



# Consumer Financing of Beneficial Electrification

**Interim Report: National Best Practices  
Review**

March 2024





ACCELERATING THE CLEAN ENERGY TRANSITION



ANALYSIS + STRATEGY



BUILDINGS



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# Study Context & Approach

## Project Context

- LD 1724 An Act to Enact the Beneficial Electrification Policy Act was recently passed.
- This requires the MPUC to
  - "...conduct a study on how to **cost-effectively provide consumer financing** of **beneficial electrification** projects, including products for energy efficiency, home or business energy storage, electric vehicle charging equipment and other distributed energy projects **through methods including, but not limited to, on-bill** financing by standard-offer service providers or competitive electricity providers, or through some combination thereof."
- This study specifically includes **a survey of national best practices** for financing beneficial electrification and associated distributed energy resources, such as solar PV and energy storage.
- In parallel, a review of **on-bill lending options**, to potentially supplement existing financing solutions, is also being conducted.

## The Study

The **National Best Practices** and On-Bill Lending reviews, paired with the forthcoming comparative analysis of financing options, will identify financing models to help accelerate beneficial electrification across Maine, and will also specifically consider on-bill lending in the context of Maine's electricity suppliers and distributors.

## The Approach



**Desktop research** to determine programs of most relevance and interest to the State of Maine.\*



Targeted **interviews** with program administrators of consumer financing programs in other states\*.



**Comparative analysis** of financing options, focusing on beneficial electrification considerations.

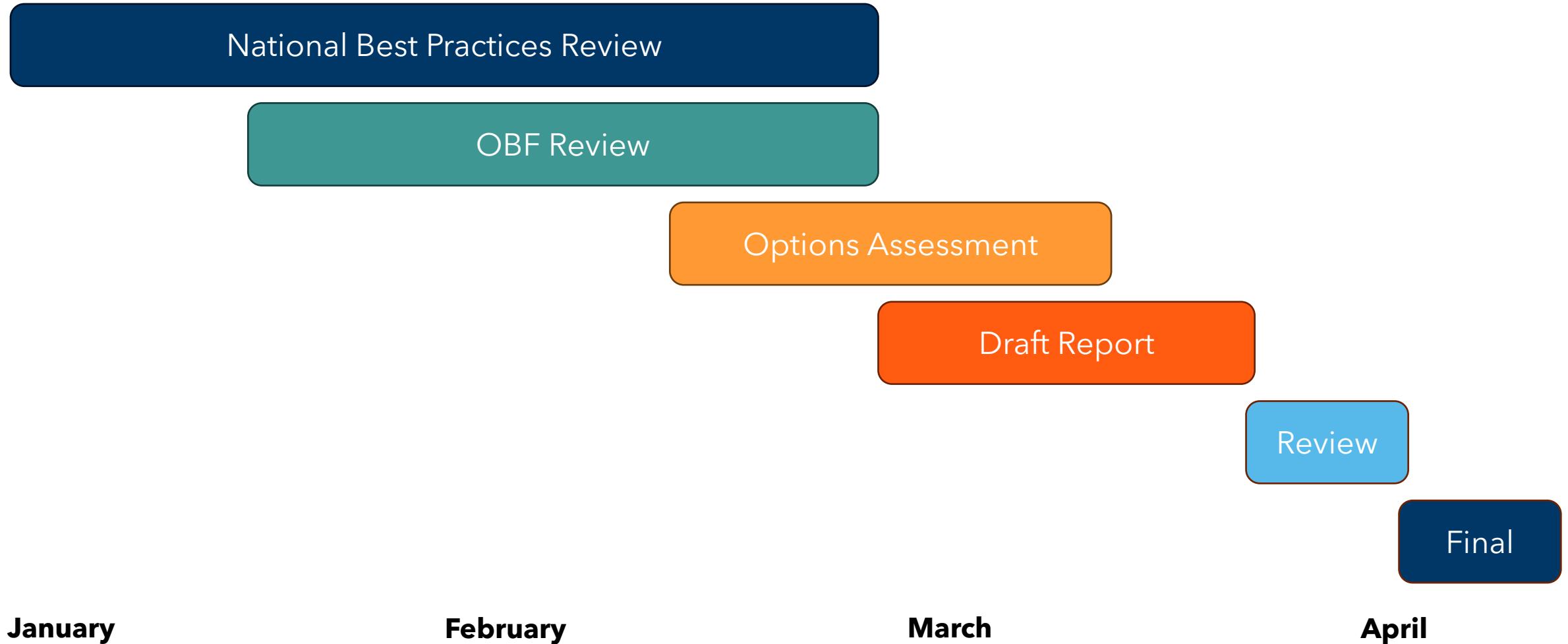
## National Best Practices Interim Report

This interim report will provide an overview of national best practices, including a synopsis of various financing options (including variants of on-bill lending), what we have heard from interviewees, and initial considerations given the Maine context. It is being delivered in tandem with an interim report on the review of on-bill lending options. A final report, including the comparative analysis, will follow.

*\*Note that a full list of programs included in the desktop research and targeted interviews is available in the appendix.*

# Approach, cont.

Below is an overview of the project timeline:





# Financing Options Overview



# Financing for Beneficial Electrification

- With the ambitious targets set in Maine’s climate action plan, “**Maine Won’t Wait**”, consumer financing programming for beneficial electrification could be an important tool to reduce building-related greenhouse gas emissions.
- Consumer financing programs, if designed appropriately, can help consumers **overcome barriers** to adopting beneficial electrification and energy efficiency projects in their homes or buildings.
- There are various forms of consumer financing programs, including traditional lending, on-bill lending and more. One of the main differentiators between program models is their **repayment vehicles** and if they offer **credit enhancement**.



# Financing for Beneficial Electrification

Several barriers exist for consumers to pursue beneficial electrification: **financial, process, and practical barriers**. Access to financing can address some of these barriers, providing increased opportunity for beneficial electrification at the consumer level.

## Barriers to beneficial electrification

**Financial barriers:** High upfront costs and scarce low-cost funding options make accessing beneficial electrification products challenging. Furthermore, longer term lengths often required for electrification projects creates risks for traditional lenders they may not be willing to take on.

**Process barriers:** It is difficult for renters to access loans due to transferability issues and split incentives between tenants and landlords. Additionally, traditional loan products often have strict lending criteria that limits access to low/medium-income consumers.

**Practical barriers:** Even when homeowners have access to capital, they may choose between competing projects (e.g. prioritizing cosmetic renovations over electrification). Additionally, there may be a lack of knowledge of electrification products among key actors and thus lack of supply.

## How financing can address barriers

**Financing provides the capital homeowners need by covering the full upfront cost of the project.** By spreading upfront costs over time, consumers are more easily able to manage payments and often balance the energy savings with additional monthly financing costs.

**Holistic financing programs can address multiple gaps in existing market interventions** through flexible underwriting and easy repayment and transferability (e.g., tied to the property instead of owner of the building).

**There is an opportunity to pair energy upgrades with other home renovations that improve comfort, health and safety, home value** and other considerations. As demand increases for these upgrades through financing programs, supply and knowledge will also improve.

Financing programs have **many strengths**, though they come with their own set of **challenges**, which are important to keep in mind during program design. These challenges differ depending on the type of financing offered (i.e. on-bill or other), opportunities for credit enhancement, and how the program fits with the existing system.

## Strengths

- ✓ **Addresses** financial and other barriers to undertake beneficial electrification projects
- ✓ **Complements** existing federal, state actor and utility policies and programs
- ✓ **Facilitates** improved efficiency, which can reduce energy costs and help meet GHG emissions reductions targets
- ✓ **Supports** multiple goals and co-benefits
- ✓ **Reduces** dependencies on public subsidies
- ✓ **Creates cost offsets** through energy savings in some cases

## Challenges

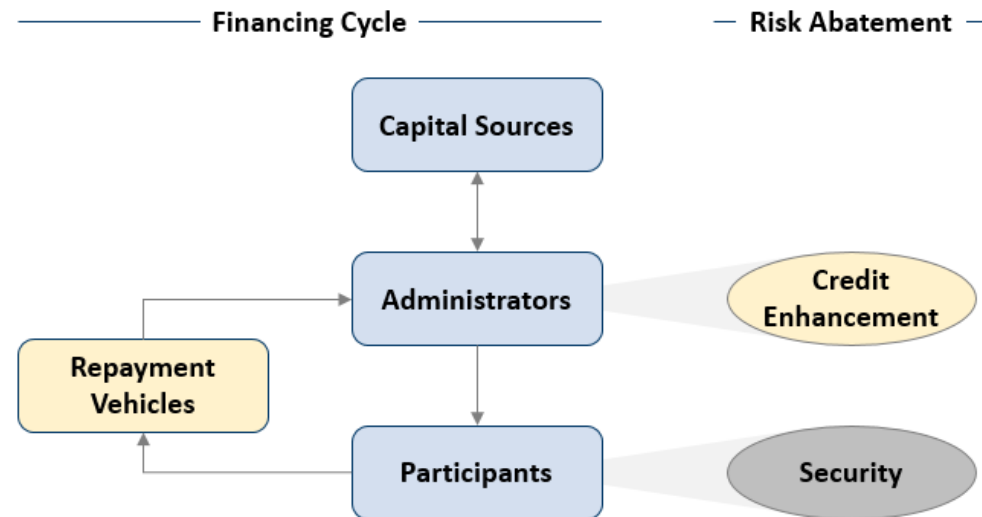
- **High cost of capital** offloaded to participants
- **Availability** of skilled trades to meet demand
- **Balancing** flexible underwriting with consumer protection to avoid over-leveraging homeowners
- **Complex** applications and restrictive eligibility criteria
- **Complex** to setup program infrastructure
- **Low uptake** can impact administration costs
- **Requires buy-in** and trust between the consumer and the entity offering the financing
- **Cost-effectiveness** requirements can exclude costlier beneficial electrification measures that don't directly contribute to energy efficiency

# Financing for Beneficial Electrification: Types of financing tools

There are **two core categories** of beneficial electrification financing tools:

**Repayment Vehicles** - These tools facilitate the process in which participants repay loans to administrators or third-party capital sources. They can encourage longer-term lending by increasing repayment security and tying the financing to the property rather than the owner; they can also allow improvement to be integrated into operational expenses, rather than capital budgets.

**Credit Enhancement** - These tools reduce risks to lenders and thus encourage them to provide longer-term loans with lower interest rates or extend credit to those typically deemed non-credit worthy. Credit enhancements can be used alongside various repayment methods to boost private investment in beneficial electrification and energy efficiency projects.



Repayment Vehicle	Description
<b>On-Bill Lending Programs</b>	Financing program where utility or private lender supplies capital to a customer to help fund beneficial electrification or energy efficiency projects and is repaid <b>through an existing utility bill.</b>
<b>Soft Loans</b>	Preferential loans provided by government or quasi-public institutions (e.g. Green Banks). Preferential terms may include lower interest rates, longer loan terms, etc. These are repaid <b>directly to the lender.</b>
<b>Energy Service Agreement</b>	Private sector financing tool where <b>repayments are set as a portion of demonstrated energy savings</b> and monthly charges are off-balance sheet for the borrower. Primarily used for the commercial sector.

# Financing for Beneficial Electrification: Credit Enhancement



Credit enhancements are tools that can **make the loan terms more attractive to the consumer**, either by improving the chances that financing will be repaid, or de-risking the investment for the capital provider, which allows them to provide funding via more flexible terms (e.g. lower credit score required for eligibility, lower interest rate offered).

	Description	Benefit to Consumers	Challenges
<b>Loan Loss Reserve (LLR)</b>	A reserve is set aside to provide partial risk coverage to lenders in the event of loan defaults.	Lenders may approve loans to consumers with riskier profiles (i.e. lower credit scores or other eligibility considerations), improving access.	Does not directly lower borrowing costs for consumers
<b>Loan Guarantee</b>	The entirety of the lender's potential losses are covered by a third-party (usually the state).	Lenders may approve loans to consumers with riskier profiles (i.e. lower credit scores or other eligibility considerations), improving access.	Requires significant access to capital, does not directly lower borrowing costs for consumers
<b>Interest Rate Buy-Down (IRB)</b>	A third-party (state or other entity) provides capital to buy down the interest rate on the loan.	Lower monthly payment for the consumer, which may make the loan more attractive.	Does not improve access to loans, can be costly

# Financing for Beneficial Electrification: Types of financing tools

Benefits of Various Financing Tools							
Financing Tools		Reducing Cost of Capital	Increasing Access to Capital	Limit impact on debt service ratio	Access to longer term financing	Support financing at point of sale	Support Loan Transferability
Repayment Vehicles	On-Bill Programs	●	○	●	●	○	●
	Soft Loans	○	○	●	○	○	○
	Energy Service Agreements (ESAs)		●	●			
Credit Enhancement	Loan Loss Reserves (LLRs)	●	●	●	○		
	Loan Guarantees	●	●	●	○		
	Interest Rate Buy-downs	●		●			

**Legend:** "●" - typically provided; "○" - sometimes possible; [blank cell] - benefit not applicable



# Financing Beneficial Electrification: Program Review



# Program Review

- As part of this review, relevant financing programs for beneficial electrification in comparator jurisdictions were analyzed to **identify and describe best practices**.
- This review considered the following details for included programs:
  - **Capital sources:** private and public sources of capital, including where ratepayer moneys are used
  - **Repayment mechanisms:** structures including on-bill lending and other facilities
  - **Origination and undertaking:** how programs attract and deem consumers eligible for loans
  - **Application to rural and low-income groups:** special eligibility criteria for underserved communities
  - **Application of credit enhancements:** use of tools such as loss reserves or loan guarantees to introduce flexibility
  - **Customer protection features:** assuring savings and ability to pay for potential customers
  - **Cost effectiveness requirements and assessments:** if applicable, how the program deems measures cost effective



# Program: NYSERDA On-Bill Recovery Loan & Smart Energy Loan



- Program launched in 2011, 41k loans issued to date (totalling \$520m)
- Includes three loan products: Tariff on-bill, traditional loan, and bridge loan
- 99% of loans have been made to the residential sector to date, but loans also offered to multi-family homes and small businesses
- Loans are originated by Slipstream
- Cost-effective requirement for On-Bill Recovery loan has shifted borrowers to favor Smart Energy Loans, with a 70% to 30% preference

<b>Capital source</b>	Regional Greenhouse Gas Initiative (RGGI)
<b>Repayment mechanism</b>	Tariff On-Bill (On-Bill Recovery Loan) and soft loan (Smart Energy Loan)
<b>Origination and underwriting</b>	<ul style="list-style-type: none"> <li>• Minimum credit score of 540 and DTI ratio of 40%</li> <li>• No bankruptcy, foreclosure, or repossession in past 24 months</li> <li>• Outstanding collections, judgments, liens and charge-offs may not exceed \$2,500</li> </ul>
<b>Application to rural and low-to-moderate income groups</b>	No special criteria, but there is a requirement that 35% of funding from program goes to disadvantaged communities.
<b>Application of credit enhancements</b>	None
<b>Customer protection features</b>	Customers must work with participating contractor. All participating contractors are insured and subject to NYSERDA reviews.
<b>Cost-effectiveness requirements and assessments</b>	For On-Bill Recovery Loan only: Estimated monthly energy savings from installed measure must be greater than monthly loan payments.

# Program: Hawaii Green Energy Money Saver (GEM\$)



- Program launched in 2019
- Provides longer term financing of up to 20 years
- Targets LMI households and does not require traditional credit checks. Has not experienced any defaults.
- 2.5k loans made to date to LMI households, with 940 applications currently in process

<b>Capital source</b>	Various sources including state green infrastructure bonds, state general funds, and federal funding
<b>Repayment mechanism</b>	Tariff On-Bill
<b>Origination and underwriting</b>	<ul style="list-style-type: none"><li>• Must be current customer of participating utilities</li><li>• Have minimum 6 months of history with the utility</li><li>• Households must be Low and Moderate-Income (LMI), defined as &lt;140% Area Median Income (AMI)</li></ul>
<b>Application to rural and low-to-moderate income groups</b>	Only LMI households are eligible to participate in the program
<b>Application of credit enhancements</b>	None
<b>Customer protection features</b>	Borrowers must use approved contractors who are verified for compliance. Contractors are capped in the rates they charge for installed measures and must conduct post-installation energy monitoring.
<b>Cost-effectiveness requirements and assessments</b>	Estimated bill savings must be between 5%-15% depending on number of disconnection notices borrower has received.

# Program: Vermont Weatherization Repayment Assistance



- Program just launched as a pilot with \$9M of state funding
- Targets LMI households under 120% AMI
- Enthusiasm with program has been high, but actual participation is slow. Potentially due to shortage of contractors in Vermont.
- Have experienced some challenges with cost-effectiveness requirement, as many proposed measures fail to meet it.

<b>Capital source</b>	State funding
<b>Repayment mechanism</b>	Tariff On-Bill
<b>Origination and underwriting</b>	Look at bill repayment history to ensure no more than one missed payment within last 12 months
<b>Application to rural and low-to-moderate income groups</b>	75% of program funding must go towards households under 120% AMI. Households under 80% AMI are eligible to participate but are encouraged to use state program that offers free weatherization services.
<b>Application of credit enhancements</b>	None
<b>Customer protection features</b>	Energy audit must be done to identify potential weatherization measures and potential savings. Only approved contractors can be used.
<b>Cost-effectiveness requirements and assessments</b>	Monthly charge for financing new measure must be no more than 90% of the savings (must be cash flow positive).

# Program: Orcas Power & Light Cooperative (OPALCO) Switch It Up!



- Program launched in 2019
- Offered to both residential households and businesses and does not require credit checks
- Have financed over \$13m in projects, primarily to residential households
- Set up a loan loss reserve due to requirement when using USDA RESP capital

<b>Capital source</b>	USDA Rural Energy Savings Program (RESP)
<b>Repayment mechanism</b>	Tariff On-Bill
<b>Origination and underwriting</b>	<ul style="list-style-type: none"><li>• Look at payment history and delinquencies with OPALCO and calculates internal credit score based on it</li></ul>
<b>Application to rural and low-to-moderate income groups</b>	No special considerations. May require autopay if calculated internal credit score is low.
<b>Application of credit enhancements</b>	Loan loss reserve
<b>Customer protection features</b>	Includes list of recommended contractors for customers to use but does not specifically endorse them. Ensures contractors that are installing measures are licensed.
<b>Cost-effectiveness requirements and assessments</b>	No specific requirement but only qualifying measures are eligible for the program.

# Program: Illinois Energy Efficiency Loan



- Program exists across five investor-owned utilities in Illinois
- Slipstream originates loans and partners with private capital provider to supply funding
- Program participation has been lower than expected, partly because it currently excludes low-income customers

<b>Capital source</b>	Private capital provider
<b>Repayment mechanism</b>	On-bill repayment
<b>Origination and underwriting</b>	<ul style="list-style-type: none"><li>• Minimum credit score of 640 and DTI ratio of 50%</li><li>• No bankruptcy within two years</li></ul>
<b>Application to rural and low-to-moderate income groups</b>	None - LMI groups are scoped out of program participation
<b>Application of credit enhancements</b>	None
<b>Customer protection features</b>	Must use participating contractors
<b>Cost-effectiveness requirements and assessments</b>	No specific requirement but only qualifying measures are eligible for the program.

# Program: PG&E Energy Efficiency Financing



- On-bill financing program for businesses
- Utilizes ratepayer funds and PAYS model for repayment
- Loans available up to \$250k; however, for exceptional opportunities that yield significant energy savings, loans can be extended to \$4m

<b>Capital source</b>	Ratepayer funds
<b>Repayment mechanism</b>	On-bill financing and PAYS (Pay As You Save)
<b>Origination and underwriting</b>	<ul style="list-style-type: none"><li>• Maintain active PG&amp;E business account for previous 24 months</li><li>• Must have good credit standing, determined through payment history screening (no existence of disconnection notices in last 12 months)</li></ul>
<b>Application to rural and low-to-moderate income groups</b>	None
<b>Application of credit enhancements</b>	None
<b>Customer protection features</b>	<ul style="list-style-type: none"><li>• Must use participating contractors</li><li>• Prior to installation of equipment, contractor submits documents to Quality Assurance Reviewer</li><li>• After installation, contractor required to conduct annual measurement and verification process annually</li></ul>
<b>Cost-effectiveness requirements and assessments</b>	<ul style="list-style-type: none"><li>• Project's estimated energy savings must be sufficient to repay the loan during maximum allowable term (120 months)</li><li>• For larger projects (over \$250k), cost-effectiveness tests such as total resource cost and total system benefit are considered</li></ul>

# Program: Ecosave



- Private company launched in 2002
- Monthly payments customer makes is based on actual savings
- Off-balance sheet transaction for customer as Ecosave owns equipment throughout term length
- Approximately ~\$50m in loans made in 2023

<b>Capital source</b>	Private (lenders, financial institutions, etc.)
<b>Repayment mechanism</b>	Energy-as-a-Service Agreement (like lease-to-own but off-balance sheet for borrower)
<b>Origination and underwriting</b>	Varies by project; no strict underwriting criteria.
<b>Application to rural and low-to-moderate income groups</b>	Works with commercial clients that are in LMI areas. Will adjust term length and project plan as needed to guarantee savings for customer (e.g., if too costly to do full electrification, start with partial)
<b>Application of credit enhancements</b>	None
<b>Customer protection features</b>	Ecosave owns equipment that is installed and is responsible for maintenance, repairs, and replacement of equipment during the term.
<b>Cost-effectiveness requirements and assessments</b>	Monthly payment is based on savings. If actual savings fall short of projections, Ecosave will reimburse the difference.



# Program: GoGreen Financing



- Program launched in 2016
- Provides financing for homeowners, tenants (if receive written permission from owner), small businesses, and multifamily homes
- Utilizes ratepayer funds from investor-owned utilities in California for credit enhancement and program administration
- Borrowers can choose from participating private lenders to work with; small businesses can choose to use on-bill repayment

<b>Capital source</b>	Private lenders and utilities (for loan loss reserve and program administration)
<b>Repayment mechanism</b>	Soft loan, repayment directly to private lenders; option for on-bill repayment for small businesses only
<b>Origination and underwriting</b>	<ul style="list-style-type: none"><li>• For homeowners: minimum credit score of 580, maximum debt-to-income ratio of 55% for loans over \$5,000</li><li>• Businesses participating in program must be small and multifamily homes must be income-restricted</li></ul>
<b>Application to rural and low-to-moderate income groups</b>	Offers financing for multifamily units (properties of 5 or more units) where at least 50% units are income-restricted
<b>Application of credit enhancements</b>	Loan loss reserve
<b>Customer protection features</b>	Must use participating contractors
<b>Cost-effectiveness requirements and assessments</b>	No specific requirement but only qualifying measures are eligible for the program.

# Program: Michigan Saves Home Energy Financing



- Program launched in 2009
- Loan loss reserve funding provided via grant by Michigan Public Service Commission
- Borrowers (residential and commercial) choose from participating lenders to work with that have interest rates between 6.5%-7.75%

<b>Capital source</b>	Private lenders and Michigan Public Service Commission (for loan loss reserve funding)
<b>Repayment mechanism</b>	Soft loan, repayment directly to private lenders
<b>Origination and underwriting</b>	Varies depending on lender. Must have "good" credit score and provide annual gross income during application.
<b>Application to rural and low-to-moderate income groups</b>	None
<b>Application of credit enhancements</b>	Loan loss reserve
<b>Customer protection features</b>	Must use authorized contractors.
<b>Cost-effectiveness requirements and assessments</b>	No specific requirement but only qualifying measures are eligible for the program. Some measures have specific minimum efficiency rating requirements.

# Program: Connecticut Green Bank Smart E-Loan



- Offered by Connecticut Green Bank in partnership with local community banks, credit unions, and contractors
- Offer loans up to \$50,000 for residential buildings with 1-4 units
- Term lengths up to 20 years with interest rates from 5.99% - 7.49%

<b>Capital source</b>	Private lenders and American Recovery and Reinvestment Act (ARRA) funds (for loan loss reserve and interest rate buy-down)
<b>Repayment mechanism</b>	Soft loan, repaid through private lenders
<b>Origination and underwriting</b>	Minimum credit score of 580 or above; all final underwriting decisions made by private lender
<b>Application to rural and low-to-moderate income groups</b>	None
<b>Application of credit enhancements</b>	Loan loss reserve and interest rate buy-down
<b>Customer protection features</b>	Must use participating contractors
<b>Cost-effectiveness requirements and assessments</b>	No specific requirement but only qualifying measures are eligible for the program.

# Program: Mass Saves HEAT Loan



- Program launched in 2006
- Borrowers can choose from list of participating lenders and finance up to \$50,000 at 0% interest
- Capital provided by utilities for interest rate buy-down

<b>Capital source</b>	Private lenders and utilities (for interest rate buy-down)
<b>Repayment mechanism</b>	Soft loan, repayment directly to private lenders
<b>Origination and underwriting</b>	Minimum credit score of 620 often required but varies by lender. Must have residential electric account.
<b>Application to rural and low-to-moderate income groups</b>	None
<b>Application of credit enhancements</b>	Interest rate buy-down
<b>Customer protection features</b>	Must use authorized contractors.
<b>Cost-effectiveness requirements and assessments</b>	No specific requirement but only qualifying energy-efficient upgrades are eligible for the program.



# Discussion and Next Steps

# Consumer Eligibility

- Eligibility varied widely between programs included in this review, including the **size** of buildings included (single-family homes to commercial buildings) and those eligible to participate in the programs (**underwriting criteria**, special terms for underserved groups).
- On-bill financing programs (where the utility provides the capital) typically gives the utility the **flexibility to set non-traditional underwriting terms**, such as considering payment history instead of credit score and debt-to-income ratio. This can expand eligibility of the program to underserved groups (such as low-to-moderate income households) that would not be able to meet traditional underwriting standards.
  - Most on-bill repayment programs and soft loans use traditional underwriting and require a **minimum credit score** and **debt-to-income ratio** which differed between programs.
- Eligibility varied for **Low-To-Moderate Income (LMI)** individuals, with some programs completely excluding this sector from eligibility (Illinois) while others targeted their programs specifically to only include LMI households (Hawaii). Sources of capital also impacted LMI eligibility, as some federal sources of funds required programs to ensure that a proportion of funds went to LMI communities.
- **Renters** were only eligible to apply for tariff on-bill programs, as they are unable to participate in on-bill financing or repayment programs where the homeowner or building owner is required to be responsible for the loan.

# Consumer Protection

- Almost all programs included an **approved contract network**, in which consumers must use a contractor within the network to access the loan. Training and other requirements to become an approved contractor varied between programs.
  - Contracting networks are a popular consumer protection measure as they ensure that contractors are properly educated about the program measures (including eligibility) and trained on how to install and maintain eligible equipment.
  - Contractors were noted as a very positive force for **marketing the program** to eligible consumers, as the program introduced them to a new group of customers who may have not previously considered measures such as heat pumps or electric vehicle charger installations.
- **Ensuring cost-effectiveness** was seen as a key consumer protection mechanism to ensure continued program success. For energy efficiency measures, many administrators felt that it was critical that consumers were consistently saving more on their energy bill than they were paying in incremental loan payments.
  - Related consumer protection measures tended to include **energy audits before installation** of materials, to confirm that desired measures would result in energy savings. Some programs, like Ecosave, take additional steps by setting monthly payments equal to projected energy savings and issuing a refund if the actual savings is less than expected.

- Not all programs required cost-effectiveness tests, but many did include internal standards for cost-effectiveness which impacted their list of eligible measures.
- Typically, programs that included cost effectiveness measures looked for a **savings-to-investment ratio (SIR) of at least 1**.
- While there are consumer protection benefits to ensuring cost-effectiveness, some program administrators noted that strictly adhering to a particular SIR can **negatively impact eligibility of costlier measures**, like ground-source heat pumps. This is exacerbated for measures that fall under beneficial electrification, but do not contribute directly to efficiency.



# Other

- **Consequence for non-payment:** There were varying views on what the ideal consequence for defaulting on the loan should be. Unlike traditional loans, it is not simple for the lender to recoup the asset because of non-payment. In OBF or OBR, since the payment flows through (or to) the utility, some advised that defaulting on the loan should result in **shut-off of electrical service**. Others have noted that employing shut-offs in the case of non-payment does not meaningfully impact default rates and may be unpopular with utilities or lenders who wish to build trust and confidence with their consumers.
- **All on-bill programs included in this scan required legislation** to begin offering financing programs. In most instances, new legislation requiring utilities to provide financing for their customers for particular measures was enacted, and utilities then began to design programs to remain in compliance with legislation.
- **Capital sources** varied, but most on-bill programs used a mixture of state and federal provided capital, while some leveraged private capital sources (e.g Slipstream). Traditional lending programs (i.e. not on bill) were more likely to include private sources of capital.

- **Sources of Capital:** Based on the experience of other jurisdictions, there may be capital available for a financing program through the federal government (such as the Greenhouse Gas Reduction Fund and the USDA Rural Utilities Service), though the State could consider internal or regional sources of capital, like the Regional Greenhouse Gas Initiative (RGGI), for such a program.
- **Legislation:** It is likely that both legislation and regulatory amendments will be required to introduce any type of on-bill financing program, particularly to address the waterfall payment structure and utility shut-off policies for non-payment of loans currently governed by regulation for utilities in Maine. Key program design elements (e.g. requiring a minimum savings-to-investment ratio) have also been included in legislation in other jurisdictions but is not a requirement.
- **Stakeholders and Governance:** Efficiency Maine Trust is the independent, quasi-state agency tasked with implementing energy efficiency programs in Maine. The Efficiency Maine Green Bank holds the agency's financing offerings, including for home energy and small business loans. Any potential financing options in addition to what is currently offered should ensure close integration with existing offerings from Efficiency Maine Trust and should leverage strengths of the existing infrastructure rather than competing or creating duplicative programming.

## Key Elements of the Comparative Analysis:

- Quantitative scoring (5-point scale) and qualitative assessment of each type of financing option, focusing on beneficial electrification considerations:
  - Ability to overcome barriers in key markets; technology types
  - Potential sources of capital
  - Administrative cost and complexity
  - Consumer protection and underwriting provisions
  - Cost-effectiveness considerations
  - Alignment with Maine's current statutory requirements.
- The **final report** will include detailed analysis of programs and stakeholders included as part of this study, the parallel on-bill financing review, a map of current financing offerings in Maine to identify gaps, comparative analysis, and will develop recommended model(s) for Maine specifically.



# Appendix

Programs included solely in Desktop Review:

<b>Financing Programs</b>	<b>Credit Enhancement Programs</b>
PG&E On-Bill Financing and PAYS program	Mass Saves HEAT Loan Program
GoGreen Financing (California Hub for Energy Efficiency Financing)	NH SAVES Res
Ouachita Electric Cooperative On-Bill Tariff Program	Michigan Saves Home Energy Loan Program
CleanBC Better Homes Low-Interest Financing Program	GoGreen Pilots
Connecticut Green Bank Smart-E Loan	DOE Innovative Clean Energy Loan Guarantee Program
Canada Infrastructure Bank EV and Buildings Programs	
Efficiency Capital Energy Savings Performance Agreement	

## Interviews Conducted:

<b>Government &amp; Utility</b>	<b>Private Sector &amp; Thought Leaders</b>
Hawaii Green Energy Investment Authority (On-Bill Tariff program)	Tom Stanton (formerly of the National Regulatory Research Institute)
Vermont Housing Finance Agency (On-Bill Financing program)	Environmental and Energy Study Institute
NYSERDA (On-Bill Recovery Loan and Smart Energy Loan)	Ecosave
Orcas Power & Light Cooperative (On-Bill Tariff program)	Chris Kramer (Independent Consultant, formerly at Energy Futures Group)
Illinois Energy Efficiency Loan Program (via Slipstream - On-Bill Financing program)	



### **"NO DISCLAIMERS" POLICY**

This report was prepared by Dunsky Energy + Climate Advisors, an independent firm focused on the clean energy transition and committed to quality, integrity and unbiased analysis and counsel. Our findings and recommendations are based on the best information available at the time the work was conducted as well as our experts' professional judgment. **Dunsky is proud to stand by our work.**