

Achieving Proposition 39's Clean Energy Promise:

*Investing in Jobs,
Energy Efficiency, and
Renewable Resources*

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**SUPPORTING
REPORT**



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Strategies for Maximizing Benefits of the California Clean Energy Jobs Act

About the Study

California has a tremendous opportunity under Proposition 39 to increase jobs, realize significant benefits for schools, strengthen the public and private sectors, and improve environmental sustainability. This report explores strategies for the implementation of Proposition 39 funds that could maximize long-term investment in energy efficiency and clean energy, and the associated jobs and other benefits for Californians. The authors found clean energy funding from Proposition 39 could quadruple if revolving investment mechanisms are put into place. The report recommends that a portion of Proposition 39 funds be used for: (1) a revolving loan fund and associated lending programs to finance energy efficiency and clean energy projects, (2) project support and demand stimulation programs, and (3) robust accountability measures at both the program and project level to assure achievement of desired energy savings and other proposition objectives.

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I. Executive Summary

I.1 Introduction to Proposition 39

The Los Angeles Business Council commissioned the UCLA Luskin Center for Innovation to evaluate options for implementing funds from Proposition 39 – The California Clean Energy Jobs Act – passed by voters in November of 2012.

Prop 39 requires businesses operating in multiple states to calculate their California income tax liability based on the percentage of their sales in California. This tax approach is referred to as the “single sales factor,” and is expected to increase state revenues by as much as \$1.1 billion annually.

For a five-year period, half of the revenues from Prop 39 – up to a maximum of \$550 million – will be transferred annually to the Clean Energy Job Creation Fund, which will be used to fund projects that create jobs in California by improving energy efficiency and expanding renewable energy generation. The funds will be allocated between (1) schools and public facilities, (2) job training and workforce development, and (3) public-private partnerships. The proposition objectives are to:

- 1) Create good paying energy efficiency and clean energy jobs in California.
- 2) Put Californians to work repairing and updating schools and public buildings to improve their energy efficiency and make other clean energy improvement that create jobs and save energy and money.
- 3) Promote the creation of new private sector jobs improving the energy efficiency of commercial and residential buildings.
- 4) Achieve the maximum amount of job creation and energy benefits with available funds.
- 5) Supplement, complement and leverage existing energy efficiency and clean energy programs to create increased economic and energy benefits for California in coordination with the California Energy Commission and the California Public Utilities Commission.
- 6) Provide a full public accounting of all money spent and jobs and benefits achieved so the programs and projects funded pursuant to the division can be reviewed and evaluated.

California has a tremendous opportunity under Prop 39 to create quality clean-energy jobs in the state, realize significant benefits for our school children, strengthen the public and private sectors, and improve environmental sustainability.

I.2 Report Objective, Findings Summary of Recommendations

The objective of this study is to recommend how Prop 39 funds could be utilized to maximize total long-term investment in energy efficiency and clean energy projects, and maximize the associated benefits in accordance with the stated objectives of the proposition.

We propose that Prop 39 funds be used for:

- 1) A revolving loan fund and associated lending programs to finance energy efficiency and clean energy projects.
- 2) Demand stimulation and project level support programs.
- 3) Oversight and accountability measures at the program and project level.

To implement this proposal, we specifically recommend that the state should:

- 1) Budget \$50 to \$125 million a year for 5 years (10% to 25% of the total projected for the Prop 39 Clean Energy Job Creation Fund) to capitalize a new or existing revolving loan fund, which will quadruple investment and jobs compared to grants.
- 2) Establish or utilize a revolving loan fund in a state agency with a successful track record of operating a revolving fund and green bank, such as the Treasurer's Office.
- 3) Focus on using the revolving loan fund to make improvements to educational and other public facilities, but define eligibility to also include private sector buildings. The fund could support property owners qualifying for on-bill refinancing or other clean energy financing programs supported by local governments, utility ratepayer funds, and potentially AB 32 auction revenues. Leverage Prop 39 funds with these other sources of revenue to maximize benefits.
- 4) The revolving loan fund should complement grant and rebate programs, (like the California Solar Initiative and the School Facility Program's Modernization Grants) and work in conjunction with support programs involving demand stimulation and workforce training. Accountability measures should be incorporated at the program and project levels.

Why is a Revolving Loan Fund Important?

The importance of financing to enhance energy efficiency and clean energy is straightforward: even when investments in retrofits and new equipment pay off in future energy savings, the up-front expenditure is often substantial.¹ To make these investments, most building owners require financing.² Programs offering grants, rebates and low-interest loans can address this need but as will be discussed in this report, the funds for existing programs in California are depleted or otherwise limited in some way.

A clean energy bank can include all of these types of programs but its distinguishing program can be a revolving loan fund to serve as a long-term, stable lending mechanism that involves loan repayments to replenish and preserve public capital. In addition, such a fund could seek

¹ Palmer, K.; Walls, M. & Gerarden, T. (April, 2012) *Borrowing to Save Money: An Assessment of Energy-Efficiency Financing Programs*. Washington, DC: Resources for the Future. Pg 1.

² *Ibid.*

to leverage public capital with private capital, resulting in further investment and job creation potential. Thus, lending programs with sufficient capital have the potential to reach the greatest number of buildings with the deepest, most cost-effective retrofits. They are also a good complement to grant programs.

Lending programs for energy retrofits have a proven track record in California and throughout the nation, with over half of U.S. states operating an energy loan program³ and many different types of financial intermediaries existing in the energy finance marketplace.⁴ However, California programs are constrained and either need to be recapitalized to meet the needs of the public sector and/or need to be expanded to make private property owners eligible.

States across the nation are exploring a variety of next generation financing mechanisms. Epitomized by Connecticut's Clean Energy Finance and Investment Authority (CEFIA), the proposed new finance entities entail the creation by states of dedicated clean energy banks that leverage public money with private-sector funds and expertise.⁵

What is the Total Investment and Job Creation Potential?

UCLA modeled the investment and job creation potential of two main types of clean energy financing mechanisms: a revolving loan fund capitalized with only public dollars (public fund) and a fund that involves a 50-50 public-private capital split (public-private fund). Then, we compared these to a grant program. Researchers assumed that each would receive \$50 million a year for five years of Prop 39 funds and would operate for 30 years, with three loan cycles of 10 year loan terms. We estimated job creation using a 20 job years per million invested multiplier and a more conservative 11-9 job years per million invested multiplier using data from the US Bureau of Economic Analysis. (These numbers do not account for jobs that could be created when a school district or business reallocates money due to lower electricity bills).

As the following table indicates, the public revolving loan fund would quadruple total investment and job creation benefits compared to a grants program, and even more so if private capital was brought in. Allocating merely 10% of Prop 39 monies (\$50 million a year for five years) to a revolving loan fund would increase investment from \$250 million to over one billion dollars and increase job years created from approximately 5,000 to over 20,000 job years. This quadrupling for investment would be due to loan repayments replenishing and preserving Prop 39 public capital.

3 Booth, S. (2009) Revolving Loan Funds. Golden, CO: National Renewable Energy Laboratory. http://www1.eere.energy.gov/wip/solutioncenter/pdfs/booth_2009_revolving_loan_funds.pdf

4 Freehling, J. (2011) *Energy Efficiency Finance 101: Understanding the Marketplace*. An ACEDE Whitepaper. Washington DC: American Council for an Energy-Efficiency Economy.

5 Berlin, K.; Hundt, R.; Muro, M. & Saha, D. (Sept. 2012) *State Clean Energy Finance Banks: New Investment Facilities for Clean Energy Deployment*. Washington, DC: Brookings-Rockefeller Project on State and Metropolitan Investment. Pg 1.

Options, each Capitalized with \$250 Million in Public Funds	Total Invested	Job Years Created (20X Multiplier)	Jobs Created (11-9X Multiplier)
Grants Program	\$250 Million	5,000	2,750
Public Revolving Loan Fund	\$1.060 Billion	21,195	11,062
Public-Private Fund with 50-50 Investment Split	\$1.877 Billion	37,549	19,641

Recommendations for the Revolving Loan Fund

A revolving loan fund and its associated lending programs can meet the following guiding principles:

- 1) Maximize total long-term investment in energy efficiency and clean energy.
- 2) Maximize job creation.
- 3) Replenish funds.
- 4) Offer low cost financing for the borrower.
- 5) Lower energy bills for the borrower/consumer.

A revolving loan fund could (1) involve public funds or a combination of public and private capital, (2) provide financing to both the public and private sectors, and (3) complement or be integrated into existing financing programs and vehicles.

Funding source: A revolving loan fund can be capitalized with public monies (public fund) and then later incorporate private equity (public-private fund). Both types would replenish public funding via loan repayments. We recommend starting with a public fund program. Once fund is successfully distributing Prop 39 funding, the state should seek to incorporate private capital, thus leveraging to maximize job creation and the other proposition objectives.

Eligible participants and projects: Programs involving a revolving loan fund could be tailored to a variety of recipients. Thus the fund could provide financing for schools districts, universities and other public entities as well as the private sector to invest in cost-effective energy retrofits and distributed renewable energy projects. We recommend an initial focus on schools and other public facilities, while designing eligibility to also include commercial buildings in order to fully achieve the proposition objectives. In particular, financing is very limited for small businesses that could benefit from energy upgrades.

Financing vehicles: A loan fund could incorporate or complement existing financing programs and vehicles for energy projects, such as On-Bill Repayment and Property Assessed Clean Energy (PACE) programs. We recommend doing so.

For a state agency host and design structure, we recommend looking to existing and emerging lending programs in California. The following examples can serve as best practices, while also highlighting the need for Prop 39 funding to provide additional support to businesses, schools and other public and private sector entities that could benefit from energy upgrades but lack the up-front capital. These funds are either tapped out and need to be recapitalized to meet the needs of the public sector and/or expanded to meet the needs of the private sector.

I-Bank's Revolving Fund Program: The Infrastructure and State Revolving Fund (ISRF) Program within the California Infrastructure and Economic Development Bank (I-Bank) has a successful track record of providing loans for government infrastructure projects. But, the program is not tailored specifically to energy efficiency projects nor specialized in providing assistance to schools. In addition, private sector businesses are not eligible to participate.⁶

Energy Conservation Assistance Act (ECAA) Low-Interest Loan Program: As with I-Bank's fund, the California Energy Commission's ECAA Low-Interest Loan Program has experienced a zero default rate. But the program is now oversubscribed and capital constrained.⁷

The California Treasurer's Office: The Treasurer's Office has a track record of operating a green bank through their California Pollution Control Financing Authority (CPCFA) and the California Alternative Energy and Advanced Transportation Financing Authority (CAEATFA). CAEATFA is the main state bond issuer for energy related bonds and has experience supporting PACE financing and energy conservation lending. In addition to its other bond and green financing programs, the CPCFA is establishing a private-public fund and the associated California Energy/Environmental Efficiency Loan Participation Program for small businesses, which could potentially be expanded or modeled for Prop 39.⁸

Third-party Approach – Example, the Efficiency Resource Fund: Non-traditional finance mechanisms are emergings that bundle the services provided by an energy services company (ESCO) with financing referred to as energy service performance contracts (ESPCs). For example, the newly created Efficiency Resources Fund will be a national lending program jointly managed by Metrus Energy, an ESCO, and the nonprofit California Clean Energy Fund. The program will provide financing to small businesses, schools and nonprofits for energy retrofits via ESOCs. The founders aim to raise \$10 million this year, which will come far short of providing financing to the estimated four

6 Personal communication with Roma Ristia-Plan, acting executive director of the I-Bank; and California Infrastructure and I-Bank's Infrastructure State Revolving Fund (ISRF) Program. <http://www.ibank.ca.gov/>.

7 California Energy Commission. Energy Efficiency Financing. www.energy.ca.gov/efficiency/financing/

8 California Treasurer's Office. CAEATFA and CPCFA Energy Bond and Related Financing Programs overview document; personal communications with CPCFA and CAEATFA staff in December, 2012 -March, 2013; and <http://www.treasurer.ca.gov/cpcfaca/ce3lpp/summary.pdf>.

million buildings across the country that would qualify for the program.⁹

Why are Demand Stimulation and Project Support Programs Important?

In addition to limited access to low-interest loans, demand for energy efficiency improvements is limited by a lack of information about cost savings that could be realized with various levels of energy retrofits.¹⁰ Energy audits, technical assistance and outreach would increase awareness and encourage property owner participation. This could involve utilities, energy service companies, local governments, non-profits, or other third parties. Workforce training will also be important to meet increased demand for clean energy projects.

Why are Program and Project Accountability Measures Important?

It is important to establish metrics that create accountability to legislators and the public. Robust oversight measures should target both Prop 39 funded programs and projects to ensure accountability for energy savings and other proposition objectives. Incentives could involve subsidies for energy savings guarantees or a tiered interest rate structure, both tied to energy savings.

What are Other Sources of Revenue and Synergistic Opportunities?

Prop 39 funds could be integrated into, or complement, programs that will be created by local governments, AB 32 auction revenues, and utility ratepayer funds. There are opportunities for leverage to result in greater energy savings and renewable energy investments than ever before in California's history.

Summary

A revolving loan fund, along with project support programs and accountability measures, can maximize the investment, jobs, energy cost savings, and environmental benefits of Prop 39.

⁹ Cusick, D. (March 14, 2013) Finance: Calif. Group to Provide Loans for Energy Efficiency Projects in Buildings. ClimateWire.

¹⁰ The purpose of this report is not to provide a full explanation of the market barriers to energy efficiency and clean energy projects and financing. For more information see: Palmer, K.; Walls, M. & Gerarden, T. (April, 2012) *Borrowing to Save Money: An Assessment of Energy-Efficiency Financing Programs*. Washington, DC: Resources for the Future.

2. Introduction

2.1 Overview

California voters decisively passed Proposition 39 (Prop 39), the California Clean Energy Jobs Act, in November, 2012. Prop 39 closes a loophole that gives multi-state businesses an option to choose a tax liability formula that provides favorable tax treatment for businesses with property and payroll outside California. Multi-state businesses will instead calculate their California income tax liability based on the percentage of their sales in California. This tax approach is referred to as the “single sales factor.” The adoption of the single sales factor is expected to increase California state revenues by as much as \$1.1 billion per year.

Half of the revenues from Prop 39 –up to a maximum of \$550 million– will be transferred annually for the first five years to the Clean Energy Job Creation Fund. This money will be available for appropriation for the purpose of funding projects that create jobs in California improving energy efficiency and expanding clean energy generation. The proposition language states that money will be allocated between (1) schools and public facilities, (2) job training and workforce development, and (3) public-private partnerships. The proposition objectives are as follows.

- 1) Create good paying energy efficiency and clean energy jobs in California.
- 2) Put Californians to work repairing and updating schools and public buildings to improve their energy efficiency and make other clean energy improvements that create jobs and save energy and money.
- 3) Promote the creation of new private sector jobs improving the energy efficiency of commercial and residential buildings.
- 4) Achieve the maximum amount of job creation and energy benefits with available funds.
- 5) Supplement, complement and leverage existing energy efficiency and clean energy programs to create increased economic and energy benefits for California in coordination with the California Energy Commission and the California Public Utilities Commission.
- 6) Provide a full public accounting of all money spent and jobs and benefits achieved so the programs and projects funded pursuant to the division can be reviewed and evaluated.

The objective of this report is to recommend how Prop 39 funds could be utilized to maximize total long-term investment in energy efficiency and clean energy projects, and maximize the associated benefits in accordance with the stated objectives of the proposition.

2.2 Synergistic Opportunities

In addition to Prop 39, there are other large sources of revenue in the state that can be used to finance energy efficiency installations and result in greater energy savings than ever before in California's history. Prop 39 funds could be integrated or work parallel to other programs that will be created by AB 32 and ratepayer funds. Programs established with Prop 39 funds will inevitably interact with other programs.

Under AB 32, money raised from the sale of pollution permits will be spent on reducing climate change impacts and greenhouse gas emissions. Some of this money could be used on programs that promote clean energy installations.

In May, 2012, the California Public Utilities Commission authorized the California investor-owned utilities to design new energy efficiency financing products through ratepayer funding. The utilities hired Harcourt Brown & Carey to assist in forming the 2013 Pilot Program Design Details. (For recommendations about state-wide programs related to on-bill financing and on bill repayment, see *Recommendations for Energy Efficiency Finance Pilot Programs* by Harcourt Brown & Carey.) The state and local entities continue to explore ways to maximize on-bill financing, on-bill repayment, and other financing programs.

Our recommendation for a revolving loan fund could be applied for AB 32 related and ratepayer funding. As described in Section 3.3, such a fund could be used to finance PACE loans or other types of loans for clean energy installations that are supported by AB 32 funding or ratepayer funding. Similarly, our recommendation to stimulate demand for clean energy installations and to create accountability for energy savings could be applied across a range of programs.

2.3 Comparison of Financing and Support Programs

The chart on the following page provides an overview of clean energy financing mechanisms and support programs that exist or could exist in California. The chart provides a preliminary assessment of various programs to inform the broader discussion of how to maximize job creation and conserve public capital. All of the options listed have the potential to lower energy bills for the consumer.

This chart is not meant to be an exclusive list of options nor a definitive assessment. Section 3 analyzes investment and job creation potential under three main Prop 39 program options. In summary, we found that a public revolving loan fund could quadruple the investment and job creation benefits compared to a grants program. And, the benefits could be maximized if private capital was brought in via a public-private credit facility. As the following sections will explain, we recommend designating a portion of Prop 39 funds to a revolving loan fund and associated lending programs to finance energy efficiency and renewable energy projects for the public and private sectors. We also recommend project support programs and robust accountability measures. These three recommendations would support the following guiding principles: maximize investment in energy efficiency and clean energy, maximize job creation, replenish funds, and lower energy bills for the consumer.



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Evaluative Criteria (Relative to Options)

Potential to Maximize # of Clean Energy Jobs

Potential to Leverage Private Sector Capital

Potential to Conserve Public Capital

Program Category

Program Type Example

Program Category	Program Type Example	Potential to Maximize # of Clean Energy Jobs	Potential to Leverage Private Sector Capital	Potential to Conserve Public Capital
Utility Financing Programs (On Bill financing Programs)	OBR	Medium	Medium	High
	Credit Enhancement for OBR	High	High	Low
	Interest Rate Buydown for OBR	High	High	Low
	Clean Energy Credit Facility for OBR	High	High	Medium
Local Government Financing Programs	Commercial PACE Program	Medium	Medium	High
	Credit Enhancement for Commercial PACE	Medium	Medium	Low
	Interest Rate Buydown for Commercial PACE	High	Medium	Low
	Clean Energy Credit Facility for Commercial PACE	High	High	Medium
	Municipal Revolving Loan Fund	Medium	Low	High
State Financing Programs	State Revolving Loan Fund	High	Low	High
	Clean Energy Credit Facility	High	High	Medium
Private Commercial Loan Programs	Credit Enhancement for Private Commercial Loans	High	High	Low
	Interest Rate Buydown for Private Commercial Loans	High	High	Low
Installation and Financing Support Programs	Technical Assistance	High	N/A	Low
	Subsidizing Energy Audits (full or partial subsidization, could be conditioned upon a project being financed by a state program)	High	N/A	Low
	Subsidizing Measurement and Verification for Energy Savings Guarantees/ Third Party Energy Savings Insurance	High	N/A	Low
	Outreach and Marketing	High	N/A	Low
	Rebates and Incentives	Medium	N/A	Low
	Workforce Development	High	N/A	Low
	Non-loan Programs	Rebate programs that 1) enable a lease arrangement between a school or other public or nonprofit entity and a private partner(s) and 2) take advantage of other public incentives including the federal tax incentive. Ex. the California Solar Initiative's rebates to schools.	Medium	Medium
	Grants that involve aforementioned 1) and 2) conditions.	Medium	Medium	Low

3. Revolving Loan Fund

3.1 Why is a Revolving Loan Fund Important?

The preceding table summarizes the types of programs that can support investments in energy efficiency and clean energy projects in California. Of these options, it is important to distinguish lending programs from grant assistance programs. Grants do not preserve public capital nor leverage private capital. Once state public funds are distributed, they are not returned directly back to the state. A revolving loan fund, on the other hand, supports financing programs that involve loan repayments to replenish and preserve public capital. In addition, such a fund could leverage the public capital with private capital, resulting in further investment and job creation potential. Despite their differences, grant programs and financing programs are not mutually exclusive. Loan programs should complement and leverage Prop 39 funded grant programs.

UCLA modeled the investment and job creation potential under two main types of clean energy lending program options: a revolving loan fund capitalized with public funds (public fund) and a fund that involves a 50-50 public-private investment split (public-private fund). Then we compared these to a grant program. Researchers assumed that each would receive \$50 million a year for 5 years of Prop 39 funds (out of the total \$550 million a year for 5 years) and would operate for 30 years (three loan cycles of 10 year loan terms). We estimated job creation using a '20 jobs per million invested' multiplier and a more conservative '11-9 job years per million invested' multiplier using data from the US Bureau of Economic Analysis. As the following table indicates, the public fund would quadruple investment and jobs compared to a grants program, and far more than quadruple investment if private capital was brought in.

Options, each Capitalized with \$250 Million in Public Funds	Total Invested	Job Years Created (20X Multiplier)	Job Years Created (11-9X Multiplier)
Grants Program	\$250 Million	5,000	2,750
Public Revolving Loan Fund	\$1.060 Billion	21,195	11,062
Public-Private Fund with 50-50 Investment Split	\$1.877 Billion	37,549	19,641

The importance of financing to enhance energy efficiency and clean energy is straightforward: even when investments in retrofits and new equipment pay off in future energy savings, the up-front expenditure is often substantial.¹¹ To make these investments, most building owners require financing.¹² Financing programs for energy retrofits have a proven track record in California and throughout the nation. However, existing programs in California are capital constrained or need to be expanded to include more customer classes interest. Section 3.4 provides more details.

A revolving loan fund and its financing programs can meet the following guiding principles.

11 Palmer, K.; Walls, M. & Gerarden, T. (April, 2012) *Borrowing to Save Money: An Assessment of Energy-Efficiency Financing Programs*. Washington, DC: Resources for the Future. Pg 1.

12 *Ibid.*

- 1) Maximize total long-term investment in energy efficiency and clean energy.
- 2) Maximize job creation.
- 3) Replenish funds (in contrast to grants and rebates that do not involve repayment).
- 4) Offer low cost financing for the borrower.
- 5) Lower energy bills for the consumer.

3.2 Overview of Design Recommendations for a Revolving Loan Fund

The five aforementioned principles allow for flexibility in how a revolving loan fund and associated financing programs could be designed. Benefits include that the fund could (1) involve only public monies or a combination of public-private capital, (2) provide financing to a variety of recipients, and (3) complement or be integrated into existing financing programs and vehicles.

- 1) **Funding source:** A revolving loan fund could be capitalized with public funds (public fund) or with a combination of public and private capital (public-private fund). Both types would replenish public funding via loan repayments. We recommend starting with a public fund program. Once successfully distributing Proposition 39 public funds, the state could seek to incorporate private equity, thus leveraging to maximize investment benefits.
- 2) **Eligible participants and projects:** Programs involving a revolving loan fund could be tailored to a variety of recipients. Thus the fund could provide financing for schools districts, universities and other public entities as well as the private sector to invest in cost-effective energy retrofits and distributed renewable energy projects. We recommend an initial focus on schools and other public facilities, while designing eligibility to also include commercial buildings in order to fully achieve the proposition objectives. In particular, financing is very limited for small businesses that could benefit from energy upgrades.
- 3) **Financing vehicles:** A revolving fund could incorporate existing financing programs and vehicles for energy projects, such as On-Bill Repayment and Property Assessed Clean Energy (PACE) programs.

Sections 3.3 - 3.5 provide details about these options and our recommendations.

3.3 Public-Private Partnerships: Financial Vehicles

As introduced in 3.2 above, a Prop 39 revolving fund could support other financial vehicles and programs that involve public-private partnerships. The three main options include: (1) PACE programs, (2) on-bill financing programs, and (3) credit enhancement and subsidy programs for private commercial loans.

3.3.1 Commercial PACE Programs¹³

Commercial Property Assessed Clean Energy (PACE) programs are local government financing programs that provide up-front capital to property owners to install clean energy improvements on private commercial properties. The improvement may be an energy efficient, water conservation, or distributed energy project. The clean energy improvement must be permanently affixed to the property. PACE financing is only available to property owners. Renters cannot access the program directly. The financing is secured through a lien on the property. The property owner repays the financing as a property tax assessment or special tax revenue for up to 20 years. Participation in PACE programs is voluntary.

In a PACE program, a local agency might issue revenue bonds to fund all or part of its PACE program. These bonds can be purchased by a third-party lender (i.e., open market bond approach) or as an investment of the local government (i.e., self-financed). The debt service on the bonds is repaid by the local agency through the property tax assessment or special tax revenue collected from the participating property owner.

Commercial PACE programs are in a nascent stage with very few projects completed. But the low risk and low cost financing potential of PACE make it an option worth pursuing. For many cities and counties in California, the infrastructure for PACE programs is already in place. These local PACE programs and future PACE programs could benefit from accessing a centralized source of lower interest rate financing for property owners in their jurisdiction.

See the Appendix for more information about PACE.

3.3.2 On-Bill Financing Programs

On-bill financing refers to a loan made to a utility customer, such as a homeowner or a commercial building owner, to pay for energy efficiency improvements to the customer's property, with the regular monthly loan payments collected by the utility on the utility bill until the loan is repaid.¹⁴

On-bill programs can take several structures, including: (1) on-bill financing, (2) on-bill repayment, (3) on-bill repayment without shut off, and (4) line item billing.¹⁵

- 1) On-bill financing offers 0% financing to utility ratepayers to install clean energy projects. This form of financing uses utility capital and does not leverage private capital. No credit enhancement is involved.
- 2) On-bill repayment involves financing from public and private capital that is repaid through the utility bill. On-bill repayment can take two forms: (1) on-bill tariff, or (2) on-bill loan. On-bill tariffs tie loan payment to the meter. Therefore, when the

¹³ Speer, B. & Koenig, R. (July, 2010) *Property Assessed Clean Energy (PACE): Financing of Renewables and Efficiency*. Boulder, Co: National Renewable Energy Laboratory. <http://www.nrel.gov/docs/fy10osti/47097.pdf>

¹⁴ Henderson, P. (August, 2012) *On-Bill Financing: Overview and Key Considerations for Program Design*. NRDC Policy Brief. NYC, New York: Natural Resources Defense Council.

¹⁵ U.S. Department of Energy, Energy Efficiency and Renewable Energy, Solution Center. <http://www1.eere.energy.gov/wip/solutioncenter/financialproducts/onbillrepayment.html>

customer moves, the new occupant adopts the payment obligations. On-bill loans tie loan payment to the customer. If the customer moves, the balance must be paid. Public funds can be used in on-bill repayment to subsidize interest rates, create a loan loss reserve, or be used as subordinate capital. When the customer does not pay the payment, the utility can shut off energy service to the property. Partial payments are allocated proportionally between the public and private capital sources.

- 3) On-bill repayment without shut off has the same structure as regular on-bill repayment but the program does not feature utility service shut off for non-payment.
- 4) Line item billing is similar to on-bill repayment but there is no utility disconnection for failure to pay the utility bills. There is also no feature that allows for the transferability of charges from one utility meter owner to the next.

3.3.3 Credit Enhancement and Subsidy Programs for Commercial Loans

Public funds can be used to support private loans by financial institutions to property owners or consumers for clean energy installations. This can take the form of a credit enhancement or an interest-rate buydown.

Credit enhancements are used to reduce the risk associated with lending. Public funds can be used as leverage to stimulate lending from financial institutions. The public funds can be used as credit enhancement that increases accessibility to loans or to lower interest rates. The form of credit enhancement can take several approaches including: (1) a loan loss reserve, (2) loan guarantees, (3) a debt service reserve fund, and (4) subordinated/senior capital structure.¹⁶

A loan loss reserve is a pool of money that covers potential losses in case a loan is not repaid. The amount is capped as a percentage of the total loan principal. A loan guarantee is like a loan loss reserve except it covers the entire amount of the financial institution's potential losses. Loan loss insurance is also similar to a loan loss reserve except funds are not set aside to cover the losses. Instead, an insurance premium is paid to a private insurer. A debt service reserve fund is a pool of money set aside to cover delayed or defaulted payments on a debt instrument, such as a loan.

A subordinate/senior capital structure allows public and private capital to be placed into a loan. The public capital absorbs the first losses on the loan. This structure lowers the risk to the senior capital provider because the senior capital provider does not experience any losses until the subordinated capital absorbs the first losses.

Public funds can also be used to lower interest rate of private loans through interest-rate buydowns. Public funds can subsidize the interest rate offered by financial institution and create an attractive financing option for the borrower.

¹⁶ Freehling, J (2011) *Energy Efficiency Finance 101: Understanding the Marketplace*. An ACEE Whitepaper. Washington, DC: American Council for an Energy Efficient Economy.

3.4 Funding Source: Public Fund or Private-Public Fund, their Track Records, and Recommendations for Prop 39

3.4.1 Public Fund

Revolving loan funds have a proven track record, with the majority of U.S. states operating an energy related loan program.¹⁷ These funds are typically capitalized by public monies, administered by a state agency or a division therein, and provide financing to schools, universities, cities, counties, and other municipal entities.¹⁸

A key example in California is the Infrastructure State Revolving Fund (ISRF) Program of the California Infrastructure and Economic Development Bank (I-Bank) located in the Business, Transportation, and Housing Authority. Another is the California Energy Commission's Energy Conservation Assistance Act (ECAA) Low- Interest Loans Program. Both have experienced a zero default rate and due to high participation, ECCA in particular is now capital constrained. We recommend using these two examples when designing a Prop 39 fund. The following tables summarize key details of these programs.

17 Booth, S. (2009) Revolving Loan Funds. National Renewable Energy Laboratory. http://www.l.eere.energy.gov/wip/solutioncenter/pdfs/booth_2009_revolving_loan_funds.pdf

18 Council of Development Finance Authorities. Revolving Loan Funds. www.cdfa.net

California Infrastructure and Economic Development Bank (I-Bank):
Infrastructure State Revolving Fund (ISRF) Program

Source: I-Bank staff in December, 2012; and <http://www.ibank.ca.gov/>.

Duration:	Established in 1999 with \$475 million but in 2000, this amount was reduced, resulting in a net appropriations of approximately \$165 million.
How many loans made and total amount lent:	The ISRF Program has 87 loans in their portfolio, totaling \$400 million.
Current balance:	\$150 million that could be lent and \$100 million that could be issued as tax exempt bonds.
Leverage:	Tax exempt bonds are issued to leverage program. The ISRF seeks to leverage at ratio of 3 to 1. I-Bank has found that it is important to have financial advisors and tax expert advisors involved.
Eligible participants:	Any subdivision of a local government, including cities, counties, redevelopment agencies, special districts, assessment districts, joint powers authorities and non-profit corporations formed on behalf of a local government. While I-Bank currently does not have experience lending to private entities and would require a change in statute to do so, the I-Bank would have the capacity to expand its list of eligible applicants.
Eligible projects:	Infrastructure projects to be financed must be Public Development Facilities: real and personal property, structures, conveyances, equipment, thoroughfares, buildings and supporting components thereof, excluding any housing, directly related to areas specified by the State.
Interest rate:	Interest rates for the month of December 2012 are at lows of 1.83% for 20 year loans and 2.06% for 30 year loans. Interest rates are set on a monthly basis and are fixed for the life of the term but will vary by loan. The rates are subsidized at 67% of an A rated bond with similar maturity.
Average default rate:	Zero percent default rate. While there have been instances of late payments, the current pool of applicants have made all payments.
Loan term:	Loan terms of up to 30 years. Some borrowers have chosen to borrow for less. Average maturity is 27 years.
Average loan size:	Funding is available in amounts ranging from \$250,000 to \$10,000,000.

California Energy Commission: Energy Conservation Assistance Act (ECAA) Loan Interest Loan Program Source: CEC staff and www.energy.ca.gov/efficiency/financing/ .	
Duration and when established:	Received ARRA funds as part of the State Energy Program (SEP), for which ECAA is one component.
Loans made and amount lent:	Approximately 770 loans made since Oct. 2012, totaling \$270 million.
Current balance:	Nominal amount left. The program is currently oversubscribed.
Eligible participants:	Eligible borrowers include cities, counties, public care intuitions, public hospitals, public schools & colleges, and special districts. To have the program apply to commercial properties would require a change in statue.
Eligible projects:	Projects with proven energy and/or demand cost savings are eligible, provided they meet the eligibility requirements. Energy efficiency projects must be technically and economically feasible.
Interest rate:	Started as 3% interest now 1% for new projects and is fixed during loan term.
Average default rate:	No defaults.
Loan term:	Loans for energy projects must be repaid from energy cost savings within 15 years, including principal and interest.
Average loan size:	Maximum is \$3 million per allocation. No minimum loan amount.

As a notable project, the Antelope Valley Union High School District did comprehensive energy audits in eight schools and then used a \$2 million ECCA loan to install new lighting controls systems and replace HVAC equipment in those schools, saving more than \$300,000 annually. The district recovered its project investment in just 6.5 years, resulting in an eight percent return on investment.¹⁹

3.4.2 Public-Private Fund

Once the public fund is successfully distributing Proposition 39 funding, the state could seek to incorporate private equity. There are several practical models for doing so.

One key model involves a state Public Trustee partnering with and overseeing a private financial institution that would serve as a Warehouse Lender, a short term lender providing private capital, as well as from an Institutional Investor via the sale of bonds. The latter could work as follows: clean energy loan products, such as PACE assessments, could be aggregated into a diversified pool used to issue a rated bond. The rated bond could then be purchased by an Institutional Investor. The purchase of the rated bond is called the “takeout.” By using an asset structure familiar to investors, the public-private credit facility could attract significant amounts of private capital, thereby leveraging public funds to maximize job creation.

¹⁹ Gordon, K & Barba, J. (Dec. 2012) *Proposition 39: Investing in California’s Future*. San Francisco, CA: The Center for the Next Generation.

See the diagram on page 19 for details.

A number of states are exploring a variety of next generation financing mechanisms similar to the model that we highlighted and is illustrated on page 19. Epitomized by Connecticut's Clean Energy Finance and Investment Authority (CEFIA), the proposed new finance entities entail the creation by states of dedicated clean energy banks that leverage public money with private-sector funds and expertise.²⁰ CEFIA is the nation's first state-based clean energy finance bank, established in 2011. It is a quasi-public clean energy finance authority that combines several existing state clean energy and energy efficiency funds, enables the new entity to make loans, and to leverage its capital with private capital, permitting the private investment in and alongside the bank with the investors receiving a reasonable rate of return on their investments. As such, CEFIA holds out an attainable model for states to employ in constructing clean energy finance banks.²¹

The California Treasurer's Office has a relevant track record of already operating a green bank of sorts, (includes but not specific to clean energy purposes) and would be a strong option to house a Prop 39 funded revolving fund. Within the Treasurer's Office, the California Alternative Energy and Advanced Transportation Financing Authority is the main state bond issuer for energy related bonds and has experience supporting PACE financing as well as energy conservation lending.²² Similar to the model outlined above, the California Pollution Control Financing Agency is establishing a private-public fund, and the associated California Energy/Environmental Efficiency Loan Participation Program, that could potentially be expanded or modeled after for Prop 39.²³ This program aims for at least a 20-80 public-private capital split.

In a different type of model involving private capital, the newly created Efficiency Resources Fund will be a national program that will provide financing to small businesses, schools, and nonprofits for energy retrofits via energy services agreements (ESA). The fund's founders differentiate an ESA from a loan in that the ESA uses a pay-for-performance structure in which recipients pay back only the amount of energy saved. The program will be jointly managed by Metrus Energy, an energy efficiency services firm, and the nonprofit California Clean Energy Fund. The founders aim to raise \$10 million this year, which will come far short of providing financing to the established four million buildings that could qualify for the program.²⁴

Despite this recent progress, California does not have a long history of operating a relevant public-private fund. Due to this lack of precedent and the additional complexity associated with

20 Berlin, K.; Hundt, R.; Muro, M. & Saha, D. (Sept. 2012) *State Clean Energy Finance Banks: New Investment Facilities for Clean Energy Deployment*. Washington, DC: Brookings-Rockefeller Project on State and Metropolitan Investment. Pg 1.

21 Ibid.

22 California Treasurer's Office. CAEATFA and CPCFA Energy Bond and Related Financing Programs overview document, personal communications with CPCFA and CAEATFA staff in December, 2012 -March, 2013.

23 California Treasurer's office, California Pollution Control Financing Authority. California Energy/Environmental Efficiency Loan Program. <http://www.treasurer.ca.gov/cpcfafa/ce3lpp/summary.pdf>.

24 Cusick, D. (March 14, 2013) Finance: Calif. Group to Provide Loans for Energy Efficiency Projects in Buildings. ClimateWire.

public-private partnerships, we dedicate the remainder of this section to recommending how a public-private fund could be designed to overcome challenges.

3.4.2.1 Mitigating Risk and Lowering Interest Rates: Using Prop 39 Funds Before Private Capital

Regulatory restrictions and costs limit the time that private capital can sit in the warehouse. Potential Warehouse Lenders may be reluctant to put forth private capital until sufficient demand for the financial product has been demonstrated. To get a Warehouse Lender to commit the private capital portion of the credit facility, a recommended option is to have Prop 39 funds used before private capital. Once the public fund is successful, then the state could release a request for proposals (RFP) seeking a financial institutional partner(s) to function as a Warehouse Lender. Under this approach, an agreement would be made between the potential Warehouse Lender and the State. Since aggregating projects will be a crucial step in issuing a rated bond, the use of Prop 39 funds first provides an assurance to the Warehouse Lender that project volume is achieved before private capital is used in the warehouse line.

When Prop 39 funds are used first, the State can set an interest rate that will serve as an attractive option for property owners and this will help increase participation and thereby contribute to project volume for securitization purposes. As more property owners participate, the cost of running the program could be spread among property owners without causing a high cost burden. Therefore, once the credit facility starts financing projects with private capital, costs will be spread and the program can continue to offer attractive interest rates.

3.4.2.2 Mitigating Risk: Using Prop 39 Funds to Close the Funding Gap

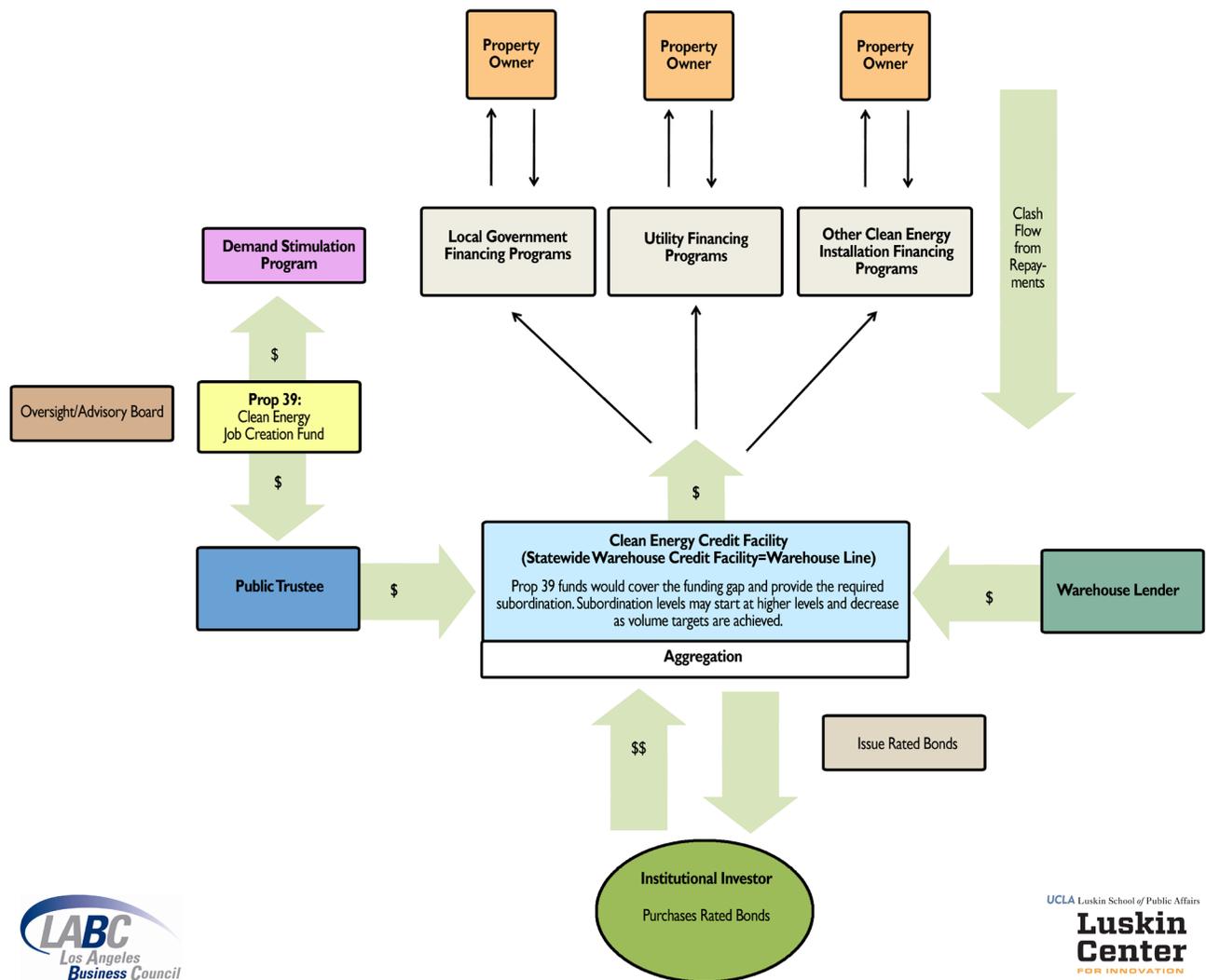
Since rated bonds backed by commercial PACE assessments or other public-private partnership financing loans have never been issued, there is uncertainty related to the pricing of the rated bond. It is possible that the loan obligations financed by the credit facility could be worth less at the time of takeout. In response to this risk, the Warehouse Lender will likely only provide the credit facility with funds that are a percentage of the origination value of the assessments and loan obligations. The percentage that the Warehouse Lender will finance is called the advance rate. The difference between the advance rate funds and the origination value of the assessments (“the funding gap”) could be covered by Prop 39 funds.

3.4.2.3 Mitigating Risk: Using Prop 39 Funds to Provide Subordination

Rating agencies assign subordination levels to each rated bond class. The same Prop 39 funds that are used to close the funding gap can be used in subordination. If a property owner fails to make a repayment for any period of time (i.e., the assessment becomes delinquent), or if the property owner is no longer able to repay loan obligation or the assessment (i.e., the borrower has defaulted), cash flow will be directed to the senior bondholder before the credit facility or the purchaser of the subordinate bond. This reduces the risk to the Institutional Investor that purchases the senior bond.

Risk to the Warehouse Lender is also reduced. If the subordination level is set at an amount equal or less than the Prop 39 funds, then the Warehouse Lender will not experience any loss because the proceeds of the senior bond will have repaid the private capital portion of the credit facility. Only the Prop 39 fund portion of the credit facility will not be replenished completely through the sale of the senior bond. The Prop 39 fund portion can be replenished through property owner repayments of the principal and interest of the PACE assessment or other clean energy financing loan. Subordination levels may start at higher levels and decrease as volume targets are achieved.

Diagram of Possible Structure for the Clean Energy Credit Facility



3.4.2.4 Process from Origination to Resale in the Institutional Bond Market

The chart below provides an overview of how the public-private fund could function. For ease of reference, we have used PACE assessments to demonstrate the process from origination to resale in the Institutional Bond Market. This process, however, can be applied to loan types other than PACE or in addition to PACE.

#	Step	Explanation
Financing Phase 1: Origination		
1	PACE Assessments Originate Throughout California	Property owners apply to PACE programs in their geographical area. Once a project is approved, the PACE program can apply for funds from the public-private fund.
Financing Phase 2: Warehouse		
2	Prop 39 Funds are Placed in a Trustee Account	A portion of Prop 39 funds are placed into a trustee account.
3	Commercial PACE Programs Request Funding from the Warehouse Credit Facility	PACE programs work with property owners interested in PACE financing. The public-private facility provides funding to finance the project.
4	The Public-private Credit Facility Pulls Money from the Trustee Account	<p>Typically, the public-private facility will only provide the warehouse with funds that are a percentage of the origination value of the assessments. The percentage that the Warehouse Lender will finance is called the advance rate. The difference between the advance rate funds and the origination value of the assessments (“the funding gap”) is covered by Prop 39 funds from the trustee account.</p> <p>Initially, the warehouse line to the PACE programs will be completely financed by Prop 39 funds. The public-private facility will pull money from the Trustee Account on a project by project basis. After a certain level of project volume is achieved, private capital could be used to finance the projects. Regulatory restrictions and costs limit the time that private capital can sit in the Warehouse Credit Facility. By using Prop 39 funds first, Warehouse Lenders do not have to commit private capital into the warehouse line until there is proven success in obtaining enough project volume.</p>

#	Step	Explanation
5	Aggregation of PACE Assessments	The PACE assessments are aggregated into a diversified pool.
6	Assessment Repayments to Warehouse Credit Facility	Property Owner repays the PACE financing as an addition to the property tax bill. The County collects the repayment and directs it to the public-private facility.
Financing Phase 3: Takeout		
7	The Warehouse Credit Facility Issues a Rated Bond	Once targeted project volume is reached, the public-private facility issues a rated bond to be purchased by Institutional Investors. Rating agencies assign subordination levels to each rated bond class. Prop 39 funds would become subordinate capital used to mitigate the risk to the senior bond investor.
8	Proceeds from the Senior Bond Sale	An Institutional Investor purchases the senior bond. Proceeds of the senior bond are used to repay the private capital portion before the Prop 39 portion of the public-private credit facility. Any proceeds of the senior bond sale that replenishes the Prop 39 Funds portion of the warehouse line can be used to finance additional projects.
9	Assessment Repayments Directed to Institutional Investor	Property Owner repays the PACE financing as an addition to the property tax bill. The County collects the assessment repayments and directs repayments to the purchaser of the senior and subordinate bond. The cash flow from the assessment repayments will pay the scheduled principal and interest on the senior bond. The public-private facility will also continue to receive assessment repayments for any PACE assessments it still holds.
Financing Phase 4: Repeating the Process		
10	Using Bond Proceeds to Finance Projects	Bond proceeds used to repay the Prop 39 funds portion of the warehouse line will be used by the public-private facility to finance other projects.
11	Repeating the Process	The public-private facility will pull money from the Trustee account on a project by project basis. Prop 39 Funds can again be used for the warehouse line before private capital. Another option is to mix Prop 39 Funds and private capital to finance projects and not use Prop 39 funds first. As awareness of the public-private facility increases and rated bonds are issued, the funding gap and subordination level required will also decrease.

3.5 Recommendations for a State Host and Structure

Prop 39 funds would be housed in a trustee fund. The proper host for the trustee fund would need to be determined. The State may want to consider the Treasurer's Office as a potential host, in part due to its relevant track record described in 3.4.2. Existing Prop 39 legislation could be amended to include authorizing legislation that expands an existing green bank to include a Prop 39 revolving loan fund.

Given our analysis, we recommend budgeting \$50 million to \$125 million a year for five years of Prop 39 funds to the revolving loan fund. The State would provide oversight over the revolving fund and its financing programs. The expertise of a financial institution, determined through a RFP, could be used when seeking to incorporate private capital to leverage the public funds. The RFP would determine when and how private capital is used in the warehouse line.

The state would also need to establish minimum eligibility requirements for financing programs, such as PACE programs, to participate. These requirements should include minimum underwriting criteria.

A rating agency, the Warehouse Lender, and the state would work together to determine subordination levels and the size of the funding gap for a public-private fund. Overtime, the funding gap and subordination level will decrease. Therefore, the need for Prop 39 funds will decrease.

Oversight over the revolving fund and its financing programs will be necessary. A citizen advisory board or other oversight board could be created. Reporting requirements and annual performance review could also be implemented to ensure accountability and transparency. Further recommendations are detailed in Section 5.

3.6 Summary of Recommendations for a Revolving Loan Fund

Prop 39 funds should be used to achieve the following guiding principles: (1) maximize total long-term investment in energy efficiency and clean energy, (2) maximize job creation, (3) replenish funds, (4) offer low cost financing for the borrower, and (5) lower energy bills for the consumer. A Revolving Fund and its associated lending programs could achieve these goals. Eligible beneficiaries could include schools, universities and other public entities as well as the private sector.

The public revolving loan fund would replenish Prop 39 funds to create a sustainable financing program that would increase total investment and associated benefits compared to a grants program. A public-private fund would further maximize investment potential by leveraging public capital with private. PACE assessments or other clean energy loans could be aggregated into a diversified pool used by the public-private credit facility to issue a rated bond. Proceeds from the senior bond sale could potentially replenish Prop 39 funds for further financing of cost saving energy retrofits to meet Prop 39 objectives.

4. Project Support and Demand Stimulation Programs

4.1 Why is Demand Stimulation and Project Support Important?

The overall success of the financing programs will be tied to the amount of demand for energy efficiency improvements and clean energy installations. A variety of factors suppress demand, including a lack of information about the payoffs from particular energy retrofit investments, associated transaction costs, and limited access to capital for investment in these projects.²⁵ The decision to pursue clean energy projects often competes with other priorities of private property owners and government property managers.

There are a variety of methods that can be used to help property owners and managers pursue cost-effective, energy saving projects. Demand stimulation steps can be divided into three different areas: (1) outreach and marketing, and (2) financial incentives, and (3) technical assistance. Outreach and marketing can make property owners aware of possible installation and financing options. Financial incentives can make clean energy projects an attractive value proposition. Technical assistance will increase the chance that those installations are successfully financed and completed.

4.2 Outreach and Education

An important component of increasing demand for clean energy projects is education. Some property owners do not understand the potential cost savings that can be achieved through specific clean energy installation options. Outreach and marketing concerning the benefits of clean energy could overcome this barrier. Education on available technology and financing programs will diminish the complexity involved in an installation.

Outreach and marketing on the benefits of clean energy installations could be performed by a number of groups. Utilities, trade associations, non-profits, local governments, commercial banks, contractors, and energy service companies could all offer outreach and marketing on clean energy installation. A centralized effort could also be implemented by the State. The State may want to leverage existing outreach programs, like the Energy Upgrade California administered by the California Energy Commission.

Possible outreach and marketing tools include workshops and seminars on clean energy installation, education of contractors on available financing options, and technical assistance.

Increased demand for clean energy installations will also increase the need of qualified personnel to respond to the demand. While outside the scope of this study, workforce training is an important component of Prop 39 and should be integrally tied to the program and measures recommended in this report.

²⁵ Palmer, K.; Walls, M. & Gerarden, T. (April, 2012) *Borrowing to Save Money: An Assessment of Energy-Efficiency Financing Programs*. Washington DC: Resources for the Future. Pg 1.

4.3 Financial Incentives

Prop 39 funds could be used to create financial incentives to increase demand for energy efficiency. Financial incentives could include: (1) lowering the cost of financing; (2) encouraging use of existing/future rebates and incentives; (3) strategies for subsidizing the cost of energy audits; (4) strategies for subsidizing the cost of energy savings guarantees; or (5) training, standards, and competition among energy service companies and contractors. Some of these strategies would be tied closely to the revolving loan fund recommended in Section 3. Others should involve energy service companies.

4.3.1 Lowering the Cost of Financing

Lowering the cost of financing could encourage property owners to install clean energy projects. Offering low interest rates and low fees to property owners for financing clean energy installations would reduce financial barriers to participation by property owners and public property managers. We recommend that the revolving loan fund proposed in Section 3 offers the lowest cost of financing possible to still cover efficient administrative needs of the revolving loan fund and its programs. A tiered interest rate structure based on energy savings could be implemented. The objective would be to encourage borrowers to invest in deep energy retrofits that maximize cost-effective energy savings and other benefits per Prop 39 objectives. We recommend that the State encourage working with a qualified energy service company that can perform a comprehensive energy audit and then design a project that will maximize cost-effective energy savings. The State should create a list of qualified, certified vendors.

4.3.2 Encouraging Use of Existing and Future Grants and Rebates

Public-private partnerships should encourage public property managers and private property owners to make use of existing rebate and incentive programs. These rebates and incentives can be used to reduce the amount financed and thus create lower monthly payments for the property owner/manager. For example, many PACE programs in California encourage, and sometimes require, property owners to apply for rebates. Some PACE programs also require the financed amount to be net of all possible rebates but if this latter requirement is eliminated, the property owner could potentially receive a positive cash flow, which might increase interest in the installation.

Moreover, Prop 39 monies will likely be used to create additional rebate or incentive programs. These rebates and incentives will increase participation in clean energy installations by reducing costs to the property owner in a relatively simple process. As previously described, however, the disadvantage is that rebates and incentives are not replenished. Meaning that if Prop 39 funds are used to support existing rebates or to create new rebate programs, those funds will be exhausted and cannot be reused for future programs. Financing programs and grant programs are not mutually exclusive. We recommend complementing grant programs with a revolving loan fund.

4.3.3 Subsidizing the Cost of Energy Audits

Energy audits are important sources of information about potential energy savings that could be achieved on one's property. Property owners/managers can then use this information to make informed investments.

To encourage property owners to conduct energy audits, Prop 39 funds could be used to subsidize the costs of an energy audit. This can take a number of forms. Prop 39 funds could be used to (1) cover the entire cost of the energy audit upfront, (2) cover a percentage of the cost of the energy audit, (3) cover a percentage of the cost of the energy audit and the rest of the cost if the project meets certain requirements, or (4) cover the entire cost of the energy audit only when the project meets certain requirements.

Covering all or a portion of the cost of an energy audit upfront will encourage property owners to conduct the energy audit. The decision to have an energy audit conducted on a commercial property must go through multiple channels of decision making and compete with other internal decisions. By subsidizing the cost, property owners will be more likely to conduct an energy audit. However, free energy audits do not necessarily lead to installation of the most cost effective clean energy projects. Energy audits differ according to level of the review and the entity that is conducting it. Energy service companies are a reluctant to rely on third party energy audits, instead choosing to conduct their own energy audit for the property owner.

We recommend partially subsidizing the upfront cost of the energy audit and then providing a larger refund or a full refund only after successful installation of a cost-effective project. The State could create guidelines that encourage property owners and managers utilizing Prop 39 funds to partner with certified energy service providers who will provide energy audits that lead to successfully installed, cost-effective energy retrofits. This can help to ensure that energy audits inform smart projects that will achieve desired energy savings. As the following describes, energy service companies offer energy savings guarantees.

4.3.4 Subsidizing the Cost of Energy Saving Guarantees

Another possible way to increase demand for clean energy projects is to encourage property owners to choose energy service companies or contractors that guarantee a certain level of energy savings, or to encourage property owners to obtain third party energy savings insurance. Property owners may be more likely to install a clean energy project when there is a guarantee that the property will experience energy cost savings. This is also important for accountability to Prop 39 objectives.

Property owners currently pay a premium for contracts that include "guaranteed savings" provisions. This premium covers the cost of monitoring, measurement and verification after installation. In exchange, the energy service company guarantees a certain level of energy savings. If that level of energy savings is not achieved, the energy service company will pay the difference. The length of the guarantee is determined between the property owner and the energy service company.

Prop 39 funds could be used to cover the cost of the first year of measurement and verification of an energy savings guarantee. This reduces the cost to the property owner who wishes to participate in an energy savings guarantee. It also provides accountability to state financing programs by guaranteeing a level of energy savings.

Steps will need to be taken to target property owners who financially cannot participate in a guaranteed savings agreement without some sort of subsidy. Steps will also need to be taken to target property owners that are not aware of the energy savings guarantee and property owners that would not be willing to install a project without one.

4.3.5 Training, Standards, and Competition Among Contractors and Energy Service Companies to Drive Demand

Currently, clean energy projects are installed by any contractor that meets minimum requirements set by the financing program, local governments, and the State. More stringent requirements could be established under Prop 39 programs to ensure accountability to the proposition's objectives. This could take several forms. A short list of contractors could be created for a geographical area based on specific criteria. The list would be reviewed and updated periodically. Competition among contracts could be used to spur program participation.

An eligible, pre-qualified contractor list could give preference to contractors that participate in training programs. Standards could be established to provide training guidelines to contractors. Prop 39 funds could be used to establish job training programs to increase successful clean energy installations.

Standards, training programs, and an eligibility list would create accountability and an assurance that contractors are qualified. To stay on the list, contractors will be motivated to install clean energy projects and to participate in training programs. By creating competition, the contractors will be motivated to use their own funds to contact property owners and stimulate demand.

4.4 Technical Assistance

Technical assistance refers to support given to property owners, contractors, and other interested parties from the stage of reviewing installation options to the stages of financing and then completing the project. Technical assistance can refer to energy audits and assessments that help the borrower determine the type of project that should be installed. It can also refer to materials, forms, and other financial support to help assist borrowers through the financing process, obtain a loan, get mortgage lender approval for a project, or other financing steps. Technical assistance can be provided by various parties. These parties include the designated State agency or agencies, partnering local governments, financial institutions, or various other third parties.

4.5 Summary of Recommendations: Demand Stimulation and Project Support for Energy Efficiency and Clean Energy Installations

Property owners do not decide to purchase clean energy installations merely because of financing options. Instead, financing is a mechanism to achieve the decision to install clean energy projects. Interest must first exist for the property owner to pursue an energy retrofit or clean energy installation.

Currently, demand is limited by a lack of information about cost savings that could be realized with various levels of energy retrofits, as well as limited access to capital for investment in these projects. Energy audits, technical assistance and outreach would increase awareness and encourage property owner participation. Outreach could be conducted by utilities, energy service companies, local governments, non-profits, or other third parties. Incentives, such as subsidizing the costs of audits and linking it to energy savings guarantees, should be offered in addition to the financing programs described in Section 3. Workforce training will also be important to meet increased demand for clean energy installations.

5. Accountability Measures

5.1 Why is Program Oversight Important?

When public funds are used, there must be program oversight. Oversight of Prop 39 funded programs should involve quantifying progress toward meeting the proposition objectives. The level of oversight needed will depend on the complexity of the program established, but there are three key features that could be applied. To achieve transparency and accountability, the programs should require: (1) reporting requirements; (2) annual performance review by legislative body or agency; and (3) a clear chain of command/structure that includes oversight committees. These three features promote the sharing of information and accountability to meeting the proposition objectives.

5.2 Why is Project Accountability Important?

Oversight at the project level is important to document energy cost savings. As described in Section 4, job training, eligibility requirements for program participants and projects, and standards for contractors could assure cost-effective projects that maximize benefits. Incentives to achieve accountability for energy savings can also take the forms of (1) a subsidy for energy savings guarantees, or (2) tiered interest rate structure based on energy savings.

5.2.1 Energy Savings Guarantees

As described in Section 4, Prop 39 funds could be used to cover the cost of the first year of measurement and verification of an energy savings guarantee. Guaranteed energy cost savings provide reassurances to property owners about the value of their investment and also provide accountability to the State in meeting Prop 39 objectives.

Property owners usually pay a premium for contracts that included “guaranteed savings” provisions. This premium covers the cost of measurement and verification, and monitoring after installation. In exchange, the energy service company guarantees lower energy bills. If that level of energy savings is not achieved, the energy service company will pay the difference. The length of the guarantee is determined between the property owner and the energy service company. Larger investments may warrant a longer guarantee.

5.2.2 Tiered Interest Rate Based on Energy Savings

Prop 39 funds could be used to offer incentives to property owners or contractors participating in a PACE program or other financing program to achieve a certain level of energy savings. The financing program, such as a public-private credit facility, could offer a tiered interest rate structure based on energy savings. This lower interest rate creates a market signal for the borrower to install a project with deeper energy savings potential. The higher the energy savings capacity the lower the interest rate for the financing.

Since property owners would be motivated to achieve a certain level of savings to get the lower

interest rate, property owners would be incentivized to strategic, deep retrofits. There will be accountability for energy savings, since participating properties will need to be monitored and verified.

A disadvantage is that funds for this and other incentive program will eventually be exhausted unless tied to a sustainable financing program.

5.3 Summary of Recommendation: Accountability

Oversight measures should exist at both the program and project to establish accountability for energy savings and other proposition objectives. Program oversight can take various forms, such as reporting requirements, performance reviews, and a clear chain of command that includes advisory committees and other structures. Project accountability measures could include energy savings guarantees and a tiered interest rate structure based on energy savings.

6. Conclusion

California has a tremendous opportunity under Proposition 39 to increase jobs, realize significant benefits for school children, strengthen the public and private sectors, and improve environmental sustainability.

We propose that Prop 39 funds be used for (1) a revolving loan fund with lending programs for energy efficiency and clean energy installations (2) demand stimulation and project support programs, and (3) program and project level accountability measures. A revolving loan fund could maximize investment in energy efficiency and clean energy installations and maximize associated job creation by replenishing public funding, offering low-cost financing that stimulates demand in cost-effective energy retrofits, and creating energy savings for schools and other consumers. In total, the strategies in this report would help to fully realize the objectives of Proposition 39, the California Clean Energy Jobs Act.

We recommend the following next steps to the State.

- 1) Budget \$50 to \$125 million a year for 5 years (10% to 25% of Prop 39 monies) to capitalize a new or existing revolving loan fund, which will quadruple investment and jobs compared to grants.
- 2) Establish or utilize a revolving loan fund in a state agency with a successful track record of operating a revolving fund and green bank, such as the Treasurer's Office.
- 3) Focus on using the revolving loan fund to make improvements to educational and other public facilities, but define eligibility to also include private sector buildings. The fund could support property owners qualifying for On-Bill Refinancing or other clean energy financing programs supported by local governments, utility ratepayer funds, and potentially AB 32 auction revenues. Leverage Prop 39 funds with these other sources of revenue to maximize benefits.
- 4) The revolving loan fund should complement grant and rebate programs, (like the California Solar Initiative, the Energy Conservation Assistance Act's Low Interest Loan Program, and the School Facility Program's Modernization Grants) and work in conjunction with support programs involving demand stimulation and workforce training. Accountability measures should be incorporated at the program and project levels to ensure that Prop 39 performance metrics are monitored and the promise of Prop 39 is fulfilled.

7. Methodology

In making this report, we reviewed the on-line literature on energy efficiency financing programs. Telephone conferences were also chosen as a primary method of collecting information. We contacted various players involved in clean energy financing programs. We would like to thank the following people for their insight and time:

- 1) Matthew Brown, Principal, Harcourt Brown & Carey Energy & Finance
- 2) Richard Chien, PACE Program Manager at City and County of San Francisco
- 3) Howard Choy, General Manager, County Office of Sustainability, Internal Service Department, Los Angeles County
- 4) Roma Cristia-Plan, Acting Executive Director, California Infrastructure and Economic Development Bank (I-Bank).
- 5) Cisco DeVries, President and CEO, Renewable Funding
- 6) David Gabrielson, Executive Director, PACENow
- 7) Matt Golden, Principal, efficiency.org
- 8) Kate Gordon, Vice President, The Center for the Next Generation
- 9) James Hamill, Program Manager, California Statewide Communities Development Authority
- 10) Craig Hill, External Strategic Advisor, Clean Fund LLC.
- 11) David Hodgins, President and CEO, Susteno Group, Los Angeles County
- 12) David Jacot, Director of Energy Efficiency, Los Angeles Department of Water and Power
- 13) Chris Lynch, Attorney, Jones Hall
- 14) Charles K. McGinnis, U.S. Director, Commercial Energy Solutions, Building Efficiency, Johnson Controls Inc.
- 15) Robert Oglesby, Executive Director, California Energy Commission
- 16) Michael Paparian, Executive Director, California Pollution Control Financing Authority, California State Treasurer's Office
- 17) Bettina Redway, Deputy Treasurer, California State Treasurer's Office
- 18) Mahesh Shah, CEO, Figtree Energy Resource Company
- 19) Frank Spasaro, Manager of Energy Efficiency Partnerships, Southern California Gas

Company

20) Tom Steyer, Founding Director, The Center for the Next Generation

21) Susie Strife, Sustainability Coordinator, Boulder County

22) Gillian A. Wright, Director of Customer Programs and Assistance, Southern California Gas Company

8. Appendix

8.1 Why Does this Appendix Focus on PACE?

We recommend that Prop 39 funds be used to assist PACE programs but by doing so establish systems that would also benefit other energy efficiency (EE) and clean, distributed energy (DE) financing efforts in California. The reason for addressing PACE is three-fold:

- 1) **The promise of PACE:** PACE would allow for a system attractive to project lenders and investors to facilitate the necessary low-cost, private capital deep enough to maximize energy efficiency and clean energy projects, and the associated jobs. In this way, public funding would be leveraged as a good investment. The reason why PACE has significant potential to maximize EE and DE projects and associated job creation is because a senior lien is placed on the property. Because of the senior lien, risk to the Project Lenders for non-payment is lower than alternative programs. This can create a low interest rate for property owners wanting to lower their energy bills and install clean energy projects
- 2) **Prop 39 could help overcome challenges to PACE start-up and harness PACE's full potential:** PACE offers the greatest potential to harness the full potential for energy efficiency and clean energy projects. Participation for other private-public partnerships, such as on-bill repayment, may be easier to attain but the potential for private capital investment is lower overall than with a secure financing option like that found in PACE programs. Prop 39 provides a tremendous opportunity to help get over the challenges to high project volume, most pronounced in the start-up phase of a PACE program.
- 3) **Existing PACE programs will complement rather than duplicate new efforts involving other types of financing instruments (beyond PACE):** Support for On-Bill Repayment is increasing among utilities. On-Bill Repayment might be easier to establish state-wide, with a shorter term around time to get projects going in the short-term.²⁶ However, On-Bill Repayment is not as secure as PACE financing, therefore it does not have the same potential as PACE to maximize investments in energy efficiency and clean energy projects over the long-term. While PACE financing is secured through a senior tax lien on the property, with On-Bill Repayment, failure to repay the loan can result in utility service shut-off. Since utilities are reluctant to shut off service, lenders will consider the financing unsecured.

Regardless, On-Bill Repayment programs may soon be financed by another source of revenue. On May 10, 2012, the California Public Utilities Commission authorized the California investor-owned utilities to design new energy efficiency financing products

²⁶ Caveat that not all Municipal Owned-Utilities have the capacity to support On-Bill Repayment. Many utility's billing systems are antiquated. There are internal process issues with handling a large number of entries which cause capacity constraints for On-Bill Repayment.

through ratepayer funds. The Utilities hired Harcourt Brown & Carey to assist in forming 2013 Pilot Program Design Details.²⁷

One of the proposals that has been strongly encouraged in *Recommendations for Energy Efficiency Finance Pilot Programs*, by Harcourt Brown & Carey,²⁸ is On-Bill Repayment.

Since ratepayer funds will be potentially utilized for On-Bill Repayment, Prop 39 funds can be used to support other financing programs that do not face the same constraints as On-Bill Repayment.

PACE programs are in a nascent stage with very few projects completed.²⁹ But the low risk and low cost financing potential of PACE make it an option worth pursuing. For many cities and counties in California, the infrastructure for PACE programs is already in place. These local PACE programs and future PACE programs could benefit from accessing a centralized source of lower interest rate financing for property owners in their jurisdiction.

We recommend that Prop 39 funds be used to assist PACE programs in getting over the challenges to realize full potential. We also recommend three main uses of the funding to overcome these challenges. The prioritized strategies would benefit existing and new PACE programs throughout California. It could also complement and align with other public financing programs, such as future efforts by the PUC.

8.2 Overview of Commercial PACE Programs

8.2.1 What is PACE?

Commercial Property Assessed Clean Energy (PACE) programs are local government financing programs that provide upfront capital to property owners to install clean energy improvements on private commercial properties. The improvement may be an energy efficient, water conservation, or distributed energy project. But the clean energy improvement must be permanently affixed to the property. The PACE financing is only available to property owners. Renters cannot access the program directly. The financing is secured through a lien on the property. The property owner repays the financing as a property tax assessment or special tax revenue for up to 20 years. Participation in PACE programs is voluntary.

In a PACE program, a local agency might issue revenue bonds to fund all or part of its PACE program. These bonds can be purchased by a third-party lender (“Project lender”) (i.e., open market bond) or as an investment of the local government (i.e., self-financed). The debt service

²⁷ See Harcourt Brown & Carey, *California Energy Financing Project*, <http://www.caleefinance.com/> (last visited Oct. 23, 2012).

²⁸ *Id.*

²⁹ Open market/owner arranged PACE programs are just beginning in California. CaliforniaFIRST is a Statewide PACE program that launched in September 2012. Los Angeles’s commercial program has not yet approved a project and GreenFinanceSF has approved one project. Sonoma County’s Energy Independence Program has had a much larger participation rate. However, Sonoma County’s program is self-financed and has not yet obtained significant Project Lender participation.

on the bonds is repaid by the local agency through the property tax assessment or special tax revenue collected from the participating property owner.

8.2.2 Benefits of PACE Financing

There are several benefits to PACE financing. These benefits include:

- 1) **Longer repayment period.** The longer term allows property owners to match payments with energy savings.
- 2) **Repayment transfers with ownership.** Property owners can invest in energy efficiency or renewable energy without worrying about repayment if they sell their property.
- 3) **Low interest rates.** Low interest rate may be available due to senior-position financing, or the lower interest on municipal bonds and other sources of funding.
- 4) **Information from a trusted source.** Local governments are generally viewed as an objective source of information.
- 5) **Lending is not based on personal credit worthiness.** In a PACE program, the local government generally looks at whether the property has any notices of default on a mortgage or any other financial obligation. The local government also looks at whether there are any tax liens as a result of failure to pay taxes. The local government does not look at the personal credit worthiness of the property owner.
- 6) **Direct support for constituents' actions.** Local governments can support building improvements within their own community.
- 7) **Job creation.** PACE stimulates the local economy and creates jobs as the solar energy and energy efficiency sectors grow.
- 8) **Safe and efficient security mechanism.** Risk is minimal. Due to the senior lien on the property, assessments are repaid before private liens in the case of foreclosure.

8.2.3 Status of PACE Programs In the United States

Property Assessed Clean Energy (PACE) financing has the potential of offering property owners a secured form of financing with low interest rates and long repayment periods. On July 6, 2010, the Federal Housing Finance Agency issued a statement indicating that PACE loans pose risk to lenders, servicers and mortgage securities investors. The FHFA directed Fannie Mae and Freddie Mac to take actions that would ensure safe operations of PACE programs. As a result, residential PACE programs froze throughout the country. The FHFA instructions applied only to residential PACE programs. This Appendix will examine commercial PACE programs.

8.2.4 Commercial PACE Programs in California

A city, county, municipal utility district, and joint powers authority can establish a PACE program in California.³⁰ PACE programs in California can be formed in one of two ways. Under the AB 811 financing model, the local government enter into a contractual assessment agreement with the property owner as a way to pay for energy efficiency and renewable energy products which are permanently attached to property.³¹

The second method of formation is through Mello-Roos Community Facilities Act of 1982. Mello-Roos Community Facilities Act of 1982 enables PACE financing through the creation of special tax financing districts. Property owners choose to have their properties “opt-in” to the Special Tax District and to pay special taxes. Under SB 555, the Mello-Roos approach to PACE program formation is available to any local agency in California.³²

8.2.4.1 Eligible Installations

In 2009, the State of California approved Assembly Bill 474, which added water efficiency improvements as an eligible product. Eligible products in California include: energy efficient, water conservation, or distributed energy projects. PACE programs in California can also finance the installation of distributed generation renewable energy sources pursuant to a power purchase agreement or lease. A power purchase agreement or a lease is an agreement between an energy service company and a third party developer for the third party developer to install, operate, and own the distributed generation renewable energy source on the property.³³ The property owner agrees to purchase the power generated by the system.³⁴

8.3 Possible Financing Mechanisms for PACE Programs.

There are several options available to local governments to finance a PACE program. The three basic structures of a PACE programs are described in more detail below. While grant funds could be used to fund PACE programs, the root of PACE financing in California is the issuance of bonds. The bonds may be purchased by a third party investor or may be purchased as an investment of the local government. There are three general approaches to the structure of a PACE program: (1) Self-financed/Warehoused; (2) Pooled Bond; and (3) Open Market (also known as Owner-Arranged).

30 For the purpose of financing the installation of water efficiency improvements, community services district, sanitary district, sanitation district, or water district can also set up a PACE program under AB 811. For the purpose of financing the installation of distributed generation renewable energy sources or energy efficiency improvements, an irrigation district, or public utility district that owns and operates an electric distribution system can set also up a PACE program. CAL. STS. & HIGH. CODE § 5898.20; AB 474, 2009 Leg., 10 Reg. Sess. (Cal. 2009), available at http://www.leginfo.ca.gov/pub/09-10/bill/sen/sb_0251-0300/sb_279_bill_20090706_amended_asm_v94.pdf.

31 CAL. STS. & HIGH. CODE § 5898.20; AB 811, 2008 Leg., (Cal. 2008), available at http://www.energy.ca.gov/recovery/documents/ab_811_bill_20080721_chaptered.pdf.

32 CAL. CONST. art XI, § 5; CAL. GOVT CODE § 53311-53368.3; see also SB 555, 2011 Leg., (Cal. 2011), available at http://leginfo.ca.gov/pub/11-12/bill/sen/sb_0551-0600/sb_555_bill_20111006_chaptered.pdf

33 U.S. EPA, *Solar Power Purchase Agreements*, GREEN POWER PARTNERSHIPS, <http://www.epa.gov/greenpower/buygp/solarpower.htm> (last updated May 24, 2012)

34 *Id.*; *On-Site Renewable Power Purchase Agreements*, U.S. DEP'T. OF ENERGY, http://www1.eere.energy.gov/femp/financing/power_purchase_agreements.html (last updated Sept. 11, 2012),

8.3.1 Self-financed/Warehoused Approach to PACE Programs

Under a Self-financed/Warehoused PACE program, the local government has money to finance the projects and program from a general fund or line of credit. Under this approach, construction for an approved project can begin immediately. There is no waiting period to find a project lender or to aggregate projects. When the project is completed, a property assessment is placed and the assessments are repaid in several payments as an addition to the property tax bill.³⁵

When the source of funding for the PACE program is a line of credit, a reservation is placed for the project amount against the total line of credit, thus reducing the total remaining line of credit available. Bonds or other securities are issued in order to replenish the line of credit.

Alternatively, the City or County can fund PACE programs through their reserves or investment portfolios. A local agency might issue revenue bonds to fund all or part of its PACE program. In such case, the local agency pledges assessment or special tax revenues collected from the participating property owners to pay debt service on the bonds. The bond is purchased as an investment of the local government. In contrast to the pooled bond approach, there is no waiting period for property owners while the bond is being issued.³⁶

For example, Sonoma County uses its own investment portfolio to fund the Sonoma County Energy Interdependence program. The Sonoma County Financing Authority, a joint powers agency, issues bonds which are purchased by the County Treasury Pooled Investment Fund, the Sonoma County Water Agency, or a third party investor. The Sonoma County Financing Authority then loans the bond proceeds to the County.³⁷

Sonoma County makes disbursement to property owners from the proceeds of bonds or from a revolving fund that provides cash on hand to make a disbursement on any day.³⁸ Bond proceeds are also used to repay the revolving fund for any disbursement made during the month prior to the bond issuance.³⁹ The County repays the loan with assessment revenues, and the Sonoma County Financing Authority uses the loan payments from the County to make debt service payments on the related bond. Sonoma County also uses the assessment revenues to fund the reserve account and program expense account.

35 U.S. DEPT. OF ENERGY, CLEAN ENERGY FINANCE GUIDE 3D, CHAPTER 13- COMMERCIAL PROPERTY-ASSESSED CLEAN ENERGY (PACE) FINANCING (Dec. 9, 2010), <http://pacenow.org/wp-content/uploads/2012/07/Chapter-13-Commercial-PACE.pdf>; SONOMA COUNTY, PROPERTY ASSESSED CLEAN ENERGY (PACE) REPLICATION GUIDANCE PACKAGED FOR LOCAL GOVERNMENTS 57-58 (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

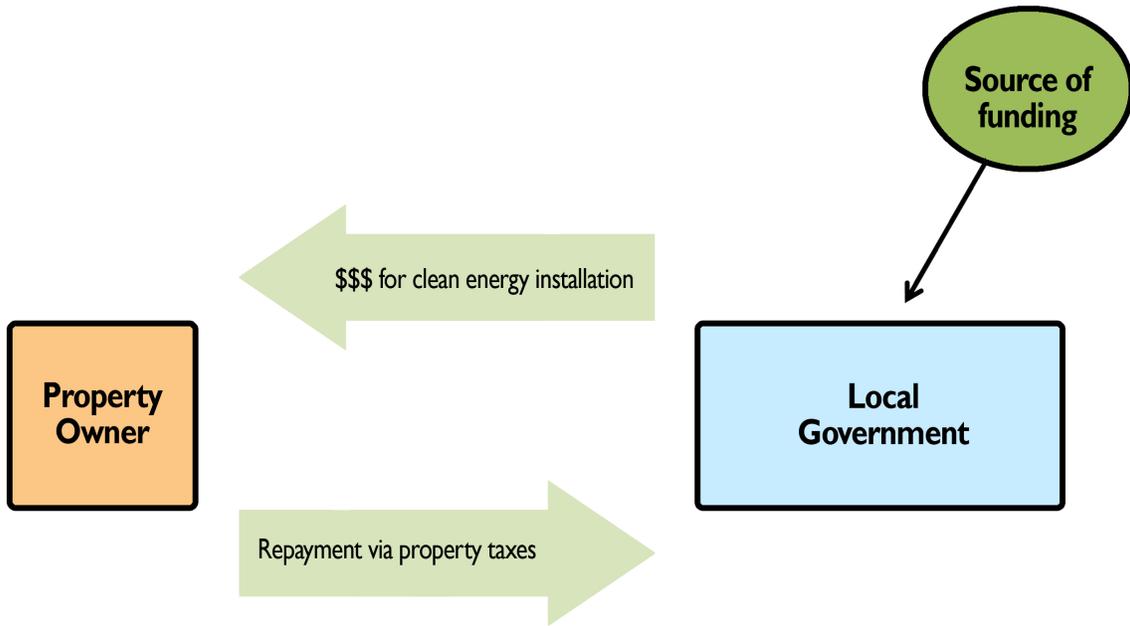
36 *Id.*

37 SONOMA COUNTY, PROPERTY ASSESSED CLEAN ENERGY (PACE) REPLICATION GUIDANCE PACKAGED FOR LOCAL GOVERNMENTS 51 (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

38 *Id.*

39 *Id.*

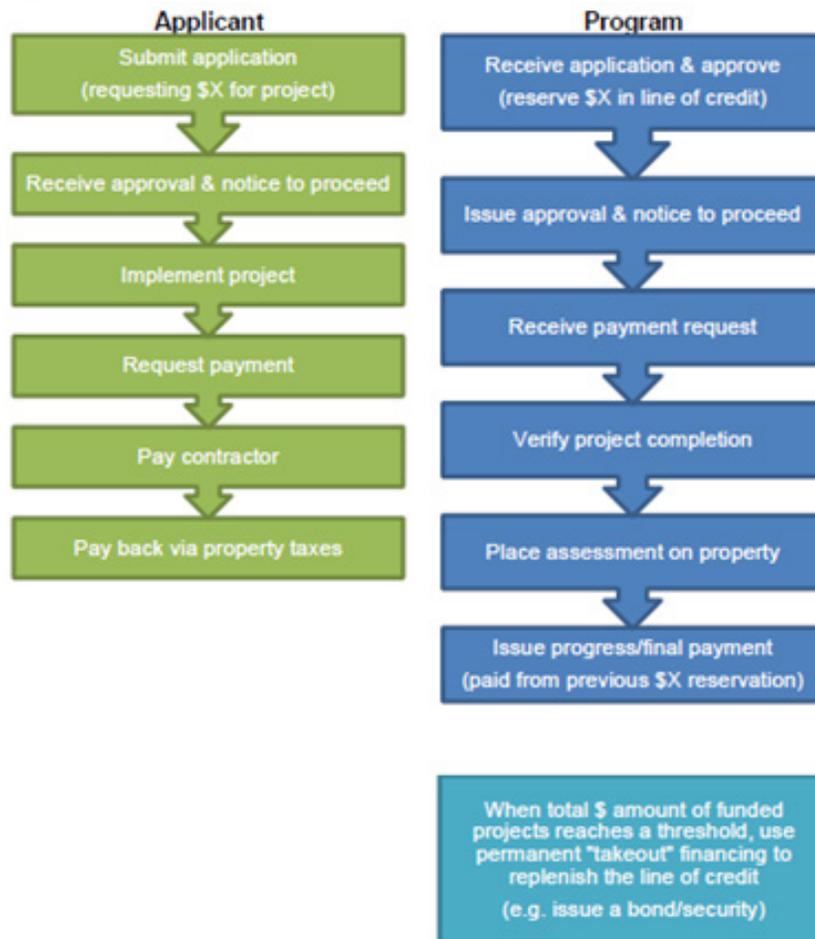
8.3.2 Basic Diagram of the Process for Self-Financed/Warehoused PACE Programs



8.3.2.1 Warehoused Approach Process Flow Chart

From: U.S. Dept of Energy, Clean Energy Financing Guide, Draft, Dec. 9 2010, <http://pacenow.org/wp-content/uploads/2012/07/Chapter-13-Commercial-PACE.pdf>.

Figure 1 – Warehoused Approach Process Flow



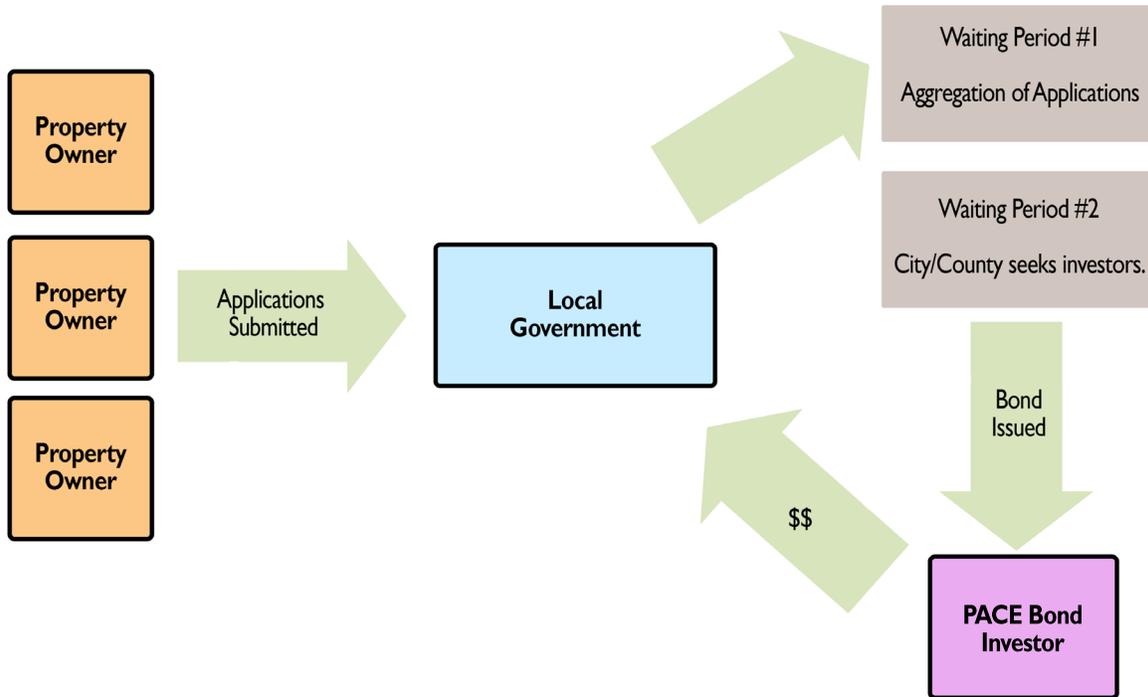
8.3.3 Pooled Bond Approach to PACE Programs

Under the pooled bond approach, approved projects cannot be implemented immediately. Projects are aggregated. When a sufficient pool of requested project funding has been assembled, the local government sells a bond to an investor to cover and fund all of the included projects. It is only after the bond is issued that the covered projects are given notice to proceed with implementation because it is only then that funding can be guaranteed. When the project is completed, a property assessment is placed and the assessments are repaid in several payments as an addition to the property tax bill. Boulder County's Commercial ClimateSmart Loan

Program used the Pooled Bond Approach.⁴⁰

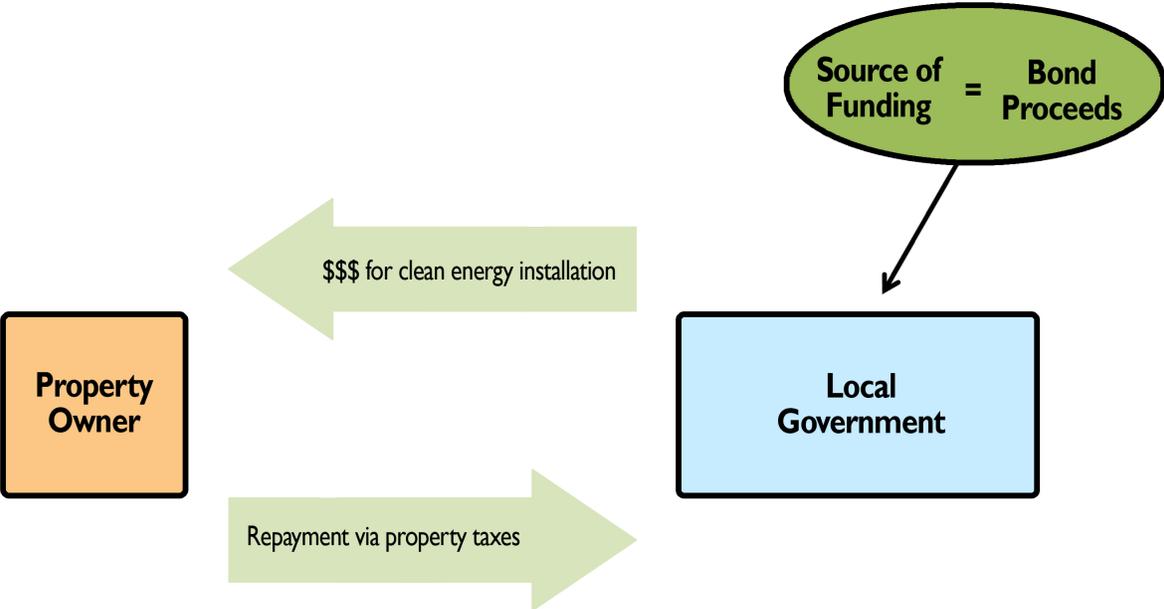
8.3.3.1 Basic Diagram of the Process of Pooled Bond Approach

First Phase:



40 U.S. DEPT. OF ENERGY, CLEAN ENERGY FINANCE GUIDE 3D, CHAPTER 13- COMMERCIAL PROPERTY-ASSESSED CLEAN ENERGY (PACE) FINANCING (Dec. 9, 2010), <http://pacenow.org/wp-content/uploads/2012/07/Chapter-13-Commercial-PACE.pdf>; SONOMA COUNTY, PROPERTY ASSESSED CLEAN ENERGY (PACE) REPLICATION GUIDANCE PACKAGED FOR LOCAL GOVERNMENTS 57-58 (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

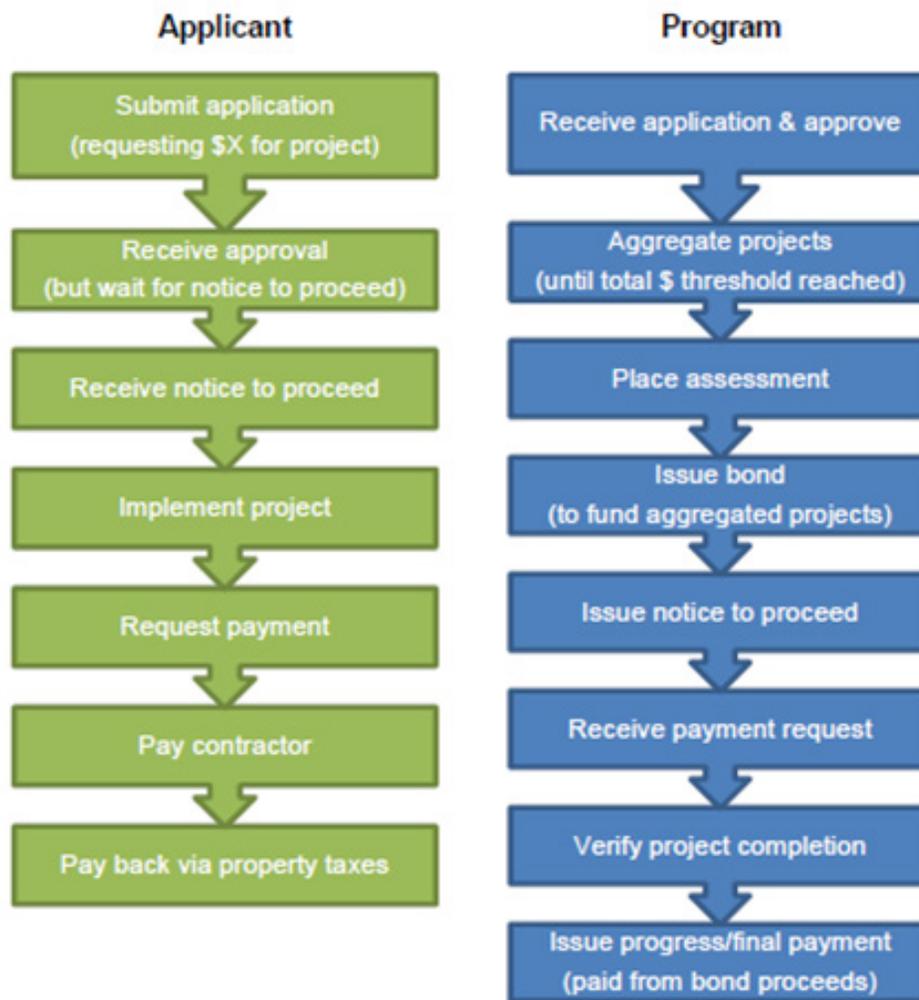
Second Phase:



8.3.3.2 Pooled Bond Process Flow Chart

From: U.S. Dept of Energy, Clean Energy Financing Guide, Draft, Dec. 9 2010, <http://pacenow.org/wp-content/uploads/2012/07/Chapter-13-Commercial-PACE.pdf>.

Figure 2 – Pooled Bond Process Flow

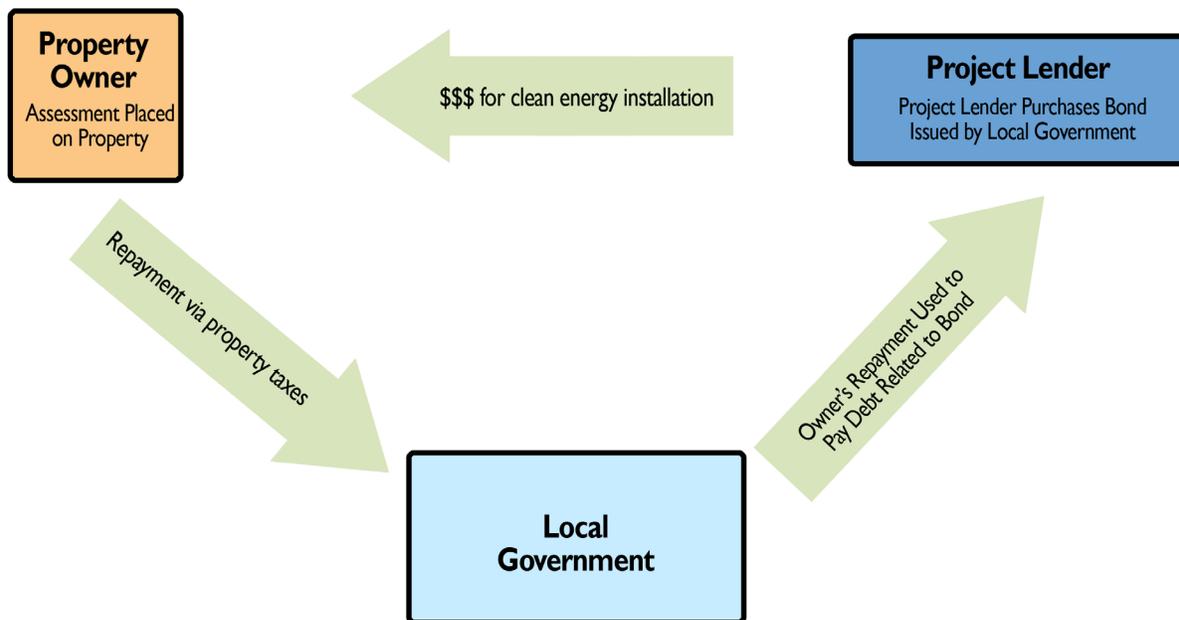


8.3.4 Open Market /Owner-Arranged Approach to PACE Programs

In a open market owner-arranged PACE Program, the property owner and a Project Lender negotiate terms for a loan. The property owner can arrange the project financing with the Project Lender, or the local government can play a more active role in arranging and finding Project Lenders. The Project Lender agrees to accept the PACE securitization and payback framework. A bond is issued by the local government and purchased by the Project Lender. This bond mirrors the terms of the agreement negotiated by the Property Owner and the Project Lender. The local government and the property owner enter into an assessment agreement.

The assessments are repaid by the property owner in several payments as an addition to the property tax bill. The PACE assessment repayments from the property are used to pay debt service on the bond. This structure results in a project specific financing option.⁴¹

8.3.4.1 Basic Diagram of the Process of Owner-Arranged PACE Programs

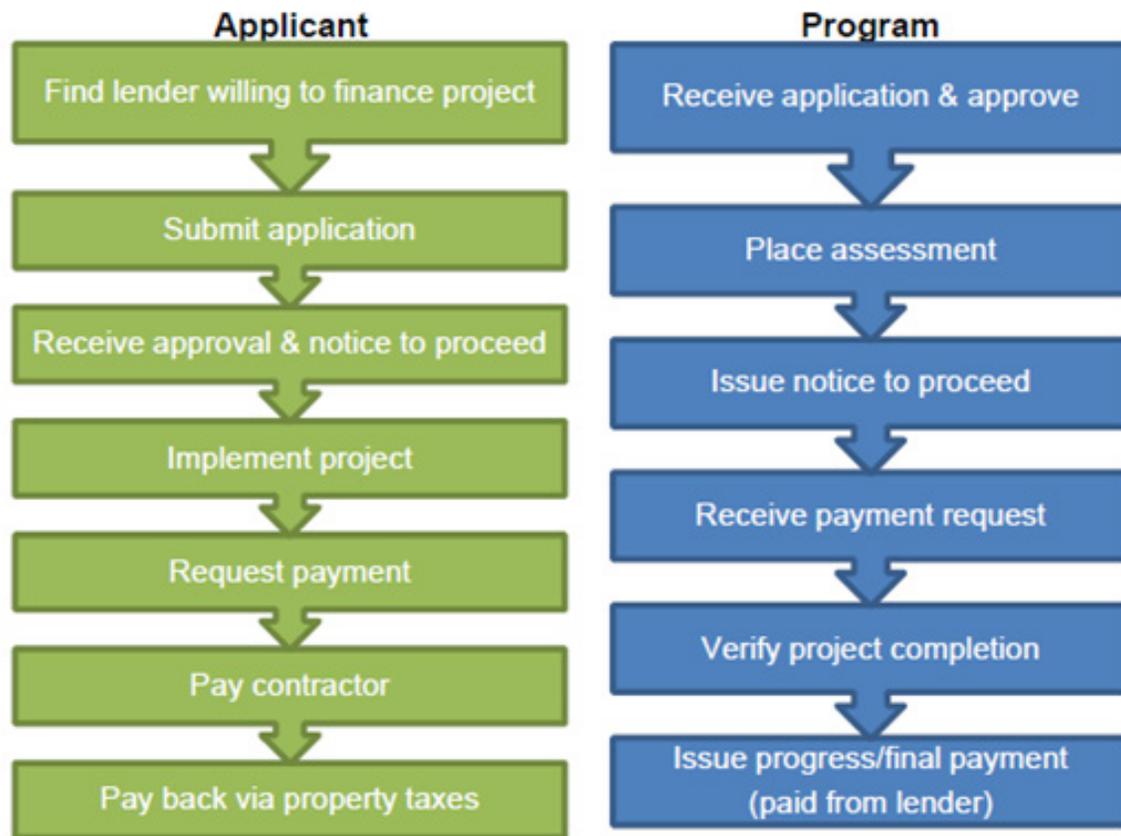


41 U.S. DEPT. OF ENERGY, CLEAN ENERGY FINANCE GUIDE 3D, CHAPTER 13- COMMERCIAL PROPERTY-ASSESSED CLEAN ENERGY (PACE) FINANCING (Dec 9, 2010), <http://pacenow.org/wp-content/uploads/2012/07/Chapter-13-Commercial-PACE.pdf>; SONOMA COUNTY, PROPERTY ASSESSED CLEAN ENERGY (PACE) REPLICATION GUIDANCE PACKAGED FOR LOCAL GOVERNMENTS 57-58 (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

8.3.4.2 Owner-Arranged Process Flow Chart

From: U.S. Dept of Energy, Clean Energy Financing Guide, Draft, Dec. 9 2010, <http://pacenow.org/wp-content/uploads/2012/07/Chapter-13-Commercial-PACE.pdf>.

Figure 3 – Owner-Arranged Process Flow



8.4 Key Design Features for PACE Programs

8.4.1 Debt Service Reserve Fund

A debt service reserve fund is a pool of money that is used to supplement late payments or non-payments of PACE assessments. A debt service reserve should be created when the PACE program includes third party investors, including investors in a municipal bond to fund the program. The debt service reserve fund protects investors when property owners make late payments or non-payment of PACE assessments.

A debt service reserve fund can be funded in a number of ways. A fee can be applied to the property owner participating in a PACE program. The debt service reserve fund can also be funded through the proceeds of bonds issued to finance the projects. It can also be created with an established source of funds.

8.4.1.1 California's PACE Reserve Program

Under SB 77, the California Alternative Energy and Advanced Transportation Financing Authority must develop and administer a PACE Reserve Program. An appropriation of \$50 million from the Renewable Resource Trust Fund was designated for the PACE Reserve Program. To reduce costs to the property owner, the PACE Reserve Program would provide a reserve of no more than 10% of the initial principle amount of the PACE bond. The PACE Reserve Program would only apply to improvements for residential projects of 3 units or fewer, or a commercial project that costs less than \$25,000 in total. The PACE Reserve Program has not yet been developed.⁴²

8.4.2 Acceleration/Non-Acceleration of Property Assessments:

In California, there is no acceleration of the PACE assessment in the event of delinquency or default. When acceleration of property assessments is permitted, the local government is able to declare the entire value of a property owner's outstanding balance as due. With non-acceleration, only the delinquent payments are due. So if the building is foreclosed, only the delinquent PACE payment is paid ahead of the existing mortgages. This reduces the risk to mortgage lenders. The non-acceleration of PACE assessments mitigates the effect of the senior lien features of PACE assessments upon mortgage lenders.⁴³

8.4.3 Commercial Leases- Eliminating the Split Incentive

Financing from PACE programs is only available to property owners. Renters cannot access the program directly. Property Owners participate in the PACE program but tenants receive the benefits of energy savings in their energy bill. This would normally create a split incentive. However, in certain commercial leases, property taxes flow through to tenants. Therefore, tenants can share in the costs of installing a clean energy improvement while receiving the benefit of energy savings.

8.5 Overview of Best Management Practices for PACE Programs

8.5.1 BMPs for Program Development:

- *Strategic Planning:* The goals and objective of the program should be defined. ⁴⁴
 - o Flexibility is important to the program's success.⁴⁵
- *Time and Budget:* The program should take the time to plan comprehensively and budget realistically. The program should plan for the high workload and costs associated with an aggressive program launch schedule.⁴⁶

42 CAL. ALT. ENERGY & ADVANCED TRANSP. FIN. AUTH., 2010 ANNUAL REPORT ON SENATE BILL 77 (PAVLEY, STATUTES OF 2010) (Mar. 2011), available at <http://www.treasurer.ca.gov/caeatfa/pace/2010.pdf>.

43 MARK ZIMRING AND MERRIAN FULLER, LAWRENCE BERKELEY NAT'L LABORATORY, ACCELERATING THE PAYMENT OF PACE ASSESSMENTS (May 4, 2010), http://eetd.lbl.gov/ea/ems/reports/ee-policybrief_050410.pdf.

44 SONOMA COUNTY, PROPERTY ASSESSED CLEAN ENERGY (PACE) REPLICATION GUIDANCE PACKAGED FOR LOCAL GOVERNMENTS 53 (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

45 *Id.* at 64.

46 *Id.* at 53.

- o Operating expenses in Sonoma County Energy Interdependence Program's first year exceeded pre-launch planning. A Strategic Plan is helpful for creating a realistic budget. Staff increases may be needed.⁴⁷
- *Transparency.* Program development should be transparent and inclusive.
- Outreach efforts:
 - o *Outreach to the lender community.* Adequate staff time should be used to reach out to the lender community. The program should be ready to respond to any concerns or misperceptions that may exist.⁴⁸
 - There is no acceleration of the PACE assessment in the event of delinquency or default. However, a common perception among the lender community is that PACE assessments are accelerated. Both mPOWER Placer and Los Angeles's commercial PACE program emphasize the message that the assessment is a priority lien, not a subordination.⁴⁹
 - "Position PACE as an opportunity for banks, not as a threat. Mortgage lenders may elect to offer PACE as a new product for their existing customers, thus avoiding the consent issue. Banks have a built-in customer base, and have deep knowledge of their clients' financial situations. The fastest way to scale PACE is for banks to get on board and utilize PACE as a tool for their existing clients to upgrade their buildings. Another option in certain localities, such as Los Angeles, is for banks to co-invest alongside a third-party investor and put in place covenants to protect the parties' interests."⁵⁰
 - o *Participant Education.* Programs should educate property owners on how PACE financing works. All program fees and details should be disclosed.⁵¹ Depending on the property owner, the program may need to educate property owners on the benefits of energy efficiency or solar energy projects.
 - Education will increase the uptake of a PACE program, particularly if the message and application process are simple.⁵²
 - o *Outreach to local elected officials.* It is important to educate local elected officials about the benefits of PACE to create ongoing support for the program.⁵³
- *Staffing.* A chain of command and communication protocol should be established. Team roles should be defined. A dedicated file manager should be appointed to keep track of the applications process and to make sure that information is accurate in the applicable

47 *Id.* at 65.

48 *Id.* at 57.

49 *Id.* at 119 & 127.

50 *Id.* at 127.

51 U.S. DEPT. OF ENERGY, GUIDELINES FOR PILOT PACE FINANCING PROGRAMS (MAY 7, 2010), available at http://www.drivecms.com/uploads/sonomacountyenergy.org/Municipal%20Resources/Resources/Best%20Practices/Best_Practices_Guideline_DOE_050710.pdf.

52 SONOMA COUNTY, PROPERTY ASSESSED CLEAN ENERGY (PACE) REPLICATION GUIDANCE PACKAGED FOR LOCAL GOVERNMENTS 64 (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

53 *Id.* at 34.

databases.⁵⁴

- o Sonoma County embarked on an aggressive program launch date for the Sonoma County Energy Interdependence Program (SCEIP). This created a high workload for staff. Adjustments were frequent which caused some confusion for line staff and contractors.⁵⁵
- o A productive working environment should be created. A lesser number of staff hours are needed to accomplish the program objectives if staff functions are performed in a dedicated space for concentrated accomplishment of work needs.⁵⁶
- o Staff should have technological resources to accomplish program objectives. Adequate office equipment, technology and training are needed to reduce staff costs and accomplish program objectives.⁵⁷

8.5.2 BMPs for Program Design

- *Debt Service Reserve Fund.* For those PACE programs that seek third party investors, including investors in a municipal bond to fund the program, an assessment reserve fund should be created to protect investors from late payment or non-payment of PACE assessments.⁵⁸
- *Length of Time of Loan Repayment.* The length of time for a homeowner to repay the PACE assessments should not exceed the life expectancy of the improvement.⁵⁹
- *Size of Financing Relative to the Property Value.* As a general matter, PACE assessments should not exceed a certain percentage of appraised value of the property.⁶⁰
 - o “There is a preference that the existing loan-to value ratio associated with the property should not exceed 85% before improvements. There is also a preference that the maximum lien-to –property value ratio be 15% to ensure that any delinquent, uncured PACE assessment that is payable senior to the mortgage upon default is nominal in value compared to the outstanding mortgage.”⁶¹
 - o Rebates: The total amount of PACE financing should be net of any expected direct cash rebates for the energy efficiency or renewable energy improvements chosen.
- *Minimum Size of Financing.* Because of the administrative costs associated with PACE

54 *Id.* at 77.

55 *Id.* at 55.

56 *Id.* at 85.

57 *Id.*

58 U.S. DEPT. OF ENERGY, GUIDELINES FOR PILOT PACE FINANCING PROGRAMS (MAY 7, 2010), available at http://www.drivecms.com/uploads/sonomacountyenergy.org/Municipal%20Resources/Resources/Best%20Practices/Best_Practices_Guideline_DOE_050710.pdf.

59 *Id.*

60 WHITE HOUSE POLICY FRAMEWORK FOR PACE FINANCING PROGRAMS (Oct. 18, 2009), http://www.whitehouse.gov/assets/documents/PACE_Principles.pdf.

61 ANTHONY J. BUONICORE, EMERGING BEST PRACTICE FOR UNDERWRITING COMMERCIAL-ATTRACTIVE ENERGY EFFICIENCY LOANS (2012), available at http://www.drivecms.com/uploads/sonomacountyenergy.org/Municipal%20Resources/Resources/Best%20Practices/Whitepaper_Underwriting_EE_Loans_FINAL_04-20-12.pdf

programs, assessments should generally not be issued for projects below a minimum cost threshold of approximately \$2500.⁶²

- *Savings to Investment Ratio should be greater than one.* The expected total utility bills savings should be greater than the expected assessment payments.⁶³
 - An energy audit and modeling of expected savings is recommended. Alternatively, programs may choose to limit eligibility to those measures with well-documented energy and dollar savings in their area.
- *Data Collection.* Data should be collected to evaluate the efficacy of the PACE program. The PACE program should keep track of the installed measures, the investment amount, default and foreclosure data, expected savings, and actual energy use before and after measure installation.⁶⁴

8.5.3 BMPs for Contractor Qualifications and Quality Assurance

- *Contractor Qualifications:* Contractors should have a valid license, liability insurance, workers and compensation insurance.⁶⁵
 - In addition, the program may establish ‘Contractor Standards’ and develop a ‘Participating Contractor’ list.⁶⁶
- *Assuring that the Retrofit is Constructed as Intended*⁶⁷
 - The scope of retrofit should be determined before construction begins.
 - Licensed contractors or installers should do the actual home improvement.
 - After the fact quality assurance program should be conducted.
 - Inspections should be completed on at least a portion of participating properties upon project completion to ensure that contractors participating in the PACE program are adequately performing work.⁶⁸
 - If work is not satisfactorily completed, contractor payment should be withheld until remedied. If not satisfactorily remedied, programs should disqualify contractors from further PACE-related work.
 - Property owners should sign-off before payment is issued for the work.

62 U.S. DEPT. OF ENERGY, GUIDELINES FOR PILOT PACE FINANCING PROGRAMS (MAY 7, 2010), available at http://www.drivecms.com/uploads/sonomacountyenergy.org/Municipal%20Resources/Resources/Best%20Practices/Best_Practices_Guideline_DOE_050710.pdf.

63 *Id.*

64 *Id.*

65 SONOMA COUNTY, PROPERTY ASSESSED CLEAN ENERGY (PACE) REPLICATION GUIDANCE PACKAGED FOR LOCAL GOVERNMENTS 86 (March 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

66 *Id.*

67 WHITE HOUSE POLICY FRAMEWORK FOR PACE FINANCING PROGRAMS (Oct. 18, 2009), http://www.whitehouse.gov/assets/documents/PACE_Principles.pdf.

68 U.S. DEPT. OF ENERGY, GUIDELINES FOR PILOT PACE FINANCING PROGRAMS (MAY 7, 2010), available at http://www.drivecms.com/uploads/sonomacountyenergy.org/Municipal%20Resources/Resources/Best%20Practices/Best_Practices_Guideline_DOE_050710.pdf.

8.5.4 Underwriting Best Practices and Eligible Property Owners:

- *Property Ownership*: Applicants must prove that they have clear title to the property. The title should be free of easements or subordination agreements that conflict with the assessment.⁶⁹
- *PACE Financing Only where No Current Default*. “Participation in the program should not be allowed unless: (i) property taxes are current; (ii) no outstanding and unsatisfied tax liens are on the property; (iii) there are no notices of default or other evidence of property-based debt delinquency for the lesser of the past three years or the property owner’s period of ownership; and (iv) the property is current on all mortgage debt.”⁷⁰
- *No Negative Equity Financing*. PACE loans should not be made to borrowers who are “underwater.” The assessed property value should not be in excess of the property owner’s debt on the property and the addition of the PACE assessment.⁷¹
- *Escrow*. “To reduce the risk of non-payment of property assessments, homeowners should escrow payments for PACE programs in the common situations where they already escrow other property tax assessments.”⁷²
- *Mortgage Holder Notification/Consent*. Mortgage holder of record should receive notice when PACE liens are placed. Commercial PACE programs should also require applicants to get the written consent of the existing mortgage holder.⁷³ The lender consent requirement has been instituted to protect participating property owners from acceleration of mortgage payments under “due on encumbrance” clauses in some mortgage contracts.

8.6 PACE Program Administrative Steps

There are several administrative steps that are absolutely essential to a PACE program. These steps include application review, installation of clean energy measures, issuance of a bond, placement of a lien on the property, and collecting repayments from the property tax bill. There are also basic administrative steps that are required to run a program successfully and some steps that are optional.

The chart below provides an overview of some administrative steps involved in a PACE program and whether the step is required or optional for a PACE program. The chart provides an

69 U.S. DEPT. OF ENERGY, GUIDELINES FOR PILOT PACE FINANCING PROGRAMS (MAY 7, 2010), available at http://www.drivecms.com/uploads/sonomacountyenergy.org/Municipal%20Resources/Resources/Best%20Practices/Best_Practices_Guideline_DOE_050710.pdf.

70 WHITE HOUSE POLICY FRAMEWORK FOR PACE FINANCING PROGRAMS (Oct. 18, 2009), http://www.whitehouse.gov/assets/documents/PACE_Principles.pdf.

71 *Id.*

72 *Id.*

73 U.S. DEPT. OF ENERGY, CLEAN ENERGY FINANCE GUIDE 3D, CHAPTER 13- COMMERCIAL PROPERTY-ASSESSED CLEAN ENERGY (PACE) FINANCING (Dec. 9, 2010), <http://pacenow.org/wp-content/uploads/2012/07/Chapter-13-Commercial-PACE.pdf>; Sonoma County, Property Assessed Clean Energy (Pace) Replication Guidance Packaged For Local Governments 57-58 (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

illustration of a sample PACE program. The chart is not meant to apply to all PACE programs. Each PACE program can choose a different administrative method. Each PACE program can assign additional steps in reviewing a PACE application. Each PACE program can also choose to conduct some steps in a different order, or require different documents in the initial application or final application.

Stand Alone Open Market Bond/Owner Arranged PACE Programs

Program Administration Steps [1]	Required for program implementation?
Pre-application workshop	Optional.
Energy audit	Recommended. LA and California FIRST require ASHRAE Level 2 standards or a comparable energy analysis (i.e. development of projected energy savings, cost savings, and project costs). In SF, a professional energy auditor must be hired and the program requires review of water conservation opportunities.
Initial application	Required. Range of documents required in an initial application can range from: initial application form, corporate/organizational Documents, recordation documentation (such as the Title Report or lien release), scope of work.
Review of initial application	Required. Review by local government staff or 3rd party administrator.
Review of custom measures	Optional. LA, SF, Cal 1st review custom measures.
Conditional Reservation	Required.
Applicants receives contractor bids	Required.
Loading order requirement (10% efficiency before renewables)	Required if PACE Program is using funding from the California Energy Commission. Not recommended as program feature.
Participation in state and local incentives	Optional for property owner. Typically financed amount will be reduced by an equivalent sum of all rebates received from the project. Program can specifically require property owner to pursue certain rebate and incentive programs.
Education/outreach to property owner, Project Lender and current mortgage holder.	Recommended.

Program Administration Steps [1]	Required for program implementation?
Negotiation with Project Lender re terms	Required between Property Owner/Project Lender. A Program can provide a list of PACE investors. The mortgage lender may elect to fund the project directly.
Obtain copy of most recent mortgage statement (if applicable)	Property Owner Required
Utility information customer release form	Optional. Recommended to monitor energy savings.
Obtain mortgage lender consent/ acknowledgement of PACE assessment	Highly Recommended. In LA, the Clinton Climate Initiative is available as a pro bono resource to assist in this process. A Sample Mortgagee Presentation is provided by the Program Administrator, which lays out ideas on how to present the business case to the mortgage holder.
Final application	Required. Final Application can include a range of forms such as: Lender Consent Form, the Investor Commitment Letter, and any Inter-creditor Agreement, final scope of work (with supplemental bid documentation and invoices); evidence of authority of signatory to enter into a PACE financing (if applicable); property value statement form; written mortgage lender consent form; energy/water audit reports; energy and cost savings analysis template; rebate/incentive documents; application fee ; term sheet from an eligible project lender; copy of most recent mortgage statement (if applicable); utility information customer release form; property owner acknowledgment of program terms; contractor acknowledgement of program terms; power of attorney, corporate resolution and/or articles of incorporation (if applicable); title report appraisal (if applicable).
Pre-install site inspection	Optional. In SF, if measures are eligible for utility incentive but applicant chooses not to participate, then pre--install inspection may be required.
Title search	Optional. Many programs include it.
Public records search	Optional. Many programs include it.

Program Administration Steps [1]	Required for program implementation?
Appraisal	Optional. In SF, value of the property must be determined by City-approved appraiser within 90 days of Program application, or market value calculated according to a method identified by the City. If Current Assessed amount is not acceptable to property owner, property owner may secure alternative appraisal from approved appraiser.
Application approved by:	Required. Approval by Program/ third party administrator.
Final reservation	Required. Reserved by Local government staff or third party administrator.
Notification of funding reservation	Required. Notice given by local government staff/ third party administrator.
Permits	Obtained by contractors/property owner.
Assessment contract created (if applicable)	Required. Created between property owner and local government.
Assessment contract signed by property owner (if applicable)	Required.
Executed authorization to release information to administrators	Required.
Assessment/lien recorded	Required.
Notice of assessment/lien recorded	Required.
Prepare financing documents	Prepared by Local government staff/third party administrator.
Notice to proceed sent to applicant	Required.
Work begins on projects	Required. Program could specify that project must be complete within certain time period for agreement not to be subject to cancelation.
Progress payment request processing	Progress payments are optional.

Program Administration Steps [1]	Required for program implementation?
Work completed- request for Disbursement submitted by property owner	Required. Property Owner submits funding disbursement request. The Program can also require Project verification documents (such as signed final permit inspection from the applicable city/county building department for applicable projects; a final invoice from all contractors, with an invoice cover sheet; release of the City/County and administrator of liability; utility authorization to release information; if applicable, copies of rebate reservations; mechanic's lien release; a payment assignment form, if the payment is to be assigned to the contractor; executed wire request, if applicable). Depending on when the assessment is placed, the verification documents can also include an executed and notarized unanimous approval to annex the subject property to the Special Tax District, pay special taxes, and consent to a recordation of a notice of special tax lien.
Review of request for disbursement/project verification	Conducted by local government staff or third party administrator.
Subject property is annexed to Special Tax District (if applicable)	Required if applicable.
Post install site inspection	Optional. SF requires.
Payment request processing	Required.
Notification to escrow company	If applicable, Program could require Property owner to notify their escrow company of the special tax payment. The agent will need to increase the monthly payment to the escrow amount by an amount equivalent to the property owner's annual special taxes divided by 12 months.
Assessment transmission created	Required.
Second title search	Optional.
Repayment schedules created	Required.
Settlement statement/claim backup	Required.
Bonding summary and backup submitted	Required.
Bond Docs prepared by bond counsel	Required.
Financing authority issues bonds	Required.
Checks issued	Program could allow payment to be made to property owner or to contractor directly.

Program Administration Steps [1]	Required for program implementation?
Check, repayment schedule, settlement statement mailed/given to applicants	Required. For example in Los Angeles' Commercial PACE program, the construction payment disbursement schedule will be arranged between the investor, the property owner and the contractor(s) and will be detailed in the Transaction Documents. LA County will release funds upon owner's request, pursuant to such schedule. Multiple disbursement fees may apply. LA County or its designated agent will service as Trustee, and will make disbursements pursuant to the Transaction Documents. Property Owner and the Contractor must certify all construction draws.
Assessment shows up as line item on Property Tax Bill	Required.
Second progress and/or final payment of multiple distb.	Required, if applicable.
Property owner repays via property taxes	Required.
Collection of property taxes	Required by County.
Prepayment of assessment	Optional.
Collecting pre and post energy and water consumption data	Optional by local government or third party administrator.
Enrollment in the free online energy use benchmarking service called "ENERGY STAR Portfolio Manager"	Optional. GreenFinanceSF requires enrollment.
Transfer or resale of the subject property	If the property is sold prior to the end of the agreed-upon special tax period, the new owner will assume the obligation. Ownership of any Authorized Improvements on the subject property will transfer to the new owner at the close of the real estate sale. Authorized improvements financed through the Program may not be removed from the property until the bond issued by the City to finance installation of the authorized improvement has been retired. Program participants agree to make all legally required disclosures about the existence of the special tax lien on the property in connection with any sale.
Disclosure of property owner information	Optional.
Other	
Creating reports/tracking	Recommended.

Program Administration Steps [1]	Required for program implementation?
Creating list of participating contractors	Optional.
Workforce training	Recommended.
Creating list of eligible products	Optional.

Table 1: Stand Alone Open Market Bond/Owner Arranged PACE Programs Program Administration Steps

Self Financed/Warehoused PACE Programs

Program Administration Steps [2]	Required for Program Implementation?
Pre-application workshop	Optional. PACE programs could require applicants to attend presentations, watch videos, or complete a survey.
Energy audit	Optional.
Applicants receives contractor bids	Required.
Initial application	Required.
Review of initial application	Required. Applications checked by staff to ensure minimum qualifications are met.
Review of custom measures	Optional by local government staff or third party administrator.
Conditional reservation	Required.
Applicants receives contractor bids	Required.
Loading order requirement (10% efficiency before renewables)?	Optional. Required if PACE program is using funding from the California Energy Commission. Not recommended as program feature.
Participation in state and local incentive programs to the extent eligible	Optional for property owner. Typically financed amount will be reduced by an equivalent sum of all rebates received from the project. Program can specifically require property owner to pursue certain rebate and incentive programs.
Education/outreach to property owner and current mortgage holder	Highly Recommended.
Obtain copy of most recent mortgage statement (if applicable)	Required.
Utility information customer release form	Optional. Recommended to monitor energy savings.
Obtain mortgage lender consent/ acknowledgement of PACE assessment	Highly Recommended.

Program Administration Steps [2]	Required for Program Implementation?
Final application	Required. Final application documents can include: final application form, bids for work, mortgage statement, trust or corporation documents, notarized lender acknowledgement, energy analysis results, authorization for utility data access; appraisal, if necessary to determine property value; customer authorization for third party to correspond with program staff.
Pre-install site inspection	Optional.
Title search	Optional. Conducted by outside source
Public records search	Optional.
Appraisal	Optional.
Obtain mortgage lender consent/ Acknowledgement of PACE assessment	Applicant
Application approved by:	Local government staff or third party administrator. In Sonoma County, the application is approved by the Program Manager or Steering Committee. [3]
Final reservation	Required.
Notification of funding reservation	Required.
Permits	Obtained by contractor/property owner
Assessment contract created	Required. In Sonoma County, the ACTTC/County creates the contract
Assessment contract signed by property owner	Required .
Executed authorization to release information to administrators	Required, if applicable.
Assessment/lien recorded	Required.
Notice of assessment/lien recorded	Required. In Sonoma County, the ACTTC/County provides the notice.
Notice to proceed mailed to applicant	Required. Noticed mailed by local Government staff or third party administrator.
Work begins on projects	Required.
Progress payment request processing	Progress payments are optional.
Work completed - request for disbursement submitted by property owner	Required.

Program Administration Steps [2]	Required for Program Implementation?
Review of request for disbursement/project verification	Required. Review conducted by local government staff or third party administrator.
Post install site inspection	Optional.
Payment request processing	Required.
Notification to escrow company	If applicable, Program could require Property owner to notify their escrow company of the special tax payment. The agent will need to increase the monthly payment to the escrow amount by an amount equivalent to the property owner's annual special taxes divided by 12 months.
Assessment transmission created	Required. In Sonoma County, the ACTTC/County creates the assessment transmission.
Second title search	Optional. Search conducted by outside source.
Repayment schedules created	Required. The schedules can be created by the local government staff, third party administrator, or outside source.
Settlement statement/claim backup	In Sonoma County, it is conducted by ACTTC/County.
Bonding summary and backup submitted	In Sonoma County, it is conducted by ACTTC/County.
Bond docs prepared by bond counsel	Required. Outside Source.
Financing authority issues bonds	Required, if applicable.
Treasury issues bond proceeds check	Required, if applicable.
Checks issued	Required.
Check, repayment schedule, settlement statement mailed/given to applicants	Required.
Assessment shows up as line item on property tax bill	Required.
Second progress and/or final payment of multiple distb.	Required, if applicable.
Property owner repays via property taxes	Required.
Prepayment of assessment	Optional.
Collecting pre and post energy and water consumption data	Optional.

Program Administration Steps [2]	Required for Program Implementation?
Enrollment in the free online energy use benchmarking service called “ENERGY STAR Portfolio Manager”	Optional.
Transfer or resale of the subject property	If the property is sold prior to the end of the agreed-upon special tax period, the new owner will assume the special tax obligation. Ownership of any authorized Improvements on the subject property will transfer to the new owner at the close of the real estate sale. Authorized improvements financed through the Program may not be removed from the property until the bond issued by the City to finance installation of the authorized improvement has been retired. Program participants agree to make all legally required disclosures about the existence of the special tax lien on the property in connection with any sale.
Disclosure of Property Owner Information	Optional.
Other	Required for Program Implementation?
Creating reports/tracking	Recommended.
Creating list of participating contractors	Optional.
Workforce training	Recommended.
Creating list of eligible products	Optional.
Acronyms	ACTTC= the Dept of the Auditor-Controller-Treasurer-Tax Collector.

Table 2: Self Financed/Warehoused PACE Programs Program Administration Steps

8.7 Overview of Program Costs Charged to Property Owners

Program Costs	Sonoma County's Energy Interdependence Program	Los Angeles' Commercial PACE Program	GreenFinanceSF (commercial)	mPOWER Placer
Application Processing Fee		Assessment collection and administrative costs will be added to the annual assessment on property tax bills. [26]	\$0. Fee initially waived during pilot. (1) Technical Review for Custom Measures= \$540. Timing At final application.[4]	
Energy Audit	Building Performance Analysis: Energy and water conservation audits conducted before and after project application can be included in financed amount. ASHRAE L1 energy audit required for non-residential properties.[3]	The analysis must be equivalent to an ASHRAE Level 2 Energy Audit, and show costs and savings estimates for all proposed measures. Property Owners can work with own in-house engineers, or with an independent firm of their choice. Costs vary. [26]	Variable. This is cost paid not to the program, but to an auditor and will vary depending on the audit level and size of building. (1) Energy Audit Requirements= ASHRAE L1 for < \$100,000 cost; ASHRAE L2 for >\$100,000 cost. [3] Technical Project Review/ Inspection fee: \$0. Fee waived during pilot period, technical review by kW Engineering to ensure project is valid and had potential to save energy.[4]	Cost Vary depending on degree of audit. Energy Audit Required- provided for free by local utility providers partnered with mPOWER Placer.[3] Inspection fee for non-permit required items (1 per site visit) = \$150.[5]

Program Costs	Sonoma County's Energy Interdependence Program	Los Angeles' Commercial PACE Program	GreenFinanceSF (commercial)	mPOWER Placer
Recording Fee	Recording Fee, Original=\$66 Due at contract signing; Recording Fee, Contract Amendments=\$41. Due at contract amendment signing.[6]	Recording Fee - \$100: Due at signing of Assessment Contract for recordation of Assessment Lien documents and assessment contract.[26]	0.20% of project cost. This is equivalent to \$100 per each \$50k of project cost.[4]	\$33 for the 2 Title pages, \$3 thereafter (can be included in financed amount)[8] or minimum \$72. [7]
Collection Fee	Annual Administrative charge= \$41.12. Assessment collection and processing costs will be added to the annual assessment on property tax bills. These costs are annually adjusted for cost of living increases using the U.S. Dept. of Labor, Bureau of Labor Statistics, and Consumer Price Index for all urban consumers for the Northern California Counties.[6]	Assessment collection and administrative costs will be added to the annual assessment on property tax bills. [26]	\$1000. (Covers the establishment and administration of the GFSF special tax district). Also annually \$15. (Cover the administration and maintenance of the GreenFinanceSF special tax district) (1) Annually \$21.55. Covers the development of the tax annual tax roll.[4]	Annual assessment collection fee of 1% of the annual assessment amount plus \$10[8]; This cost was determined after consultation with the County Auditor-Controller's Office and a third-party assessment contractor.[9]

Program Costs	Sonoma County's Energy Interdependence Program	Los Angeles' Commercial PACE Program	GreenFinanceSF (commercial)	mPOWER Placer
Title Search/ Bond Counsel/ Legal Cost	Title Search costs \$50 for projects under \$5,000; \$125 for projects \$5,000-\$500,000; Title insurance required for projects over \$500,000. Due upon application acceptance. Title search cost, 2nd project= \$30 if application made within 180 days of first application. Due upon application acceptance.[6]	Legal costs associated with negotiation and drafting of Transaction Documents are the responsibility of the applicant and may be capitalized in the amount financed. These costs include, but may not be limited to: \$1,000 for required Notice of Assessment and Assessment Diagram, and the title search cost: \$600-900.[26]	Title Search: \$250-\$1,000. Cost is relative to size and complexity of ownership structure and history.[4] Bond counsel fees are based on the financed amount. Fee is 2% of first \$1M bond Issuance (with a minimum of \$15,000: 1% of next \$4M; 0.5% of next \$10M; 0.125% beyond[4]	Title Search up to \$215 (can be included in financed amount) [8]. Regular costs are \$65 for projects under \$5,000, and \$215 for projects \$5,000 and over, but less than \$500,000.[9]
Permit Fee	Fees Vary	Fees Vary	Fees Vary	Fees vary

Program Costs	Sonoma County's Energy Interdependence Program	Los Angeles' Commercial PACE Program	GreenFinanceSF (commercial)	mPOWER Placer
Property Appraisal	Automated Valuation Report= \$12 to determine market value of property valued up to \$1.5 million. Full appraisal required if value is greater than \$1.5 million. Due concurrent with SCEIP application.[6]		\$5k-\$10k. Timing=at final application. If current assessed amount is not acceptable to property owner, property owner may secure alternative appraisal from approved appraiser.[4]	Appraisal cost as charged by a qualified appraiser selected by the County should the property owner elect to have value determined through an appraisal. Residential appraisal fees are not expected to exceed \$600 based on parameters such as square footage and acreage. Non-residential appraisal costs will be based on property characteristics

Program Costs	Sonoma County's Energy Interdependence Program	Los Angeles' Commercial PACE Program	GreenFinanceSF (commercial)	mPOWER Placer
Costs associated with Prepayment/ Payment	Assessment Payoff Quote (NBS official) = \$35 dues at time of quote request. Removal of tax lien=\$26 due at time of assessment payoff.[6]	Payoff Quote - \$250: Due upon request from requesting party. Covers the cost for prepayment quotes of assessment liens and coordination of the Release of Lien of any prepaid assessments.[1]	TBD. Doesn't include on— site inspection activity or fees (assumption is that project lender will conduct inspection to verify progress, if desired).[4]	A prepayment premium will be charged if the assessment is repaid within the first 5 years. The graduated premium structure is as follows: 5% within the first year (95% of the additional payment goes toward the principal); 4% within year two through three; 3% within years 3 through 5. Multiple disbursements will be subject to an additional processing fee. Includes minimum inspection fee of \$150.00 plus recording fees per each inspection. Contact mPOWER Placer for estimate.[5,9]

8.8 Underwriting Criteria for PACE Programs

The applicant is required to be the legal owner of the property. The property must also geographically be located in the PACE programs jurisdiction. PACE programs also require the property owner to meet underwriting criteria. The requirements of the underwriting differ across PACE programs. However, PACE programs require (1) that the property owner be current on their mortgage, (2) that the Property Owner current on their property taxes, and (3) that there be no involuntary liens on the Property.

8.8.1 Underwriting Chart

	Property Owner Required to be Current on mortgage?	Property Owner Required to be Current on Property Taxes?	Property Owner Required to not be in bankruptcy?	Require no Other Tax Liens and no other involuntary liens on Property?	Consent of Mortgage Holder Required?
Sonoma County's Energy Independence Program [10]	Yes. Loan modification because of default or delinquency completed at least one year before application was filed. Mortgage payments due on the property timely paid during the six months preceding the application.	Yes. For all properties owned in Sonoma County.	Yes. If bankruptcy in the past three years, the bankruptcy must have been concluded at least one year before filed application.	Yes.	Yes for non-residential properties.
Los Angeles' Commercial PACE Program [11]	Yes. The property must also not have any notices of default or foreclosure for past five years.	Yes. The property must also not have been delinquent on property taxes for the past three years.	Yes. The property Owner has not declared bankruptcy within the last 10 years.	Yes.	Yes.
Commercial GreenFinanceSF [4]	Yes. Also requires no history of default.	Yes. Must also have no history of non-payment of property taxes.	Yes. Property Owner must not have filed for bankruptcy or been subject to bankruptcy protection in the past three years. Nor have significant pending legal action.	Yes.	Yes.

	Property Owner Required to be Current on mortgage?	Property Owner Required to be Current on Property Taxes?	Property Owner Required to not be in bankruptcy?	Require no Other Tax Liens and no other involuntary liens on Property?	Consent of Mortgage Holder Required?
mPower Placer [5]	Property owner is current on mortgages with no notice of default within the last 5 years.	Property taxes are current with no notices of default within the last 3 years.	Yes. Property owner has not been subject to bankruptcy within the last 5 years	Yes.	Yes.
Figtree's Commercial PACE Program [12]	Yes. Also no delinquency in the last three years or since owning the property if less than three years.	Yes. Also, no delinquency in the last three years or since owning the property if less than three years.	Applicant must not be in bankruptcy and property must not be an asset in bankruptcy in the past 5 years.	Yes.	Yes.
CaliforniaFIRST [13]	Yes. Also, no notices of default on property in the last 5 years (or since ownership, if less than 5 years). Exceptions may be granted on a case by case basis.	Yes. Also, no delinquencies in the past three years	Yes. Also has not filed for or been subject bankruptcy in the past three years.	Yes.	Yes.
City of Yucaipa- Energy Independence Program [14]	Yes. For a minimum of six (6) consecutive months prior to the application date, the applicant will have incurred no late fees or penalties. In addition, no notice of default will have been filed relative to that mortgage(s), within the past twelve (12) months.	Yes. Also, no delinquency 12 months prior to the application date.[15]	Yes. And property is not an asset in a bankruptcy proceeding.	Yes.	If deemed necessary by the EIP Administrator, property owner has received the consent of any pre-existing secured lenders, as evidenced by the attached consent agreement(s).

8.8.2 Financial Considerations in Underwriting

PACE programs will also take the property value into account when determining eligible properties. These financial considerations are summarized in the chart below.

	Financial Considerations
Sonoma County's Energy Independence Program	Improvement costs are reasonable to property value. As a guideline, proposed improvements should not exceed 10% of market value. If the proposed project exceeds this guideline or otherwise does not appear prudent, the application will be reviewed on a case-by case basis. [16] Total annual property taxes and assessments due on the property cannot exceed 5% of the property's market value, as determined at the time of approval of the contractual assessment. [10]
Commercial GreenFinanceSF (commercial)	The value of the property (based on current assessed value, appraised value determined by a City—approved appraiser within 90 days of Program application, or market value calculated according to a method identified by the City) plus the value of the Authorized Improvements financed by the Program must be equal to or greater than the sum of (i) the total private property debt including mortgages and equity lines of credit secured by the property, (ii) the principal amount of any Program indebtedness attributable to the property, and (iii) the aggregate principal amount of any fixed assessment liens or other special tax debt on the property. [4]
mPower Placer	Except in limited circumstances, the assessment lien cannot exceed 10% of the value (value = the assessment or market value, whichever is greater plus the cost of the proposed improvement). [8]
Figtree's Commercial PACE Programs	The outstanding mortgage must not be an amount greater than the property's assessed total value (Owner must not be "underwater"). In certain cases, an appraised value can be used if the assessed total value is deemed inaccurate (e.g. the assessment value is not commensurate with current market value). [12]

	Financial Considerations
California FIRST	<p>Costs of the proposed Energy Improvements are reasonable relative to the value of the property. As a guideline, improvements should not exceed 10 percent of the property's assessed value.</p> <p>The assessed value of the property plus the value of the Authorized Improvements to be financed by the Program must be equal to or greater than the sum of (i) the total private property debt including mortgages and equity lines of credit secured by the property, (ii) the principal amount of any Program indebtedness attributable to the property, and (iii) the aggregate principal amount of any fixed assessment liens or special tax debt on the property. If the property does not pass the above test with the assessed value, a property owner may, at its own cost, use an appraised value determined by an Appraiser or market value calculated according to a method identified by the Program. The appraisal must be dated no earlier than 90 days before the financing date.</p> <p>The total sum of all items appearing on the property's annual property tax bill including annual ad-valorem property taxes, special taxes and assessments, in addition to the contractual assessment to be levied in connection with the Program, may not exceed 5% of the property's market value. For the purposes of demonstrating value for this requirement, market value will be measured using assessed value plus the cost of the improvement. If the property does not pass the above test with the assessed value, a property owner may, at its own cost, use an appraised value identified by a Program-approved appraiser or market value calculated according to a method identified by the Program. The appraisal must be dated no earlier than 90 days before the financing date. [13]</p>
City of Yucaipa- Energy Independence Program	<p>The value to lien ratio (including pre-existing liens) is a minimum of 10:1</p> <p>Calculation: The ratio of (a) the value of the property to (b) the sum of (i) the requested EIP Loan plus (ii) the amount of all other pre-existing liens on the property securing a special tax levied pursuant to the Mello-Roos Community Facilities Act of 1982, a special assessment, must be at least 10:1. Exceptions to the minimum ratio may be granted on a case by case basis by the EIP Administrator and the City Manager (to a minimum of an 8:1 value-to-lien ratio) upon sufficient evidence, provided by the property owner, of the fiscal prudence and rationale for such exception.</p> <p>The total amount of any annual property taxes and assessments shall not exceed five percent (5%) of the market value of the property. [14]</p>

8.9 Overview of Commercial PACE Programs in California

8.9.1 Los Angeles' Commercial PACE program

Los Angeles' Commercial PACE program follows an open market model for its PACE financing. The County established a County-wide Energy Financing District ("EFD"). Cities within the

County must then pass a resolution to “opt in” to the EFD. A property owner that lives in one of these cities is eligible to participate in the PACE program. Eligible properties are commercial, industrial, or multi-family residential (5 units or more) properties.⁷⁴

The Property Owner arranges the financing of the project with a Project Lender. The loan term, interest rate, and loan fees are all negotiated with the qualified Project Lender. The Project Lender agrees to purchase bonds from the County. The County will structure the bonds according to the principal maturity schedule, interest rate, reserve requirement, and redemption provisions as agreed between the Project Lender and Property Owner, as long as they are in conformity with the legal requirements of the Los Angeles County Energy Program (LACEP). The County then places an assessment on the property and the County collects property tax payments. The County uses the payments to pay the debt service to the Project Lender.

As part of its LA Commercial Buildings Performance Partnership, the Community Redevelopment Agency of Los Angeles (CRA/LA) has budgeted \$2.5 million in grant funds to be used as a debt service reserve fund (“DSRF”) backing PACE bond financings for projects within the City of Los Angeles’ boundaries (not available outside of LADWP service territory).⁷⁵

Los Angeles Commercial PACE Program has not yet financed a project.

74 PROPERTY ELIGIBILITY CRITERIA FOR PACE FINANCING, https://content.renewfund.com/production/los_angeles_county_ca_commercial/eligibility_criteria.en.pdf; PACE Reservation Form, https://content.renewfund.com/production/los_angeles_county_ca_commercial/pacereservationform.en.pdf; PACE Application Form, https://content.renewfund.com/production/los_angeles_county_ca_commercial/pacefinancingapplication.en.pdf;

75 *Available Credit Enhancement for PACE Financings in the City of Los Angeles*, https://content.renewfund.com/production/los_angeles_county_ca_commercial/credit_enhancements.en.pdf.

Los Angeles' Commercial PACE Program	
Eligible Measures	<p>Common energy efficiency, energy generation, and water conservation property improvements.</p> <p>Because the program is receiving grant support from the California Energy Commission (CEC) State Energy Program, property owners are required to meet a 10% loading requirement when seeking to install renewable energy systems.</p> <p>Rather than prescribe a list of eligible measures, projects will be evaluated on a case by case basis.</p>
Loan Amount for Project	Negotiated with qualified Project Lender.
Eligible Costs	<p>Eligible Costs of the Improvements include the cost of surveys and audits, permits and inspections, equipment, installation from licensed, approved professionals, and follow-up inspections. Installation costs may include, but are not limited to, energy audit consultations, labor, design, drafting, engineering, permit fees, and inspection charges. A qualified contractor of the property owner's choice can be selected to complete installation of Improvements.</p> <p>For each property, the Program Administrator will determine whether the estimated equipment and installation costs are reasonable. The Program Administrator will evaluate market conditions and may require the property owner to provide additional bids to determine whether costs are reasonable. While the property owner will be able to choose the contract of his/her choice, the amount eligible for the LA county Commercial PACE program may be limited to the amount deemed reasonable by the Program Administrator. Projects that exceed a certain size and dollar amount may be subject to additional review.[18]</p>
Loan Term	Negotiated with qualified Project Lender
Interest Rate	Negotiated with qualified Project Lender

8.9.2 GreenFinanceSF Commercial Program:

Commercial GreenFinanceSF follows an open market model for its PACE financing. A contract is formed between the City of San Francisco and the Project Lender, pursuant to which the lender agrees to purchase a special tax bond issued by the City. San Francisco County collects property tax payments. The City then uses the repayments to pay the debt service to Project Lender. Eligible properties are commercial, industrial, or multi-family residential (5 units or more) properties. The property must be located in San Francisco City and County.⁷⁶

An owner files an initial application and a conditional reservation may be placed. The property owner must then fill out a final application. The final application includes obtaining an energy

⁷⁶ GREENFINANCESF PROGRAM HANDBOOK (Nov. 17, 2011), https://content.renewfund.com/production/san_francisco_county_ca_commercial/gfsf_program_handbook.en.pdf

audit, the consent of the existing mortgage holder, and a project lender. When the application is approved, the project lender agrees to purchase a special tax bond issued by the City on behalf of the Special Tax District. The property owner agrees to have an assessment placed on the property. After which, the property owner can begin construction. At the completion of the project, a verification and inspection is conducted. A payment for the project is then given to the Property Owner from the Project Lender. The County of San Francisco collects property tax payments. The City then uses the repayments to pay the debt service to project lender.⁷⁷

Debt Service Reserve Fund is funded by grant fund received by the City (ARRA funds). Each approved project has the option to a standard allocation for a DSRF equal to 10 percent of the total requested financing amount, with a maximum debt service reserve fund allocation of \$100,000 for any single project. Requests that exceed the \$100,000 maximum or the 10% maximum DSRF allocation will be considered on a case-by-case basis. Once DSFR funds run out, applicants will cover the cost through fees or by adding them to their total financed amount.⁷⁸

One project has been approved for financing through GreenFinanceSF.

77 GREENFINANCESF PROGRAM HANDBOOK (Nov. 17, 2011), https://content.renewfund.com/production/san_francisco_county_ca_commercial/gfsf_program_handbook.en.pdf

78 GREENFINANCESF PROGRAM HANDBOOK 14-17 (Nov. 17, 2011), https://content.renewfund.com/production/san_francisco_county_ca_commercial/gfsf_program_handbook.en.pdf

Commercial GreenFinanceSF	
Eligible Measures	<p>Common energy efficiency, energy generation, and water conservation property improvements. Because the program is receiving grant support from the California Energy Commission (CEC) State Energy Program, property owners are required to meet a 10% loading requirement when seeking to install renewable energy systems. The property improvements must have a useful life of five years or longer.[4]</p> <p>For a list of eligible Measures, see https://content.renewfund.com/production/san_francisco_county_ca_commercial/gfsf_eligible_measures.en.pdf</p> <p>The program will also consider, on a case-by-case basis, other measures (custom measures) that do not appear in the Eligible Measures List.</p>
Loan Amount for Project	<p>Minimum: \$50,000</p> <p>Maximum: The value of the property (based on current assessed value, appraised value determined by a City—approved appraiser within 90 days of Program application, or market value calculated according to a method identified by the City) plus the value of the Authorized Improvements financed by the Program must be equal to or greater than the sum of (i) the total private property debt including mortgages and equity lines of credit secured by the property, (ii) the principal amount of any Program indebtedness attributable to the property, and (iii) the aggregate principal amount of any fixed assessment liens or other special tax debt on the property.</p> <p>Property lenders may impose additional minimum and maximum project funding requirements.[4]</p>
Eligible Costs	<p>The City will only authorize funding requests in an amount equal to the final cost of installing the Authorized Improvements (including the energy audit fee) less State, City and Utility rebates.[4]</p>
Loan Term	<p>Negotiated with qualified project lender.</p>
Interest Rate	<p>Negotiated with qualified project lender.</p>

8.9.3 mPOWER Placer

The PACE program in Placer County, mPOWER Placer (money for Property Owner Water & Energy-efficiency Retrofitting), was approved December 8, 2009 and January 26, 2010 under AB 811 and AB 474. The initial funding for mPOWER Placer was provided through a financial arrangement with the County Treasury and the Placer County Public Financing Authority. The Placer County Public Financing Authority issued a bond of \$33 million. The County Treasury and the Placer County Public Financing Authority entered into a loan agreement in which Placer

County Financing Authority agreed to loan the Bond proceeds to the County Treasury (“Bond Proceeds Loan”). As projects are approved, funds are drawn from the Treasury Pool to finance PACE projects and to pay administrative costs. The Property Owner and the County enter into an assessment contract in which the Property Owner will repay the project through property assessments. The County then repays the Bond Proceeds Loan from the assessments it receives from the property owner. From the payments of the Bond Proceeds Loan, the Placer County Financing Authority repays the Bond that was issued.⁷⁹ The program is also financed through funds from California Energy Commission’s State Energy Program Energy Upgrade California.

On July 27, 2010, the residential program was suspended due to the policy action taken by the Federal Housing Finance Authority. The County is still taking applications for its commercial program. Owners of commercial, industrial, agricultural, or multi-family residential (5 units or more) properties in Placer County are eligible to participate.

To participate, property owners must attend a private seminar to learn about PACE financing. The property owner must also obtain an energy audit to apply for the financing. Once the property owner’s application is approved, the property owner signs an assessment contract. The assessment lien is placed on the property three days after the assessment contract is signed. The interest begins to accrue when the money is disbursed to the property owner. The property owner can choose to have the funds directly dispersed to the contractor. The property owner repays the County for the improvements as an assessment on their property tax bill.

79 PROGRAM REPORT AND ADMINISTRATIVE GUIDELINES (2011), <http://www.mpowerplacer.org/wp-content/uploads/2011/09/Program-Report-and-Administrative-Guidelines.pdf>; Placer mPOWER AB 811 Program Administration Tax and Revenue Anticipation Note (Oct. 25, 2011), http://www.placer.ca.gov/upload/bos/cob/documents/sumarchv/2011Archive/111025A/bosd_111025_06__p39_p48.pdf; Sonoma County, Property Assessed Clean Energy (PACE) Replication Guidance Package for Local Governments (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

	mPOWER Placer
Eligible Measures	<p>For a list of eligible measures, see http://www.mpowerplacer.org/wp-content/uploads/2011/08/Non-Residential-Eligible-Improvements.pdf. Custom measures may be requested.</p> <p>Because the program is receiving grant support from the California Energy Commission (CEC) State Energy Program, property owners are required to meet a 10% loading requirement when seeking to install renewable energy systems.</p>
Loan Amount for Project	<p>Minimum: \$2,500.</p> <p>Maximum: Except in limited circumstances, the assessment lien cannot exceed 10% of the value of the property. (Value = the assessment or market value, whichever is greater plus the cost of the proposed improvement).</p> <p>Projects less than \$60,000 require staff approval.</p> <p>Projects of \$60,000 to \$500,000 will require mPOWER Placer committee approval.</p> <p>Projects valued at over \$500,000 will require Board of Supervisor's approval.[8]</p>
Eligible Costs	<p>Costs necessary for the planning and installation of the energy and/or water efficiency measures can be included in the mPOWER Placer financing. Those costs include the energy audit, drafting, engineering services, labor, and program fees.[8]</p>
Loan Term	<p>5, 10, 15, or 20 years, depending on the useful life of the product. A shorter term can be requested.[8]</p>
Interest Rate	<p>Fixed 6% [8]</p>

8.9.4 Figtree’s Commercial PACE Program

Figtree PACE financing is a regional PACE program in California. The Pacific Housing and Finance Agency (PFHA) and the California Enterprise Development Authority (CEDA) are California Joint Power Authorities. Each member city of CEDA and PFHA is eligible to participate in the Figtree PACE program. The program is financed through bonds issued by CEDA and PFHA. The program is administered by Figtree Energy Resource Company. The member city must pass the appropriate resolution to join the California PACE program. The following members of Pacific Housing and Finance Agency (PHFA) have passed the appropriate resolution to join the PACE program: City of Adelanto, City of Calipatria, City of Clovis, City of Exeter, City of Farmersville, City of Fresno, County of Lake, City of Clearlake, City of Kerman, City of Palm Springs, City of Sanger, City of Tulare, City of Vacaville, City of Woodlake. Agency members of California Enterprise Development Authority (CEDA) that have passed the appropriate resolution to join the PACE program include: County of Alameda, County of Kern, City of Clovis, City of Dublin,

City of Elk Grove.⁸⁰

Commercial and residential properties are eligible. However, the program is no longer taking applications for its residential program.

Figtree does not require total financing to be net of rebates/incentives. All processing of rebates/incentives is between the property owner and the entity offering the rebates and/or incentives.⁸¹

Figtree's Commercial PACE Program	
Eligible Measures	Energy efficiency, Renewable energy, Water conservation installations
Loan Amount for Project	Minimum: \$5,000 Maximum: Tier 1 Interest Rate: 10 % of total property value (before improvements). The sum of the annual payment and property taxes cannot exceed 3% of total assessed value. At Tier 2 Interest Rate: 20% of total property value (before improvements). The sum of the annual payment and property taxes cannot exceed 4% of the Total Assessed Value. Property values are determined by the County Assessor. Figtree will calculate financing within these parameters.[12]
Eligible Costs	Costs associated with the clean energy installation including administrative and application fees.
Loan Term	Useful life of improvements, up to 20 years [12]
Interest Rate	Tier 1 Interest Rate: 7.99%* Fixed over useful life of improvements, up to 20 years. Tier 2 Interest Rate: 8.99%* Fixed over useful life of improvements, up to 20 year. *Quoted interest rate subject to change based on market conditions. The interest rate is set by current market rates for taxable municipal bonds. Figtree PACE offers fixed-rate financing. Once the interest rate is set for a particular financing, it will not change.[12]

8.9.5 WRCOG HERO Program

Western Riverside Council of Governments HERO Program (“WRCOG HERO Program”) is a regional PACE program. Western Riverside Council of Governments was formed in 1989 as a California Joint Powers Authority. The HERO Program launched January 2012 as a joint effort between the Western Riverside Council of Governments and Renovate America Incorporated. The program is administered by Renovate America.⁸²

The WRCOG HERO Program is open to residential and commercial property owners. Property owners in the following communities are eligible to apply for assessments: the Western portion

⁸⁰ Participating Areas, FigTree Energy Res. Co., <http://www.figtreecompany.com/commercial-pace-areas/> (last visited Oct. 31, 2012)

⁸¹ FIGTREE ENERGY RES. CO., PACE FINANCING DISCLOSURE INFORMATION (July 18, 2012), <http://www.figtreecompany.com/pdf/disclosures-commercial.pdf>

⁸² WRCOG HERO PROGRAM HANDBOOK, Version 01.2, (July 7, 2012) http://wrcog.herofinancing.com/Content/Documents/WRCOG_HEROProgramHandbook.pdf

of the unincorporated area of the County of Riverside and the Cities of Banning, Calimesa, Canyon Lake, Corona, Eastvale, Hemet, Jurupa Valley, Lake Elsinore, Menifee, Moreno Valley, Murrieta, Norco, Perris, Riverside, San Jacinto, Temecula and Wildomar.⁸³

The projects are financed through taxable municipal bonds which are issued for each projects and sold to one of HERO's designated funding partners: Renovate America, Samas Capital, or Structured Finance Associates. Renovate America buys bonds for residential projects. Samas Capital buys bonds on the small commercial projects. Structure Finance Associates buys bonds for the large commercial projects.⁸⁴

An energy audit and solar site evaluation is recommended for the property owner to determine the scope of the project. The installation may be completed by a licensed contractor of the property owner's choice who is registered with the Program or by a property owner who signs a Self-Install Agreement. A property owner's own labor costs are not eligible to be included in the financed amount.⁸⁵

All available up front federal, state, or utility rebates that are assignable to the contractor must be deducted from the assessment amount at the time of financing. However, performance-based incentives, such as the CSI PBI rebate, can be included in the financed amount. State or federal tax credits and rebates that are not assignable to the contractor will also not be deducted from the assessment amount, but property owners may wish to consider these additional benefits in determining the amount of their financing request. Property owners in Southern California Edison's service territory who plan to install solar photovoltaic ("solar PV") or solar thermal water heating systems must be eligible for and participate in the appropriate California Solar Initiative ("CSI") rebate program, unless rebates are not available or the property is currently not connected to the utility grid (solar PV only). Most solar installers can assist property owners with applying for these rebates.⁸⁶

83 *Id.*

84 WRCOG Program, PACENow, <http://pacenow.org/resources/new-residential-pace-launch/> (last visited Nov. 2, 2012)

85 WRCOG HERO PROGRAM HANDBOOK 8, Version 01.2, (July 7, 2012), http://wrcog.herofinancing.com/Content/Documents/WRCOG_HEROProgramHandbook.pdf

86 HERO Financing FAQ, WRCOG, <http://wrcog.herofinancing.com/FAQs/#Q1> (last visited Oct. 31, 2012); WRCOG HERO Program Handbook, Version 01.2, (July 7, 2012) http://wrcog.herofinancing.com/Content/Documents/WRCOG_HEROProgramHandbook.pdf

WRCOG HERO Program	
Eligible Measures	<p>Permanently affixed energy efficiency, water efficiency, and renewable energy products.</p> <p>Custom products are allowed. If a property owner wishes to finance a Custom Product, he or she must request approval for the Custom Product after financing has been approved. To do so, the property owner must complete the Custom Product Application. All Custom Product Applications must be approved by the WRCOG Executive Committee at one of their regularly scheduled meetings. The Program reserves the right to deny any Custom Product Application.</p> <p>For a list of eligible products, see http://wrcog.herofinancing.com/EligibleProducts/; see also http://wrcog.herofinancing.com/Content/Documents/HEROFinancingResidentialEligibleProductsList.pdf.</p>
Loan Amount for Project	<p>Minimum: \$5,000.</p> <p>Maximum: 10% of the value of the property. WRCOG Executive Committee approval is required for any residential projects over \$200,000.[19]</p>
Eligible Costs	<p>Eligible costs under the Program include both the cost of the equipment and the installation costs. Installation costs may include, but are not limited to, energy/water audit costs, appraisals, labor, design, drafting, engineering, permit fees, and inspection charges.[20]</p>
Loan Term	<p>Property owners agree to repay the amount financed over a 5-, 10-, 15- or 20-year period, depending on the type of property, the financing amount, and the expected useful lifetime of the installed Eligible Products.[21]</p>
Interest Rate	<p>The interest rate for the assessment will be based on market rates. The final interest rate will be set at the time the Financing Documents are issued and sent to the property owners. The current estimated interest rate(s) will be available on the Program website, with the actual interest rate identified in the Financing Documents. Current interest rates can be found: http://twitter.com/WRCOGHERO. The interest rate as of 04/27/12: 5yr - 5.95%, 10yr - 6.95%, 15yr - 7.75%, 20yr - 8.25%.[22]</p>

8.9.6 City of Palm Desert’s Energy Independence Program

The City of Palm Desert launched the Energy Independence Program in August 2008. The Energy Independence Program was initially funded with \$2.5 million from the city’s general fund and Redevelopment Agency. The program funds energy efficiency improvements and distributed energy projects for commercial, residential and industrial properties within the City of Palm Desert. The City of Palm Desert temporarily suspended the program and reinstated it in August 2010. The City is currently taking applications but residential property owners who wish to participate have to sign a disclosure statement as part of their application that explains the FHFA’s policy with respect to PACE programs.⁸⁷

87 Energy Independence Program, City of Palm Desert, <http://www.cityofpalmdesert.org/Index.aspx?page=484> (last visited Oct. 31, 2012)

The program received \$6 million in new funding from the City in February 2010. This funding will be divided evenly between energy efficiency projects and solar project.⁸⁸

The Office of Energy Management offers energy surveys for property owners. Energy surveys are highly recommended but not required. During these on-site surveys, the financial details of the Energy Independent Program will be described to the property owner and a Program expert will review possible energy efficient and distributed energy installations with the property owner. This service is provided at no cost to the property owner.

The Office of Energy Management also recommends, but does not require, property owners to seek rebates. The Office of Energy Management recommends that the amount of an EIP loan be reduced by an applicable California Solar Initiative Expected Performance Based Buy-Down rebate, Self-Generation Incentive Program (SGIP) rebate, and any Set to Save rebates. Such rebates may be assigned to the applicable contractor.

As the project is defined, the property owner obtains a contractor's bid or determines the cost of the equipment if self-installing. The property owner submits an application and a title check is conducted. After the application is reviewed and approved, the property owner enters into a contractual assessment agreement with the City. The City records an assessment lien against the property. A 10% contingency will be included in the Loan Contract to reserve additional funds for the property owner to draw against if needed in the case of change orders. For Loans of \$30,000 or more, consent from the mortgage lender is required. The property owner then proceeds with the installation of the improvements. A progress payment prior to the completion of the work is possible when the maximum loan amount is \$20,000 or greater, at least 75 percent of the required material have been delivered to the property and reasonably secured, and the requested progress payment does not exceed 50 percent of the maximum loan amount. The Office of Energy Management inspects the completed project and based on satisfactory project completion, the OEM disburses the loan funds. The disbursement is repaid by the property owner through an assessment on the property tax bill.⁸⁹

88 *City of Palm Desert- Energy Independence Program*, DSIRE: Database of State Incentives for Renewables & Efficiency, http://www.dsireusa.org/incentives/incentive.cfm?Incentive_Code=CA174F (last updated Aug. 8, 2012)

89 CITY OF PALM DESERT , SUMMARY OF LOAN PROCESS, http://pacenow.org/wp-content/uploads/2012/08/Appendix-E_-_Summary-of-Loan-Process-2.pdf.

City of Palm Desert's Energy Independence Program	
Eligible Measures	Energy efficiency, distributed energy, water conservation, custom features For a list of eligible measures, see http://www.cityofpalmdesert.org/Modules/ShowDocument.aspx?documentid=5379 .
Loan Amount for Project	The minimum size: \$5,000 The maximum size: \$100,000. All EIP Loans greater than \$60,000 must be approved by the City Manager. Property owners may submit more than one application but the maximum aggregate of these applications may not exceed \$100,000 per parcel.[23] The total amount of any annual property taxes and assessments shall not exceed five percent (5%) of the market value of the property. Exceptions to the minimum 10:1 value-to-lien ratio may be granted by the City Manager (to a minimum of an 8:1 value-to-lien ratio), upon sufficient evidence, provided by the property owner, of the fiscal prudence and rationale for such exception. The determinations of whether the evidence is sufficient and whether or not to grant an exception shall be in the City Manager's sole discretion and shall be final.[23]
Eligible Costs	Eligible costs of the Energy Improvements include the cost of equipment and installation. Installation costs may include, but are not limited to, labor, drafting, engineering, permit fees, and inspection charges.[23]
Loan Term	EIP Loans are made available for up to 20-year terms not to exceed the reasonably expected useful life expectancy of the Energy Improvements financed by the EIP Loan. The term of the loan is in the discretion of the property owner in consultation with the Office of Energy Management. Exceptions to the repayment term limitation above may be granted by the City Manager, to provide for a longer repayment term (up to a maximum of the reasonably expected useful life expectancy of the Energy Improvements plus 5 years), upon sufficient evidence, provided by the property owner, of the fiscal prudence and rationale for such exception. The determinations of whether the evidence is sufficient and whether or not to grant an exception shall be in the City Manager's sole discretion and shall be final.[23]
Interest Rate	EIP Loans will be made for the initial \$2.5 million an annual interest rate not to exceed 7% for all loans. Thereafter, the City Council will maintain the discretion to adjust the interest rate up to an amount not to exceed 10%. (as of Aug 2008).[23]

8.9.7 Sonoma County's Energy Independence Program

Sonoma County's Energy Independence Program is a county-wide residential and commercial PACE program. Sonoma County uses its own investment portfolio to fund the Sonoma County Energy Interdependence program. The Sonoma County Financing Authority, a joint powers agency, issues bonds which are purchased by the County Treasury Pooled Investment Fund,

the Sonoma County Water Agency, or a third party investor. The Sonoma County Financing Authority then loans the bond proceeds to the County.

Sonoma County makes disbursement to property owners from the proceeds of bonds or from a revolving fund that provides cash on hand to make a disbursement on any day.⁹⁰ Bond proceeds are also used to repay the revolving fund for any disbursement made during the month prior to the bond issuance.⁹¹ The Auditor-Controller Treasurer-Tax Collector is designated as the Program Administrator and is authorized to enter into contractual assessments on behalf of the County.⁹² The County repays the loan with assessment revenues, and the Sonoma County Financing Authority uses the loan payments from the County to make debt service payments on the related bond. Sonoma County also uses the assessment revenues to fund the reserve account and program expense account.

For commercial properties, property owners are required to have a PG&E onsite energy audit of their property. Rebates are encouraged but will not be included in the financing amount unless the rebate is contingent on performance so as to be unavailable for use to pay the project.⁹³

Sonoma County's Energy Independence Program	
Eligible Measures	Energy efficiency, distributed energy, water conservation. For a list of eligible measures, see http://www.drivecms.com/uploads/sonomacountyenergy.org/Policy%20Documents/Eligible_Improvements.pdf .
Loan Amount for Project	Minimum: \$2,500. Assessment amounts cannot exceed 10% of the current market value of the property. The repayment period for amounts from \$2,500-\$4,999 is 10 years. Projects over \$5,000 may be repaid over a term of either 10 or 20 years, at the property owner's option. Projects of \$60,000 up to \$500,000 require approval by the Program administrator. Projects over \$500,000 require specific approval by the Board of Supervisors.
Eligible Costs	Eligible costs of the energy and water efficiency improvements include the cost of equipment and installation. Installation costs may include, but are not limited to, energy evaluation consultations, labor, design, drafting, engineering, permit fees, and inspection charges.[10]
Loan Term	10 or 20 year period based on financing amount.
Interest Rate	7% simple interest (as of March 22, 2012)

⁹⁰ SONOMA COUNTY, PROPERTY ASSESSED CLEAN ENERGY (PACE) REPLICATION GUIDANCE PACKAGED FOR LOCAL GOVERNMENTS 51 (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

⁹¹ SONOMA COUNTY, PROPERTY ASSESSED CLEAN ENERGY (PACE) REPLICATION GUIDANCE PACKAGED FOR LOCAL GOVERNMENTS 51 (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

⁹² SCEIP PROGRAM REPORT AND ADMINISTRATIVE GUIDELINES 2 (Mar. 2012), http://www.drivecms.com/uploads/sonomacountyenergy.org/Policy%20Documents/Program_Report_Admin_Guidelines.pdf.

⁹³ Sonoma County, *Frequently Asked Questions*, Energy Independence Program, <http://www.sonomacountyenergy.org/lower.php?url=faqs-75> (last visited Oct. 18, 2012).

8.9.8 CaliforniaFIRST: California's Statewide PACE program ⁹⁴

CaliforniaFIRST Program is a statewide PACE Program. The CaliforniaFIRST Program is a program of the California Statewide Communities Development Authority (CSCDA). The CSCDA is a joint powers authority co-sponsored by the California State Association of Counties and the League of California Cities. CSCDA is composed of over 500 members that include cities, counties, and special districts. CSCDA is California's largest joint powers authority. To participate in the PACE program, member cities and counties must pass a resolution opting into the program. The CaliforniaFIRST Program currently includes 14 counties and 126 cities located in the state of California. The Program will launch for the first 14 counties in September 2012.⁹⁵

Only non-residential properties are eligible to participate. CaliforniaFIRST applies the open market approach to PACE programs. Under the open market approach, the program will issue either stand alone bonds or pooled bonds. The Stand alone bonds allows each project to have customized transaction timing, interest rate and payback term. The pooled bond approach allows lower cost projects to be aggregated into a single bond issuance or for a property owner to aggregate projects from one property owner on multiple properties. CaliforniaFIRST also has capital available for projects without a Project lender.⁹⁶

If a property owner chooses to participate, the improvements will be financed by the issuance of bonds by CSCDA. CSCDA will retain and pay the bond and disclosure counsel for issued bonds. The City is not the issuer of the bonds. CSCDA will levy contractual assessments on the owner's property to repay the portion of the bonds issued to finance the improvements on that property. Renewable Funding LLC and RBC Capital Markets provide the administration and financing for the program including charging fees to the participants.⁹⁷

Project Lenders can participate in the program by purchasing a privately placed bond. This bond is secured by a contractual tax assessment with senior position. The bond reflects the terms of the loan negotiated between the Project Lender and the property owner. The agreement can be tailored to the individual property and project.⁹⁸

94 CaliforniaFIRST FAQ, https://californiafirst.org/property_owners_faq (last visited Oct. 31, 2012); CaliforniaFIRST Program Handbook.

95 CaliforniaFIRST FAQ, https://californiafirst.org/property_owners_faq (last visited Oct. 31, 2012); CaliforniaFIRST Program Handbook.

96 Leo Wiegman, *A Handful of States are Reimagining Property Assessed Clean Energy Financing*, State & Local Energy Report, Aug. 6, 2012, <http://www.stateenergyreport.com/2012/08/06/pace-makers/>.

97 City of San Diego, Authorization to Join CaliforniaFIRST PACE Financing Program, (July 18, 2012) http://docs.sandiego.gov/councilcomm_agendas_attach/2012/NRC_120725_7.pdf

98 For Lenders, CaliforniaFIRST, <https://californiafirst.org/lenders> (last visited Oct. 19, 2012).

CaliforniaFIRST	
Eligible Measures	Energy efficiency, renewable energy and water conservation improvements that are permanently affixed to the property. Recent legislation allows solar leases and PPAs to be financed by PACE programs. Projects must have a useful life of at least 5 years For a list of Authorized Improvements, see https://content.renewfund.com/production/california_first/ca_first_improvements_list.en.pdf
Loan Amount for Project	Minimum: \$50,000 Maximum: Dependent on the property value. Current outstanding debt plus CaliforniaFIRST financing amount must be less than the property value plus the value of the financed projects.[24]
Eligible Costs	A property owner can finance the equipment, labor, design, audit, permits and engineering of the project(s).[24]
Loan Term	Repayment periods will range from 5-20 years, depending on the expected useful life of the financed improvements and terms negotiated with your lender.[24]
Interest Rate	Negotiated with qualified project lender.

8.9.9 City of Yucaipa - Energy Independence Program

The City of Yucaipa’s Energy Independence Program is a PACE program open to any residential, commercial, or industrial property owner in the City of Yucaipa. The City of Yucaipa approved the program in the fiscal year 2010-2011. The initial source of funding for the program was a \$2,500,000 transfer from the General Fund Undesignated Fund Balance to a Special Revenue Fund. Of that amount, the City allocated \$375,000 for program costs, \$2,125,000 for financing to owners of residential property, and the remaining \$850,000 for commercial or industrial property.⁹⁹ Interest earnings are deposited into the Special Revenue Fund and transferred to the General Fund on an annual basis. As principal is repaid, the principal balance becomes available for new loan applications.¹⁰⁰

The City of Yucaipa recommends that property owners obtain energy survey or audits. However, an energy audit is not required. The City will provide 50% of the costs associated with energy audits, up to the amount of \$150.

To apply for the program, the property owner must determine the scope of the project and the cost of the efficiency improvement. The property owner must apply to state or federal rebate programs including, but not limited to, the California Solar Initiative, Self-Generation Incentive Program, and other weatherization programs, as applicable.¹⁰¹

99 CITY OF YUCAIPA ENERGY INDEPENDENCE PROGRAM: PROGRAM REPORT AND ADMINISTRATIVE GUIDELINES 8 (revised Aug. 8, 2011) http://www.yucaipa.org/cityPrograms/EIP/PDF_Files/AB811_Program_Report_Final.pdf

100 CITY OF YUCAIPA BUDGET SUMMARY 149 (June 25, 2012), <http://yucaipa.org/cityBudgetCip/documents/2012-13AnnualAdoptedBudgetWEB.pdf>

101 Program FAQ, City of Yucaipa, <http://www.yucaipa.org/cityPrograms/EIP/FAQ.php>

After the application approval, the property owner can hire a licensed contractor (licensed with both the City of Yucaipa and the State of California) and obtain any necessary permits. The property owner must sign an assessment contract. The EIP Administrator, in his discretion, may require the consent of pre-existing secured lenders. After completion of the installment, a building inspector must document the completed installation. After submitting the final paperwork (finalized permit, invoices showing final costs, applicable rebate amounts), the City of Yucaipa disburses the payment to the property owner. A progress payment prior to the completion of the work is possible when the maximum loan amount is \$35,000 or greater, at least 75 percent of the required material have been delivered to the property and reasonably secured, and the requested progress payment does not exceed 50 percent of the maximum loan amount. The property owner repays the disbursement through assessments on the property tax bill.¹⁰²

City of Yucaipa - Energy Independence Program	
Eligible Measures	Energy Efficiency, Distributed Energy, Water Conservation, Custom Projects For a list of eligible measures, see http://www.yucaipa.org/cityPrograms/EIP/PDF_Files/Eligible_Improvements.pdf .
Loan Amount for Project	Minimum: \$5,000 Maximum \$35,000 (residential); \$100,000 (commercial or industrial). The amount shall not exceed 10 percent of the property's assessed value.[25] EIP loans greater than \$50,000 must be approved by the City Manager. Loans greater than the maximum must be approved by City Council. Approval of loans will be made on first come, first serve basis and will be subject to amount of funds available in the program.
Eligible Costs	Energy evaluation/audit costs. Licensed, professional contractors working on their own property may request EIP financing for materials, cost of their work crew's labor and overhead but not for their own time. The labor and time of the contractor is not included.
Loan Term	All projects may be repaid over a term of either 10, 15, or 20 years at the property owner's option.[25]
Interest Rate	7% simple interest. The interest rate will be fixed at the time the assessment contract is signed, and will not go up.[25]

8.9.10 City of Sacramento - Clean Energy Sacramento

Clean Energy Sacramento is managed and funded by Ygrene. Ygrene is involved in all aspects of PACE financing from managing the energy district, offering private financing, paying for costs related to district implementation, staffing, and marketing.¹⁰³

¹⁰² *Application Process Steps*, City of Yucaipa, <http://www.yucaipa.org/cityPrograms/EIP/steps.php>; *Energy Independence Program Summary of Assessment Financing Process*, City of Yucaipa, http://www.yucaipa.org/cityPrograms/EIP/PDF_Files/Summary_of_Assessment_Financing_Process.pdf; City of Yucaipa, *Program Report and Administrative Guidelines* (Aug. 8, 2011), <http://www.yucaipa.org/cityPrograms/EIP/documents/RestartI1092011.pdf>.

¹⁰³ *Clean Energy Sacramento*, Ygrene <http://ygrene.us/ca/sacramento> (last visited Oct. 19, 2012).

Eligible Properties includes Multiplex Residential (5 or more units), small commercials, and large commercial properties. There is also a residential program. The program will finance energy efficient, distributed energy, and water conservation projects.¹⁰⁴ The Program will be launched in fall 2012.

8.10 Challenges Facing Successful Implementation of Commercial PACE Programs

There are several challenges to the successful implementation of commercial PACE programs. The challenges are similar to those facing all public-private partnerships.

The three most prevalent challenges are (1) achieving low cost of capital, (2) demand stimulation, and (3) energy savings accountability.

8.10.1 Challenge #1 for Commercial PACE Programs: Achieving Low Cost of Capital

PACE Programs have the potential to provide a low cost form of financing to property owners over a long repayment period. However, there are high program costs associated with the startup of PACE programs which increase fees and interest rates for property owners participating in the PACE program. The market for PACE is still being developed and project lenders are cautious even when the risk of delinquency and default is low. This keeps rates higher than what would be expected of such a secured financing option. In addition, program participation is low so costs cannot be spread among a larger pool of property owners.

• A Barrier to Achieving Low Cost of Capital: Obtaining Mortgage Holder Consent

Most commercial PACE programs require applicants to get the written consent of the existing mortgage holder.¹⁰⁵ The lender consent requirement has been instituted to protect participating property owners from acceleration of mortgage payments under “due on encumbrance” clauses in some mortgage contracts.

The relationship between commercial property owners and mortgage lenders is a strong one. Some property owners will not participate in low cost financing programs outside of their mortgage lender because of the potential to tarnish the relationship with the mortgage lender. Sometimes mortgage lenders are willing to provide the financing for the project and participate in the PACE program. When mortgage lenders are not willing to provide financing for the project, obtaining mortgage lender consent can prevent or slow down approval for a project. This can increase costs to the property owner as well as prevent project approval.

¹⁰⁴ For a list of eligible products, see *List of Eligible Improvements*, Ygrene, https://s3.amazonaws.com/ygrene/dis-tribut_cms_asset/file/bhi4cr/Sac_Eligible_Improvements.pdf?AWSAccessKeyId=AKIAINWWCY7VBGRZJFSA.

¹⁰⁵ U.S. DEPT. OF ENERGY, CLEAN ENERGY FINANCE GUIDE 3D, CHAPTER 13- COMMERCIAL PROPERTY-ASSESSED CLEAN ENERGY (PACE) FINANCING (Dec. 9, 2010), <http://pacenow.org/wp-content/uploads/2012/07/Chapter-13-Commercial-PACE.pdf>; Sonoma County, Property Assessed Clean Energy (Pace) Replication Guidance Packaged For Local Governments 57-58 (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.

8.10.2 Challenge #2 for Commercial PACE Programs: Demand Stimulation

The overall success of PACE programs, and other financing programs, depends on increasing demand for clean energy installations. As with any new financing program, many property owners want to see the program proven by another person before they participate. But before a property owner gets to the point of choosing a financing option, the property owner must make the decision to install energy efficient, water efficient, or distributed energy projects. The decision to install clean energy projects must compete with the other internal decisions of the commercial business. The precedence of other internal decisions and the general lack of understanding of the energy cost savings potential of projects keep the demand for clean energy projects low.

8.10.3 Challenge #3 for Commercial PACE Programs: Energy Savings Accountability

There is a public expectation that public funds used for programs that finance or support clean energy installations actually lead to energy cost savings for the property owner. There are a variety of energy audits and surveys that can be conducted on a property. The potential energy savings of a clean energy installation is estimated for the property. Property owners may experience less or more energy cost savings than expected. Generally in PACE programs, there is limited accountability for the energy cost savings experienced by property owners.

8.11 Possible Uses of Prop 39 Funds to Overcome the Challenges of Commercial PACE Programs

We propose that Prop 39 funds be used to (1) create a Public-private credit facility for commercial PACE programs, (2) stimulate demand for clean energy installations, and (3) create accountability for energy savings. The recommendations meet the guiding principles of creating a program that would maximize private capital, replenish public funding, offer a low cost form of financing for the property owner, and create energy savings for the consumer.

8.12 Designing a Program with the Lowest Cost of Capital: Creation of a Public-private credit facility

Prop 39 funds could be used to provide funding and support for a Public-private credit facility for commercial PACE programs. There is opportunity for private capital to be leveraged through the use of asset backed securities. Essentially, PACE assessments could be securitized, just like auto loans or credit card receivables. The PACE assessments could be pooled together, structured as a debt instrument, and rated by the rating agencies.

In this financing structure, a Public-private credit facility provides financing for clean energy projects in PACE programs. The warehouse line is collateralized by the cash flows from the repayment of the PACE assessments. The PACE assessments are aggregated into a diversified pool. The pool is then used by the Public-private credit facility to issue a rated bond. The rated bond is purchased by an institutional fixed income investor (“Institutional Investor”). The

purchase of the rated bond is called the “takeout.”

By using an asset structure familiar to investors, a Public-private credit facility could attract significant amount of private capital. Prop 39 funds could be used in a Public-private credit facility to mitigate the risks associated with a new asset class like PACE assessments.

For a detailed description of the Public-private credit facility, see section 5 of this report.

8.13 Alternative Options if a Public-private credit facility is Not Implemented

The Public-private credit facility would maximize private capital, replenish public funds, and offer a low cost form of financing to property owners. By using Prop 39 funds first in the Public-private credit facility, low interest rates could be offered to the property owner. Proceeds from the senior bond sale could potentially replenish Prop 39 funds and revolve funds for further financing.

If a Public-private credit facility is not created, there are other alternative options available to support commercial PACE programs. However, these programs would not leverage as much private capital or offer as sustainable of an option for low cost capital as a Public-private credit facility. The alternative options include: (1) Interest Rate Buydown; and (2) a Statewide Commercial PACE Reserve Program.

8.13.1 Alternative Option #1: Interest Rate Buydown

Since PACE financing is a secured form of financing with relatively low risk, interest rates should be low. However, PACE financing is new and participation by commercial property owners is still low. High program costs associated with implementing a PACE program, low demand for energy efficiency projects, and hesitancy of the private market to participate in a new program, translates to an interest rate of 6-10% for property owners. This interest rate is higher than what would be expected of such a secure financing option (4-6%).

Prop 39 Funds could be used to create an Interest Rate Buydown Program for PACE financing.

8.13.1.1 Possible Structure of the Interest Rate Buydown Program

An Interest Rate Buydown consists of a lump sum payment to a lender. In an stand alone open market bond/owner arranged PACE program, the Project Lender would receive a lump sum payment if the PACE program participated in the Interest Rate-Buydown Program. The amount of the lump sum represents the difference between the targeted return to the investor and the property owner’s interest rate.

A state trustee account could be set up to house the Prop 39 funds to be used for the Interest Rate Buydown Program. PACE programs could then apply for participation in the Interest Rate Buydown Program. The state could set up minimum criteria for participation. These requirements could include minimum underwriting criteria.

8.13.1.2 Advantages of an Interest Rate Buydown Program

An interest rate buy-down could be applied to a range of PACE programs. Providing a lower interest rate to property owners might increase participation in PACE financing. As more projects are financed by PACE financing, potential property owners would look to prior financed projects as a model for their own projects. Confidence in the program would increase among property owners. As participation increases and PACE programs mature, the need for an Interest Rate Buydown would decrease.

8.13.1.3 Disadvantages of an Interest Rate Buydown Program

Demand for energy efficiency is still low. It is not clear whether a lower interest rate would increase property owner participation. In addition, funds used in an Interest Rate Buydown Program are not replenished. Funds are exhausted and cannot be revolved for future financing.

8.13.2 Alternative Option #2: Statewide Commercial PACE Reserve Program

Prop 39 funds could be used to create a Statewide Commercial PACE Reserve Bond Program. In 2010, Governor Arnold Schwarzenegger signed SB 77 which authorized a PACE Bond Reserve Program. Under SB 77, the California Alternative Energy and Advanced Transportation Financing Authority was tasked with developing and administering a PACE Reserve Bond Program to protect PACE Bond investors when property owners make late payments or non-payments of PACE assessments or special tax revenue.

Under SB 77, the PACE Bond Reserve program would provide a reserve of no more than 10% of the initial principle amount of the PACE bond. An appropriation of \$50 million from the Renewable Resource Trust Fund was designated for the PACE Reserve Program. The PACE Reserve Program would only apply to improvements for residential projects of 3 units or fewer, or a commercial project that costs less than \$25,000 in total. Due to FHFA litigation, the PACE Reserve Bond Program has not yet been developed.¹⁰⁶

Prop 39 funds could be used to create a Statewide Commercial PACE Reserve Bond Program. The purpose of the Statewide Commercial PACE Reserve Bond Program would be similar to the purpose of the PACE Reserve Bond Program authorized in SB 77. The Program would be developed to lower the risk to PACE Bond Investors. However, a Statewide Commercial PACE Reserve Bond Program would broaden the list of eligible PACE programs to include PACE programs that finance commercial projects greater than \$25,000.

8.13.2.1 Possible Structure for a Statewide Commercial PACE Reserve Program

A California Agency (“Agency”) could develop and administer the Statewide Commercial PACE Reserve “Reserve.” Prop 39 funds could be transferred into the Reserve. These funds would never be replenished. However, if it is determined that the Reserve is not necessary, the money could later be transferred for another purpose.

¹⁰⁶ <http://www.treasurer.ca.gov/caeatfa/pace/2010.pdf>

An applicant would then submit an application to the Agency. To qualify for assistance, the PACE programs should meet minimum requirements. These requirements could include the following:

- 1) The interest rate on the PACE bond does not exceed a certain percentage;
- 2) Minimum legal loan structure and underwriting criteria;
- 3) Proceeds of the PACE bonds are used to finance commercial projects; and
- 4) The use of PACE program best practices, as dictated by the Agency, to qualify eligible properties for participation in underwriting the PACE program.

After reviewing and approving an application, the Agency would transfer the amount made available at the closing of the applicant's PACE bond. This money would be used in the PACE bond's reserve fund under the bond documents.

8.13.2.2 Advantages of a Statewide Commercial PACE Reserve Bond Program.

The Statewide Commercial PACE Reserve Bond Program would be a pool of money available to PACE programs if they wished to implement a debt service reserve fund. Debt service reserve funds protect PACE Bond investors by supplementing the late payments or non-payments of PACE assessments.

A debt service reserve fund lowers risk to PACE Bond Investors. Potentially, lower interest rates can be applied to the property owner when risk to PACE Bond Investors is reduced. A debt service reserve fund might also attract PACE Bond Investors who are cautious of purchasing PACE Bonds without a debt service reserve fund.

In addition, a PACE programs could set up or increase the size of the debt service reserve fund through Prop 39 funds instead of applying additional fees to the property owner. This would lower the costs to the Property Owner.

8.13.2.3 Disadvantages of a Statewide Commercial PACE Bond Reserve Program: Is a Debt Service Reserve Fund Necessary?

There is controversy concerning whether a debt service reserve fund is necessary. Some argue that PACE assessments are secure enough investments that Project Lenders are not interested in a debt service reserve fund. For example, certain PACE programs used ARRA funding to create debt service reserve funds. Potential Project Lenders in the open market/owner arranged PACE program in California have not yet applied or expressed interest in having access to the debt service reserve fund when they purchase the PACE bond. It is important to keep in mind that many of these PACE programs are still developing. So while current Project Lenders may not be interested in the debt service reserve fund, other Project Lenders might be in the future. The existence of the reserve would not negatively impact PACE programs besides dedicating money that could be used for another purpose.

8.14 Demand Stimulation And Accountability

Creating demand stimulation and accountability are two challenges facing PACE programs. For a description on possible options to overcome these challenges see sections 6 and 7 of this report.

9. Works Cited

- 1 LOS ANGELES COUNTY COMMERCIAL PACE FINANCING APPLICATION, https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CCcQFjAB&url=https%3A%2F%2Fcontent.renewfund.com%2Fproduction%2Flos_angeles_county_ca_commercial%2Fpacefinancing_application.en.pdf&ei=9U1qUL-mMMe6iwLjvoCQBQ&usg=AFQjCNGWaEpjs664mIsHKBI8p_DRd55mEg&cad=rja; GreenFinanceSF Program Handbook (Nov. 17, 2011), https://content.renewfund.com/production/san_francisco_county_ca_commercial/gfsf_program_handbook.en.pdf; Renewable Funding, CaliforniaFIRST Program Handbook (2012).
- 2 *Apply for Financing*, Sonoma County, <http://www.sonomacountyenergy.org/apply-for-financing.php>; Sonoma County, Property Assessed Clean Energy (PACE) Guidance Package for Local Governments (Mar. 30, 2012), <http://www.cleanenergyfinancecenter.org/wp-content/uploads/PACE-manual-for-local-governments.pdf>
- 3 SONOMA COUNTY, PROPERTY ASSESSED CLEAN ENERGY (PACE) GUIDANCE PACKAGE FOR LOCAL GOVERNMENTS (Mar. 30, 2012), <http://www.cleanenergyfinancecenter.org/wp-content/uploads/PACE-manual-for-local-governments.pdf>
- 4 GREENFINANCESF PROGRAM HANDBOOK (Nov. 17, 2011), https://content.renewfund.com/production/san_francisco_county_ca_commercial/gfsf_program_handbook.en.pdf;
- 5 MPOWER PLACER APPLICATION, <http://www.mpowerplacer.org/wp-content/uploads/2011/08/Application.pdf>.
- 6 SONOMA COUNTY, SONOMA COUNTY ENERGY INDEPENDENCE PROGRAM: PROGRAM POLICIES (Mar. 30 2012); <http://www.drivecms.com/uploads/sonomacountyenergy.org/Policy%20Documents/SCEIP%20Policies.pdf>.
- 7 MPOWER PLACER FEE SCHEDULE, <http://www.mpowerplacer.org/wp-content/uploads/2011/08/Fee-Schedule.pdf>.
- 8 FAQ, mPOWER Placer <http://www.mpowerplacer.org/about-us/faqs> (last visited Oct. 1, 2012).
- 9 PROGRAM REPORT AND ADMINISTRATIVE GUIDELINES (2011), <http://www.mpowerplacer.org/wp-content/uploads/2011/09/Program-Report-and-Administrative-Guidelines.pdf>.
- 10 SONOMA COUNTY ENERGY INDEPENDENCE PROGRAM: PROGRAM REPORT AND ADMINISTRATIVE GUIDELINES 4-5 (Rev. Mar. 2012) http://www.drivecms.com/uploads/sonomacountyenergy.org/Policy%20Documents/Program_Report_Admin_Guidelines.pdf
- 11 LOS ANGELES PROPERTY ELIGIBILITY CRITERIA FOR PACE FINANCING (June 15, 2011) https://content.renewfund.com/production/los_angeles_county_ca_commercial/eligibility_criteria.en.pdf; PACE Reservation Form: Los Angeles County Commercial Property Assessed Clean Energy (PACE) Program, https://content.renewfund.com/production/los_angeles_county_ca_commercial/pacereservationform.en.pdf. Each project lender may also set additional requirements
- 12 FIGTREE ENERGY RES. CO., PACE FINANCING DISCLOSURE INFORMATION (July 18, 2012), <http://www.figtreescompany.com/pdf/disclosures-commercial.pdf>.

- 13 RENEWABLE FUNDING, CALIFORNIAFIRST HANDBOOK (2012).
- 14 CITY OF YUCAIPA ENERGY INDEPENDENCE PROGRAM: PROGRAM REPORT AND ADMINISTRATIVE GUIDELINES 5 (revised Aug. 8, 2011), http://www.yucaipa.org/cityPrograms/EIP/PDF_Files/AB811_Program_Report_Final.pdf
- 15 Delinquent payments are those that result in incurred penalties and/or interest expense as a result of a late payment.
- 16 SONOMA COUNTY, SONOMA COUNTY, PROPERTY ASSESSED CLEAN ENERGY (PACE) REPLICATION GUIDANCE PACKAGED FOR LOCAL GOVERNMENTS 116 (Mar. 30, 2012), available at <http://www.mpowerplacer.org/wp-content/uploads/2012/04/PACE-Manual.pdf>.
- 17 PROPERTY ELIGIBILITY CRITERIA FOR PACE FINANCING (June 15, 2011), https://content.renewfund.com/production/los_angeles_county_ca_commercial/eligibility_criteria.en.pdf
- 18 PACE RESERVATION FORM: LOS ANGELES COUNTY COMMERCIAL PROPERTY ASSESSED CLEAN ENERGY (PACE) PROGRAM, https://content.renewfund.com/production/los_angeles_county_ca_commercial/pacereservationform.en.pdf
- 19 *Hero Financing Costs and Terms*, WRCOG, <http://wrcog.herofinancing.com/HEROFinancing/Costs.aspx> (last visited Oct. 1, 2012).
- 20 WRCOG HERO PROGRAM HANDBOOK 8, VERSION 01.2, (July 7, 2012), http://wrcog.herofinancing.com/Content/Documents/WRCOG_HEROProgramHandbook.pdf.
- 21 *Hero Financing Costs and Terms*, WRCOG, <http://wrcog.herofinancing.com/HEROFinancing/Costs.aspx> (last visited Oct. 1, 2012); WRCOG HERO Program Handbook 9, Version 01.2, (July 7, 2012), available at http://wrcog.herofinancing.com/Content/Documents/WRCOG_HEROProgramHandbook.pdf.
- 22 *Hero Financing Costs and Terms*, WRCOG, <http://wrcog.herofinancing.com/HEROFinancing/Costs.aspx> (last visited Oct. 1, 2012). Current interest rates can be found at <http://twitter.com/WRCOGHERO>.
- 23 PALM DESERT ENERGY INDEPENDENCE PROGRAM REPORT AND ADMINISTRATIVE GUIDELINES 4, (April 5, 2011), <http://www.cityofpalmdesert.org/Modules/ShowDocument.aspx?documentid=8376>
- 24 *CaliforniaFIRST FAQ*, https://californiafirst.org/property_owners_faq
- 25 *Frequently Asked Questions*, City of Yucaipa <http://www.yucaipa.org/cityPrograms/EIP/FAQ.php> (last visited Oct. 19, 2012)
- 28 LOS ANGELES COUNTY COMMERCIAL PACE FINANCING APPLICATION, https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=2&ved=0CCcQFjAB&url=https%3A%2F%2Fcontent.renewfund.com%2Fproduction%2Flos_angeles_county_ca_commercial%2Fpacefinancingapplication.en.pdf&ei=9UIqUL-mMMe6iwLjvoCOBQ&usg=AFQjCNGWaEpJs664mIsHKBI8p_DRd55mEg&cad=rja:

10. Glossary

- **“Assessment”** – Total dollar amount of the lien placed on the property to fund the clean energy installation.
- **“Assessment Repayments”**- Repayments by the Property Owners for the PACE financing of the clean energy installation.
- **“Asset-Backed Securities”**- A bond collateralized by the cash flows of an underlying pool of assets.
- **“Institutional Investor”**- An entity/person that trade securities in large enough quantities to face fewer protective regulations.
- **“Joint power authority”**- A public authority established through an agreement between two or more public agencies to jointly exercise a power common to both.
- **“PACE”**- Property Assessed Clean Energy
- **“PACE Bond”**- A bond secured by a voluntary contractual assessment on property or a special tax on the property, pursuant to paragraph (2) of subdivision (a) of Section 5898.20 of the Streets and Highways Code., Section 5 of Article XI of the California Constitution, or subdivision (b) of Section 53328.1 of the Government Code.
- **“Pooled Bond”** - Bonds that are secured by assessments of a number of properties.
- **“Program Administrator”** – A third-party administrator hired by the local government to administer the PACE Program.
- **“Property Owner”** – The record owner(s) of the fee title to the Property.
- **“Stand-alone bond”** – A bond that is secured by the assessment of a single property
- **“PACE Bond Investor”**- The person/entity that purchases a PACE Bond.
- **“Project Lender”**- A PACE Bond Investor in an open market/owner arranged finance structure. The Project Lender agrees to finance a PACE Project and negotiates terms of the financing with the property owner. The Project Lender agrees to purchase a bond from the local government that mirrors the terms of the agreement. The proceeds of the bond is used by the local government to finance the project. The local government repays the Project Lender through the Assessment Repayments from the Property Owners
- **“Open Market/Owner Arranged PACE Program”**- A PACE program in which the Project Lender agrees to finance a PACE Project and negotiates terms of the financing with the property owner. The Project Lender agrees to purchase a bond from the local government that mirrors the terms of the agreement. The proceeds of the bond is used by the local government to finance the project. The local government repays the Project Lender through the Assessment Repayments from the Property Owners
- **“The State”**- California
- **“Warehouse Lender”**- A short term lender that provides private capital to a warehouse line.

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