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Commercial Property Assessed Clean Energy: Establishment, Processes, and Features

In our report, we examine the existing infrastructure of Residential Property Assessed Clean Energy in Vermont legislation, and report on Commercial Property Assessed Clean Energy programs in other regional states. Our report includes the legislation and administration of these programs, the financing behind them, and the practical implementation of them.

Vermont Residential Property Assessed Clean Energy Program

Property Assessed Clean Energy

The Property Assessed Clean Energy (PACE) program is an established program in the state of Vermont that enables and provides financial assistance to property owners towards implementing clean energy and environmental efficiency projects on a municipal level.¹ PACE programs are not federally enacted and do not require the use of public funds. PACE programs are authorized by state legislation and approved by individual municipalities.² While other regional states have PACE programs, Vermont's program is different due to the requirement of a popular vote of a municipality's constituents to establish itself as a PACE district.³ Once passed, the district gains the ability to finance projects relating to renewable energy.⁴ Regarding the financing itself, financial assistance exists in the form of lower than industry standard, fixed-rate interest PACE loans that a property owner takes on, often provided by third-party financiers.⁵ These loans are available to property owners following their municipality's assessment and approval of their specific project. A vote of approval held at an annual or special meeting with a majority of their municipality's constituents is required for a property owner's PACE project to move forward.⁶ In its current state, Vermont's PACE program only applies to residential properties. PACE loans for commercial property owners have not been made available as of the writing of this report in November of 2025.⁷

¹ An Act Relating to the Vermont Energy Act of 2011, Vt. Acts & Resolves § 3261-3269, No. 39-48 (2011).

² United States Department of Energy, *Commercial Property Assessed Clean Energy (C-PACE)*, October, 2017. https://www.energy.gov/sites/prod/files/2017/10/f39/FL1710_WIP_CPACEv2.PDF

³ Vt. Acts & Resolves § 3261, p. 39-40 (2011).

⁴ Vt. Acts & Resolves § 3261, p. 39-40 (2011).

⁵ Environmental Protection Agency, *Commercial Property Assessed Clean Energy*, July 1, 2025. <https://www.epa.gov/statelocalenergy/commercial-property-assessed-clean-energy>

⁶ Vt. Acts & Resolves § 3261-3269, No. 39-48 (2011).

⁷ Vt. Acts & Resolves § 3261, p. 39-40 (2011).

Residential Property Assessed Clean Energy

The Residential Property Assessed Clean Energy (R-PACE) program shares similar objectives and guidelines with PACE as a whole, but it is aimed at clean energy projects on residential properties in particular.⁸ Residential properties are defined as “primary residences, vacation homes, 1-4 unit owner-occupied structures, manufactured homes and condominiums.”⁹ The R-PACE program in Vermont was established in 2009 and given more structure through the clarification of the PACE financing framework in 2011.¹⁰ Since then, the maintenance of the R-PACE program has been delegated to district municipalities.¹¹

Regional Commercial Property Assessed Clean Energy Programs

Commercial Property Assessed Clean Energy (C-PACE) refers to a similar set of energy project loans. While R-PACE centers on residential properties, the purpose of C-PACE loans is to provide financing for businesses and industrial spaces.¹² At the current moment, Vermont has not enacted legislation to establish a C-PACE program. However, thirty-seven states, plus Washington D.C., have passed legislation for C-PACE programs. Out of these, thirty have active C-PACE program.¹³ Our report observes and presents information on the C-PACE programs of Maine, Connecticut, and New York, as these states provide a comparison of C-PACE programs that exist in the same region of the country as Vermont.

C-PACE of Maine

Administration

The Maine C-PACE program was authorized by the Maine State Legislature in June 2021.¹⁴ The establishment of this program followed the implementation of energy reduction efforts put forward in Maine’s *Act to Reduce Energy Costs, Increase Energy Efficiency, Promote Electric System Reliability, and Protect the Environment* (Me. Laws §10203, No. 2-4, 2021). The C-PACE program is overseen by the Efficiency Maine Trust, which works with participating municipalities to establish programs and is controlled by the Efficiency Maine Green Bank.¹⁵ Green banks are defined as “public, quasi-public, or nonprofit financing entities that leverage public and private capital to pursue goals for clean energy projects that reduce emissions,” and

⁸ Department of Energy, *Best Practice Guidelines for Residential PACE Financing Programs*, November 18, 2016. <https://www.energy.gov/sites/prod/files/2016/11/f34/best-practice-guidelines-RPACE.pdf>

⁹ Vermont Energy Investment Corporation, “2016 Vermont PACE Eligible Measures,” accessed September 19, 2025. <https://www.efficiencymaine.com/Media/Default/docs/services/efficiency-vermont-financing-PACE-eligible-measures-form.pdf>

¹⁰ Vt. Acts & Resolves § 3251–3256, No. 52-56 (2009); Vt. Acts & Resolves § 3261-3269, No. 39-48 (2011).

¹¹ Vermont Energy Investment Corporation, “Guide to Implementing PACE Districts in Vermont Communities,” accessed September 16, 2025. <https://www.trorc.org/wp-content/uploads/2013/05/Appendix-13-Guide-to-Implementing-PACE-Districts.pdf>

¹² Environmental Protection Agency, *Commercial Property Assessed Clean Energy*.

¹³ PACENation, “PACE Programs,” accessed September 15, 2025. <https://www.pacenation.org/pace-programs/>

¹⁴ An Act to Allow for the Establishment of Commercial Property Assessed Clean Energy Programs, Me. Laws §10203, No. 2-4 (2021).

¹⁵ Efficiency Maine, “C-PACE Program Guidelines,” accessed September 24, 2025. https://www.efficiencymaine.com/docs/C-PACE_Program_Guidelines_12-20-2023.pdf

Efficiency Maine Green Bank is defined as a quasi-public institution.¹⁶ The Efficiency Maine Trust's duties include:

1. Establishing program guidelines and rules;
2. Reviewing Energy Savings Improvements applications for approval;
3. Maintaining a public listing of Registered Capital Providers;
4. Collecting necessary fees to administer the program;
5. And conducting annual reporting on the implementation of the C-PACE Act.¹⁷

According to Efficiency Maine Green Bank, the C-PACE program has three main goals.¹⁸ The first goal is attracting private capital through their lien security mechanism. A lien establishes that all property constructed using C-PACE loans remains the property of the loan provider until the debt owed is discharged by the property owner.¹⁹ The second goal is deepening investment in energy efficiency through the promotion of building improvements and retrofits. The last goal is the public economic benefits, including reduced energy costs, stimulated economy, improved property valuation, and reduced greenhouse gas emissions.²⁰ At the time of this report, Efficiency Maine Green Bank has reported no metrics to measure the completion of these intended successes.

Financing

Registered Capital Providers: Financial backing for C-PACE loans in Maine comes from Registered Capital Providers (RCP). An RCP is a nongovernmental lender, such as a bank, credit union, or investment firm, that funds the C-PACE Energy Savings Improvements approved by the Efficiency Maine Trust. Before taking on this initiative, RCPs must demonstrate a willingness and capability to fund and service C-PACE loans, including performing all accounting, reporting, billing, and collection required for C-PACE assessments. Additionally, RCPs must demonstrate their intention to manage approved projects to completion.²¹

Eligible Costs, Disbursement, and Financing Term: In Maine, C-PACE financing may cover up to 100% of an Energy Savings Improvement's costs, including audits, development fees, and application fees associated with the improvement, minus any direct contributions provided by the Efficiency Maine Trust.²² These funds are disbursed upon completion of a C-PACE Assessment Agreement, which established the previously mentioned lien security mechanism. In addition to this lien, the agreement establishes another concept called Estimated Useful Life, which

¹⁶ Environmental Protection Agency, "Green Banks," January 24, 2025.

<https://www.epa.gov/statelocalenergy/green-banks>; Efficiency Maine, "About," accessed September 24, 2025. <https://www.efficiencymaine.com/about/>

¹⁷ Efficiency Maine, "Commercial Property Assessed Clean Energy (C-PACE) Program Regulations," accessed September 24, 2025. https://www.efficiencymaine.com/docs/Appendix-A_EMT_Ch-5_CPACE-Program-Regulations.pdf

¹⁸ Efficiency Maine, "C-PACE Program Guidelines."

¹⁹ Efficiency Maine, "C-PACE Program Guidelines."

²⁰ Efficiency Maine, "C-PACE Program Guidelines."

²¹ Efficiency Maine, "C-PACE Program Guidelines."

²² Efficiency Maine, "C-PACE Program Guidelines."; Me. Laws §10203, No. 2-4 (2021).

demonstrates the length of the financing term and the feasibility of a C-PACE project.²³ C-PACE projects have a financing term of 15-20 years but can extend into 25 years if deemed necessary by the Estimated Useful Life of the agreement.²⁴

Practical Implementation

The C-PACE program, according to the Efficiency Maine Green Bank website, offers loans to many different businesses across the state.²⁵ For example, a skiing location in Maine took out a \$24,000 C-PACE loan to approve the efficiency of their operations. The ski trail uses snowmaking equipment to optimize user experience.²⁶ To improve overall efficiency, outdated snow equipment nozzles have been replaced with higher-efficiency ones that optimize air and water flow.²⁷ Multiple other businesses, ranging from a local blueberry farm that took on a \$620,000 C-PACE loan to a large grocery store that took on a \$55,178 C-PACE loan, have utilized funding to enhance the efficiency of their heating and cooling systems.²⁸ Small businesses can also take on C-PACE loans, as seen in a project undertaken by a local clothing goods store that took on a C-PACE loan to enhance the energy efficiency of their in-store lighting systems.²⁹ The Efficiency Maine Green Bank website does not provide the financial amount taken on by the small business.

C-PACE of Connecticut

Administration

Connecticut passed its first PACE legislation in 2011, which allowed municipalities to establish sustainable energy programs.³⁰ Sustainable energy program refers to programs which allow municipalities to enter contractual assessments with property owners on qualifying properties to finance energy improvements.³¹ Under these programs, municipalities may issue bonds to finance energy improvements and employ the services of quasi-public administrators in support of the program.³² Before financing is approved, municipalities must:

1. Require energy audits or feasibility studies;

²³ Me. Laws §10203, No. 2-4 (2021).

²⁴ Efficiency Maine, “C-PACE Program Guidelines.”

²⁵ Efficiency Maine, “Commercial Property Assessed Clean Energy (C-PACE),” accessed September 24, 2025.

<https://www.efficiencymaine.com/c-pace/>

²⁶ Efficiency Maine, “Quarry Road Snowmaking: An Efficiency Maine Case Study,” accessed September 24, 2025.

https://www.efficiencymaine.com/docs/Quarry_Road_Custom_Case-Study.pdf

²⁷ Efficiency Maine, “Quarry Road Snowmaking.”

²⁸ Efficiency Maine, “Hannaford Supermarket: Heat Energy Project,” accessed September 24, 2025.

<https://www.efficiencymaine.com/docs/Hannaford-Heat-Recovery-Case-Study.pdf> ; Efficiency Maine, “Backyard Farms: An Efficiency Maine Case Study,” accessed September 24, 2025.

https://www.efficiencymaine.com/docs/Backyard-Farms-Custom_Case-Study.pdf

²⁹ Efficiency Maine, “Screw-In LED Case Study: Portland Dry Goods,” accessed September 24, 2025.

<https://www.efficiencymaine.com/docs/EM-Case-Study-Portland-Dry-Goods.pdf>

³⁰ An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future, Conn. Pub. Acts § 100, No. 192-95 (2011).

³¹ Conn. Pub. Acts § 100, No. 192-95 (2011).

³² Conn. Pub. Acts § 100, No. 192-95 (2011).

2. Enter into a contractual assessment on the property with the property owner for the amount required to cover project costs;
3. Ensure repayment of funds using conditions including liens in the event of default;
4. And provide full notice to property owners regarding consequences of financing.³³

The legislation establishes the Clean Energy Finance Investment Authority as a quasi-public agency.³⁴ One of their roles is to develop programs to finance clean energy investments in residential and commercial projects.³⁵

In 2012, the Connecticut legislature passed additional legislation pertaining to C-PACE projects, which expanded the Clean Energy Finance Investment Authorities responsibilities to include:

1. Creating and financing a commercial energy program;
2. Developing financing guidelines in consultation with property owners, bankers, and municipalities;
3. And using private, public, or quasi-public sources for administrative support and to obtain financing.³⁶

Financing

Connecticut Green Bank: The financing for C-PACE projects is handled by the Connecticut Green Bank, a quasi-public agency established in the initial PACE legislation.³⁷ The Green Bank administers C-PACE programs on the municipal level, coordinating with municipalities interested in participating and facilitating outreach to commercial property owners.³⁸ Financing comes from public benefit assessments on properties which establishes a lien on the property. Benefit assessments are used by municipalities to levy property to finance projects. These liens are like tax liens and represent a secure financing mechanism. This level of security is assured by requiring that the energy cost savings outweigh project costs, involving a third-party technical review of the project, and ensuring that liens stay with the property regardless of ownership. The Green Bank issues, bills, remits, and collects funds on these liens.³⁹

Approved Capital Providers: The Connecticut Green Bank is permitted to use funds from approved third-party capital providers to finance C-PACE projects.⁴⁰ Third-party providers are entities other than the Green Bank and Green Bank subsidiaries which have entered into financing agreements.⁴¹ If capital providers wish to provide direct funding to property owners,

³³ Conn. Pub. Acts § 100, No. 192-95 (2011).

³⁴ An Act Concerning the Establishment of the Department of Energy and Environmental Protection and Planning for Connecticut's Energy Future, Conn. Pub. Acts § 99, No. 181-84 (2011).

³⁵ Conn. Pub. Acts § 99, No. 181-84 (2011).

³⁶ An Act Implementing Certain Provisions Concerning Government Administration, Conn. Pub. Acts § 157, No. 65-67 (2012).

³⁷ Connecticut Green Bank, "C-PACE Program Guidelines," accessed September 19, 2025.

³⁸ https://www.ctgreenbank.com/wp-content/uploads/2024/02/CPACE-Program-Guidelines_031524.pdf

³⁹ Connecticut Green Bank, "C-PACE Program Guidelines."

⁴⁰ Conn. Pub. Acts § 157, No. 65-67 (2012).

⁴¹ Connecticut Green Bank, "C-PACE Program Guidelines."

they must become an approved capital provider through the Green Bank. When a project is approved, the capital provider must enter into a financing agreement with the property owner after which they may enter into an administrative agreement with the Green Bank. The Green Bank will facilitate the benefit assessment lien and will work with the capital provider to collect and remit payments.⁴²

Practical Implementation

Connecticut Green Bank financing provides capital to commercial, industrial, and non-profit property owners.⁴³ For example, a senior living facility located in Redding, CT, used \$3.25 million in C-PACE financing to install solar panels on their property.⁴⁴ This project installed a solar system which is expected to save \$3.5 million in energy costs over the lifetime of the project.⁴⁵ A smaller farm in Killingworth, CT used \$94,122 of C-PACE financing to install solar panels, the energy cost saving of the project is projected to be \$570,000.⁴⁶ The Green Bank also funds non-profit energy improvement like the aquarium in Mystic, CT which used C-PACE funds in the construction of a rooftop solar installation which is projected to save them \$1.5 million⁴⁷

C-PACE of New York

Administration

PACE and C-PACE programs were established by the New York State Assembly in 2009.⁴⁸ The law authorizes any municipal corporation including cities, towns, counties or villages to create a sustainable energy loan program by passing a local law. The program allows for the installation of renewable energy systems as well as energy efficiency improvements. The loan is repaid by the property owner through an assessment or annual tax charge, collected in the same time and manner as municipal property taxes.

New York State Energy Research and Development Authority (NYSERDA): The Municipal Sustainable Energy Loan Program appointed NYSERDA as the authoritative agency over PACE and C-PACE financing programs in New York state.⁴⁹ Their responsibilities include:

1. Provide guidance on implementing PACE in New York;

⁴² Connecticut Green Bank, “C-PACE Program Guidelines.”

⁴³ Connecticut Green Bank, “C-PACE Program Guidelines.”

⁴⁴ Connecticut Green Bank, “The Meadow Ridge Solar Committee Started with a Mission,” accessed September 24, 2025. https://www.ctgreenbank.com/wp-content/uploads/2025/03/Meadow-Ridge-BUILDING-story_TEMPLATE-0823-3.pdf

⁴⁵ Connecticut Green Bank, “The Meadow Ridge Solar Committee Started with a Mission.”

⁴⁶ Connecticut Green Bank, “Running Brook Farms Plants the Seeds of Sustainability” accessed September 24, 2025. https://www.ctgreenbank.com/wp-content/uploads/2024/02/BUILDING-story_Running-Brook-Farm-Case-Study-11.29-0823-1.pdf

⁴⁷ Connecticut Green Bank, “Verogy Announces Completion of Solar Project at Mystic Aquarium” accessed November 6, 2025. <https://www.ctgreenbank.com/solar-project-at-mystic-aquarium-announced/>

⁴⁸ An Act to Amend the General Municipal Law, In Relation to the Municipal Sustainable Energy Financing Program. N.Y. Laws § 119EE-GG (2009).

⁴⁹ N.Y. Laws § 119EE-GG (2009).

2. Certify contractors to perform energy audits;
3. Approve entities to certify contractors qualified to conduct energy audits and renewable energy system feasibility studies;
4. Establish criteria to determine when an energy efficiency improvement is cost-effective;
5. Approve PACE financing;
6. And establish the form and manner by which municipal corporations should verify and report on the installation and performance of the energy efficiency improvements and renewable energy systems.⁵⁰

Finance

Energy Improvement Corporation (EIC): C-PACE financing in New York state, excluding New York City, is administered by EIC, a non-profit and local development corporation designated as the C-PACE administrator.⁵¹ EIC's Open C-PACE program provides long-term financing for clean energy projects in commercially owned buildings through approved capital providers. The program can cover the entirety of project costs with flexible terms extending to the useful life of the improvements. Repayment is made through a benefit assessment lien that transfers upon the sale of the property. All projects must comply with New York's Municipal Sustainable Energy Loan Program and NYSERDA's C-PACE guidance.⁵²

New York Green Bank: New York Green Bank is a New York state-sponsored investment fund within NYSERDA. Municipalities may use New York Green Bank to finance C-PACE projects among other clean energy developments when traditional lenders are not available. They use public funds to attract private investment and can provide \$5 to \$50 million in financing to C-PACE or other clean energy and sustainable development projects within municipality boundaries.⁵³

Practical Implementation

The New York state C-PACE program has financed clean energy projects in numerous different kinds of businesses and buildings. On a 300-acre dairy farm in Palatine Bridge, New York, NYSERDA helped assess and implement the recommended measures to realize energy savings, which included efficient lighting, upgrading motors, installing a plate cooler, and variable speed drives on the transfer pump and vacuum pump. These energy efficiency upgrades saved \$2,400

⁵⁰ New York State Energy Research & Development Authority, *Municipal Sustainable Energy Loan Program—Commercial Property Assessed Clean Energy (PACE) New York State General Municipal Law 5L Guidance Document*, August 2024. <https://www.nyserra.ny.gov/-/media/Project/Nyserda/Files/Programs/Commercial-Property-Assessed-Clean-Energy/Commercial-PACE-Guidance-Documents.pdf>

⁵¹ New York State Energy Research & Development Authority, *Green Financing*, accessed October 8, 2025. <https://www.nyserra.ny.gov/All-Programs/Clean-Energy-Communities/High-Impact-Actions/Toolkits/Green-Financing>

⁵² Energy Improvement Corporation, "EIC Open C-PACE Program," accessed September 26, 2025. <https://www.eicpace.org/eicopencpace>

⁵³ New York State Energy Research & Development Authority, *Clean Energy Communities*, December 2023. <https://www.nyserra.ny.gov/-/media/Project/Nyserda/Files/Publications/Fact-Sheets/CLC-fs/CEC-green-financing-fs.pdf>

annually.⁵⁴ In the city of Schenectady, C-PACE funded \$1.95 million for energy efficiency upgrades such as new windows, insulation, high-efficiency boilers, and LED lighting in a converted upscale 32-unit apartment building.⁵⁵ New York City established a local law to create its own administrator and financing program as instructed through the *Municipal Sustainable Energy Loan Program*.⁵⁶ This allowed an owner to fund predevelopment expenses for their 6-unit apartment building in Brooklyn. The project included window replacements, new lighting, oil-to-gas boiler conversion, thermostatic radiator valves, roof and pipe ventilation, and low-flow water fixtures which are expected to reduce the building's utility expense by 27%.⁵⁷

Conclusion

This report has outlined the current Residential Property Assessed Clean Energy (R-PACE) program in Vermont since its inception in 2009. Programs in Maine, Connecticut, and New York demonstrate an expansion of Property Assessed Clean Energy programs into the commercial sector, which offers loans to businesses and industrial entities looking to make energy efficiency improvements.

This report was completed on November 11, 2025, by Peyton Paquette, Bella Scholl, and Sophie VanOrden under the supervision of VLRS Director, Dr. Anthony “Jack” Gierzynski and VLRS Deputy Director, Dr. Jonathan “Doc” Bradley in response to a request from Senator Thomas Chittenden.

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⁵⁴ New York State Energy Research and Development Authority, “Dairy Farm Doubles Milk Production While Keeping Energy Bill Down”, *New York State*. February 2019, <https://www.nyserda.ny.gov/-/media/Project/Nyserda/Files/Publications/Case-Studies/AG/dygert-cs.pdf>

⁵⁵ Energy Improvement Corporation, “First Multi-Family Open C-PACE Financing Deal in New York State,” accessed September 24, 2025. https://www.eicpace.org/files/ugd/1b6741_094e750675b04a80baa2bb3772aadeb6.pdf

⁵⁶ NYC Accelerator, “The Climate Mobilization Act: A Summary of New York City’s Climate Legislation,” accessed September 24, 2025. https://www.nyc.gov/assets/nycaccelerator/downloads/pdf/ClimateMobilizationAct_Brief.pdf

⁵⁷ New York City Energy Efficiency Corporation, “NYCEEC Green Predevelopment Loan Catalyzing Energy Efficiency in Affordable Multifamily Housing,” accessed September 24, 2025. https://nyceec.com/wp-content/uploads/2020/02/NYCEEC_Low_interest_construction_loan_v_4.3_7.10.19.pdf.