Commercial PACE Project Origination: Leverage Points for Growing the Project Pipeline

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Executive Summary

Greater use of Commercial Property Assessed Clean Energy (C-PACE) financing within communities where it is enabled will increase energy savings, drive economic development, and result in additional public benefits. Some states with active C-PACE programs have ramped up activity significantly while others have not achieved and sustained a high volume of transactions. This brief details C-PACE project origination trends, barriers, and market practices for state and local government C-PACE program sponsors looking to grow their C-PACE project pipeline.

Based on the results of a questionnaire of C-PACE stakeholders, this brief provides new information on project origination trends and strategies for how state and local governments and third-party partners can increase the volume of projects leveraging C-PACE financing. The questionnaire results support the following observations about the C-PACE financing market:

- **Marketing and education:** Program administrators and capital providers agree that direct outreach to property owners (e.g., one-on-one or in small groups) to explain the benefits of C-PACE financing is the most effective strategy to originate projects.

- **C-PACE capital providers:** Specialty C-PACE capital providers—private lenders with deep knowledge of and a significant focus on C-PACE financing—are the primary source of capital for most C-PACE programs according to program administrator respondents. The share of capital provided by specialty C-PACE providers grew from 2019 to 2020. However, some C-PACE programs (two in this study) are structured so that they use exclusively public capital.

- **C-PACE project entry point into a program:** Most program administrators report that over 75% of financing volume comes from projects with pre-selected capital providers, meaning that property owners have connected with capital providers before making contact with the C-PACE program. Transaction sizes for these projects grew from 2019 to 2020 (most are now over $1 million), helping to drive industry growth.

- **Smaller C-PACE projects:** Small and medium projects often do not have a pre-selected capital provider and may need additional support from a program administrator to navigate the transaction process. This is significant given that some programs have goals to serve small- and medium-sized businesses.

- **Messaging to property owners:** The features property owners find most attractive about C-PACE financing are the long repayment period and the fact that it does not require a personal guarantee.
**Introduction**

Commercial Property Assessed Clean Energy (C-PACE) financing supports energy savings, economic development opportunities, and greater resiliency in the built environment. C-PACE is a growing industry that provides both public and private benefits by financing clean energy projects. Since 2010, clean energy financing volume through new C-PACE projects has increased by an average of 76% per year.\(^3\) However, new programs often grow slowly taking years to originate their first project and additional time to achieve volume of $100 million (see Figure 1).

For public-sector sponsors seeking to increase the impact of their programs by increasing project origination (i.e., program uptake), this brief reviews the process of identifying and engaging property owners who could benefit from C-PACE projects and formalizing their use of C-PACE financing. Identifying project origination challenges and ways to overcome them can help promote clean energy deployment through C-PACE investment, enabling programs to build a pipeline of projects. The project origination process generally consists of:

- A program sponsor (or sponsors) establishes a C-PACE program.
- The stakeholder (the property owner or a contractor) learns about C-PACE.
- The property owner approaches the program administrator to participate in the program (either with or without a capital provider).
- The property owner finds a source of capital, either by directly interacting with a capital provider or by working with the program administrator to help find one.
- The property owner agrees to formally enter into a C-PACE agreement.

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**Figure 1.** C-PACE program uptake (in millions of dollars invested) by state through the end of 2021. Note that year 0 in the graph is the point at which C-PACE legislation is passed. In some states, the time between the passage of enabling legislation and the program launching in earnest could be several years. For example, Colorado has C-PACE legislation dating back to 2010 and the program launched in 2016. *Source: PACENation.*

\(^3\) See PACENation “Market Data.” [https://www.pacenation.org/pace-market-data/](https://www.pacenation.org/pace-market-data/)
The key stakeholders in the project origination process are:

- **Program sponsor** – The entity responsible for establishing a C-PACE program. A program sponsor may be a state office or agency, a local government, or a regional or quasi-public entity. For example, state and local governments may sponsor C-PACE programs by passing enabling legislation and C-PACE ordinances, determining program rules, setting up C-PACE special assessment districts, and either administering the program or selecting a third party to serve as program administrator. In a few cases, program sponsors provide program capital.

- **Program administrator** – The entity responsible for C-PACE program implementation in concert with state and local enabling legislation and program guidelines. This may be the same entity as the program sponsor, but day-to-day program responsibilities—including program promotion—are often fulfilled by a different party.

- **Capital provider** – The entity that provides capital to complete a C-PACE-financed project. C-PACE program capital providers can be state, local, or quasi-public entities, financial institutions (e.g., banks and community development financial institutions), and specialty C-PACE capital providers—although, as noted below, specialty capital providers currently dominate the market. Capital providers also originate some projects by seeking out, recruiting, and educating potential C-PACE customers.

- **Property owner** – Elects to participate in a C-PACE program to pay for energy improvements (or other eligible improvements such as resiliency measures) in their building. They must learn about a C-PACE program, seek out and choose a capital provider, complete any required administrative steps to participate and secure financing, host the project, and repay the C-PACE financing.

- **Contractors and project developers** – Develop a project’s technical scope of work, propose pricing for the property owner, and install the eligible clean energy measures.

This brief aims to support C-PACE program sponsors (state and local governments) and other stakeholders to accelerate C-PACE project uptake to advance public purpose benefits of energy savings, greenhouse gas mitigation, economic development, and job creation. Key objectives include:

1. Increase public-sector sponsor understanding of the project origination process including the level of effort, promising practices, barriers to success, and pathways of project origination.
2. Identify impactful roles public-sector sponsors can assume to support project uptake.
3. Identify successful marketing messages.
4. Identify share of projects originated through capital providers vs. other means.

This brief gives information and perspectives on C-PACE project originations to help decision makers increase project uptake and promote the likelihood of sustained C-PACE program success.

To accomplish these objectives, LBNL researchers reached out to C-PACE program administrators and capital providers with a questionnaire about their programs and their project origination practices. Thirty-two stakeholders responded: 22 program administrators and 10 C-PACE capital providers. At least four program administrator respondents also provide capital and at least one capital provider respondent has also administered programs. However, each respondent replied either as a program administrator or as a capital provider; none responded to both questionnaires. All of the capital provider respondents were specialty C-PACE capital providers (private, non-bank lenders with a special focus on C-PACE); their perspectives may not be representative of other C-PACE capital providers. As noted below, specialty capital providers fund most C-PACE projects.

To capture the different roles and perspectives of program administrators and capital providers, this brief distinguishes between property owners that approach program administrators with pre-selected capital providers and those that approach the program without a capital provider. In the first case, the capital provider has directly recruited the property owner, and reported project sizes are generally larger (i.e., greater than $1 million); in the second, the program administrator will be more involved in recruiting the property owner to the program, and project sizes are generally smaller (i.e., under $1 million). Depending on state and local objectives, including whether the program goal is to maximize dollar volume or maximize the number of projects, the perspective of capital providers and program administrators, respectively, can be informative for program design and implementation. In closed market C-PACE programs, a single capital provider funds all C-PACE projects—and the capital provider and program administrator may be the same entity—so the distinction between projects with pre-selected capital providers and those without is less clear.

The next sections review the takeaways from this research. They are organized into four topics: a detailed description of program activities, a review of the level of effort in originating projects, a discussion of barriers to project origination, and a discussion of practices that facilitate originations. The concluding section focuses on takeaways, first for capital providers and program administrators and second for state and local government program sponsors.

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Insights and Analysis from C-PACE Program Administrators and Capital Providers

Detailed description of program activities

This section provides context on the program activities of C-PACE stakeholders—program administrators and specialty capital providers—who responded to LBNL’s questionnaire. Specialty C-PACE capital providers are private firms focused almost exclusively on financing C-PACE projects. They often operate in multiple states and fund projects for multiple programs.

Figure 2 shows how many years respondents (both program administrators and capital providers) have operated in the C-PACE market. Nearly 80% of respondents (25 of the 32 respondents) report having been active in the C-PACE industry for 5 years or more. Thus, respondents are mostly seasoned market participants.

Currently, most C-PACE programs mainly rely on specialty C-PACE capital providers to fund projects. For most program administrators (77% or 17 out of 22), more than half of their program capital comes from specialty C-PACE capital providers (see Figure 3). Respondent programs source almost none of their capital from large commercial banks, and most respondents (77% or 17 out of 22) reported that less than 10% of their capital comes from local or regional banks. Two respondents (9%) report using 100% “other” capital sources to capitalize projects; they are both local governments whose program models rely exclusively on public funds.

At the time that property owners first engage with a C-PACE program administrator, the property owner may already be working with a capital provider. Alternately, they may rely on the program administrators to find a capital provider for them, if the program allows multiple capital providers to participate. Program administrators report that, when property owners approach them with potential C-PACE projects, most have already selected capital providers. The share of projects with pre-selected capital providers grew from 2019 to 2020. That growth is even more pronounced when looking at the dollar volume those projects represent. In 2019, 17 out of 22 program administrators (77%) said more than half of their projects by dollar volume came with pre-selected capital providers; in 2020 all program administrators said so (see Figure 4).

5 Two program administrators reported that local or regional banks provided between 21% and 30% of program capital and three reported that they provided between 31% and 40%.
The average size of projects that come with a pre-selected capital provider has likewise been increasing (see Figure 5). In 2019, nearly half of program administrators (10 out of 22) said projects with pre-selected capital providers averaged less than $1 million per project. In 2020, only three program administrators said projects with pre-selected capital providers averaged less than $1 million per project; 16 of 22 providers (73%) said their projects averaged between $1 million and $5 million. A number of C-PACE programs have revised their program rules to allow for the financing of new construction, and the increasing prevalence of new construction projects may be one reason average project sizes increased from 2019 to 2020.6

Among projects without pre-selected capital providers, Figure 6 shows that 18 of the 22 program administrators (82%) reported average project amounts of $1 million or less in both 2019 and 2020; ten of those—45%— reported average project sizes of $250,000 or less.

Comparing Figure 5 and Figure 6 reveals that projects with pre-selected capital providers are generally larger than those without pre-selected capital providers.

The data suggest that program administrators may play a key role in facilitating smaller project transactions, while individual outreach by capital providers may drive dollar volume through larger projects. Given the complexity of financing new construction projects, it is also likely that new construction projects tend to arrive with a pre-selected capital provider, and this might explain much of the difference between the two groups of projects.

Both program administrators and capital providers see direct outreach to individual property owners and groups of property owners—not paid marketing—as the

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6 New construction projects may have distinct project origination needs and barriers, such as resolving how to apply savings-to-investment tests to new buildings and whether to count only incremental savings over code minimums without also considering incremental cost or avoided carbon costs.
most effective outreach strategy. For all C-PACE tasks, program administrators are hiring additional full-time equivalent employees (FTEs) and most now have between two and five FTEs. Most program administrators report spending less than $10,000 per year on paid marketing.

**Barriers to project origination**

Feedback from questionnaire respondents indicates C-PACE project origination is hindered by several barriers. The barriers identified by respondents differ between program administrators and capital providers.

**Barriers Identified by Program Administrators** – As shown in Figure 7, a majority of program administrators agree that property owner awareness, obtaining mortgage holder consent, property owner perception that C-PACE is a burdensome process, cost of energy audits, and other miscellaneous issues (mostly including fees, high interest rates, onerous program requirements, and lack of funding for smaller projects) are barriers to C-PACE originations.

![Barriers to C-PACE project origination](image)

Figure 7. Percent of program administrators (total 22 respondents) who agree or strongly agree on barriers to C-PACE project origination.

**Reason C-PACE project did not close**

![Reason C-PACE project did not close](image)

Figure 8. Reasons program administrators report that potential C-PACE projects did not close.

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7 One program administrator comments that, “just advertising doesn’t get the message across since the program is a little complicated and for a narrow population of people (building owners).”

8 “Consent” refers to banks that hold property mortgages consenting to the use of C-PACE financing to improve those properties.

9 One additional barrier, mentioned by a reviewer, but not included in the questionnaire, is the split-incentive challenge under a triple net lease, in which the tenant pays utility bills. Under such an arrangement, the incentive for the owner to improve the property is diminished since the owner must pay but the tenant receives the cost savings. The reviewer notes that so-called “green leases” can help overcome this problem.
For cases in which property owners seriously considered C-PACE but ultimately decide not to use it, program administrators mostly attribute this attrition to (1) causes unrelated to C-PACE (e.g., the property owner decides not to go through with the project at all) and (2) selection of alternative financing (see Figure 8).

**Barriers Identified by Capital Providers** – As shown in Figure 9, a majority of capital providers say that mortgage holder consent, lack of property owner awareness, and property owner perception that the process is resource intensive are barriers.

![Barriers to C-PACE project origination](https://example.com/barriers.png)

Capital providers also gave input on how enabling state legislation can impact project origination. Given capital providers’ role in driving program dollar volume, especially for large projects, states may wish to consider their suggestions to increase uptake of C-PACE programs. Legislative provisions that capital providers see as top barriers are:

- Post-closing environmental reporting.
- A savings guarantee.\(^{10}\)
- Prevailing wage requirements.
- Energy audit requirements.
- Savings-to-investment requirements.

According to capital provider respondents, the top legislative provisions that *support* program uptake are:

- Allowance for new construction.
- Allowance for non-energy and/or resilience measures.\(^{11}\)
- A clear process on tax foreclosure and enforcement.\(^{12}\)
- A requirement for lender consent.\(^{13,14}\)

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\(^{11}\) Enabling legislation generally allows for energy improvements in existing buildings as the measures that are eligible for C-PACE financing. Allowance for new construction and non-energy measures like resiliency expands the types of projects and buildings that can use C-PACE financing.

\(^{12}\) The special assessment process usually tasks the local government with collecting special assessment payments. Some C-PACE special assessment districts allow third parties, like the capital provider, to collect the C-PACE special assessment payments. Likewise, the local government in some special assessment districts may assign a particular assessment to a third party, including responsibility for tax foreclosure and enforcement. For more on these aspects of the special assessment process, see the first brief in this series: Leventis, G. and L. Schwartz, 2019. Commercial PACE Financing and the Special Assessment Process: Understanding Roles and Managing Risks for Local Governments. [https://eta-publications.lbl.gov/sites/default/files/cpace-special-assessmentv3.pdf].

\(^{13}\) Note that obtaining lender consent is easier for larger projects whose stakeholders are more likely to have relationships with lenders already.

\(^{14}\) Lender consent, even when not required in legislation, is a C-PACE best practice.
Practices that facilitate originations

Respondents also gave feedback on practices that can support and facilitate C-PACE project originations. Both program administrators and capital providers report that they consider direct outreach to individual property owners, groups of property owners, and contractors to be the most effective strategy for originating projects. Program administrators also suggest talking to capital providers, project developers, consultants, and communicating with contractors through phone check-ins and trainings.15

Program administrators also suggested the following strategies for originating projects:

• Cultivate a customer service mentality.
• Work with government offices that review and approve commercial building projects.16
• Coordinate with local economic development organizations.17

Capital provider suggestions for program administrators to help increase originations include:

• Provide a list of lenders that have consented to C-PACE.
• Educate mortgage lenders and property owners about the C-PACE program.
• Provide property owners with a list of qualified capital providers.
• Engage in general (i.e., non-specific) conversations with mortgage lenders regarding consent.
• Introduce property owners to capital providers.

Capital providers indicate that they would welcome the program administrator activities above. However, they also convey a strong preference to have control over their relationship with their clients. Three capital providers said that program administrator involvement can complicate the relationship with property owners considering C-PACE. Therefore, capital providers prefer that program administrators direct property owners to a list of all qualified capital providers and either have the capital providers reach out to the property owners (preferred) or have the property owners reach out to the capital providers, rather than intermediating these conversations. Given the role of capital providers in driving project volume, program administrators may wish to consider these recommendations.

It is often in C-PACE participants’ best interest to communicate directly with program administrators. Program administrators do not have a direct financial stake in the projects and may provide useful objective information. In programs where the program administrator has responsibility for project technical review and approval, the property owner needs clear guidance on what level of investment or actions may be necessary to satisfy program requirements. If a property owner does not engage with the program administrator until late in the process, misunderstandings about program requirements may arise.

Both program administrators and capital providers say that C-PACE features that most attract property owners (in both projects with and without pre-selected capital providers) are:

• Longer terms.
• No personal guarantee.18
• Lower interest rates.19
• The ability to borrow larger amounts of money.

15 One program administrator notes that, where C-PACE can positively impact a property’s net operating income and asset value, stakeholders can use project developer and consultant channels to introduce C-PACE as a tool to support single property or portfolio capital needs assessments and budgeting. Stakeholders can use contractor channels (e.g., HVAC contractors) to introduce C-PACE at the point the owner is considering equipment replacement projects.

16 For example, Maryrose Myrtetus, executive director of the Philadelphia Green Capital Corp. (an affiliate of the Philadelphia Energy Authority), says the Philadelphia Energy Authority has met with the city’s planning commission to educate them on C-PACE. Philadelphia Energy staff attends the planning commission’s multi-departmental ‘civic design review’ meetings, which allow developers to get feedback from many city offices at once for a new project. Philadelphia Energy staff bring up sustainability and efficiency measures in those meetings and introduce C-PACE as a financing option. In a related effort, they work with the city’s licenses and inspections office to reduce the fees for solar permits in the city, which, she notes, is not directly related to marketing C-PACE but helps the market.

17 Todd Williams, president and general counsel of Lean and Green Michigan (LGM), says that the LGM program engages with their local economic development organization for three main reasons: access, education, and marketing—in his view, each is an opportunity to drive program participation. LGM has found local economic development organizations are already engaged (and often better engaged) with the local government or jurisdiction they are targeting to establish a C-PACE special assessment district. In Michigan, some of these organizations work across multiple jurisdictions and can lend credibility as a trusted third party to what would otherwise be a cold approach. Economic development organizations support education and marketing because they are engaged with local businesses and commercial property owners and are a known resource for those businesses and owners undertaking projects and investments (and they can ensure their constituents are aware of C-PACE as an option). LGM has often partnered with local economic development groups to offer webinars or seminars on C-PACE and has found the outreach to be invaluable.

18 A personal guarantee, which may be required for conventional financing, is an agreement by business owners or executives to take responsibility for financing payments if the business is unable to pay.

19 C-PACE interest rates will be lower than some other financing products and higher than others.
When it comes to marketing efforts of public-sector C-PACE program sponsors, respondents see the most effective undertakings as:

- Creating a public website.
- Providing information on C-PACE to property owners when sponsors interact with them.
- Having staff available to answer questions about C-PACE.
- Providing space for program education and outreach.

Program administrators also recommend that public-sector program sponsors provide start-up funding (i.e., funding for program start-up costs for the first 6–12 months of the program). While successful programs have been established without public funding, start-up funding can be critical to attract qualified program administrators that can kick start program growth. Capital providers also suggest that public-sector program sponsors provide C-PACE information to property owners.

**Conclusion**

Resident input to the questionnaire provides takeaways for state and local government program sponsors, capital providers, and program administrators. Three recurring themes among responses are the importance of:

1. Developing and maintaining relationships (particularly with property owners but also with other stakeholders).20
2. Educating property owners.
3. Making C-PACE simple since it is often perceived as complex.

Feedback from questionnaire respondents suggests that capital providers originate most large C-PACE projects (dollar amount) and the significant majority of C-PACE dollar volume through individual outreach to property owners. Program administrators can grow their C-PACE project pipeline by providing targeted education and quality customer service to applicants.

Selective program administrator outreach to individual property owners may also be valuable, particularly where programs wish to serve smaller buildings or support smaller projects that capital providers may be less motivated to source. A whitepaper by Sustainable Real Estate Solutions finds that significant increase in small- and medium-sized buildings (SMB) efficiency is essential to achieve ambitious national climate goals.21 Given that the main motivation for C-PACE-enabling legislation is deploying clean energy measures and reducing greenhouse gas emissions, most program administrators likely seek to serve SMB markets in addition to larger ones. Smaller projects often require more “handholding” and education for the borrowers and may be less likely to close. These projects are often one-off projects since the participating owners do not generally own a portfolio of buildings like property owners of larger projects. As a result, private capital providers may have less incentive to directly engage these projects, so program administrator support is valuable. A recent National Association of State Energy Officials report details the small business outreach strategies of three C-PACE programs that have had success in reaching small businesses.22

**For state and local government program sponsors**

State and local program sponsors aiming to increase C-PACE program participation can:

- Offer specific, nuanced education efforts—preferably in small groups—to property owners (and potentially developers, consultants, and contractors), including:
  - Ensuring that property owners understand the process so they do not think it is more burdensome than it is and so they understand what resources it takes to participate.
  - Ensuring that property owners know how long C-PACE terms can be and the fact that they do not require a personal guarantee.
- Coordinate with offices that review and approve commercial building projects.

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20 As a case in point, engaging with lenders—who may be the mortgage holders who need to consent to a C-PACE assessment—can increase the chances of closing deals.


• Work with economic development organizations to gain access to local businesses and potential new C-PACE jurisdictions.
• Maintain a list of lenders that have consented to a C-PACE project for participating capital providers.
• Include developers, consultants, and contractors in outreach strategies.

For capital providers and program administrators

Although capital providers and program administrators have different roles in a C-PACE program, they both help expand program participation. Both capital providers and program administrators agree that increasing property owner awareness and facilitating mortgage holder consent to C-PACE assessments make it easier to close deals. They also agree that direct outreach to individual property owners and groups of property owners is the best strategy for driving originations.

Considerations for outreach strategies are:
• Make C-PACE simple, highlighting what respondents identify as the most attractive features of C-PACE for property owners.
• Cultivate and leverage relationships with all stakeholders.23
• Consider sharing case studies. One program administrator comments, “Case studies are incredibly valuable. Building owners want to see that other building owners have done these projects successfully.”

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23 In addition to property owners, stakeholders include lenders, consultants, developers, contractors, local economic development organizations, and government offices that review and approve commercial building projects. One program administrator suggested other groups: local chambers of commerce, the Building Owners and Managers Association International, the International Facility Management Association, the American Institute of Architects, the Association of Energy Engineers, and the National Electrical Contractors Association.

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