehensive requirement described above; ratepayer contributions are used for interest buydowns; loans less than \$50,000 have no fees, loans from \$50,000-\$75,000 incur \$495 in fees, and loans greater than \$75,000 incur a fee of \$995

[CT Municipal Loan for Public Housing Authorities](#): Funds utility incented EE measures for Public Housing Authorities that are Eversource customers, loans from \$500-\$500,000 up to 4 years with an on-bill financing option; 0% interest rates for PHA's; ratepayer contributions are used to buy down interest and waive assessment/application fees

[VT Commercial Energy Loan Program](#): administered by VEDA; Vermont businesses and municipalities can finance qualifying efficiency and renewable energy generation upgrades; max loan volume of \$2 million for variable rate and \$500,000 for fixed rate; [initial variable rate](#) is subsidized for two years which results in 4.75%-5% interest and adjusts with the variable VEDA Rate after; loan term is dependent on the project(s); eligible businesses also include those listed in the Direct Loan Program and Small Business Loan Program; VEDA's funding is typically limited to 60% of project cost, but in some cases it can finance 90% of costs up to \$500,000; ratepayer contributions are used to subsidize variable rates for the first two years resulting in interest rates between 4.75%-5%, as well as waive application fees; there is a 1% Commitment Fee (max of \$5,000), project review fee, and credit report fee

[CA PG&E Non-Residential EE Financing](#): Energy efficiency upgrade financing for Pacific Gas and Electric customers at 0% interest; up to five-year loans from \$5,000 to \$100,000 for C&I customers and up to ten-year loans from \$5,000 to \$4,000,000 for Government agencies; any projects that qualify for PG&E program rebates or incentives are eligible; must have good standing payment history for at least 1 year and have been a PG&E customer for 2 years; ratepayer contributions are used for interest buydowns

[CA So. Cal Edison Non-Residential On-Bill Financing](#): non-Residential customers with active service accounts for over two years are eligible for the OBF program; monthly loan payments will be added to the customer's electric and/or gas bills; Government and institutional customers may finance up to \$1,000,000 in efficiency upgrades per account, while businesses and multifamily property owners can

finance up to \$250,000 per account; all non-Residential customers can borrow a minimum of \$5,000; ratepayer contributions are used to buy down interest and waive assessment/application fees

Section 4b. Summary of Comparisons:

- **Interest rates are similar across jurisdictions for municipal/public building EE project financing.**
 - Connecticut’s Low-interest Energy Efficiency C&I Loan Program has interest rates between 2.99% and 4.99% for the first \$100,000 and then market rate interest on the remainder of loans.
- **It is uncommon for energy efficiency funds to be used on renewable projects.**
 - Massachusetts has begun to explore how energy efficiency can align with renewable energy projects/incentives in order to meet emissions reductions goals and promote clean energy generation.
 - Cape Light Compact is developing a program that will combine home weatherization with battery storage and solar PV arrays to support heating electrification in Massachusetts
- **Rhode Island offers longer loan terms than other places**
 - Vermont is the other state that allows loans to be repaid over a period of 15-20+ years
 - Vermont also includes renewable installations as eligible upgrades in its Commercial Energy Loan Program.
- **At a loan cap of about \$5,000,000, Rhode Island allows the largest loan amounts. The caps on similar financing programs in other jurisdictions typically range from \$1,000,000-\$2,000,000.**

SECTION 5. RHODE ISLAND C-PACE

Table 5. C-PACE

Program	Administrator	Interest Rates	Loan Term	Capital Source	Customers	Eligible Projects
RI C-PACE	RIIB	Property-assessed, long-term, fixed	Up to 25 years, project dependent	Third-party	C&I/MF Res	Energy Efficiency, Renewables
CT C-PACE	CT Green Bank	Property-assessed, fixed	5-25 years	State/Public	C&I	Energy Efficiency, Renewables
C-PACE (Energize NY) Financing	NYSERDA	Property-assessed, fixed	5-30 years	Third-party	C&I	Energy Efficiency, Renewables
California R-PACE	Multiple administrators	Based on Loan Term, typically 6%-10%	Up to 30 years	Third-party	Res	Energy Efficiency, Renewables

Section 5a. Comparable Programs

CT C-PACE: Financing for up to 100% of green energy upgrades (includes EE and renewable upgrades), administered by CT Green Bank, loan minimum of \$150,000 with no maximum, loans are secured by a property tax assessment with loan repayment on the property tax bill

Energize NY C-PACE: municipalities offer financing for commercial property owners completing EE and renewable projects; financing can only be applied to improvements deemed appropriate through an energy audit; covers 100% of project costs with loan terms of 5 to 30 years; loan balance automatically transfers to next property owner

California R-PACE: Renew Financial administers Residential-PACE loans for homeowners performing energy efficiency and renewable projects; max loan volume is typically 25% of property value (\$250,000); up to 30-year repayment terms, but interest is fixed and based on repayment period; no FICO credit requirements; upgrades for resilience against earthquakes and other natural disasters can also be financed as long as approved contractors are used; typically, interest rates range from 6%-10%.

Section 5b. Summary of Comparisons

- Residential PACE loans are much less common than Commercial PACE loans. California is an example of a State with R-PACE financing that is structured similarly to C-PACE.
- Most PACE financing comes from third-party lending institutions, except for Connecticut PACE loans which are provided by the Green Bank.

SECTION 6. RHODE ISLAND DOUBLEGREEN LOAN

Table 6. DoubleGreen Loan

Program	Administrator	Interest Rates	Loan Term	Capital Source	Customers	Eligible Projects
RI DoubleGreen Loan	Capital Good Fund	0%	2-5 Years	Third-party/Ratepayers	Res	Energy Efficiency
CT Home Energy Solutions Program Micro Loans	Energize CT	0%	Up to 3 years	Third-party/Ratepayers	Res, Multifamily Res	Energy Efficiency
VT Home Energy Loan	Efficiency Vermont	0-6.99%, income/loan term dependent	Up to 15 years	Third-party	Res	Energy Efficiency
VT Gas Residential EE Loan Program	Vermont Gas	0% for 3 years, 2% for 5 years, 4% for 10 years	Up to 10 years	Third-party	Res	Energy Efficiency, Pre-weatherization

Section 6a. Comparable Programs

CT Home Energy Solutions Program Micro Loans: Homeowners in single and 2 to 4-family homes can apply for EE upgrade financing; loans between \$1,000 and \$3,000; must participate in Home Energy Solutions Program; Eversource and UI customers only; up to 20% of the total loan amount can be used for any repairs needed before installing energy efficient measures; ratepayer funds are used for interest buydowns; underwriting is based on utility payment history and owner-occupancy is not required

[VT Home Energy Loan](#): Efficiency Vermont offers financing through credit unions for home weatherization and heating improvements, loan volumes up to \$40,000, customers are able to refinance existing Efficiency VT residential loans; health and safety repairs needed for the efficiency improvements can constitute up to 50% of the total loan volume; interest rates vary based on both household income and loan term, households with income below \$90,000 have 0% interest for terms 5 years or less, households with income over \$90,000 have 4.99% interest on loan terms of 5 years or less; interest rates for 5-15 year loans range from 1.99% for low- and moderate-income residents to 6.99% for household incomes above \$90,000; ratepayer contributions are used for interest buydowns and waiving closing costs

[VT Gas Residential EE Loan Program](#): Vermont Gas offers zero/low-interest financing through local lending institutions (primarily Green Mountain Credit Union) for residential customers to upgrade to high-efficiency space and water heating systems; max loan volume of \$10,000; interest depends on loan term; ratepayer contributions are used for interest buydowns

Section 6b. Summary of Comparisons:

- **There is variance between what offerings are available to moderate-income customers across jurisdictions; in some areas, zero-interest financing options are not available for moderate-income residents.**
 - The conditions to meet the definition of moderate-income vary; this is due in part to both expected differences in State Median Income levels and varying criteria for moderate-income classification.
- **The DoubleGreen Loans expand HEAT Loan access to moderate- and middle-income customers, but these customers have limited access to other desirable financing options.**
 - Customers whose income levels put them just above moderate-income thresholds may lose access to affordable financing opportunities
- **Multifamily Residential customers cannot take advantage of HEAT Loans or DoubleGreen Loans in many cases.**
 - Landlord engagement has been noted as a barrier to serving residents in multifamily buildings, but HEAT Loans and DoubleGreen Loans are limited to homeowners.