



PROGRAM GUIDE

VERSION 4.0

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Texas PACE Authority*



TEXAS ★ **PACE**
AUTHORITY

Cover Photo

The Barfield Building in Amarillo, Texas was an historic office building vacant for 25 years. A \$7.3 million PACE Assessment helped convert the property into a Marriott Autograph Hotel, revitalizing the area around it.

[Click Here](#) to read the case study.

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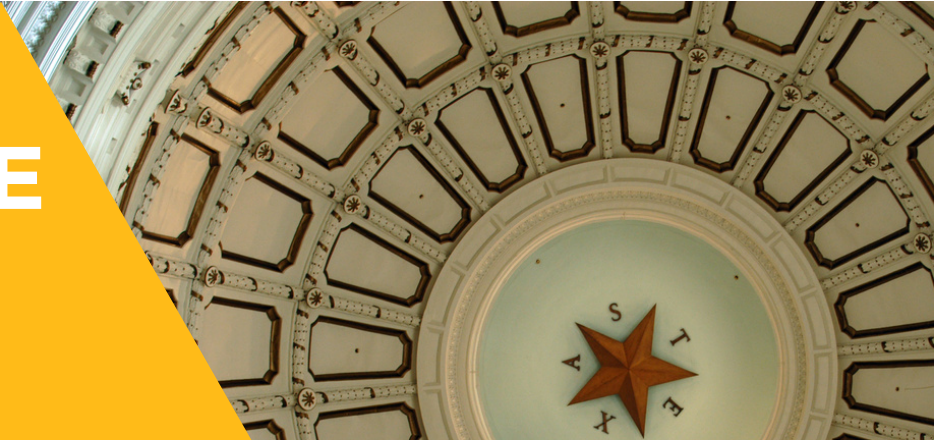
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EXECUTIVE SUMMARY



Texas PACE Authority (TPA) prepared this Program Guide (Guide) as a service to assist Texas property owners, service providers and lenders interested in financing and installing energy and water saving measures on business and nonprofit property using the [Property Assessed Clean Energy Act](#) (Texas PACE Act, Act).

This Program Guide is TPA's playbook. It lays out the requirements and process for designing a successful Texas Property Assessed Clean Energy (TX-PACE) project, following the [PACE in a Box program](#) of best practices. By following this Guide, you can develop the most efficient, impactful energy and water saving project without hindering the property owner's cashflow. The TX-PACE investment option is a public/private financing program that allows owners of real property (Property Owners) across the state to finance energy and water efficiency upgrades in a cash flow positive manner.

Questions or comments about this publication should be directed to: admin@TexasPACEAuthority.org.

The following sections are included in this Program Guide:

SECTION I TPA'S PROJECT DEVELOPMENT AND APPROVAL PROCESS

This section is the heart of the Program Guide. Read this section if your property is in an established PACE region, and you need step by step guidance to put together a successful TX-PACE project. There are ten critical steps from start to finish for developing a TX-PACE project, including the items for consideration in each step.

SECTION II ADDITIONAL TPA SERVICES

This section describes the ongoing services provided by Texas PACE Authority in addition to the TX-PACE project review process described in Section I.

SECTION III HISTORY AND BACKGROUND OF TX-PACE

Read this section if you wish to know how the Texas PACE program came about or if you are interested in establishing a PACE region in your area. This section provides background on the Texas PACE Act, the model Texas PACE in a Box program, the role of local government, and the administrative services offered as a public service by Texas PACE Authority on behalf of local governments.

SECTION IV ADDITIONAL RESOURCES

This section provides links to more detailed information.

SECTION V GLOSSARY

This section provides an explanation of terms used in this Guide.

SECTION 1

TPA'S PROJECT DEVELOPMENT PROCESS

Development of a successful TX-PACE project requires a Property Owner to take several interdependent actions, characterized here as steps. These steps effectively operate as a TX-PACE project playbook. TPA works with all project stakeholders during every step of this process.

TPA developed these steps as a comprehensive road map to assist Property Owners and their PACE Lenders in constructing and installing energy and water conservation measures qualifying for and achieving the greatest possible value from a TX-PACE assessment. Every step follows the PACE in a Box best-practices template.

The knowledgeable TPA team is ready to answer questions and assist as your project moves through these process steps.



STEP 1: DETERMINE PROJECT ELIGIBILITY

Property Owners should first determine if the proposed project is an eligible project. An [Eligibility Check](#) on the TPA website provides a high level assessment of whether a proposed project is eligible under the TX-PACE program and identifies areas that must be addressed prior to moving forward with a TX-PACE project. Once a Property Owner decides to move forward with a potential TX- PACE project, the following section identifies the necessary steps for creating and implementing a successful TX-PACE project.

The eligibility criteria are as follows:



The Project is in an established TX-PACE Region

The property on which improvements are being considered must be located in a region where the local government has adopted a TX-PACE program. The TPA website includes a link showing [regions where TX-PACE financing programs exist](#). If the property is located in a region that has not yet established a TX-PACE program, please contact TPA at admin@TexasPACEAuthority.org. TPA has committed to assist you and your local government in the adoption of TX-PACE financing programs throughout the state of Texas.

The Property Owner is Eligible

To be eligible for TX-PACE financing, the Property Owner(s) must:

- Be a private entity – an individual, business, or nonprofit organization.
- Provide evidence that it is the legal owner of the property, and all the legal owners of such property agree to participate.
- Be current on taxes for the previous 3 years.
- Not be or have been in bankruptcy during the previous 5 years.



The first PACE project in Texas provided mechanical upgrades for the day school at Congregation Beth Israel in Austin. A children's services organization, eldercare services organization, small business development center, church, and college are examples of nonprofits utilizing the PACE program in Texas to lower operating expenses so they can target their fundraising and resources to their core missions.

The Property is Eligible

To be eligible for TX-PACE financing, the subject property must meet the following requirements:

- A property must be located within the boundaries of a county or municipal [TX-PACE region](#).
- The property must be a privately owned -
 - [Commercial](#) real property – including office, hospitality, retail, and nonprofit real property such as private schools, medical facilities, houses of worship, etc.
 - [Industrial](#) real property – including manufacturing and privately owned agricultural real property; or
 - [Multifamily](#) real property with five or more dwelling units.

The property must have a property tax identification (ID) number. Nonprofit buildings have a property tax ID number and are eligible.

Mortgage Holder Consent

The Texas PACE Act requires the Property Owner to receive the written consent of the mortgage holder (if one exists) before the property is eligible for TX-PACE financing. There are many [benefits](#) for a mortgage holder (often called "senior lender") that consents to a TX-PACE assessment. TPA or the TX-PACE Lender (often called "capital provider") can help with obtaining consent. See Step 3.

Nonprofit Properties

A nonprofit may use TX-PACE on its commercial, industrial, or multifamily property. Nonprofit Property Owners of qualified properties, such as charter schools, private hospitals, and houses of worship, are eligible to use TX-PACE financing even though they do not pay property taxes on the qualified property.

Developed Lots

The Texas PACE Act prohibits the use of TX-PACE on undeveloped lots. However, undeveloped property can be developed prior to the use of TX-PACE for new construction. A property on which an improvement has been recognized by an Appraisal District under the Texas Property Tax Code is considered developed for purposes of the Texas PACE Act. Property owners can check online Appraisal District records to determine if the property is or was designated as improved. An open records request can be made for prior written records that have not been digitized and made available on the internet.

Property that is or was not previously improved can be improved by the addition of an “improvement” to the property under the [Texas Property Tax Code Section 1.04\(3\)](#). Property records are updated annually by Appraisal Districts.

Businesses are developing property to make it eligible for PACE



John Frew, developer of Pearl Point Apartments, didn't give up when he was told his project was ineligible because his property was undeveloped. Instead, Mr. Frew built a six-stall maintenance facility first and used that to qualify the property as developed. He then used TX-PACE to develop award winning Phase 1 and a second TX PACE assessment for Pearl Point Phase 2. Mr. Frew is the first developer to use TX-PACE for post Hurricane Harvey multifamily housing in Texas. Mr. Frew's analysis of PACE for new construction can be found on [our Youtube Channel](#).

TPA will accept an email from an Appraisal District acknowledging an improvement that the Appraisal District will recognize when the next annual tax record adjustments occur. Property Owners interested in this option are encouraged to contact Texas PACE Authority to coordinate communication with the Appraisal District.

Additional guidance on developed lots can be found in the latest [Keeping PACE in Texas Underwriting Guidance](#). To determine if the property is eligible, please complete and submit [TPA's Request for Determination Form](#).

Ground Leases

To qualify for TX-PACE, a ground lease must:

1. be recognized as separately owned real estate by the County Appraisal District (CAD) with its own property tax ID number;
2. have the consent of the Ground Lessor; and
3. include an addendum detailing who will pay the TX-PACE installments if the ground lease is terminated.

Please contact TPA at admin@TexasPACEAuthority.org for more specific details regarding ground lease projects.

Ineligible Properties

The most notable ineligible properties are:

- Residential property (including single family homes, condos, duplexes, or any residence) with fewer than five units
- Government-owned property (including public colleges and universities and public school districts)
- Undeveloped lots or lots undergoing development (See Developed Lots on previous page).

Government owned properties cannot use TX-PACE, but the State Comptroller's Office has a similar program. Housed in the State Energy Conservation Office, the LoanSTAR (Saving Taxes and Resources) Revolving Loan program has financed more than \$500 million in energy and water saving upgrades to courthouses, city halls, schools, jails, etc. The program also offers engineering services.



The Project Improvements are Eligible

To be eligible for TX-PACE financing, qualified improvements must meet the following requirements:

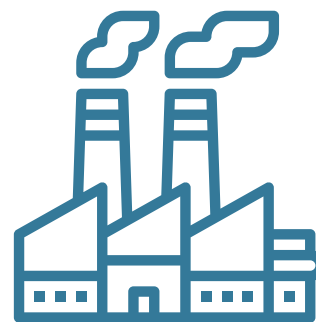
- Have a demonstrated capacity to -
 - Decrease energy consumption or demand or water consumption or demand; and/or
 - Generate electricity, provide thermal energy, or regulate temperature via a product, device, or interacting group of products or devices on the customer's side of the meter.
- The qualified improvements proposed for the project must be permanently affixed to the property (i.e., the TX-PACE improvements are physically attached) and may not be removed from the property while the assessment is in place.

The following, non-exclusive, list of common, proven energy and water efficiency technologies / utility cost reduction measures (UCRMs) is intended as a reference list for TX-PACE applicants. Even if not included on this list, Texas PACE Authority will review proposed technologies and may accept them if they meet statutory requirements.

- High efficiency lighting
- Heating, ventilation, and air conditioning (HVAC) upgrades
- Automated building and HVAC controls
- Variable speed drives (VSDs) on motors fans and pumps
- High efficiency chillers
- High efficiency boilers and furnaces
- High efficiency hot water heating systems
- Combustion and burner upgrades
- Fuel switching
- Water conservation measures
- Low flow water fixtures
- Irrigation improvements that decrease water consumption
- Heat recovery and steam traps
- Building enclosure and envelope improvements
- Building automation (energy management) systems
- Renewable energy systems behind the meters (e.g., solar, fuel cells, geothermal)
- Combined heat and power systems (CHP)
- Microgrids

The following end use savings technologies are generally more applicable to industrial facilities:

- New automated process controls
- Heat recovery from process air and water
- Cogeneration (CHP)
- Process equipment upgrades



Refinancing Eligible Improvements

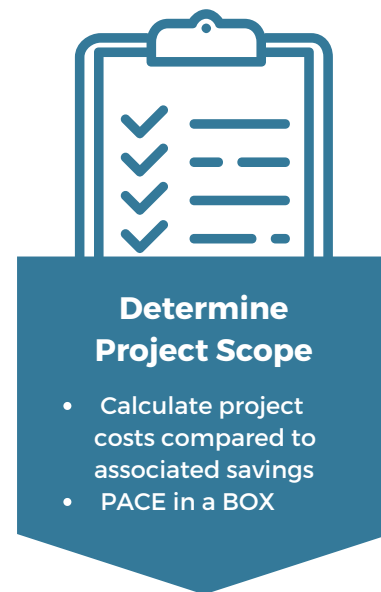
The Texas PACE Act requires that the qualified improvements are *intended* to decrease water or energy consumption or demand (emphasis added). Refinancing enables an eligible Property Owner to retroactively finance qualified retrofits and development projects. Evidence that a qualified measure is “intended to decrease water or energy consumption or demand, including a product, device, or interacting group of products or devices on the customer's side of the meter that uses energy technology to generate electricity, provide thermal energy, or regulate temperature” as required under Chapter 399.102(3) may be submitted as drawings, plans, or equipment specifications. The PACE qualified measures must be listed on a dated memo on letterhead identifying the corresponding page numbers of the submission. Please contact TPA at admin@TexasPACEAuthority.org for more specific details regarding intent.

Refinancing of TX-PACE projects can occur up to 24 months after the date on which the last qualified improvement was installed, provided all other Texas PACE in a Box underwriting and technical standards are satisfied (See steps 2 & 7). The Savings to Investment Ratio (SIR) is calculated from the beginning of the refinancing. The life of equipment calculation for all qualified measures should be measured from the date on which the last qualified measure was installed.

See the latest [Keeping PACE in Texas Underwriting Guidance](#) document for additional information.

STEP 2: DETERMINE PROJECT SCOPE

Before investing effort in a TX-PACE project, one should first determine how much of the project is likely to have a savings to investment (SIR) ratio greater than one – meaning savings will offset costs over the project's useful life. This involves an initial calculation (normally a desktop review) of estimated project costs compared to associated savings. The best TX-PACE projects encompass multiple improvements to fully address a property's needs. TPA encourages leveraging a suite of technologies to upgrade the entire property all at once.



TPA follows the uniform PACE in a Box Technical Standards Manual provided by Keeping PACE in Texas, which provides more detail and guidance for project stakeholders. The [Technical Standards Manual](#) and [ITPR Workbook](#) should be used to assist in scoping a TX-PACE project.

Use of the ITPR Workbook will also enable the person scoping the project to determine early in the process if the project meets requirements and adjust the proposal accordingly.

For engineering firms unfamiliar with the TX-PACE process, TPA designed an [Energy and Water Assessment Report Template](#) to assist engineering teams in presenting the required information needed as part of the Texas PACE technical review. This information will support that provided by the ITPR. Following this format will result in uniform inputs that will reduce ITPR review cost. TPA's technical documents can be found on the TPA website [Resources](#) drop down menu under [Program Documents](#) > Engineer and Independent Third Party Reviewer (ITPR) Forms.

Project scoping can be done by the Property Owner or Service Provider. Mechanical, electrical, and plumbing contractors will have systems knowledge and experience to identify qualified improvements and scope the project. Experience and training in energy and water saving measures can be helpful but is not required. TPA's [Service Provider Directory](#) includes a list of Service Providers that have completed TPA's TX-PACE training. Texas PACE Authority does not endorse any particular PACE Service Provider. This nonexclusive list of Service Providers attended a TPA Training Workshop and are interested in designing and/or installing successful PACE projects. The Service Provider Directory is provided for your convenience.

Several key underwriting parameters must be kept in mind when scoping a project.

- **The Loan to Assessed Value Ratio (LTV)** for TX-PACE financing is set at no more than 25% of the assessed value of the property as defined by the county/central appraisal district. The program administrator may waive the assessed LTV and approve a variance of up to 25% of the market value of the property as complete. More detailed guidance can be found in the latest [Keeping PACE in Texas Underwriting Guidance](#). The [TPA Variance Request](#) is included as part of the application process.
- The assessment term cannot exceed the projected useful life of the improvements. See a more detailed discussion in Step 7.

The Savings to Investment Ratio (SIR) requires that projected savings from the qualified improvements must exceed the total cost of the project over the life of the assessment financing. Step 7 includes a more detailed discussion.

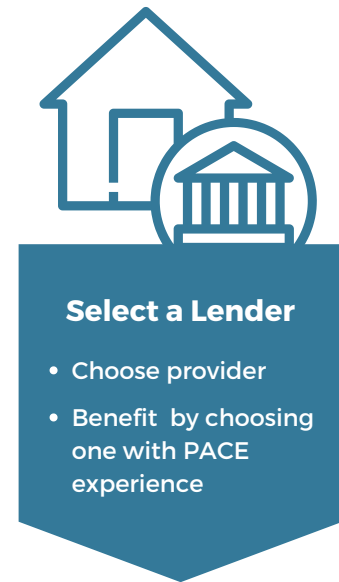
What Can be Included in a TX-PACE Assessment

TX-PACE may provide 100% financing with no out of pocket costs from the owner. To that end, the final TX-PACE assessment can include:

- The cost of materials and labor necessary for the installation of a qualified improvement;
- Permit fees;
- Inspection fees;
- Lender's fees;
- Program application and administrative fees;
- Project development and engineering fees;
- ITPR fees, including verification fees;
- Legal, consulting, and other fees on an actual cost basis; and
- Any other fees or costs that may be incurred by the Property Owner incident to the installation, modification, or improvement on a specific or pro rata basis (limited to no more than 20% of the total assessment)

STEP 3: SELECT A TX-PACE CAPITAL PROVIDER (LENDER)

To obtain TX-PACE financing, Property Owners will select a Lender of their choice, meet that Lender's underwriting criteria, and negotiate a private underlying loan agreement. In negotiating the terms of a loan agreement, the Property Owner and the Lender agree upon the date and frequency of assessment installment payments. Installment payments must be made at at least annually, and most often reflect the annual property tax payment schedule. Because installment payments are billed by and paid directly to the Lender, the Lender a Property Owner selects must have the ability to carry out, directly or through a servicer, the bookkeeping and customer service work necessary to manage TX-PACE financing assessment accounts.



TX-PACE is an open-market model, meaning the Property Owner (not the local government or TPA) selects its Lender. However, there is great benefit in choosing a Lender with TX-PACE experience. In many cases, the Lender will manage the various tasks associated with a project and ensure that the process is smooth and efficient.

Eligible Lender Criteria

Eligible TX-PACE Lenders may include:

- Any federally insured depository institution such as a bank, savings bank, savings and loan association and federal or state credit union;
- Any insurance company authorized to conduct business in one or more states;
- Any registered investment company, registered business development company, or a Small Business Administration small business investment company;
- Any publicly traded entity; or
- Any private entity that:
 - Has a minimum net worth of \$5 million;
 - Has at least three years' experience in business or industrial lending or commercial real estate lending (including multifamily lending), or has a lending officer that has at least three years' experience in business or industrial lending or commercial real estate lending; and
 - Can provide independent certification as to availability of funds.

All Lenders must have the ability to carry out, either directly or through a servicer, the bookkeeping and customer service work necessary to manage the assessment accounts.

TPA's Searchable TX-PACE Lender Database

TPA maintains a nonexclusive, [searchable listing of qualified Lenders](#) on its website. Although TPA does not endorse any specific parties, those on the list meet the PACE in a Box qualifications and are familiar with TX-PACE and ready to provide financing on TX-PACE projects. This list is provided for your convenience. Texas PACE Authority can assist Property Owners wishing to work with another lender not currently on the list by answering questions and providing guidance about the TX-PACE program.

Lenders interested in becoming TX-PACE Lenders are encouraged to connect with TPA to learn more about how to participate in the TX-PACE program. Please contact TPA at admin@TexasPACEAuthority.org for more specific details regarding lender participation.

Capitalized Interest and Interest Only Periods

Capitalized interest provides coverage during the construction period for new construction and renovations prior to the first TX-PACE payment becoming due. Typically, the capitalized interest term is no more than a two-year period for new construction and gut rehabilitation projects. If the construction period is verifiably longer than two years, please contact TPA. If construction on a project is complete at the time of application or the construction period will be less than one year, capitalized interest may be used for up to one year to finance the project prior to the first payment. Interest-only terms may be used in lieu of capitalized interest following the terms outlined above. A mix of interest only and capitalized interest may be applied during the timeframes specified above so long as they do not overlap (no double dipping).

STEP 4: SELECT TX-PACE CONTRACTOR OR OTHER SERVICE

Property Owners can engage any Service Provider. TPA maintains a searchable listing of [TX-PACE trained Service Providers](#) and provides ongoing training to interested parties. TPA does not endorse any particular TX-PACE Service Provider. This nonexclusive list of Service Providers attended a [TPA training workshop](#) or completed TPA online training and are interested in designing and installing successful TX-PACE projects. This list is provided for your convenience.

Contractors, architects, engineers and other Service Providers interested in being listed in the TPA searchable Service Provider Directory are invited to take the online TPA Service Provider Training on the TPA website.

TX-PACE projects do not require a savings guarantee or performance contract (although a Property Owner can contract with the contractor for a guarantee of TX-PACE project savings if that is what the Property Owner prefers). TPA is not responsible for project performance. Property Owners must service and maintain equipment over the life of the TX-PACE assessment to maximize efficiency and savings.



Select a PACE Service Provider

Choose qualified
contractors,
architects,
engineers, and
other helpful
services

STEP 5: Prepare Application & Gather Required Documents

A TX-PACE project requires the submission of an application to TPA. Notify TPA of your readiness to apply by contacting us via email at admin@texaspaceauthority.org. Doing so will help ensure more efficient processing of the application. Once an application is received and approved, TPA will share the required template documents specific to that region; model documents on the website may not be submitted as part of a project application. In addition, TPA will verify potential projects to ensure that all statutory and local requirements are met.



In most cases, the application to TPA will be submitted by the TX-PACE Lender, as most, if not all, of the documentation TPA requires will be the same documentation required by the Lender. See TPA's website for the [required documents list](#) that must be submitted for an application review. Importantly, TPA will not begin processing an application until it receives all required documents and properly completed forms and the required application initial fee. The application fee covers the many and wide-ranging services TPA provides –

- Application intake and review for administrative and statutory completeness
- Providing technical support to the ITPR, before and after construction
- Pre-qualification letter to Property Owner
- Underwriting review of submitted documents
- Technical review of submitted documents
- Legal review of submitted documents
- Verification that the existing senior lender written consent, if necessary, is obtained and meets program requirements.

- Preparation and review of PACE Owner and Lender Contracts and the PACE Notice of Contractual Assessment Lien
- Participation in closing
- Filing of notice of TX-PACE assessment lien with the County Clerk
- Ongoing annual notices to Property Owners
- Ongoing annual reporting plan

How long does TX-PACE financing take?

Generally, most Lenders can underwrite projects in 30-60 days. If senior lender written consent is needed, stakeholders should address this requirement early, as it must be secured prior to closing.

Once all documents are submitted to TPA, the technical and legal review process typically takes a minimum of 5 business days. Note that some local governments also require additional time for their reviews. Please contact TPA at admin@TexasPACEAuthority.org for regional project review timelines.

STEP 6: OBTAIN MORTGAGE HOLDER CONSENT (IF APPLICABLE)

If a property has an existing mortgage, the mortgage holder must be notified 30 days before closing and must consent in writing to a TX-PACE assessment being placed on the property. A TX-PACE Lender can and should help Property Owners get consent. Obtaining written approval from a senior lender can require considerable time and the process should begin as soon as possible. TPA welcomes opportunities to provide education and outreach to senior lenders and provides additional resources on its website and in this Step 6 discussion.



Obtain Consent

Mortgage holder
provides consent in
writing

There are many good business reasons that senior lenders grant consent. As of the publication date of this Guide, over 250 [mortgage lenders nationwide](#) and over 35 [senior lenders in Texas](#) have granted consent to PACE projects. Several Texas senior lenders have approved multiple projects.

- TX-PACE assessments do not accelerate upon default. This means that only the current or past due portion of a TX-PACE financing is senior to a mortgage holder's claim. The increase in property value resulting from TX-PACE project savings will more than offset this fractional installment amount of the total project cost.
- The senior lender stays in control of the mortgage and can make the defaulted installment payment and take over the property per terms in the underlying loan agreement.
- Relationships matter. Every TX-PACE project involves a senior lender's customer who wants or needs to complete an energy or water improvement project to reduce operating costs and often enable the replacement of an obsolete or failing system while remaining cashflow positive. TX-PACE funded projects make good business sense for the owner, and therefore, the property's mortgage holder.
- Lenders already factor property taxes and governmental assessments into their underwriting models. Some senior lenders begin their TX-PACE analysis by seeing how the incremental TX-PACE assessment would impact a lending decision. If adding the TX-PACE assessment wouldn't cause the property to exceed established parameters for lending, there should be no reason to object to the use of TX-PACE funding for a project that makes sense.
- TX-PACE projects can increase the debt coverage ratio for senior lenders. TX-PACE projects directly reduce a property's operating costs. Coupled with long-term TX-PACE funding, TX-PACE projects result in energy or water cost savings that exceed the amount of the annual TX-PACE assessment, increasing cash flow and a corresponding increase in the debt coverage ratio.
- Because real estate value is based on net operating income, the increased cash flow from a TX-PACE project increases a property's collateral value to the senior lender and improves the Property Owner's capacity to make mortgage payments.

Additional resources for obtaining senior lender consent can be found on the [Lender page of the TPA website](#).

STEP 7: ENGAGE AN INDEPENDENT THIRD PARTY REVIEWER (ITPR)

Independent Third Party Reviewer (ITPR) Qualifications

To successfully complete a TX-PACE application, all projects must be accompanied by a review from an Independent Third Party Reviewer (ITPR).



ITPR Qualifications

ITPR must be professionally qualified and without conflict or relationship to project

ITPR must be a Texas licensed professional engineer with energy / water efficiency experience.

To be of value, the ITPR must be both professionally qualified and without conflict or relationship to the project the ITPR is reviewing.

An ITPR must be a licensed Texas Professional Engineer with energy and water efficiency experience. The Professional Engineer should also have at least one of the certifications listed in Section III of the [Technical Standards Manual](#). Engineers meeting this criteria are encouraged to take the online [TPA Service Provider training](#) and be listed in the [TPA Service Provider Directory](#).

Ideally, the same ITPR should follow a project from initial review to project completion. TPA maintains a list of ITPRs who are qualified and familiar with TX-PACE projects and encourages applicants to use an established ITPR.



ITPR Review

Validates projected savings

Chosen by property owner

[TPA maintains a listing of trained, qualified ITPR candidates.](#) Texas PACE Authority does not endorse any particular PACE Independent Third Party Reviewer (ITPR). This nonexclusive list of Texas professional engineers who attended a TPA Service Provider Training Workshop and satisfy PACE in a Box qualifications is provided for your convenience.

Selection of the Independent Third Party Reviewer (ITPR)

Generally, the Property Owner selects the ITPR, often in consultation with the Lender – as the ITPR provides assurance for both. Hence, the ITPR must have an arms-length relationship with the engineer of record who performs the initial energy and water analysis (Step 2).

The Role of the ITPR

The ITPR will review the project savings to determine if the projected savings are reasonable. If so, the ITPR validates projected savings.

The review has two phases:

1. Pre-Construction – the “before” analysis – the ITPR will review the project, assumptions, and projected savings and complete the following:
 - Pre-Construction Verification Certificate
 - PACE in a Box ITPR Workbook
2. Post-Construction – the “after” analysis – the ITPR will verify that the project was completed and is operating as intended. (See Step 10 for more details).

The ITPR must conduct a site visit both before and after the project is installed and submit the required documentation as part of the TX-PACE application process.

TPA’s ITPR documents can be found on the TPA website [Resources](#) drop down menu under [Program Documents](#) > Engineer and Independent Third Party Reviewer (ITPR) Forms.

Keeping PACE in Texas provides the Technical Standards Manual and an ITPR workbook to standardize and simplify ITPR project review. These tools are available at the [KPT Document Library](#).

Full Assessment and Fast Track Protocols

All projects fall under one of two types of technical review protocols. Projects will involve either a Full Assessment protocol or Fast Track review. Technical reviews are based on accepted engineering standards.

The **Full Assessment Protocol** divides an energy and water conservation project into six steps that fall into these basic stages:

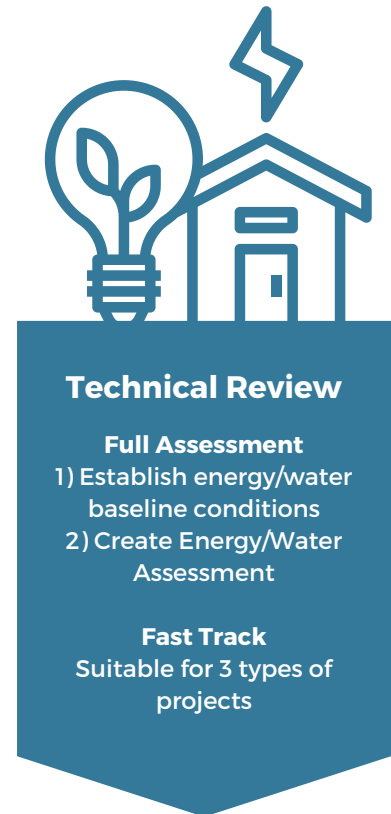
- Establish energy and water baseline conditions
- Create an Energy and Water Assessment Report
- Implement the Project

The **Fast Track** uses a simpler analysis, and is suitable for three types of projects:

- Like-for-Like Replacement - projects that involve like-for-like replacement of energy/water inefficient equipment with more energy/water efficient equipment. Examples may include a lighting retrofit or A/C unit upgrade.
- Single-Measure Efficiency Projects – projects that involve a single efficiency measure such as window film, additional insulation, or reflective roof coating.
- Distributed Renewable Generation - projects that involve only the installation of an industry accepted renewable energy system such as solar photovoltaic (PV).

Determine Useful Life of the Improvements

A TX-PACE assessment is limited by the projected useful life of the improvements, or in the case of multiple improvements, the weighted average useful life. This is calculated on a cost basis and approved by the ITPR.



EXAMPLE: HVAC AND LIGHTING IMPROVEMENTS:

	HVAC		LIGHTING
	\$500,000		\$100,000
	useful life 20 years		useful life 10 years
Weighted Average	=	$(\$500,000)(20 \text{ years})$	+ $(\$100,000)(10 \text{ years})$
	=	10,000,000 \$ years	+ 1,000,000 \$ years
	=	11,000,000 \$ years	
 Projected Life	=	$\$11,000,000 \text{ $ years} / (\$500,000 + \$100,000)$	
	=	18.3 years	

For guidance see page 9 of the [Technical Standards Manual](#).

Validate the Savings to Investment Ratio (SIR)

SIR refers to the ratio of overall project savings to overall project costs. An SIR greater than one indicates a project whose savings are greater than its costs over the life of the assessment term. This requires that all projects have robust savings projections, which must be validated by an ITPR. Here is an example of the required calculation:

SIR = Savings : Investment

Project Description	HVAC and Lighting improvements
Project Savings	\$1,500,000 over 20-year period
Project Cost	\$1,000,000 (including financing costs)
SIR	1.5



The SIR calculation incorporates utility incentives and savings from other grants and incentives resulting from the investment. Property owners are encouraged to apply for and take advantage of incentives for which the TX-PACE project is eligible. For example, the solar installer for the Elgin General

Store, made sure that the project qualified for a \$38,186 utility rebate and a USDA Rural Energy for America (REAP) \$30,781 grant. This extra effort significantly reduced the overall cost of the project and helped establish a strong savings to investment ratio (SIR).

Although the SIR can help Property Owners evaluate the value of a TX-PACE project, SIR is also important for financial underwriting because local governments and Lenders want to be confident that borrowers will be able to repay their TX-PACE assessment loans. An owner may choose to buy down (contribute cash) towards the project to increase the SIR. An SIR buy down should not exceed 50% of the total investment. Calculate SIR using current technical guidance (i.e., sum of savings over the life of assessment versus sum of investment over the life of assessment). An SIR of 1 or greater is expected. At least 50% of the calculated savings should be energy or water related. Detailed guidance for determining savings can be found in Section II: Underwriting and Technical section of the [Technical Standards Manual](#).

For complete redevelopment projects (i.e., teardown/rebuild, expansion of existing property, or new construction on a previously developed lot), the baseline is established using current building codes. Because most of Texas currently uses 2015 IECC Energy Codes for new construction, establishing a baseline for a redevelopment is based on the Texas state energy code – currently the 2015 IECC/ASHRAE 90.1-2013. Check for updates to that code here:

comptroller.texas.gov/programs/seco/code/commercial.php.

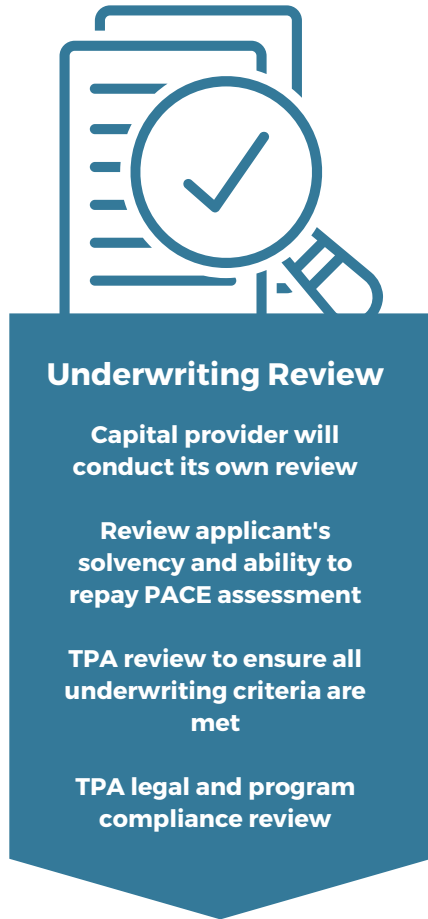
STEP 8: CLOSE ON TX-PACE FINANCING



The primary role of TPA is to review and approve TX-PACE applications on behalf of the local government. TPA determines the eligibility of each project and ensures compliance with the Texas PACE Act, PACE in a Box requirements, and local government requirements. TPA works with project stakeholders through each step of the TX-PACE project development process described in this Guide.

Project Review

TPA reviews and approves PACE projects on behalf of the local government that established the PACE region in which the project is located. TPA's general process for reviewing TX-PACE projects is shown below. Once TPA receives all required documents, it can analyze the information provided in the required documents submitted by the Property Owner, Lender, and ITPR for each project.



TPA performs a technical review of the documents submitted by the ITPR as described in Step 7.

Every project will also undergo a financial and underwriting review of the applicant’s solvency and ability to repay the TX-PACE assessment. The Lender will undergo its own underwriting review. TPA will require specific documents from the owner and information from the Lender verifying the information provided. The application documents list can be found on TPA’s website [Resources](#) drop down menu under [Program Documents](#) > Application Documents. Finally, TPA will conduct a legal review to ensure compliance with the Texas PACE Act, this Guide, and local TX-PACE program requirements.

The table below summarizes the underwriting metrics that a project must meet to qualify for TX-PACE financing.

Underwriting Criteria Guideline

Loan to Value Ratio (LTV)	< 25% of the appraised value post project. Variance requests to use up to 25% of the market value are evaluated case-by-case using KPT additional guidance. (see Step 2)
Savings to Investment Ratio (SIR)	Over the life of the assessment, total savings must exceed total cost as determined by the ITPR utilizing the PACE in a Box Technical Standards. This savings to investment ratio of equal to or greater than one is expressed as $SIR \geq 1$. (see Step 7)
Estimated Useful Life (EUL)	Assessment term may not exceed the estimated useful life of the eligible measures. (see Step 7)
Mortgage Holder Consent	Written consent from existing senior lenders is required. (see Step 6)

Project Closing

Once the required documents have cleared the technical, underwriting, and legal reviews, the project is ready to close. To close a TX-PACE project requires a set of uniform project documents approved by the local government that incorporate the terms of the privately negotiated underlying loan agreement, or note, between the Property Owner and TX-PACE Lender, as noted in Step 3.

TPA reviews the documents and executes them at the closing on behalf of the local government. The TX-PACE program closing documents include:

- a PACE Owner Contract in which the Property Owner voluntarily requests and agrees to a local government assessment on the property secured with a senior lien;
- a PACE Lender Contract in which the local government assigns the proceeds of the assessment to the TX-PACE Lender and agrees to collect a past due installment; and,
- A Notice of Contractual Assessment Lien that TPA files with the county clerk who records the assessment lien on the property record.

TPA serves as the closing agent. With some projects that include multiple sources of capital that close simultaneously, Lenders choose to rely on a title company to execute the closing. TPA works closely with these Lenders and the title companies. The title company must follow a TPA letter of instruction to ensure the proper closing of the TX-PACE project.

Administrative Fees

TPA strives to operate an efficient and financially stable organization, while keeping costs to a minimum and operating in a lean fashion. For this reason, TPA was organized and operates as a nonprofit, and TPA charges two types of fees as part of administration - an application fee and an ongoing residual fee. These fees cover the basic administrative service to complete a TX-PACE project review as well as the ongoing oversight and program reporting to local governments that establish a TX-PACE program. For a schedule of fees, see: texaspaceauthority.org/for-capital-providers.

STEP 9: CONSTRUCT OR INSTALL PROJECT

Texas' PACE program is designed to be flexible and can include pre-construction financing (like a construction loan) along with the long-term TX-PACE financing after the project is complete. Typically, the pre-construction financing will include a draw schedule with milestone payments.

TX-PACE Installments

Unlike most other states, local governments in Texas have elected to delegate the collection of their TX-PACE installment payments to the Lenders (or a servicer of Lender's choosing). The date and frequency of installment payments is negotiated between the Property Owner and TX-PACE Lender in the underlying financing agreement and note. Installment payments must be made at least annually. Monthly, quarterly, or semiannual payment schedules are possible, but most reflect the annual property tax payment schedule. Installment payments are billed by and paid directly to the Lender.



STEP 10: POST CONSTRUCTION INSTALLATION VERIFICATION



After project completion, the ITPR will visit the site one final time to verify that the improvements were properly installed and operating as intended and submit a Post-Construction Statement of Compliance certifying the completion to TPA.

TPA must ensure that this ITPR Statement of Compliance is obtained because it is a statutory requirement. If the TX-PACE financing is made available prior to construction of the project, there will be a reasonable draw schedule that is put in place appropriate for the project. In addition, the final draw in that schedule must be equal to at least 10% of the project cost or as agreed between TPA and the TX-PACE Lender. This final draw will not be released until TPA receives the final ITPR certificate verifying project completion.

Note that long-term measurement and verification as traditionally defined is

recommended, but not required, in Texas. TPA does not guarantee savings, and there is no recourse on the program administrator or the local government if savings do not materialize. The issue of long-term project performance is best dealt with between the Property Owner, Service Provider, and Lender. Property Owners are encouraged to utilize facility management best practices and undertake regularly scheduled maintenance of eligible equipment to realize the long-term savings.

Ongoing Monitoring

To create a more resource-aware community and reduce energy and water waste, TPA will measure the utility impact of each project. While TPA does not require traditionally defined measurement and verification, Property Owners agree in the PACE Owner Contract to share annual energy and water usage data to the Houston Advanced Research Center (HARC) which oversees the TX-PACE Energy and Emissions Tracker - pace.harcresearch.org.

Lien Assignments and Sale or Transfer of Property

It is understood that lien assignment may take place after loan closing and the Lender has the right to assign or transfer the right to receive the installments of the financing secured by the PACE Notice of Contractual Assessment Lien, provided the following conditions are met:

- a. The assignment or transfer is made to a qualified Lender as defined in the PACE Lender Contract;
- b. Property Owner and TPA are notified in writing of the assignment or transfer and the address to which payment of the future installments should be mailed at least 30 days before the next installment is due according to the payment schedule included in the PACE Notice of Contractual Assessment Lien and the Financing Documents; and
- c. The assignee or transferee of the right to receive the payments executes an explicit written assumption of all of Lender's obligations under the PACE Lender Contract.

As TX-PACE runs with the land, the Property Owner's obligations will be transferred to the succeeding owner. TPA requires written notice that the property has sold or transferred to a new Property Owner.

TPA provides the required assessment assignment notice and sale and transfer notice forms to be completed by Lender or Property Owner.

SECTION II

ADDITIONAL TPA SERVICES

Texas PACE Authority provides TX-PACE administration for local governments that have established PACE programs as a public service and at no cost to the Local Government.

Outreach, Education, and Training

In addition to TX-PACE project review, TPA provides education, outreach, and training for all stakeholders. Please reach out to admin@TexasPACEAuthority.org if you are interested in scheduling a TPA presentation for your organization. TPA's robust website includes information, webinars, flyers, case studies and training.

Annual Report

TPA prepares an annual report. All previous annual reports can be found on the [About Us](#) page of the website.

Delivery of Annual Notices to Property Owners

TPA prepares and sends a PACE Notice of Annual Assessment for the coming year to the Property Owner on behalf of the local government. This annual notice is sent as a courtesy to highlight the total amount of installment due in the coming year for the TX-PACE assessment on the property. This notice is not a bill and payments should be made to the address and according to the schedule as set out in the financing documents.

Coordination with Local Governments in the Event of Delinquent Payments

The Lender will notify TPA of a delinquent payment. TPA will then coordinate with the local government in that region regarding the collection of the past-due assessment installment. The local government is responsible for collecting delinquent installments in the same manner as they collect property taxes. Local governments are entitled to penalties, interest, and attorney's fees. As in the case of delinquent property taxes, outside debt collection law firms are likely to be engaged to collect default TX-PACE installments. The financing documents between the Property Owner and Lender should address contractual penalty interest due the Lender from the delinquent Property Owner. Because TX-PACE assessments stay with the land, the only amount eligible for collection is the past due installment and associated penalty interest due the Lender under the financing agreements and the local government's costs, attorney's fees, penalties, and interest under the statute.

By statute, the assessment will be "enforced by the local government in the same manner that a property tax lien against real property may be enforced by the local government." Under no circumstances can the TX-PACE Lender accelerate the collection of a TX-PACE loan, and in the case of default, the only payment collected will be assessments in arrears and related penalties and costs. There is no obligation for the local government to pay past due amounts.

SECTION III

HISTORY & BACKGROUND OF TX-PACE

WHAT IS PACE?

PACE stands for Property Assessed Clean Energy. PACE programs are a nationally recognized, voluntary financing tool Property Owners can use to construct or install energy and water efficiency improvement measures or create power onsite with *little or no* capital outlay. Financing available under a PACE program gives Property Owners access to private, affordable, long-term funding through a special assessment a local government entity attaches as a lien on their property. PACE assessments generally are paid over a period of ten to twenty-five years.

PACE programs are not available in all states; they must be authorized by the state legislature. Once PACE legislation is enacted, PACE programs are typically implemented by local government entities. Not all state-authorized PACE programs are the same.

State legislatures and executive branch officials, local governments, and Property Owners find PACE financing programs to be attractive. In addition to the environmental benefits of reducing energy and water consumption and demand, PACE programs reduce operating costs, and they help Property Owners overcome financial barriers that result in deferred maintenance and impede investment in energy and water saving equipment and construction improvements. Lowering an organization's operating costs makes the organization financially stronger, reduces greenhouse gas emissions, and creates jobs. Importantly, PACE financing programs can be implemented without expending a state's and its local governments' financial and staffing resources or creating mandates.

HOW DID TEXAS CREATE ITS TX-PACE PROGRAM?

In 2013, the Texas Legislature adopted, and Governor Perry signed the [Texas PACE Act](#), as the result of the efforts of [Keeping PACE in Texas](#) (KPT), a 501(c)(6) organization formed in 2011 to promote enactment of PACE legislation applicable throughout Texas. KPT worked with hundreds of volunteers in support of the Texas PACE Act.

As adopted, the Act does not create a state-level bureaucracy to administer the TX-PACE program. Rather, the Act authorizes cities and counties to establish local TX-PACE programs to finance energy and water saving improvements within their jurisdictions. Under the Act, areas for which the local government entity has created a TX-PACE program are called “regions.”

WHAT ARE THE FEATURES OF TX-PACE FINANCING?

TX-PACE financing enables Property Owners of commercial, institutional, industrial, nonprofit, and multifamily properties to access private capital to fund qualifying energy and water efficiency improvements and to install clean energy technology. Private capital provided through a TX-PACE program is secured by a local government assessment lien on the owner’s property. This assessment is similar to a sidewalk or sewer assessment, but distinguishable because it is voluntary. The assessment remains in place until the funding is paid back.

Governmental special assessments are a familiar tool that municipalities levy on real estate parcels to finance projects including street paving, water and sewer systems, and street lighting that increase the value of the assessed properties. TX-PACE is a voluntary program that builds on a long history of using special assessments to serve multiple public purposes through reducing energy costs, conserving water resources, stimulating the economy, improving property valuation, reducing greenhouse gas emissions, and creating jobs.

TX-PACE financing has several features of significance to local government entities, Property Owners, and Lenders:

- TX-PACE financing produces environmental and economic benefits without government subsidies.
- TX-PACE financing supports permanent real property improvements that will increase the value of the property (as well as the local government’s tax base and a Lender’s equity in the event of default) and will lower operating costs.
- TX-PACE projects can be designed to achieve maximum benefit.

- TX-PACE financing spreads the costs of energy and water improvement projects over the expected life of the improvement.
- Property Owners can choose the source of the capital for their project, typically a TX-PACE capital provider (Lender) and select their own contractors and other helpful providers of service (Service Providers) that support the development and implementation of TX-PACE projects.
- Because the assessment is tied directly to the property, TX-PACE projects are lower risk than conventional capital equipment expenditures underwritten on the profitability of the owner. TX-PACE assessments stay with the land; the repayment obligation transfers automatically if the property is sold.
- Where a property is the subject of an underlying mortgage, the holder of the mortgage (senior lender) must consent to the TX-PACE assessment in writing.
- In the event of default, only payments in arrears are enforceable. This means only the current or past due TX-PACE assessment installment payments are collectable as senior to the claims of the holder of an underlying mortgage. Additionally, TX-PACE assessment payments do not accelerate upon default. The senior lender must receive notice in case of an installment default and does not lose control of the mortgage.

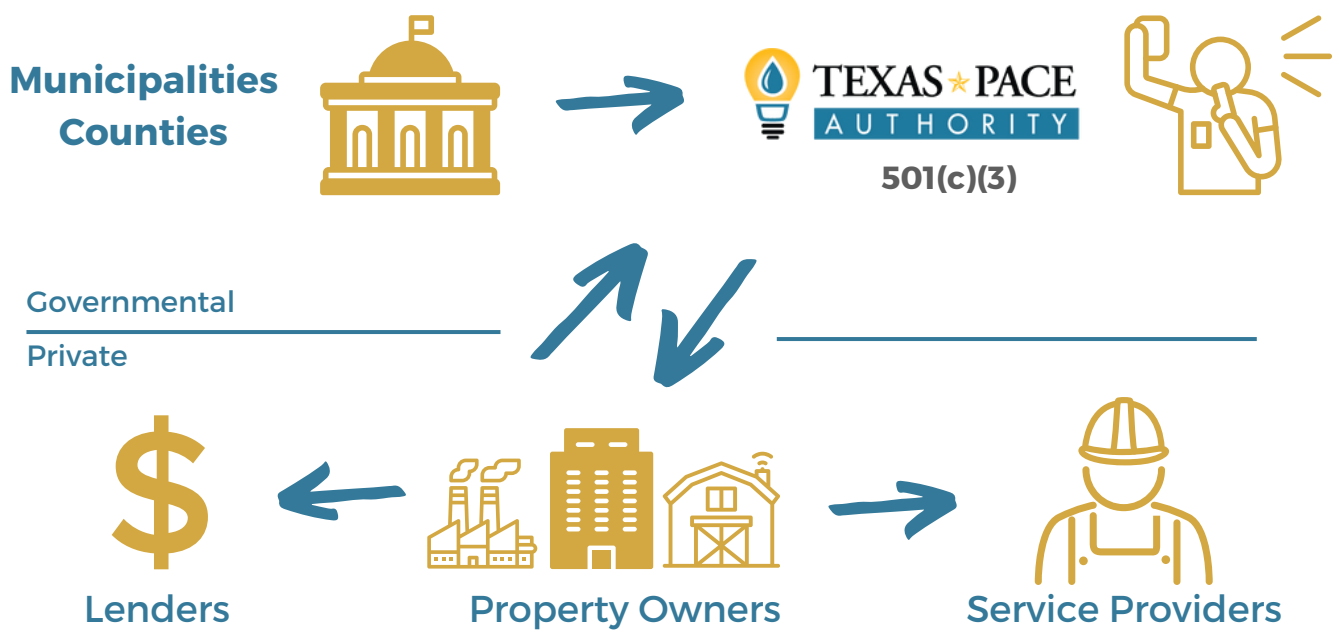
WHAT IS PACE IN A BOX?

Within a week following enactment of the Texas PACE Act, KPT convened its all-inclusive statewide group of diverse stakeholders – including local government officials, businesses, lenders, contractors, environmental groups – to consider how to best implement TX-PACE. Realizing Texas has 254 counties and 1,200 municipalities, any one of which might wish to implement a TX-PACE program, KPT stakeholders readily understood the importance and value of creating programs that were uniform, user-friendly, sustainable, and scalable. KPT's stakeh-

olders committed to assist local government entities in developing a “plug and play” TX-PACE model program. After volunteers in five different working groups spent a year developing program design, technical standards, underwriting criteria, methods for financing PACE projects with private funding, and education and outreach tools, PACE in a Box was published and made available at no cost to local governments.

PACE in a Box serves as the equivalent to the statewide regulations that would have been promulgated if the Texas Legislature had opted to create a state-level program administered by a state-level bureaucracy. Its templates, technical manuals and guidance documents represent collaboration among all stakeholder groups and are the product of thousands of hours of work by a diverse group of more than 130 volunteers, and feature best practices in underwriting, technical standards, and administration that are uniform, user-friendly, scalable, and sustainable.

Under the PACE in a Box model program, the local government’s administrator role is limited to those tasks that a government must perform – ensuring project eligibility, quality control, education, outreach, and training. Property Owners have the power to select the Lender and Service Providers of their choice and to find the highest and best use of the program in the market with free-market flexibility.



KPT reconvened the working groups tasked with developing the initial version of PACE in a Box in 2017 and in 2020 to receive feedback and to incorporate new information based on PACE program and project experience in Texas and other states and evolving market standards. As such, the PACE in a Box model continues to constitute best practices for local governments to follow in creating a TX-PACE program, and for considering and underwriting TX-PACE projects.

Current PACE in a Box templates, technical manuals and guidance documents are available free of charge from the KPT website Document Library.

HOW ARE TX-PACE REGIONS CREATED?

Only a county or city can establish a TX-PACE program. The PACE in a Box model incorporates a unique feature, not found in many states' PACE programs when PACE in a Box was established. Appreciating that local government entities were not positioned to expend financial and staff resources in creating and administering a program, and reviewing projects submitted for financing, PACE in a Box creates a framework in which the local government delegates administration of its local TX-PACE program to a nonprofit administrator. As such, adoption of a local TX-PACE program following the PACE in a Box model does not require the expenditure of any local tax dollars or the hiring of additional staff.

PACE in Box recommends local government entities delegate administration of their TX-PACE programs to a nonprofit organization rather than a for-profit business. Stakeholders adopted this approach believing a nonprofit organization would be more likely to act as a "public servant," performing its work in a more transparent and cost-effective manner.

WHAT IS TEXAS PACE AUTHORITY'S ROLE?

TPA is the nonprofit organization that a substantial percentage of [local governments](#) have selected to administer their local TX-PACE programs. TPA serves a significant majority of the Texas population and the number of regions adopting the TX-PACE program continues to grow. TPA is committed to serve all of Texas – urban and rural.

TPA has been an integral participant in KPT and in the development and ongoing work on PACE in a Box. It is committed to work to bring local TX-PACE programs to every part of Texas and works together with those local state government entities interested in adopting their own local programs.

A 501(c)(3) organization, TPA is funded through grants and administrative user fees paid by Property Owners seeking TX-PACE financing for their energy and water conservation projects. TPA does not charge local governments to provide TX-PACE program administration. TPA charges two types of administrative fees: (1) an application fee and (2) an ongoing interest rate residual fee.

In addition to its work on behalf of local government entities and Property Owners, TPA provides educational programs, engages in outreach, and conducts in-person and online training for TX-PACE stakeholders.

IS IT WORKING?

Yes! At the publication of this Guide Version 4.0, TPA serves a significant majority of the Texas population. Through the TX-PACE programs it administers, TPA has facilitated the investment of hundreds of millions in clean energy and water-saving improvements. The TX-PACE projects for which TPA has successfully managed approval have ranged in size from \$70,000 to more than \$25 million.

HOW DOES A PROPERTY OWNER PARTICIPATE IN TPA'S TX-PACE PROGRAM?

This question is what this Program Guide is all about. Section I, TPA's Project Development and Approval Process, lays out the steps for putting together a successful TX-PACE project. TPA stands ready to assist and the [TPA website](#) has webinars, training, case studies, flyers, and much more to help Property Owners get started and successfully complete the steps and requirements for designing, financing, and installing a TX-PACE project.

Email TPA for assistance at admin@texaspaceauthority.org.

SECTION IV

ADDITIONAL RESOURCES

Below are several relevant links to resources that you may find useful.

Texas PACE Authority: [texaspaceauthority.org](https://www.texaspaceauthority.org)

- Property Owners: [texaspaceauthority.org/for-property-owners](https://www.texaspaceauthority.org/for-property-owners)
- Local Governments: [texaspaceauthority.org/local-governments](https://www.texaspaceauthority.org/local-governments)
- Service Providers: [texaspaceauthority.org/for-service-providers](https://www.texaspaceauthority.org/for-service-providers)
- Lenders: [texaspaceauthority.org/for-capital-providers](https://www.texaspaceauthority.org/for-capital-providers)

Resources: case studies, flyers, webinars, etc. - www.texaspaceauthority.org/resources

Tools: HARC Emissions Tracker, Project Calculator, DOE Market Assessment Tool - [texaspaceauthority.org/tools](https://www.texaspaceauthority.org/tools)

Eligibility Check: [texaspaceauthority.org/eligibility](https://www.texaspaceauthority.org/eligibility)

TPA's Project Database - [texaspaceauthority.org/project-list](https://www.texaspaceauthority.org/project-list)

Texas PACE Authority Media:

YouTube Channel: [youtube.com/channel/UCfFhwV9jtIQAb7mrBg8I3Qg](https://www.youtube.com/channel/UCfFhwV9jtIQAb7mrBg8I3Qg)

Press: [texaspaceauthority.org/category/blog](https://www.texaspaceauthority.org/category/blog)

PACE Regions - [texaspaceauthority.org/service-areas](https://www.texaspaceauthority.org/service-areas)

Keeping PACE in Texas - [keepingpaceintexas.org](https://www.keepingpaceintexas.org)

PACE in a Box Document Library - [keepingpaceintexas.org/library/resources](https://www.keepingpaceintexas.org/library/resources)

Questions? Email admin@texaspaceauthority.org

SECTION V

GLOSSARY

ASSESSMENT: An assessment is an obligation on the property that stays with the property that is placed by the local government in exchange for an economic benefit that increases the value of the property. The assessment is removed once it has been repaid. A PACE assessment is a voluntary assessment that must be requested by the Property Owner. In exchange, the Property Owner receives access to private long-term affordable financing for energy and/or water saving improvements that increase the value of the property and provide energy and water saving benefits to the community at no cost to the local government.

CAPITAL PROVIDER (LENDER): The entity providing the funding for the PACE project.

ELIGIBILITY CHECK: A tool on TPA's website with a few quick questions to find out whether your project might be eligible for PACE financing.

HOUSTON ADVANCED RESEARCH CENTER (HARC): HARC is a nonprofit research hub developing science-based solutions to ensure a future where people thrive, and nature can flourish. harcresearch.org

INDEPENDENT THIRD PARTY REVIEWER (ITPR): A Texas licensed Professional Engineer with energy and/or water efficiency certification and experience.

KEEPING PACE IN TEXAS: A nonprofit business association organized for the purpose of promoting Property Assessed Clean Energy (PACE) financing programs throughout the state of Texas. keepingpaceintexas.org

LENDER (CAPITAL PROVIDER): The entity providing the funding for the PACE project. PACE Lenders are often referred to as capital providers.

LoanSTAR: A revolving Loan Fund administered by SECO to finance energy and water saving improvements to public property.

comptroller.texas.gov/programs/seco/funding/loanstar

LOCAL GOVERNMENT: A Texas municipality (city) or county.

MEASUREMENT AND VERIFICATION (M&V): The process for quantifying savings delivered by an energy or water conservation measure. M&V demonstrates how much energy or water use is avoided, rather than the total cost saved. The latter can be affected by many factors, such as energy prices. The M&V process enables the energy or water savings delivered by the measure to be isolated and fairly evaluated.

MORTGAGE HOLDER CONSENT (SENIOR LENDER CONSENT): If there is an existing mortgage on the property, the mortgage holder (senior lender) will have to consent to allowing a PACE assessment on the property. A [sample consent form](#) is on TPA's website.

OPEN MARKET: A PACE program in which the Property Owner may select a Lender and Service Provider(s) of its choice.

PACE IN A BOX: The Texas uniform model PACE program of best practices in the administration, underwriting, and technical standards widely adopted by local governments across Texas. keepingpaceintexas.org/library/document-library

PROPERTY OWNER: The record owner(s) of the real property on which a qualified improvement is installed.

QUALIFIED IMPROVEMENT: A permanent improvement fixed to real property and intended to decrease water or energy consumption or demand, including a product, device, or interacting group of products or devices on the customer's side of the meter that uses energy technology to generate electricity, provide thermal energy, or regulate temperature. These are often referred to as energy conservation measures (ECMs), water conservation measures (WCMs) or utility conservation measures (UCRM).

REAL PROPERTY: Under the Texas PACE Act, real property means privately owned commercial or industrial real property or residential real property with five or more dwelling units. Under the Texas Tax Code, real property means land, an improvement, a mine or quarry, a mineral in place, standing timber, or an estate or interest, other than a mortgage or lien on property to secure payment or performance.

SERVICE PROVIDER: A contractor, architect, engineer, or other source of services to a Property Owner in the development of a TX-PACE project.

STATE ENERGY CONSERVATION OFFICE (SECO): A division of the Texas Comptroller's Office that serves as a model of best practices and is a source of support and expertise for the PACE in a Box Technical Standards Manual and energy and water efficiency in the state of Texas. The Director of SECO is the volunteer chair of the PACE in a Box Technical Standards Working Group.

comptroller.texas.gov/programs/seco

comptroller.texas.gov/programs/seco/funding/pace.php

TECHNICAL STANDARDS MANUAL: The uniform model of technical best practices used by Independent Third Party Reviewers (ITPRs) to validate the projected savings on proposed PACE improvements. The Technical Standards Manual is modeled on the manual used by SECO in the administration of its LoanSTAR program, a revolving loan fund similar to TX-PACE that is available for energy and water saving improvements to public buildings. The Technical Standards Manual includes an appendix of key technical terms that are followed in this Guide. English and Spanish translations are available at

keepingpaceintexas.org/library/document-library.

TEXAS PACE ACT: Authorizing legislation enacted in 2013 that gives cities and counties the authority to establish TX-PACE programs. [Chapter 399 of the Texas Local Government Code](#).

TEXAS PACE AUTHORITY (TPA): The 501(c)(3) nonprofit organization that administers TX- PACE programs following the PACE in a Box model program for Texas cities and counties as a public service. TPA is a TX-PACE Program Administrator.

TX-PACE: The descriptive term for programs and projects that follow the Texas PACE in a Box model program of best practices.

UTILITY COST REDUCTION MEASURES (UCRM): Improvements to property that reduce energy or water use and meet the Texas PACE Act definition of “Qualified Improvements.” UCRMs are often also more precisely referred to as energy conservation measures (ECMs), water conservation measures (WCMS) or utility conservation measures (UCRMs).



www.TexasPACEAuthority.org

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