Vermont Public Service Department

Commercial PACE
(Property Assessed Clean Energy)
Study

Submitted to the Vermont General Assembly
January 15, 2013
Executive Summary

As originally designed, Property-Assessed Clean Energy, or PACE, is a means by which states and municipalities can help private property owners finance energy efficiency retrofits and/or renewable energy systems on buildings. Through PACE, qualified property owners obtain financing that they repay through a special assessment along with their property taxes for up to 20 years. In 2010, because of concerns about lien priorities, secondary market lenders refused to support the PACE market for residential properties, causing many communities to stop their programs pending resolution of outstanding regulatory and legal actions. However, substantive differences between commercial and residential PACE allowed commercial programs to advance.

PACE is one of many finance tools that can help advance towards Vermont’s energy goals and is consistent with the 2011 Comprehensive Energy Plan. Vermont developed its residential PACE program during the 2009 legislative session, when members of the General Assembly passed Act 45. In light of concerns by federal regulators and secondary market lenders, Vermont revised its approach by not allowing a senior PACE lien with respect to existing mortgages and received approval from regulators.

Commercial and industrial property owners also stand to benefit substantially by reducing their overall energy consumption. With commercial programs, lenders almost always place covenants that are more restrictive on commercial than residential mortgages. Thus, commercial property owners must receive approval from their primary mortgage lender before the placement of a PACE lien on a commercial property, which would then assume the senior position and secure low cost financing. This consent would presumably only be obtained in those cases where the PACE-financed project would result in significant benefits to the values of the building, the cost of operating the building, or both. By obtaining consent from the mortgage holder, commercial PACE financing would avoid the concerns raised by federal regulators. With these differences, commercial PACE programs have not suffered the same fate as residential PACE. As a result, many commercial PACE programs are moving forward.

Costs and Challenges of Commercial PACE

Vermont’s residential PACE program, originally authorized in 2009 and substantially amended in 2011, is only now ready for roll out. Program results are at least another year henceforth. However, using information provided by Efficiency Vermont, the following estimated costs can be used to compare the residential and prospective commercial PACE programs.

Residential PACE legislation enables up to $20 million in financing that includes a loan loss reserve of $1 million. This credit enhancement provides additional security to investors and is an important consideration given the use of subordinate liens in Vermont. With an estimated average cost of $10,000 per project, that would equate to 2,000 projects spread out to about 500 participants annually in the first four years. With a faster uptake, the $20 million in financing would decline in fewer years and participation may need to be capped at some dollar value per year, or additional funding obtained for the loan loss reserve. Participants fund the program costs through fees that will amount to approximately $120,000 in year one rising to over
$300,000 per year as participation rates rise. Most of this funding will cover the cost of underwriting by a private finance institution with the balance going toward program administration.

Developing a commercial PACE component is estimated to cost approximately $50,000 to $60,000. Initial DOE funding for residential PACE was $110,000. Depending on a variety of factors, including how similar or different these two models are from one another, this amount could change substantially.

One key consideration regarding the creation of a commercial PACE program is the size of a given commercial market with property owners and mortgage holders amendable to participating in PACE. Given the small size of the state, it is not clear whether there would be a sufficient number and adequately sized projects to justify the program costs, to attract private lenders, or to allow re-sale of PACE finance products into secondary markets.

Other activities to advance energy finance are underway in the state. The Public Service Department (PSD) received support from the US DOE to carry out a Commercial Energy Efficiency Finance (CEEF) program developed by the Vermont Energy Investment Corporation that seeks to open private capital markets and leverage qualified tax credit bonds to stimulate commercial sector demand for energy efficiency retrofits. PSD anticipates that the activities continuing through 2013 will show results by the end of the year. With CEEF still under development, it is not yet clear how much need there will be to develop a PACE finance program for commercial entities at this time.

**Recommendations**

As another finance mechanism in the expanding toolkit, Commercial PACE would be consistent with the Comprehensive Energy Plan. The question is whether Vermont should press this option at this time. There are three basic options:

1) Amend the current Vermont PACE statute to provide for commercial real estate to be included in the PACE program.
2) Wait at least one year to determine how the residential PACE and other on-going commercial energy finance programs evolve, both in and out of Vermont.
3) Rely on private finance providers to develop commercial energy finance solutions on their own.

Given the variety of challenges facing PACE nationwide, the Public Service Department recommends option two allowing the Vermont residential PACE program to run at least one full year to generate operational data on costs and benefits, while encouraging evolution of other commercial energy finance programs, including through private finance. It will also provide time to examine how other states work out critical differences with regulators regarding PACE and allow the PSD Commercial Energy Efficiency Finance program to conclude. Upon reaching resolution with each of these elements, the capacity of the State to implement energy finance programs will have been demonstrated and augmented, and data will be available to evaluate the need for additional commercial energy finance options. In the event that the State decides to move forward with inclusion of commercial PACE in the current program, the report concludes with a set of measures needed to ensure sufficient funding and adequate reserves are in place to incorporate commercial real estate into the program.
Legislative Charge

Per Fiscal Year 2013 Appropriations Act, Act No. 162. An act relating to making appropriations for the support of government (H.781) ¹

Sec. E.800.4 STUDY; EXPANSION OF PROPERTY-ASSESSED CLEAN ENERGY PROGRAM TO INCLUDE COMMERCIAL REAL ESTATE

(a) On or before January 15, 2013, the commissioner of public service, in collaboration with the department of financial regulation, the office of the treasurer, Housing Vermont, the Vermont housing and conservation board, the department of economic, housing and community development, the Vermont bankers’ association, and other interested private sector stakeholders, shall conduct a study on the feasibility, benefits, and costs of expanding Vermont’s property-assessed clean energy program to include commercial real estate, and shall submit its findings and recommendations to the house committee on commerce and economic development, the senate committee on economic development, housing and general affairs, and the house and senate committees on natural resources and energy. The study shall specifically consider appropriate measures to ensure sufficient funding and adequate reserves are available to incorporate commercial real estate into the program.

The Public Service Department worked with the Department of Financial Regulation and the Office of the Treasurer on the development of the study, and sought input from the Department of Economic, Housing and Community Development. The department also sought input on commercial PACE and other finance options for thermal efficiency from the Vermont Housing and Conservation Board, Vermont Energy Investment Corporation, Housing Vermont and other interested parties that participated in the Thermal Efficiency Task Force.

¹ http://www.leg.state.vt.us/docs/2012/Acts/ACT162.pdf
Background on Residential and Commercial PACE

As originally designed, Property-Assessed Clean Energy, or PACE, is a means by which states and municipalities can help private property owners finance energy efficiency retrofits and/or renewable energy systems on buildings. Through PACE, qualified property owners obtain financing that they repay through a special assessment along with their property taxes for up to 20 years. One key element of the original PACE model is that the assessment, unlike a loan, remains with the property upon transfer of ownership. Upon sale of a property or default, the assessment must be brought current but the outstanding balance remains with the property. This feature is intended to help overcome a substantial barrier to adoption of energy efficiency and renewable energy (EE/RE) improvements and to allow homeowners to invest in upgrades that would take more time to pay back than they might stay with the property. Voters in communities interested in PACE must authorize the creation of an assessment district that gives eligible property owners access to energy improvement financing.

In general, PACE programs seek one of three main sources of capital to finance their PACE programs. First is a warehouse model, through which government or third party program sponsors use a line of credit or their own capital to fund projects. In this example, loans can be packaged for sale into secondary markets by primary financial institutions. A second model is the pooled bond model, through which a government or a third party program sponsor aggregates project applications and issues a bond to fund all the projects at the same time. A third model is open market or owner-arranged financing where each owner negotiates financing terms directly with prospective investors or financial institutions, including the existing mortgage lender. It is possible to construct variations of these three options as well.

PACE had its origins in California in 2008 with the formation of the pilot finance program, Berkeley FIRST (“Financing Initiative for Renewable and Solar Technology”). In 2008, the State of California subsequently authorized cities and counties via AB 811 to establish voluntary assessment programs to support energy efficiency and renewable energy projects. This innovative approach achieved widespread interest around the country with 28 states and the District of Columbia adopting legislation that grants local governments the ability to offer PACE financing to residential and/or commercial property owners. Vermont adopted its initial residential PACE legislation under Act 45 of 2009.

Secondary market lenders refused to support the PACE market for residential properties in 2010 because of concerns about lien priorities, causing many communities to put their programs on hold pending resolution of outstanding regulatory and legal actions. However, substantive differences

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3 Commercial PACE Status Update, Mark Zimring, Lawrence Berkeley National Laboratory, NASEO Financing Committee, April 5, 2012; [http://www.naseo.org/committees/financing/notes/2012-04-05-Zimring.pdf](http://www.naseo.org/committees/financing/notes/2012-04-05-Zimring.pdf)
4 For listing of locations, see Database of State Incentives for Renewables & Efficiency, PACE map; [http://www.dsireusa.org/documents/summarymaps/PACE_Financing_Map.pdf](http://www.dsireusa.org/documents/summarymaps/PACE_Financing_Map.pdf), accessed 12/17/12
between commercial and residential PACE allowed commercial programs to advance even as the residential PACE stakeholders seek resolution.

PACE is one of many finance tools that can help advance towards Vermont’s energy goals. The 2011 Vermont Comprehensive Energy (CEP) Plan identifies four leverage points that taken together yield long-lasting results: outreach and education, finance and funding, innovation and expertise, and regulatory policy and structures. While funding typically derives from public resources to pay for program costs (e.g., via taxes or fees), financing consists of non-program private capital such as secured or unsecured loans, mortgages, or other mechanisms typically paid back from savings or revenues associated with a project. Financing may also include individual contributions. PACE is one of the finance options with potential to expand the deployment for thermal efficiency activities and small-scale renewables in the state. The CEP references residential PACE but does not specifically mention commercial PACE. However, one of the CEP recommendations states, “Use insights from the first set of PACE projects to increase municipal participation in PACE over the next three years.”

This report starts with a brief review of PACE and relevant history then addresses the potential for developing commercial PACE in Vermont.

PACE: One of Many Finance Tools

With the rise of energy prices and awareness regarding climate change over the past decade, consumers have increasingly sought means to reduce their energy usage and environmental footprint. Many states including Vermont and numerous municipalities have taken leadership positions on these issues by establishing energy and climate change goals, along with related economic development and cost savings objectives. In the case of both renewable energy systems such as solar PV and energy efficiency, the high front-end costs serve as a barrier to participation by great numbers of consumers and businesses, even as the benefits from reduced energy costs, increased energy security and diminished environmental harm become clear. Other barriers also diminish interest in EE/RE, such as split incentives among renters and property owners, uncertainty of savings, and the effort it takes to move through the process. Currently, many governments, financiers and organizations are seeking ways to harness private capital and develop streamlined, cost effective finance options similar to those available for other

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6 The 2011 Vermont Comprehensive Energy Plan (Vol. 1) states, “Expand focus on Property Assessed Clean Energy program deployment and develop on-bill utility payment for small-scale renewable generation and thermal projects for customers.” Pg. 9; Vol. 2 of the CEP also references homeowners but does not specifically mention commercial property owners; http://publicservicedept.vermont.gov/sites/psd/files/Pubs_Plans_Reports/State_Plans/Comp_Energy_Plan/2011/2011%20CEP_Volume%202%5B1%5D.pdf, Pg. 170-172
7 For example, Vermont greenhouse gas reduction goals (10 V.S.A. § 578); Building efficiency goals (10 V.S.A. § 581) and 2011 Comprehensive Energy Plan
commercial products (e.g., automobiles). Addressing the high costs for entering the market has emerged as a central focus among governments seeking solutions to related energy usage and climate goals.

The opportunity for substantial energy savings coupled with the economic development prospects for EE/RE spurred many states and communities to seek or create options that facilitate greater participation. With its attractive features, PACE became one of the more hopeful tools for reducing finance costs and increasing uptake. However, there are several other finance tools currently in use or under development also intending to advance related energy, climate and economic goals such as revolving loan funds, private finance models using credit enhancements, on-bill financing, energy service companies (ESCOs), energy service agreements (ESAs) and power purchase agreements (PPAs) among others. As technologies mature and installation prices for systems such as solar PV decrease, some credit providers are increasing their interest and participation with secured and unsecured loan products.

During the period of the American Recovery and Reinvestment Act (“Recovery Act”) from 2009 to 2012, the White House and the US Department of Energy (DOE) continued to support a range of finance options for EE/RE, including PACE as one of the promising means to help property owners overcome the substantial first cost barriers of renewable energy and energy efficiency investments. DOE continues to focus on developing and expanding the use of successful finance mechanisms that help address first cost barriers. For example, in 2011 the Vermont Public Service Department received a competitive DOE award to work with the Vermont Energy Investment Corporation on development of a viable commercial energy efficiency finance model.

Financial Regulators Dampen the PACE

After receiving recognition for its potential to help address key finance challenges associated with renewables and energy efficiency, PACE jumped in prominence with numerous cities and states deciding to pursue it. PACE stands out as a potentially powerful finance tool in that it employs a long-standing assessment mechanism familiar to municipalities that have used such mechanisms to finance improvements in their communities for decades. Energy financing districts offer a variety of attractive benefits to property owners and communities, including long repayment periods, potentially lower interest rates and streamlined application and participation processes. As initially construed, PACE links repayment to the property—not the individual—thus eliminating the need for individual credit evaluation. PACE allows municipalities to harness their borrowing capacity to obtain affordable capital needed to finance energy improvements.

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In its original form, residential PACE programs in most communities required a senior lien to be attached to the property above the mortgage, a requirement that led to action by the federal regulators and secondary market lenders. In May 2010, Fannie Mae, one of the two government-sponsored organizations that purchase mortgages, stated, “PACE loans generally have automatic first lien priority over previously recorded mortgages. The terms of the Fannie Mae/Freddie Mac Uniform Security Instruments prohibit loans that have senior lien status to a mortgage.”9 Freddie Mac issued similar guidance on the same day.10

In July 2010, the Federal Housing Finance Agency (FHFA) stated, “First liens established by PACE loans are unlike routine tax assessments and pose unusual and difficult risk management challenges for lenders, servicers and mortgage securities investors” and called for a pause in such programs to address concerns.11 FHFA directed Fannie Mae, Freddie Mac and the Federal Home Loan Banks to undertake a set of prudential actions to protect their operations. The Office of the Comptroller of the Currency also shared such concerns and issued supervisory guidance to national banks at the same time.12 Shortly afterwards, Fannie Mae and Freddie Mac issued instructions telling lenders that after July 6, 2010 they would not purchase mortgages secured by properties subject to PACE obligations that provide for first lien priority.13

These actions immediately dampened the budding PACE market nationwide as most governments suspended their programs. Subsequently, the State of California along with early PACE pilot communities and others filed suit against the FHFA, Fannie Mae and Freddie Mac asserting that the agency failed to follow standard rulemaking procedures and other concerns. In response, the United States District Court for the Northern District of California ordered in August 2011 that the FHFA undertake a rulemaking process regarding PACE while maintaining its current policy.14 FHFA proposed a rule and alternatives in June 201215 and solicited public comment through an extended period ending September 13, 2012. As of the writing of this report, FHFA had not promulgated its final rule and the current policy limiting PACE remains in place. In addition, legislation introduced in Congress in 2011 to address PACE issues did not advance, leaving the future of residential PACE based on the original conception unresolved.16

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9 Lender Letter LL-2010-06, Fannie Mae, May 5, 2010; https://www.fanniemae.com/content/announcement/ll1006.pdf
16 The PACE Assessment Protection Act of 2011 (HR 2599) was introduced in July 2011 with bi-partisan support; http://www.gpo.gov/fdsys/pkg/BILLS-112hr2599ih/pdf/BILLS-112hr2599ih.pdf
PACE in Vermont

A Different Approach

Vermont originally developed its residential PACE program similar to models from other states. During the 2009 legislative session, members of the Vermont General Assembly passed Act 45, the Vermont Energy Act of 2009, which provided the basis for municipalities to create residential PACE districts in the state.\(^{17}\) In summary, Act 45’s relevant sections:

Authorize municipalities to create clean energy assessment districts to finance eligible renewable energy and energy efficiency projects undertaken by the owners of real property within the boundaries of the municipality. The creation of such a district would be subject to voter approval. Upon approval by the voters, a municipality would be able to incur indebtedness for or otherwise finance eligible projects. Only property owners who have entered into written agreements with the municipality will be subject to a special assessment. The sections require the participating municipality to follow underwriting criteria and establish other qualifying criteria to assure that property owners will be able to meet assessment payment obligations. The property owners shall repay the assessment no later than the end of the expected lifetime of the project. In the event a property subject to the assessment is transferred, all past due balances shall be paid and the requirement for future payments shall constitute a lien on the property. Before a written agreement is entered into, an analysis of project costs, energy savings and estimated carbon impacts must be performed or reviewed and approved by the energy efficiency utility. Participating owners are responsible for the costs of operating the districts. A municipality may establish a reserve fund, funded by participating property owners, for use in the event of foreclosure on an assessed property.\(^{18}\)

In light of concerns by federal regulators and secondary market lenders, Vermont decided to revise its approach by not allowing a senior PACE lien with respect to existing mortgages. As most residential PACE programs ground to a virtual halt while federal regulators and other stakeholders worked to resolve their concerns, Vermont developed a response that received approval from regulators.\(^{19}\) During the 2011 legislative session, and with concerns from FHFA in mind, members of the Vermont General Assembly passed Act 47, the Vermont Energy Act of 2011, which substantially amended the residential

\(^{17}\) See the Vermont Energy Act of 2009, Act 45; [www.leg.state.vt.us/DOCS/2010/ACTS/ACT045.PDF](http://www.leg.state.vt.us/DOCS/2010/ACTS/ACT045.PDF); and Vermont Statutes, Title 24, Municipal and County Government, Chapter 87: Special Assessments 24 V.S.A. §3261 et seq; [http://www.leg.state.vt.us/statutes/sections.cfm?Title=24&Chapter=087](http://www.leg.state.vt.us/statutes/sections.cfm?Title=24&Chapter=087)

\(^{18}\) Summary, Act 45 (H. 446) Renewable energy and energy efficiency, Sections 15e to 15k; [http://www.leg.state.vt.us/docs/2010/Acts/ACT045sum.htm](http://www.leg.state.vt.us/docs/2010/Acts/ACT045sum.htm)

\(^{19}\) FHFA provided its support to the overall approach taken by H. 155, which later became part of Act 47 of 2011, the Vermont Energy Act that amended the state’s residential PACE program; [http://pacevermont.wikispaces.com/file/view/BISHCA%20letter%20and%20FHFA%20letter%20re%20VT%20PACE%20program.pdf](http://pacevermont.wikispaces.com/file/view/BISHCA%20letter%20and%20FHFA%20letter%20re%20VT%20PACE%20program.pdf)
PACE program in the state to address concerns about PACE programs altering traditional lending priorities. The Act:

Amends existing law under which municipalities may create special assessment districts to fund energy efficiency and renewable energy improvements, including changing the name of these districts to property-assessed clean energy (PACE), limiting PACE to residential properties, making PACE liens subordinate to first mortgages, requiring that on foreclosure PACE payments are made current and that the PACE lien survives foreclosure, and establishing two tiers of reserve funding to provide security for PACE assessments.

The key element was the provision that a PACE lien shall be subordinate to all liens on the property in existence at the time the lien for the assessment is filed, and shall be subordinate to a first mortgage on the property recorded after such filing.

Upon passage of Act 47, numerous communities began moving forward with program development. On Town Meeting Day in March 2012, more than 20 communities voted to authorize PACE. As of August 2012, 34 towns had authorized PACE districts. Residential PACE programs are administered in Burlington through the Burlington Electric Department and the rest of the state through Efficiency Vermont. Throughout 2012, Efficiency Vermont and others have advanced towards enrollment, which organizers plan to initiate in 2013.

Vermont’s Residential PACE Program

According to guidance prepared by Efficiency Vermont and the Burlington Electric Department, residential dwellings, including primary residences, vacation homes, 1-4 unit owner-occupied structures, manufactured homes and condominiums, are eligible to participate in the PACE Program if property taxes are being paid on the dwelling by the owner of the dwelling. The minimum amount that can be financed through the PACE Program is $3,500. The maximum amount that can be financed is 15% of the assessed value of the property, capped at $30,000. The total amount financed by PACE plus any outstanding mortgages on the property cannot exceed 90% of the assessed value of the property. All installation costs associated with eligible energy efficiency and renewable energy measures may be financed under the PACE Program. Measure installation must be completed by or under the guidance of professional installation contractors who are properly insured and appropriately licensed or certified for

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20 See The Vermont Energy Act of 2011; Act 47; http://www.leg.state.vt.us/DOCS/2012/ACTS/ACT047.PDF; and Vermont Statutes, Title 24, Municipal and County Government, Chapter 87: Special Assessments 24 V.S.A. §3261 et seq; http://www.leg.state.vt.us/statutes/sections.cfm?Title=24&Chapter=087
21 Summary, Act 47 (H. 56) Energy; public service; renewable energy; tax; municipalities; real property; commerce and trade; consumer fraud; natural resources; air quality, Sections 18a to 18j; http://www.leg.state.vt.us/DOCS/2012/ACTS/ACT047sum.htm
22 24 V.S.A. §3255(b)
24 For more information on residential PACE in Vermont, see: http://www.efficiencyvermont.com/for_our_partners/PACE/PACE_progress.aspx; additional information on Burlington PACE can be found at: https://www.burlingtonelectric.com/page.php?pid=141&name=Burlington%20PACE%20Program
the measures being installed. As required by statute, Efficiency Vermont developed a list of eligible energy efficiency and renewable energy measures.  

**Vermont PACE Underwriting Criteria**

During the development of the Vermont PACE program in 2011, the Legislature required participating municipalities to follow underwriting criteria established by the Department of Financial Regulation (DFR) and to develop other qualifying criteria to provide an adequate level of assurance that property owners will have the ability to meet assessment payment obligations. Some of the DFR underwriting requirements include:

- A PACE assessment must be secured by a PACE Lien on Qualifying Property
- The Participant must own the Qualifying Property
- The maximum amount of any assessment shall be the lesser of $30,000; 15% of the assessed value of the property or 15% of an updated USPAP conforming market appraisal not more than 6 months old, whichever is greater; or the amount of the PACE Assessment, including the reserve percentage
- Participant’s Debt to Income ratio shall not exceed 41%
- Income includes the estimated annual energy savings as determined by Efficiency Vermont
- The Participant must certify that there are no overdue payments on mortgages or other liens secured by such property and provide either a certificate from each existing lien holder or a recent account statement to demonstrate current balances
- The holder of the first mortgage lien that requires a home loan escrow account may require the escrow account to include the PACE Assessment payment

These standards were deemed essential to protect the interests of all participants to a PACE agreement. Since the Vermont residential PACE program has not yet rolled out, the effectiveness of the underwriting criteria and the entire program remain undetermined.

**Commercial PACE**

**General Information**

Commercial and industrial property owners also stand to benefit substantially by reducing their overall energy consumption. As federal regulators dampened the market for residential PACE programs,

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26 24 V.S.A. §3262(a)

commercial PACE programs apparently have not suffered the same fate. As a result, many communities around the nation have begun commercial PACE programs.

As with residential PACE, commercial PACE financing requires a defined financing district or geographic area in which businesses that obtain PACE financing repay via an assessment linked to the commercial property. The assessment would be paid along with the property tax. Terms for commercial PACE are usually up to 20 years and at reasonable rates with finance capital coming from a variety of sources such as government-issued general obligation bonds or private lenders.

Comparison of Commercial and Residential PACE

The current model for commercial PACE employed in communities around the country differs from the residential PACE design in Vermont. Vermont’s Residential PACE program requires the PACE lien to remain below the mortgage on the property thus allowing first mortgage holder to recover their full investment prior to PACE lien holders recovering their investment. With commercial programs, lenders almost always place covenants that are more restrictive on commercial than residential mortgages. Thus, commercial property owners must receive approval from their primary mortgage lender before the placement of a PACE lien on a commercial property, which would then assume the senior position and secure low cost financing. By obtaining consent from the mortgage holder, commercial PACE financing would avoid the concerns raised by federal regulators.

The issue with residential PACE was a determination that the improvements were loans, and that the secondary market would not purchase loans with a priority PACE lien. In the case of commercial PACE, the priority lien holder must be asked to subordinate the lien position before a PACE assessment can be attached to the property. Thus, the primary lien holder has the opportunity to decide if a second position is acceptable.

In emerging commercial PACE models, the property secures the financing meaning that the property owners would not need a credit evaluation. Because of the focus on the property, however, the property owners must have their property taxes paid in full, and the property must be free of any involuntary liens, title disputes or other issues.

According to the DOE Primer on PACE, potential properties that may be attractive for Commercial PACE include mid- to large-sized properties, owners with multiple properties, office buildings less than six stories, select service hotels, small malls with central HVAC, newly-purchased distressed properties, large commercial properties and condominiums or apartment buildings greater than four units.\(^{28}\)

Below are some of the key features of commercial PACE:

- No or low upfront costs – Removes high first cost barrier to investment
- Very secure – Provides investors with repayment security through priority of tax lien; security enables lower interest rates and longer terms than typical financing vehicles

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- Minimizes holding period bias – Assessment stays with the property, not the owner
- Addresses split incentives – Property tax assessments may qualify as “pass-through expenses”
- Attractive across a wide variety of property types and sizes – Property owners have financed $5,000 to $1 million plus in improvements
- Debt of property, not person or corporation – Minimizes the need to underwrite to personal or business credit

Commercial PACE: Advantages and Disadvantages

There are a range of pros and cons associated with commercial PACE programs. As originally designed, one of the main advantages is that PACE financing can yield beneficial interest rates with long repayment periods, and positive cash flow that exceeds the monthly finance charge. This feature improves the overall financial performance for a business, and makes a property more appealing in the marketplace. As with residential PACE, another key factor is that the assessment remains with the property. Primary disadvantages include the requirement to obtain the approval of the mortgage holder and the expenses associated with setting up such programs. In addition, the scale required to achieve success may make Commercial PACE unsuited to small towns and cities.

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<th>Advantages</th>
<th>Disadvantages</th>
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<td>Allows for secure financing of comprehensive projects over a longer term that enhances paybacks</td>
<td>Legal and administrative expenses to set up</td>
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<tr>
<td>Repayment obligation passes with ownership, overcoming hesitancy to invest in longer payback measures</td>
<td>May not be appropriate for small towns and cities as scale is required to reduce costs</td>
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<tr>
<td>Taps into private capital, such as the municipal bond market</td>
<td>Mortgage holder approval required</td>
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<td>Allows governments to encourage energy efficiency and renewable energy without putting their general funds at risk</td>
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Source: US Department of Energy

and the expenses associated with setting up such programs. In addition, the scale required to achieve success may make Commercial PACE unsuited to small towns and cities.

Commercial PACE Moving Ahead

There are a growing number of commercial PACE programs under way across the United States (See Appendix for examples). Experiences from these programs may offer useful insights into program design. Current commercial PACE projects typically allow the use of a senior PACE lien provided the property owners obtain the consent or acknowledgment from the mortgage holder. They are attracting the attention of well-known capital providers such as Wells Fargo Securities, People’s United Bank,

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29 Supra, Commercial PACE Status Update, Mark Zimring, NASEO Finance Committee, April 5, 2012. It should be noted that some members of the finance community maintain different opinions regarding this perspective. Not all interests support the senior lien model or agree that PACE obligations are property assessments—not loans—that require minimal underwriting.

30 Supra, Commercial PACE Primer, U.S. Department of Energy
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Citigroup Global Markets, Clean Fund and others.\textsuperscript{31} Some legislatures are recognizing that commercial PACE serves a public purpose, and that it is legitimate to use the well-known assessment structure.\textsuperscript{32} In many cases, states are looking for opportunities to foster cooperation among municipalities and counties to streamline procedures and reduce transaction costs. Together, these actions appear to be moving commercial PACE towards a point where the interests of private capital providers align with those of governments interested in energy efficiency and renewable energy deployment.

Commercial PACE: Costs, Benefits & Feasibility

Costs and Challenges of Commercial PACE

As legislators and stakeholders consider the prospects for implementing a commercial PACE program in Vermont, it is important to take stock of current residential PACE progress as well as other energy finance programs in the state. Vermont’s residential PACE program, originally authorized in 2009 and substantially amended in 2011, is only now ready for roll out. The program has taken considerable time to initiate, and an evaluation of results is at least another year henceforth. The Legislature asked that PSD consider the costs of expanding Vermont’s property-assessed clean energy program to include commercial real estate. Since the program has not formally commenced, there are limited data on the actual costs for Vermont’s residential PACE program. However, using information provided by Efficiency Vermont, the following estimated costs can be used to compare the residential and prospective commercial PACE programs.\textsuperscript{33}

Residential PACE legislation enables up to $20 million in financing that includes a loan loss reserve of $1 million. This credit enhancement provides additional security to investors and is an important consideration given the use of subordinate liens in Vermont. With an estimated average cost of $10,000 per project, that would equate to 2,000 projects spread out to about 500 participants annually in the first four years. With a faster uptake, the $20 million in financing would decline in fewer years and participation may need to be capped at some dollar value per year, or additional funding obtained for the loan loss reserve. Participants fund the program costs through fees that will amount to approximately $120,000 in year one rising to over $300,000 per year as participation rates rise. Most of this funding will cover the cost of underwriting by a private finance institution with the balance going towards program administration.

Developing a commercial PACE component is estimated to cost approximately $50,000 to $60,000. Initial DOE funding for residential PACE was $110,000. Depending on a variety of factors, including how similar or different these two models are from one another, this amount could change substantially. As it stands, towns assume no cost for implementing PACE as stated in the legislation. In addition, given

\textsuperscript{31} For example, see: C-PACE Pre-Approved Capital Providers, Clean Energy Finance and Investment Authority; http://www.ctcleanenergy.com/YourBusiness%20Institution/CommercialPropertyAssessedCleanEnergyCPACE/CPACEPreApprovedCapitalProviders/tabid/667/Default.aspx
\textsuperscript{32} For example, see Florida Statues 2012 Title XI, Chapter 163.08 (1)(b) and (c); http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=0100-0199/0163/Sections/0163.08.html
\textsuperscript{33} Email correspondence from Efficiency Vermont, December 17, 2012
that a senior PACE lien implies a more secure product, there is little need for additional credit enhancement in the form of a loss reserve for businesses. However, this feature may be included for marginal businesses that currently lack access to commercial financing but would benefit from reduced energy costs. Credit enhancement may also be necessary at the outset to help establish the performance record and viability of commercial PACE in the state.

One key consideration regarding the creation of a commercial PACE program is the size of a given commercial market with property owners and mortgage holders amendable to participating in PACE. Given the small size of the state, it is not clear whether there would be a sufficient number and adequately sized projects to justify the program costs, to attract private lenders, or to allow re-sale of PACE finance products into secondary markets.

Below are additional challenges with Commercial PACE for consideration.

- Vermont’s residential PACE model puts the PACE lien subordinate to the mortgages on the property. The model for commercial PACE allows for a senior PACE lien once a lender provides consent. The key aspect is lien holder consent, which appears sufficient for emerging commercial PACE programs around the country. In addition, it appears that the California commercial PACE model in which commercial property owners are receiving written acknowledgement of the superior PACE lien from their mortgage lenders may also be sufficient. These two approaches to residential and commercial PACE may have different standards requiring unique program designs, potentially adding expenses or other conflicts. If this is deemed undesirable, there may be a need to rectify the programs around one common design. However, until the FHFA resolves its concerns regarding residential PACE, this may prove difficult. If the residential lien must remain subordinate per FHFA, a decision to subordinate commercial PACE liens would potentially nullify some of the cost savings attributes that would make the assessment attractive in the first place, and insert a level or regulation where arguably market conventions already provide sufficient controls. This issue requires careful consideration prior to designing a commercial PACE program in the state.

- There is still a lack of agreement on the fundamental premise regarding PACE. While advocates articulate that PACE is a property assessment, others counter that it is a loan to the property owner. For example, the costs for upgrades to a municipal water upgrade would be assessed over the population of water consumers, but only those who decide to add energy efficiency and/or renewable upgrades to their properties would be required to pay for PACE assessments. Thus, the payments for a 20-year, $30,000 retrofit or solar array remain with current owners and future buyers of the property alone, and would not be distributed across a larger population as with a water upgrade. The financial risk from this situation may be partially ameliorated via loan loss reserves that help protect the interests of participants. In either residential or commercial PACE, the property owner must have the ability to repay the balance. Hence, underwriting standards as well as analysis of project cash flow (energy savings as compared to
assessment payments) become of paramount importance and also reduce risk as they would with any residential or commercial loan.

- The decreased security of a subordinate-lien commercial PACE model may make it more difficult to repackage the financing for resale into secondary markets.
- The costs for PACE program development can be substantial.
- Commercial PACE programs would require a certain volume of projects to cover the administrative costs and remain financially viable. It is not clear whether Vermont’s communities have the scale necessary to generate sufficient project flow to attract the attention of lenders or busy municipal leaders. It may be possible to achieve the necessary scale on a statewide basis, however.

**Related Commercial Finance Activities**

In addition to residential PACE, other activities to advance energy finance are underway in the state. For example, the Public Service Department received support from the US DOE to carry out a Commercial Energy Efficiency Finance (CEEF) program. This initiative resulted from a US DOE competitive award to the PSD for a proposal developed by the Vermont Energy Investment Corporation that seeks to open private capital markets and leverage qualified tax credit bonds to stimulate commercial sector demand for energy efficiency retrofits. DOE made the award to the state in September 2011, and program participants continue to explore potential funding options. The original program model included the potential use of Qualified Energy Conservation Bonds (QECBs) as a low cost source of capital; however, challenges with QECBs, bond markets and obtaining general obligation status has meant that the program will likely pursue other sources of capital, at least at the outset. PSD anticipates that the activities continuing through 2013 will show results by the end of the year. With CEEF still under development, it is not yet clear how much need there will be to develop a PACE finance program for commercial entities at this time.

Another related set of activities includes the Public Service Department’s year-long Thermal Efficiency Task Force slated to produce a set of recommendations in 2013. The task force includes stakeholders from around the state that focused on how to achieve the building efficiency goals outlined in statute. From this group emanated a set of recommendations, including suggestions for funding and finance that can help accelerate the rate of energy efficiency modifications. One of the recommendations includes exploring in how a commercial PACE model would complement existing programs currently under design or being implemented in the state. While there is interest in commercial PACE, the group deemed it a second tier tool with potential to help meet a portion of the state’s thermal efficiency goals but in need of additional development or consideration prior to deployment.\(^{34}\)

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Recommendations

As another finance mechanism in the expanding toolkit, Commercial PACE would be consistent with the Comprehensive Energy Plan. The question is whether Vermont should press this option at this time. There are three basic options:

1) Amend the current Vermont PACE statute to provide for commercial real estate to be included in the PACE program.
2) Wait at least one year to determine how the residential PACE and other on-going commercial energy finance programs evolve, both in and out of Vermont.
3) Rely on private finance providers to develop commercial energy finance solutions on their own.

Given the variety of challenges facing PACE nationwide, the Public Service Department recommends option two allowing the Vermont residential PACE program to run at least one full year to generate operational data on costs and benefits, while encouraging evolution of other commercial energy finance programs, including through private finance. It will also provide time to examine how other states work out critical differences with regulators regarding PACE and allow the PSD Commercial Energy Efficiency Finance program to conclude. Upon reaching resolution with each of these elements, the capacity of the State to implement energy finance programs will have been demonstrated and augmented, and data will be available to evaluate the need for additional commercial energy finance options.

In the event that the State decides to move forward with inclusion of commercial PACE in the current program, below are a set of measures needed to ensure sufficient funding and adequate reserves are in place to incorporate commercial real estate into the program. The list is organized in general sequence from near- to longer-term activities.

1. Review the status of emerging commercial PACE programs around the country to determine the effect of their structure, and whether loss reserves and/or other credit enhancements are needed to protect participants. Study the default rates from similar programs and evaluate the adequacy of the loss reserves in these programs if used. If needed, loan loss reserves from the State would need to provide a minimum of 5% of the anticipated loans, on par with the amount provided to cover potential defaults in other loan pools. (On a loan pool of $20 million, the reserve fund would need to be $1 million).
2. Benchmark the actual costs and performance data associated with the roll out of the residential PACE program in 2013.
3. Review the performance of commercial loans under the CEEF program. This program includes an evaluation of the size of the potential commercial market in the state and other relevant parameters needed to determine whether current sources of finance adequately serve this market.
4. Determine the size of the commercial market necessary to support a commercial PACE finance program funded with private capital.
5. Study the options for combining the current subordinate lien residential PACE model with a senior lien commercial PACE model.

Submitted by the Public Service Department to the General Assembly of the State of Vermont

*House Committee on Commerce and Economic Development*
*Senate Committee on Economic Development, Housing and General Affairs*
*House and Senate Committees on Natural Resources and Energy*

January 15, 2013
Appendix: Commercial PACE Programs

State Programs

1) Connecticut C-PACE – The State of Connecticut passed legislation to support commercial PACE in 2012 and with program administration by the Clean Energy Finance and Investment Authority (CEFIA). This program received the support of the state’s banking community. Although the program is statewide, municipalities must opt-in through an agreement with CEFIA. There is no minimum financing, however, the program is best suited for improvements above $150,000. The C-PACE program is an open market model, meaning that finance is provided by lenders who compete for projects. Connecticut’s C-PACE currently lists eight capital providers identified through an application and screening process. Building owners can choose from the list, or identify their own capital provider. Interested property owners opting into a commercial PACE district can finance qualifying energy efficiency and clean energy improvements on their properties through an additional assessment on the property tax bill with terms up to 20 years and low interest financing. The PACE lien assumes first priority with repayment obligation automatically transferring to the next property owner. The property owner must provide evidence that the mortgage holders on the property consent to the C-PACE assessment. The initial program rollout serves commercial, industrial and multi-family properties with five or more units, but may expand to residential in the future.

2) CaliforniaFIRST – This is an open market commercial PACE program offered by the California Statewide Communities Development Authority (CSCDA), a joint powers authority sponsored by the California League of Cities and the California Association of Counties with administration by Renewable Funding out of Oakland. Participation is limited to cities and counties that have passed a resolution opting into the program. To date, more than 14 counties and 126 cities are eligible to participate, with anticipation of more than 500 eligible units of government. Property owners can finance energy and water improvements on commercial, industrial or multi-family (over 5 units) buildings. Minimum financing is $50,000 with terms up to 20 years. Like other programs in California, the PACE assessment is a senior lien, which requires the written acknowledgement from the mortgage lender.

3) Florida – The State of Florida established PACE enabling legislation in spring 2010 that included a set of program and underwriting criteria to help provide protections to participants in the program. Since then, three programs focusing on the commercial sector have launched, each designed as a statewide program available to local governments interested in PACE. Florida Green Energy Works started in July 2011 and created the Florida Green Finance Authority in April 2012. This program serves eight towns through an open market model. The Florida PACE Funding Agency was formed in June 2011 as an inter-local

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37 CaliforniaFIRST website; https://californiafirst.org, accessed 11/29/12
38 Florida Statute 163.08; http://www.leg.state.fl.us/statutes/index.cfm?App_mode=Display_Statute&URL=0100-0199/0163/Sections/0163.08.html
agreement between the City of Kissimmee and Flagler County with bonding authority up to $2 billion. This program is exploring the use of a warehouse bond model. They also received judicial validation for several key program features including bonding authority and that the non-ad valorem assessments comply with case law. Finally, Ygrene Energy Fund Florida LLC is a joint venture between Ygrene Energy Fund and EcoAsset Solutions LLC with participants along the Miami-Dade Green Corridor. All of these programs are just beginning their operations.

Municipal & County Programs

1) Palm Desert Energy Independence Program, Palm Desert, CA
Palm Desert launched the first PACE program in 2008 and re-opened its program in August 2010 after a suspension to review FHFA guidance. This program has made $5 million in loans including commercial systems for HVAC and solar PV.

2) Sonoma County Energy Independence Program, Sonoma County, CA
Sonoma County began its residential and commercial PACE program in 2009, the first countywide program in California. To date, the program has funded 57 commercial and 1703 residential project contracts valued at over $59 million, with much of the funding used by local contractors that generated or retained over 724 jobs. Most of the projects financed through this program are solar PV or cool roofs, with a few solar thermal, HVAC and other energy and water efficiency measures. Funding for this program comes from the County Treasury.

3) Boulder County Climate Smart Loan Program, Boulder County, CO
This program developed and successfully issued pooled bonds for residential and commercial issuances backed by the moral obligation of the County, enabling it to pass on low interest rates to participants. The county further reduced interest rates by using a portion of its Qualified Energy Conservation Bond (QECB) allocation. The majority of the improvements were for energy efficiency.

40 Florida PACE Funding Agency; [http://www.floridapace.gov](http://www.floridapace.gov) accessed 12/3/12; for judicial decision, see: [http://www.floridapace.gov/about/judgment](http://www.floridapace.gov/about/judgment)
41 Clean Energy Green Corridor; [http://ygrene.us/fl/green_corridor/about](http://ygrene.us/fl/green_corridor/about), accessed 12/3/12
45 Supra, Policy Brief, Property Assessed Clean Energy (PACE) Financing, Berkeley Lab. Pg. 4
46 Supra, Policy Brief, Property Assessed Clean Energy (PACE) Financing, Berkeley Lab. Pg. 5
4) **GreenFinanceSF**

The City of San Francisco’s GreenFinanceSF program offers finance to commercial property owners through its PACE program. The City has authorized up to $100 million in financing. This program recently supported the retrofit of Pier 1, home to the real estate company Prologis, Inc. The $1.6-million project includes retrofits to 1,500 lighting fixtures, a 200-kilowatt rooftop PV array and an overhaul of the HVAC system. Anticipated purchased electricity reductions will be 32 percent, reducing utility bills by $98,000 annually. Ninety percent of the retrofit was financed with a $1.4-million, 20-year, low-interest bond purchased by Clean Fund from the City of San Francisco, which participates in CaliforniaFIRST.

5) **Ann Arbor PACE Financing, Ann Arbor, MI**

The Ann Arbor commercial PACE program began in 2011 upon action by the City Council to establish a commercial PACE district as allowed under Michigan’s PACE legislation, Act 270 of 2010. This law allows local units of government to create a commercial PACE program serving both commercial and industrial property owners interested in energy efficiency and renewable energy. The Act enables capital to be raised by issuing bonds or notes, which shall not be general obligations of the local unit but shall be secured by means such as payments of assessments on the benefitted property within the district or municipal bond insurance. One key feature of the Michigan PACE Act is its clarification that bonds or notes issued under the Act “further essential public and governmental purposes.”

The City of Ann Arbor authorized a maximum annual for all financing to be provided by the City of $10 million, and plans to use approximately $393,000 of ARRA funding under the Energy Efficiency Block Grant Program to capitalize a loan loss reserve fund. The City intends to provide initial program funding with up to $4.2 million in bond funding. Interest rates are not to exceed 1% per annum above the true interest cost of the debt issued to fund the energy project and payment terms no longer than 10 years or the useful life of the installed equipment. The program supports a wide variety of technologies and energy efficiency options such as wind turbines, ground source heat pumps, small biomass thermal systems as well as the typical energy efficiency and solar PV. Amounts available range from a minimum of $10,000 to a maximum of $350,000.

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