



TEXAS ★ **PACE**
AUTHORITY

2019 Annual Report

TEXAS PACE AUTHORITY

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I. EXECUTIVE SUMMARY

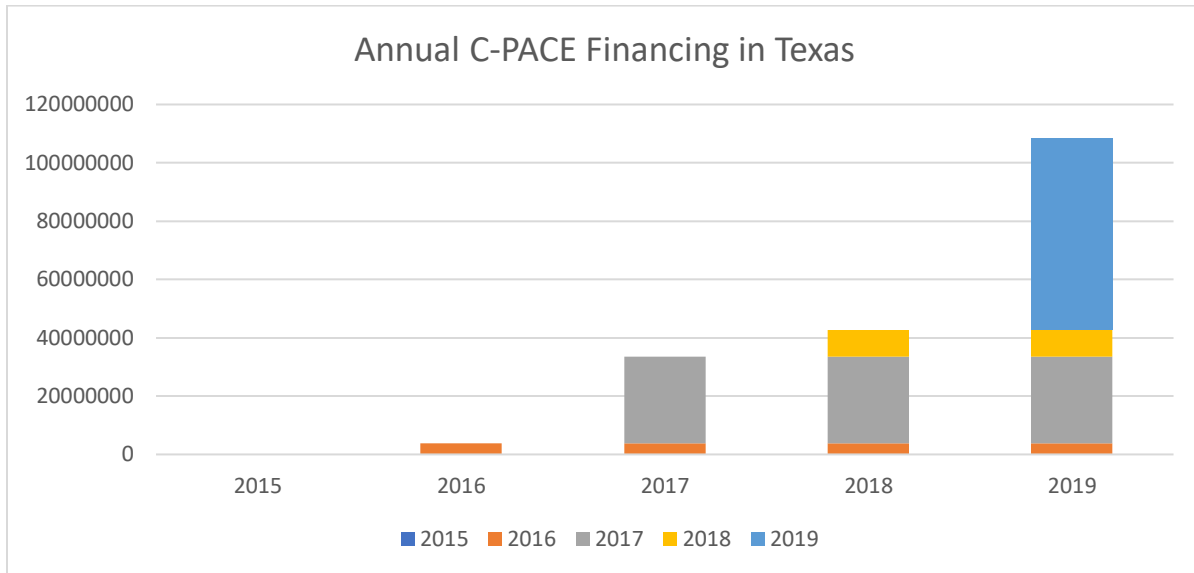
Texas PACE Authority (TPA) is honored to submit this 2019 annual report to the local governments it serves as a snapshot of its activities in this impactful year for energy and water saving property improvements using the Texas Property Assessed Clean Energy (TX-PACE) financing tool. As of December 31, 2019, TPA serves 36 local governments in Texas that have established commercial, industrial, and multifamily TX-PACE programs.

Property Assessed Clean Energy is a proven financial tool that incentivizes Texas' property owners to upgrade facility infrastructure with little or no capital outlay. Approved by State legislation in 2013 and established by local governments, TX-PACE programs enable owners to lower their operating costs and use the savings to pay for eligible water conservation, energy efficiency, resiliency, and distributed generation projects. Owners gain access to private, affordable, long-term (typically 10-20 years) financing that is not available through traditional funding avenues.

2019 was a breakout year for TPA and the TX-PACE program. As anticipated, the start-up of TX-PACE programs using the uniform, user-friendly, sustainable, and scalable PACE in a Box model over the past four years required and continues to require herculean outreach, education, and patience. PACE itself is "outside the box" for most property owners and lenders and Texas is just big. The dramatic increase in the amount of project investment and remarkable expansion of PACE regions in 2019, is strong evidence that the acceptance of this model, created by Texans for Texans is proving itself. Communities launching this program build local capacity and reap economic, environmental, and social benefits.

PROJECTS

In 2019, 10 projects resulted in \$59,287,300 in new TX-PACE investment, raising the cumulative PACE investment in Texas properties to more than \$102 million. The 2019 PACE investment totals more than doubled the three previous years combined. Texas became the 4th largest commercial PACE market in the US.

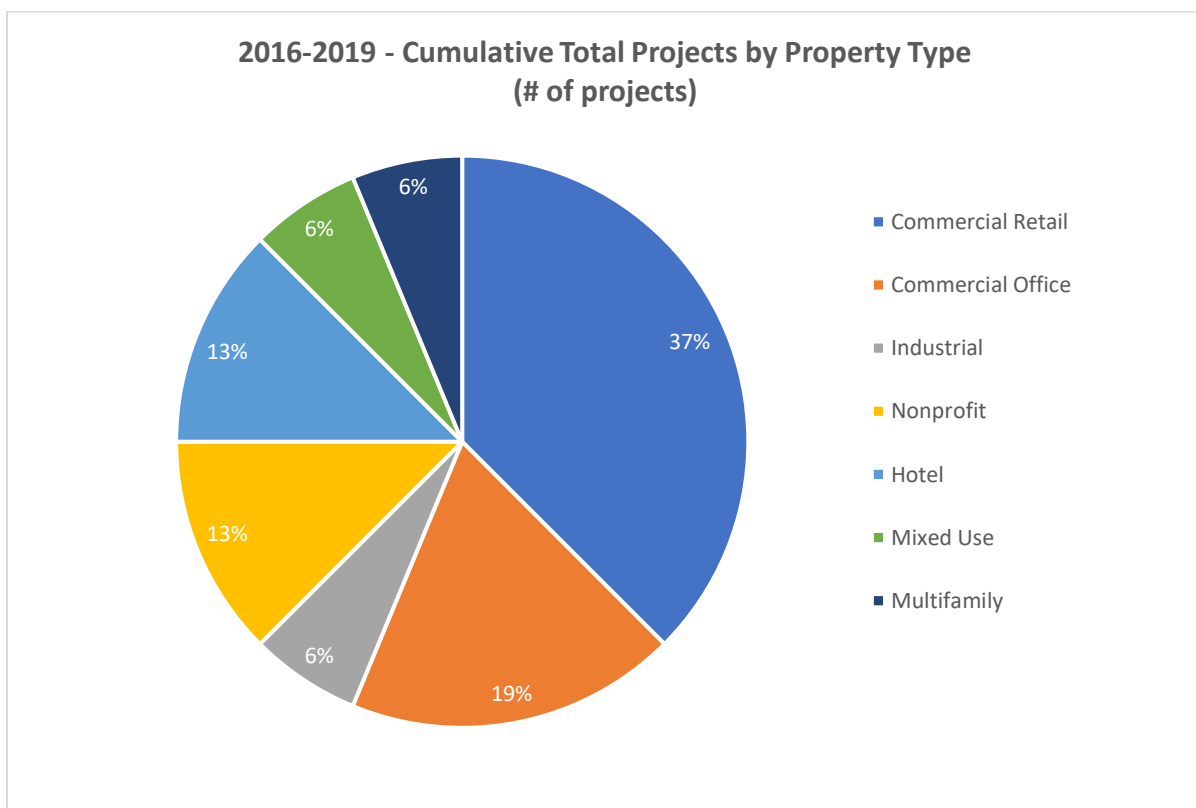


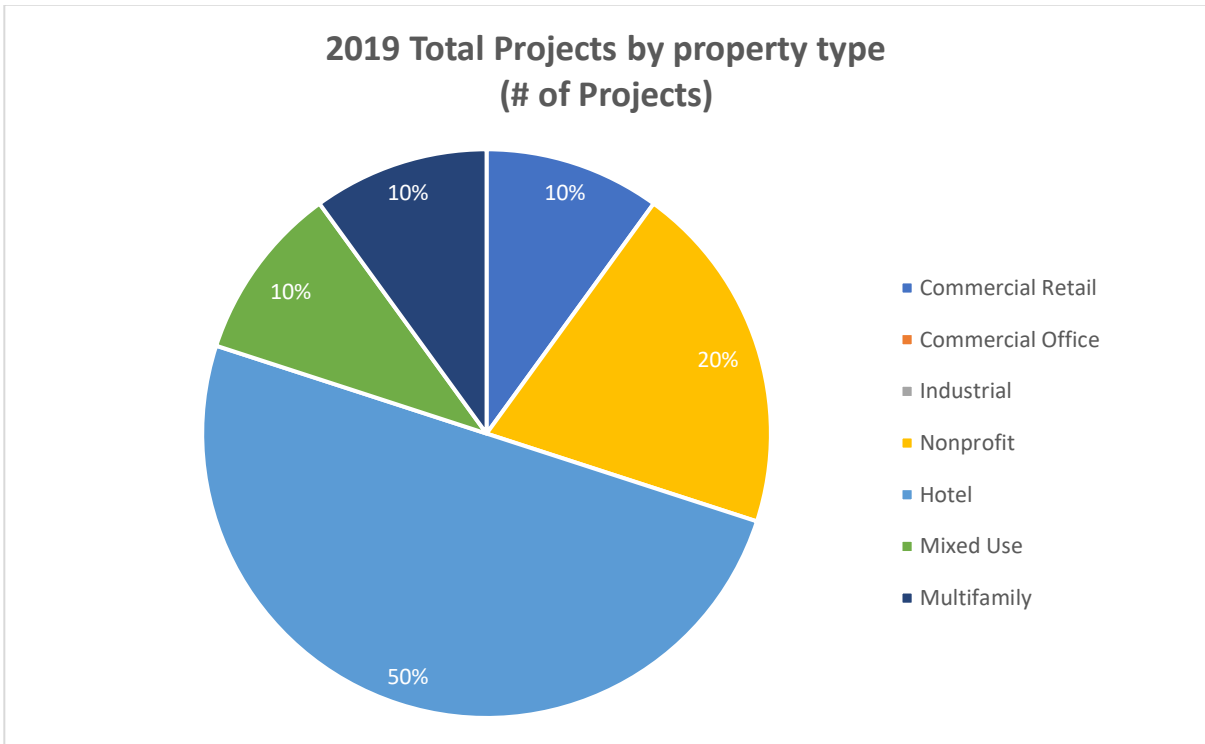
Annual number of TX-PACE Project completions:

- 2016 – 5
- 2017 – 7
- 2018 – 5
- 2019 – 10

- 40% of PACE projects support the repurposing of abandoned buildings, bringing new economic development to their communities, and creating over 200 new *permanent* jobs in Amarillo, Austin, El Paso, and Fort Worth once these vacant buildings reopen.
- 834 clean energy jobs were created by PACE projects.
- 10,815 tonnes of CO₂ emissions were avoided.
- 90% of projects required and received lender consent from mortgagees.

- Project financing ranged from \$556,495 to \$21,763,788.
- The non-exclusive list of knowledgeable capital providers on the TPA website increased from 12 to 19. Many of the TX-PACE capital providers have a presence in Texas and are competitively developing PACE projects throughout the state.
- Traditional banks make up 16% of the Texas PACE capital providers participating on the non-exclusive TPA Capital Provider list.
- Tarrant County closed its first PACE project and closed four of the 10 projects.
- In 2019, TPA lowered project administrative fees for the 2nd time since inception.
- The Plaza Hotel PACE project in El Paso was highlighted in the 19th DOE Good Neighbor Environmental Board report to Congress and the President titled “Energy Production, Transportation, and Demand in the Transborder Region: Opportunities and Impacts, at page 72, December 2019” https://www.epa.gov/sites/production/files/2020-01/documents/19thgneb_report_published_final_508compliant.pdf.

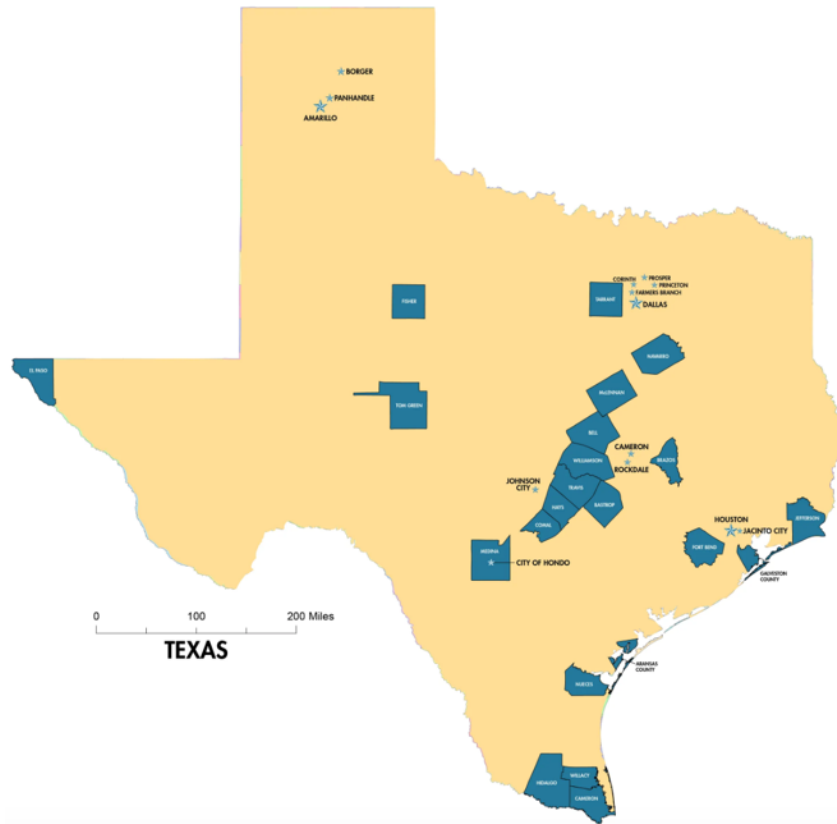




TEXAS PACE REGIONS

Thirteen local governments established uniform PACE regions in 2019 served by TPA, increasing the total number of PACE regions in Texas from 23 to 36.

- The uniform TX-PACE program serves over 55% of the Texas population.
- The new 2019 PACE regions include Aransas County, Bell County, Comal County, Fisher County, Galveston County, Medina County, Tom Green County, City of Borger, City of Cameron, City of Corinth, City of Hondo, City of Panhandle, and the City of Princeton.
- Alamo Area Council of Governments (AACOG) became the 2nd council of governments in Texas to establish a regional TX-PACE program and contract with Texas PACE Authority for administration.
- Comal County was the first local government to join the AACOG regional program on August 1, 2019. Medina County and the City of Hondo subsequently joined the AACOG PACE region.



PACE Regions as of December 31, 2019

POLICY

Education and training were a key program focus for 2019. TPA took a multifaceted approach to engaging stakeholders including property owner workshops, community summits, advanced service provider training workshops, webinars, flyers and case studies, and digital newsletters.

- Spanish translations of the TPA flyers and case studies are now available online and in print with support from the Texas Commission on Environmental Quality (TCEQ).
- TPA’s website can now be translated to Spanish with a click of a button.
- Specific focus in 2019 included:
 - PACE outreach for agricultural properties and rural communities.
 - Property owner workshops highlighting property owners and managers of successful PACE projects as relevant examples of this new economic and environmental tool.
 - PACE for border communities.

- Local lender outreach to identify capital providers to fund smaller projects.
- PACE for underserved communities and small businesses.

The commitment of these local governments to the fundamental principles of the PACE in a Box model enable the TX-PACE program to grow uniformly and scale up quickly, resulting in best practices at the lowest possible cost for all eligible organizations.

These Texas jurisdictions' patience and recognition of the multi-year effort required to build a comprehensive, transparent public service model program allowed TPA the time necessary to achieve the goals of the legislation. This foundation enables TPA to serve large and small property owners with best practices, and to allow for the development of the high-volume, low cost business model that is bringing about economic and environmental results for these communities. There is no short cut to these desired outcomes.

Thus, it is with great appreciation for the trust and commitment of these local governments that enabled the significant success in the laying of the foundation resulting in project growth in 2019.



II. PROGRAM AND PROJECT GROWTH

LOCAL GOVERNMENTS WITH TPA ADMINISTERED PROGRAMS



The first TX-PACE program was established by Travis County in March 2015. By December 31, 2019, a total of 22 counties and 14 cities established PACE programs using the PACE in a Box model program. Combined, these 36 uniform programs now reach more than 55% of the Texas population.

The following jurisdictions have adopted the PACE in a Box model program

Amarillo, City of, September 5, 2017
 Aransas County, December 16, 2019 +
 Bastrop County, September 24, 2018
 Bell County, August 19, 2019 +
 City of Borger, November 19, 2019 +
 Brazos County, October 18, 2016
 Cameron County, January 12, 2016*
 City of Cameron, January 22, 2019 +
 City of Corinth, January 10, 2019 +
 Comal County, August 1, 2019 + **
 Dallas, City of, May 11, 2016
 El Paso County, August 29, 2016
 Farmers Branch, City of, December 12, 2017
 Fisher County, December 9, 2019 +
 Fort Bend County, September 6, 2016
 Galveston County, January 14, 2019 +
 Hays County, January 17, 2017
 Hidalgo County, November 22, 2016*

City of Hondo, October 28, 2019 + **
 Houston, City of, November 4, 2015
 Jacinto City, November 8, 2018
 Jefferson County, March 20, 2017
 Johnson City, October 23, 2018
 McLennan County, November 6, 2018
 Medina County, November 7, 2019 + **
 City of Panhandle, February 12, 2019 +
 City of Princeton, June 24, 2019 +
 Town of Prosper, October 23, 2018
 Navarro County, August 14, 2017
 Nueces County, December 14, 2016
 Rockdale, City of, July 9, 2018
 Tarrant County, November 21, 2017
 Tom Green County, August 13, 2019 +
 Travis County, March 24, 2015
 Willacy County, January 14, 2016*
 Williamson County, April 5, 2016

+Adopted the PACE in a Box model program in 2019.

*The Lower Rio Grande Valley Development Council (LRGVDC) has an interlocal agreement with the three counties in the regional council of government to participate in a single PACE program administered for the LRGVDC by Texas PACE Authority.

** The Alamo Area Regional Council of Governments (AACOG) has an interlocal agreement with several local governments served by the regional council of governments to participate in a single PACE program supported by Texas PACE Authority.

Local governments are encouraged to access information regarding the TX-PACE program on the SECO website. *How to Create a TX-PACE Region: A Guide for Local Government*, identifies barriers and recommendations to overcoming obstacles, as well as outlining regional program creation best practices; <https://comptroller.texas.gov/programs/seco/funding/pace.php>. Two companion webinars, TX-PACE: An overview for local government officials; <https://vimeo.com/250351065/868cdc5e25> and How to establish a TX-PACE Program; <https://vimeo.com/250351396/25d7ccd6e2> are available for on-demand viewing on the State Energy Conservation Office website. These materials were created by the Houston Advanced Research Center (HARC) with a grant from SECO.

COMPLETED PROJECTS IN 2019



In 2019 a total of 10 PACE projects were completed for a total investment in Texas of \$59,287,300, raising the cumulative PACE investment in Texas property to more than \$102 million. Project financing in 2019 ranged from \$556,495 to \$21,763,788.

PACE financing was provided for the following projects in 2019:

- March 19, 2019 – Tarrant County (Fort Worth): Nonprofit
ACH Child and Family Services: \$556,495 (HVAC, lighting, insulation, plumbing fixtures, roof, glass/glazing)
- April 26, 2019 – El Paso County (El Paso): Hospitality
Plaza Hotel: \$9,200,353 (HVAC, lighting, elevators, windows, plumbing fixtures)
- May 16, 2019 - Dallas: Mixed use
Jackson Street Garage: \$5,140,164 (electrical, lighting, building envelope, mechanical, plumbing)
- July 1, 2019 – Houston: Hospitality
Medical Center Hotel: \$21,763,788 (electrical, lighting, building envelope, plumbing, plumbing fixtures, elevators)
- August 22, 2019 – Tarrant County (Fort Worth): Hospitality
Kimpton Hotel: \$5,811,875 (lighting, HVAC, domestic water heating)
- September 4, 2019 – Dallas: Mixed Use
Continental Gin: \$5,250,000 (roofing, glass/glazing, mechanical, HVAC, electrical/lighting, solar PV, building envelope, elevators, utilities)

September 12, 2019 – Tarrant County (Fort Worth): Nonprofit - Entertainment
 New Isis Theater: \$2,383,000 (HVAC, pumps, heat rejection, fans, lighting, electrical, plumbing fixtures)

September 23, 2019 – Travis County (Austin): Multifamily Housing
 Centro Homes: \$1,626,653 (HVAC, roof, lighting)

November 8, 2019 – Tarrant County (Grapevine): Hospitality
 Hilton Garden Inn: \$6,655,000 (lighting, HVAC, building envelope, plumbing)

December 30, 2019 – Amarillo: Hospitality
 Barfield Building: \$7,347,580 (Amendment of 2018 Assessment (original \$6,447,609), (2018: HVAC, building envelope, domestic hot water, water conservation)

A broad spectrum of project measures is reflected in these projects:

Energy Efficiency:

Interior and exterior LED lighting, HVAC, mechanicals, cool roof, building controls, windows, glass, glazing, domestic water heating, elevators, pumps, fans, heat rejection, and insulation.

Water Efficiency:

Plumbing efficiencies and a variety of water conserving plumbing fixtures.

Distributed Generation:

Solar PV.

On average, the PACE projects completed in 2019 reduced energy use and operating costs for targeted Energy Conservation Measures (ECMs) by:

Electricity: 48%

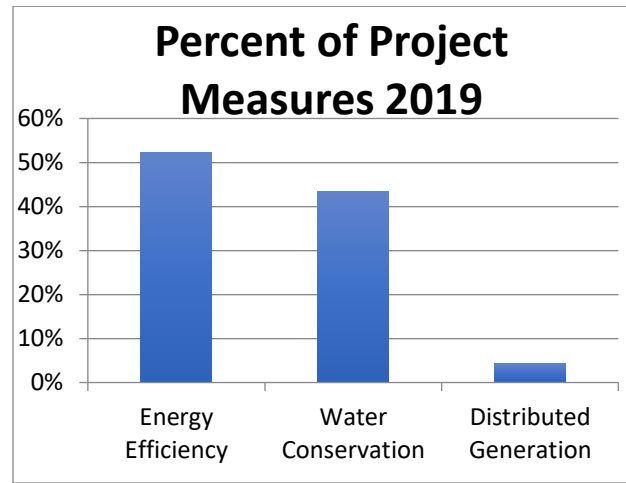
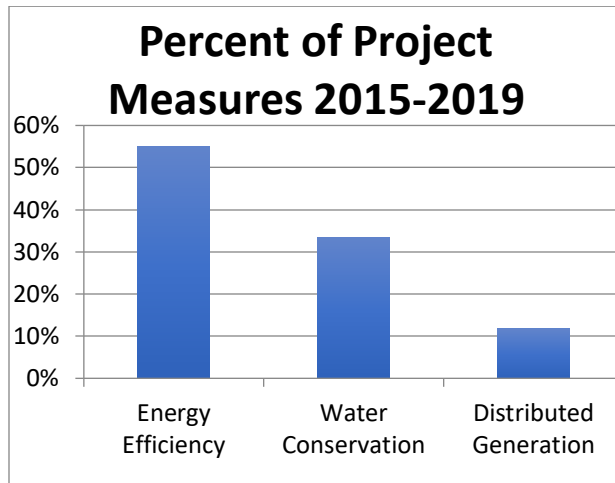
Water: 51%

Natural gas: 30%

Fort Worth ACH	Fort Worth	67%	62%	
Plaza Hotel	El Paso	56%	60%	60%
Jackson Street Garage	Dallas	11%		
Pearl Medical Center	Houston	31%	45%	25%
Kimpton Hotel	Fort Worth	50%		25%
Continental Gin	Dallas	67%	62%	38%
Isis Theatre	Fort Worth	54%	45%	25%
Centro Homes	Austin	44%		
Hilton Garden Inn	Grapevine	52%	30%	4%
Barfield Building*	Amarillo			
Average Savings		48%	51%	30%

* Barfield Project amended the 2018 project financials and did not alter the 2018 measures

Property owners across Texas are using the TX-PACE program to implement energy efficiency, water efficiency, and distributed generation improvements.



PACE loans pay for themselves, conserve natural resources, and move Texas towards a more sustainable future.



III. COMMUNITY OUTREACH

COMMUNITY ENGAGEMENT

TPA's commitment to the education and training necessary to build the foundation of knowledgeable stakeholders is evidenced by the increased number of 2019 projects of varying sizes and markets. Growth in the number of participating stakeholders (capital providers, engineers, architects, property managers, local economic development officials, PACE consultants, etc.) is resulting in an increased number of projects in pipelines throughout Texas PACE regions.

Texas PACE Authority continues to be committed to community outreach. In 2019, the following engagement was completed for the communities we serve:

- 18 statewide outreach presentations and conferences
- 85 local engagement presentations and outreach meetings
- 2 webinars

- 3 national outreach presentations and conferences, including TPA co-chairing the PACENation Summit in Austin, Texas, April 3 – 5, 2019
- Numerous individual company and project specific meetings where TPA was privately invited to meet with specific organizations regarding potential and pending PACE projects or to provide outreach and training to individual organizations.

Outlined in Appendix A is a more detailed list of the outreach events completed by geography.

WORKSHOPS AND WEBINARS

Property Owner and Manager Workshops

In 2019 TPA engaged in a new format for outreach and education focusing on panels consisting of participants in successful PACE projects reaching out to their colleagues to explain the benefits of successful and relevant case studies. These programs have been well received, and TPA plans to replicate this format.

Service Provider Training Workshops

These workshops are focused on training contractors, engineers, architects, property managers, and others to understand how PACE can help finance their energy and water saving improvement projects:

- Valley (Weslaco): Lower Rio Grande Valley Development Council PACE Service Provider Training Workshop, January 24, 2019
- Central Texas (Austin): PACE Engineering Training Workshop – November 7, 2019
- DFW (Carrollton): PACE Engineering Training Workshop – November 6, 2019

PACE Webinars

TPA leadership fostered a better understanding of TX-PACE in the following webinars in 2019:

- Council of Development Finance Agencies (CDFA) New Construction C-PACE Projects Webinar, November 18, 2019
- Benchmarking Webinar, December 10, 2019
<https://www.texaspaceauthority.org/resources/education/benchmarking/>

EXPANSION INTO AFFORDABLE HOUSING

Given the growth of population in Texas, maintaining the existing stock of multifamily affordable housing is critical. Aging structures and increasing utility costs threaten both the quality and affordability of these properties. PACE can improve both challenges, and TPA is committed to making PACE a genuinely useful tool in multifamily housing and to navigating the unique challenges in the affordable multifamily sector.

On January 17, 2017, the US Department of Housing and Urban Development (HUD) issued guidelines for obtaining HUD and Federal Housing Authority (FHA) consent for multifamily properties wishing to utilize PACE financing.

TPA is grateful to the Williamson County District Attorney's Office for requesting an opinion from the Texas Attorney General. The [Attorney General's opinion](#), stating that the Texas PACE Act creates an assessment on property is one of the requirements for receiving HUD approval. With this opinion, TPA is working to qualify its uniform program with HUD and the FHA.

A TPA study of using PACE for affordable housing resulted in a white paper, <http://www.texaspaceauthority.org/Documents/PACE-for-Affordable-Housing.pdf?dl=0> and a webinar, <https://www.youtube.com/watch?v=j4i7DIYuI4I&t=30s>.

TPA recently joined a PACENation national group reaching out directly to HUD in an effort to increase communication and achieve HUD's program consent for affordable housing projects under programs administered by TPA.

Freddie Mac signaled a willingness in 2019 for obtaining lender consent from Freddie Mac for multifamily PACE projects, <https://mf.freddiemac.com/product/green-advantage.html>.

INDUSTRIAL SECTOR OUTREACH

TPA is a member of the Texas Industrial Energy Efficiency Network (TIEEN) organized by the Texas Industrial Energy Efficiency Program at the University of Houston and made up of public and nonprofit entities that serve the industrial sector with energy and water saving programs. TIEEN collaborates on outreach and education regarding energy and water efficiency to the industrial sector. The group meets quarterly to coordinate efforts and share best practices and industry information.

[Targeted outreach to educate the industrial community](#) about the PACE program is an emphasis for Texas PACE Authority. Through the [Industrial Ambassador Network](#), subject matter experts have collaborated with TPA to develop tools and resources targeted to the specific needs of this vertical market.

UNDERSERVED COMMUNITIES OUTREACH

With the help of the Texas Commission on Environmental Quality (TCEQ), TPA flyers and case studies were translated into Spanish. The TPA Program Guide and Technical Standards manual is also now available in Spanish.

Meeting the needs of underserved communities is a TPA core objective. TX-PACE can help owners within these communities access private, affordable financing to make updating property and lowering operating expenses a reality. As indicated above, TX-PACE can also be used to upgrade multifamily housing. Projects providing energy and water savings for landlords and tenants help address the shortage of affordable housing across many parts of the state. TX-PACE enables property owners to make much needed building upgrades while keeping lease rates and utility costs reasonable. These updated structures can become catalysts for thoughtful investment within many underserved communities.

Outreach, training, and education are essential to creating and sustaining community partnerships. Through collaboration with community development partners, Texas PACE Authority is providing leadership, data, support, tools, and resources along with program orientation and service provider trainings to property owners, managers, industry organizations and the industry professionals who update the buildings (contractors, architects, engineers, etc.) in the regions it serves. Service provider training workshops will continue to build capacity and foster economic growth as the TX-PACE program retrofits create additional demand for local jobs.

TPA continues outreach and education to increase local lender participation so small businesses can access local financing for smaller PACE projects. TPA is also working with PACE administrators in other states to identify best practices to ensure capital for small businesses, rural projects, and PACE projects in underserved communities.

TX-PACE ALONG THE BORDER

TPA administers PACE programs on each end of the Texas-Mexico border: El Paso County to the west and Cameron, Hidalgo, and Willacy Counties on the east.

- With a grant from TCEQ, TPA hosted training and outreach efforts in Brownsville, El Paso, Hidalgo, Raymondville, and Weslaco.
- PACE lenders are working with the North American Development Bank to access funding for PACE projects within 62 miles of the Texas-Mexico border.
- The Plaza Hotel PACE project in El Paso, was highlighted in the 19th DOE Good Neighbor Environmental Board report to Congress and the President titled “Energy Production, Transportation, and Demand in the Transborder Region: Opportunities and Impacts,” at page 72, December 2019 https://www.epa.gov/sites/production/files/2020-01/documents/19thgneb_report_published_final_508compliant.pdf.

AGRICULTURAL SECTOR OUTREACH

In 2019, TPA continued its outreach to the agricultural sector by introducing PACE to the Texas Association of Cotton Ginners at their Annual Meeting in Fort Worth on March 19, 2019. TPA also

made a PACE presentation to the Texas State Agricultural Cooperative on May 9, 2019 in Austin. TPA organized a “PACE in Rural” Texas panel at the 2019 PACENation Summit in Austin. Speakers included Connie Standridge – Corsicana’s City Manager, Billy Curb – USDA, Dr. Rebekka Dudensing – Texas A&M AgriLife Extension Service, and Patrick Johnson – Frontier Bank’s president.

On November 14, 2019 at the Texas Capitol, TPA’s president facilitated a panel on “Clean Energy as an Economic Development Tool” during the Texas Energy Summit. The positive economic impact of clean energy technology and PACE financing on rural Texas were highlighted by Hon. John Clamp, AACOG’s CFO, Hon. John Davis, rancher, former state legislator and board member, Conservative Texans for Energy Innovation, and Ginger Watkins, City of Cameron Industrial Foundation’s Executive Director.

Making PACE accessible to the agricultural community also requires TPA to expand availability of the program to rural areas. Several rural communities established PACE programs in 2019, enabling agricultural businesses to utilize the program in Aransas, Bell, Comal, Fisher, Galveston, Medina, and Tom Green counties and the cities of Borger, Cameron, Corinth, Hondo, Panhandle, and Princeton.

NATIONAL OUTREACH

The PACE in a Box model is being copied in other states, and TPA is often asked to participate in efforts to improve and standardize commercial and industrial PACE best practices. In 2019, the national association for local PACE programs, PACENation, held its annual summit in Austin. TPA’s president served as co-chair of the 2019 PACENation Summit and facilitated the plenary session. TPA assisted in establishing panels and speakers for a series of panels in a Texas PACE panel track to bring many Texas voices to the national PACE stage. Sessions included:

- **PACE as a Texas-Sized Economic Development Tool:** Speakers included the Hon. Cynthia Long - Williamson County Commissioner, Heather Lepasca - City of Dallas Office of Economic Development, Carlton Schwab, president and CEO, Texas Economic Development Council, and Natalie Goodman, president IncentiFind.
- **Rural PACE in Texas:** Speakers included the Hon. John Clamp - AACOG’s CFO, Hon. John Davis - rancher, former state legislator and board member of Conservative Texans for Energy Innovation, and Ginger Watkins - City of Cameron Industrial Foundation’s Executive Director.
- **Transacting in Texas:** Speakers included Tommy Deavenport – Petros PACE Capital’s COO, Phil Geheb – Munsch, Hardt, Kopf & Harr, Marina Badoian-Kriticos – TPA, Andrew Meyer – Twain Financial Capital, and Brently Weber – Prosperity Bank.
- **Texas Case Studies:** Speakers included Marina Badoian-Kriticos – TPA, Kristene Canady – ECAST, Tim Crockett – PACE Building Efficiency, Rachel Davis – Petros PACE Capital, and Jennifer Smith – Congregation Beth Israel’s ED.

- Measuring the Impact of PACE in Texas: Speakers Included Hon. John Hall – EDF, Steve Minick – Republic Services, and Dr. Gavin Dillingham – Houston Advanced Research Center (HARC).

TPA participates on monthly conference calls with PACENation and with open market commercial PACE program administrators from other states to exchange best practices.

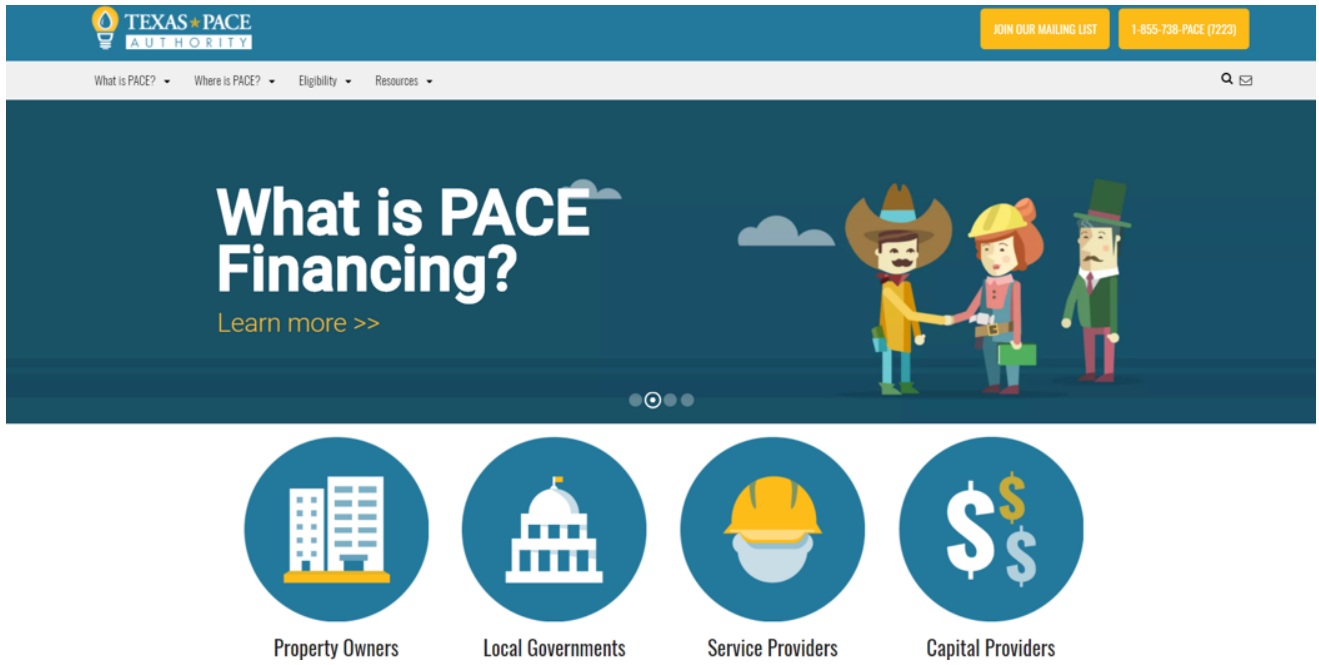
Texas PACE Authority provides best practices and experience to other state efforts to establish quality PACE programs and administration. In 2019, this included Virginia, Oklahoma, and South Dakota. TPA’s president testified in support of PACE legislation by phone before the South Dakota House of Representatives on February 11, 2019. On May 10, 2019, TPA participated in PACE Round Table at the National Resources Defense Council in New York.

TPA is a Market Partner in the Department of Energy’s C-PACE Working Group. The City of Dallas is also a member. <https://www.energy.gov/eere/slsc/commercial-pace-working-group>.

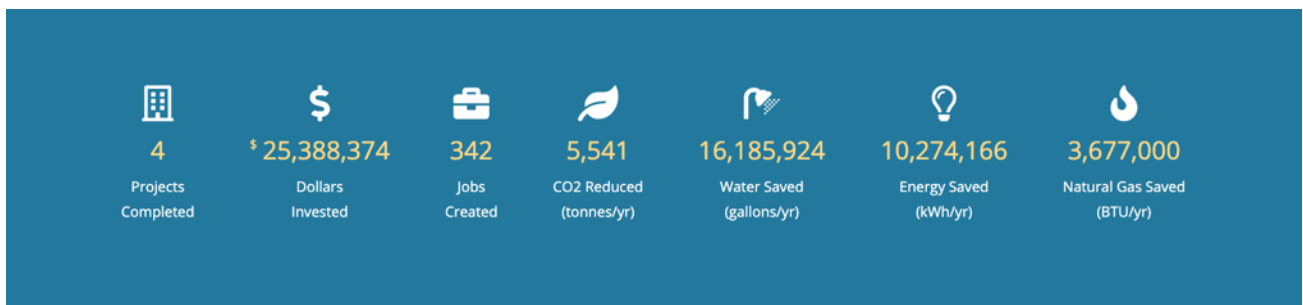
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PROGRAM WEBSITE AND DATABASE

TPA continues to develop a more user-friendly and organized website by improving the appearance, effectiveness, and streamlining the availability of stakeholder resources as well as improving the application process. Texas PACE Authority’s website hosts hundreds of unique visitors each month. (<http://www.texaspaceauthority.org/>).



The website includes a local program page for each of the 36 counties and municipalities TPA serves by highlighting the benefits of PACE projects to that community: <https://www.texaspaceauthority.org/service-areas>. In programs with completed projects, the website displays the cumulative number of projects completed, total local PACE investment, jobs created (using the US Department of Energy formula), tonnes of CO₂ reduced annually, kilowatts of energy saved annually, and gallons of water saved annually. This example is from the City of Houston PACE page on the TPA website:



TPA is establishing content and continues to reach out to each local government to make these pages and corresponding pages on the local government’s website more informative and helpful.

Eligibility Assessment Tool

An eligibility assessment tool on the TPA website allows prospective stakeholders to quickly vet project eligibility. Using this tool, the contractor or owner answers a series of basic questions about the property, project, and owner, and receives instant feedback on whether the project is likely to be eligible for PACE financing. (<http://www.texaspaceauthority.org/eligibility/eligibility-check/>)

Benefits Calculator

Texas Pace Authority has developed a PACE project pro formula model to quickly demonstrate the benefits of a PACE loan to property owners by comparing the impact of benefits of PACE financing with self-funding and traditional loan financing. This model allows a user to take project inputs (namely, cost and savings assumptions) and prepare a consolidated financial report for presentation to the property owner. One must be able to accurately produce such a report in order to properly evaluate a project. In addition, this tool helps contractors and project developers present projects using metrics that property owners want to see. It is also used to demonstrate the benefits of PACE financing to a mortgage holder.

(<http://calculator.texaspaceauthority.org/>)

Project Inputs	
Project Cost	\$1100000
Annual Savings	\$125000
Cap Rate (Discount Rate)	5%
PACE Loans Inputs	
Term (years)	20
PACE Interest Rate	6.5%
Conventional Loan Inputs	
Loan Term (years)	5
Loan Interest Rate	4%
Down Payment	20%
Self-Funded Inputs	
Include Opportunity Cost?	no <input type="button" value="v"/>
Opportunity Cost	3%

Summary of Results			
	Self-Funded	Conventional Loan	PACE
Out-of-Pocket Investment	(\$1100000)	(\$220000)	\$0
Average Annual Savings	\$125000	\$125000	\$125000
Annual Payment	\$0	(\$247090)	(\$99832)
Cash Flow Impact Year 1	(\$975000)	(\$342090)	\$25168
Net Project Cash Flow Year 2	(\$850000)	(\$464180)	\$50336
Years to Positive Project Cashflow	8.8	11.64	IMMEDIATE
Debt Service Over Finance Term	\$0	(\$1235449)	(\$1996641)
10-Year Project NPV	(\$134783)	(\$324553)	\$194340
20-Year NPV	\$457776	\$268007	\$313648

MARKETING PLAN

TPA informs and engages the market about the TX-PACE program based on the marketing strategies outlined in Section 5 of [PACE in a Box](#). Texas PACE Authority has a promotional video: <https://www.youtube.com/watch?v=1zybcEAwYoQ&t=5s>.



<https://www.youtube.com/watch?v=5gnN72buwv4>

Logo:



Growing PACE Market Infrastructure

In 2019, TPA made over 100 PACE presentations (listed on Exhibit A) to expand community awareness of the TX-PACE program and establish a complete local TX-PACE community – one that includes all the necessary channel partners to provide property owners with competitive choices for each of the services necessary to establish a successful PACE project. This ongoing effort to build outreach infrastructure is a necessary first and ongoing step in the education, outreach, and marketing effort to establish a vibrant PACE community, and a positive, efficient, user-friendly experience for property owners interested in the PACE program.

Channel partners are the stakeholders necessary to serve property owners interested in utilizing the Texas PACE program. Capital providers, mortgagees, project originators and others working to provide the necessary capital for TX-PACE improvements need to be familiar with and understand the program in order to serve the property owners and prospective property owners interested in utilizing TX-PACE. Contractors, architects, engineers, manufacturers of energy and water saving equipment, and their service organizations need to know about the program and understand the underwriting and technical requirements, so they can advise property owners on how to put together a successful PACE project in an efficient manner.

Flyers and Case Studies

Texas PACE Authority currently has six general flyers for market use listed in Exhibit B. Successful projects are superb advertisements for the PACE program. To help distribute information about these successful projects, TPA has created case studies that are available on the resources page

of the website: <https://www.texaspaceauthority.org/resources/case-studies-marketing> and listed in Exhibit B. Project case studies are created on an ongoing basis as projects close.

With support from TCEQ, TPA flyers and case studies are now available in Spanish.

Social Media

TPA uses WordPress to effectively connect with target market and online community. Information and content are shared via Twitter and a TPA website blog. TPA is leveraging LinkedIn to engage business professionals who primarily use one form of social media. Measures are in place to increase traffic to TPA's website and social media sites.

Constant Contact Email Distribution List and Blasts

More than 5,600 people receive emails from Texas PACE Authority. In 2019, subscribers received 10 email blasts that included updates about new programs, project closings, TPA's trainings and workshops, as well as industry news and events.

Webinars

- Council of Development Finance Agencies (CDFA) New Construction C-PACE Projects Webinar, <https://www.cdfa.net/cdfa/cdfaweb.nsf/ordredirect.html?open&id=BrickerPACEWebinar4.html>, November 18, 2019
- Benchmarking, <https://www.texaspaceauthority.org/resources/education/benchmarking/>, Posted on TPA website - December 2019

STAKEHOLDER INQUIRIES

The complexities of PACE for the various stakeholders created a need for an accessible repository of Frequently Asked Questions. The 65 questions listed on the TPA website are broken into categories to apply to property owners, service providers, capital providers, and local governments. <https://www.texaspaceauthority.org/resources/faqs>.

A toll-free number was established to encourage inquiries: 1-855-738-PACE (7223). In addition, stakeholders are able to submit email inquiries by using the 'Contact Us' webpage link to the TPA Administrator account: admin@texaspaceauthority.org.

TECHNICAL STANDARDS MANUAL

TPA uses a Technical Standards Manual which was designed by one of the PACE in a Box stakeholder working groups, which is chaired by the manager of the State of Texas Energy Conservation Office (SECO). It relies primarily on the SECO technical requirements for a similar revolving loan program for public buildings called LoanSTAR, <https://comptroller.texas.gov/programs/seco/funding/loanstar/>. The program also utilizes the Investor Confidence Project (ICP) Energy Performance Protocols (EPP) for standard and large commercial facilities contributing to the ICP nationwide effort to standardize the technical review of energy efficiency. The manual is a key component of the TPA Program Guide and service provider training. [The Program Guide and Technical Standards Manual](#) are updated to include additional guidance from the PACE in a Box working groups as it becomes available.

TPA is participating in a PACENation national effort to increase the standardization in PACE project technical standards. [The Program Guide and Technical Standards Manual](#) are also available in Spanish thanks to TCEQ assistance.



HELPING PROPERTY OWNERS IDENTIFY PACE CAPITAL PROVIDERS

The following link provides a list of interested and qualified capital providers to enable property owners to easily identify potential sources of private third-party financing. Texas PACE Authority neither recommends nor endorses any particular PACE capital provider. Under the TPA's open market model, property owners are free to use financing of their choice. Thus, this directory is by no means an exclusive list of available capital providers. It is provided solely for convenience in consolidating a list of PACE capital providers.

<http://www.texaspaceauthority.org/home/capital-provider-list>

The non-exclusive list of capital providers jumped from 12 to 19 in 2019, a 65% increase. Traditional banks make up 16% of the capital providers doing business in Texas. These capital providers are competing robustly for PACE projects of all sizes throughout Texas. The increase in the number of capital providers developing PACE projects has a direct impact on the increase in PACE projects in Texas.



SERVICE PROVIDER TRAINING

The Texas PACE Authority's service provider training sessions are designed to inform contractors, capital providers, and other stakeholders about the financial intricacies of PACE and introduce them to a suite of tools, resources, and reports designed to generate owner enthusiasm for a specific project. The traditional contractor focus is on quick payback projects. This is a result of property owner requirements that projects meet a two to three-year simple payback. Energy and water efficiency projects rarely meet this requirement without PACE.

Few, if any contractors have the existing knowledge, experience, and tools to fully integrate the compelling reasons to use PACE financing in a business proposal. To address this problem, TPA regularly conducts service provider training sessions throughout the state. Continued outreach, education, training, tools, and ongoing support services to both the energy efficiency (EE) and distributed generation (DG), e.g. solar photovoltaic contractor and water efficiency contractor communities are critical.

Training workshops were conducted in the following Texas PACE regions in 2019:

- Valley (Weslaco): Lower Rio Grande Valley Development Council PACE Service Provider Training Workshop, January 24, 2019
- Central Texas (Austin): PACE Engineering Workshop – November 7, 2019
- DFW (Carrollton): PACE Engineering Workshop– November 6, 2019

The service provider training sessions usually run about 4-5 hours and typically include a meal or snack and a spiral bound PACE Program Guide and Technical Standards Manual. A rotating panel of PACE capital providers participates in the service provider training sessions.

The Service Provider Training Workshops typically cover in-depth PACE topics, such as:

- Introduction to PACE (“How to Market PACE”)
- Overview of steps in a PACE Project
- Available Energy and Solar Rebates and Commercial Incentives
- Available Water Commercial Rebates
- Technical Standards as part of a PACE Project
- The Role of the Independent Reviewer
- Financial Modeling: PACE Project Report
- PACE Network and Project Development
- Current ICP Protocol and its use in PACE

The PACE Engineering Workshop, introduced in 2019 is designed to focus on the specific technical requirements for independent third party review (ITPR) of project baseline and projected savings measurements, and increase the number of trained engineers who are knowledgeable about PACE.

A series of training webinars for licensed Texas engineers interested in serving as ITPRs can be found on the TPA website at: <https://www.texaspaceauthority.org/technical-standards/>.

HELPING PROPERTY OWNERS IDENTIFY PACE SERVICE PROVIDERS

Texas PACE is designing a webpage directory to help property owners, developers and capital providers identify service providers who have attended a Texas PACE Authority training workshop. TPA is collecting best practices from other states to determine alternative means for helping property owners identify PACE knowledgeable service providers.

QUALITY ASSURANCE AND ANTIFRAUD MEASURES

TPA reviews each PACE application for completeness and supporting documents through independent review and verification procedures. TPA uses checklists and a legal review of required documents supplied by the capital provider to ensure that all statutory and PACE in a Box best practices are satisfied. The application and required documents identify and supply the information necessary to ensure that the property owner, the property itself, and the proposed project all satisfy PACE program underwriting and technical standard requirements.

TPA also reviews the report submitted by an independent third-party reviewer (ITPR), who must be a Texas licensed professional engineer, before the project can proceed. The report confirms that the energy and water savings baseline and projected savings are in compliance with the Technical Standards Manual. The ITPR performs an initial site visit, and then issues a report and a letter certifying that he or she has no financial interest in the project and is an independent reviewer. After the construction of the project is complete, an ITPR conducts a final site inspection and determines whether the project was properly installed and operating as intended. The reviewer's certification for this 2nd review also includes a statement that the reviewer is qualified and has no financial interest in the project.



IV. OUTCOMES

PROJECT AND PROGRAM EXPANSION

In 2019, 10 projects resulted in \$59,287,300 in new TX-PACE investment, raising the cumulative PACE investment in Texas property to more than \$102 million. The 2019 PACE investment totals more than doubled the three previous years combined. PACE projects typically take more than 12 months for design, savings calculations, third-party review, and financing. The dramatic increase in the number of PACE projects in the pipeline across Texas is a strong indicator that the jump in project growth in 2019 will continue into the new decade.

Thirteen local governments established uniform PACE regions in 2019 served by TPA, increasing the total number of TX-PACE regions in Texas from twenty-three to thirty-six. The uniform TX-PACE program now serves over 55% of the Texas population.

JOB CREATION

Utilizing a DOE formula, TPA tracks energy efficiency jobs created by TX-PACE projects. In 2019, over 822 jobs clean energy jobs were created. In addition, the repurposing of vacant and underutilized buildings is creating hundreds of permanent jobs. For example, TX-PACE projects enabled the creation of 60 industrial jobs in the Liebe plant (Corsicana), 55 hotel jobs in the Barfield Building (Amarillo), 161 hotel jobs in the Plaza Hotel Pioneer Park (El Paso). Centro Homes (Austin) and the New Isis Theater (Fort Worth) are 2019 projects that will also create permanent jobs when these vacant properties reopen.

CAPITAL PROVIDER EXPANSION



Texas PACE Authority neither recommends nor endorses any particular PACE capital provider. Under the TPA's open market model, property owners are free to use the PACE lender of their choice. Seven new PACE capital providers entered the TX-PACE market in 2019, including two traditional banks. These capital providers represent a wide range of institutions from traditional banks to private equity funds to PACE-specific investment vehicles. All capital providers listed on the TPA capital provider page have certified that they are ready to loan on PACE projects and conduct business in Texas. Together, they represent billions of dollars ready to invest in Texas, <https://www.texaspaceauthority.org/home/capital-provider-list/>.

LOCAL LENDER PARTICIPATION

Three banks now offer PACE capital: Frontier Bank, TNFB, and Live Oak Bank. Local lenders are critical to the availability of PACE capital for projects in small communities and rural Texas. TPA welcomes this interest and works to ensure that local lenders also benefit from the TX-PACE economy.

MORTGAGEE CONSENT SUCCESS

The development of a business case is required to gain written mortgagee consent for PACE financing from an existing mortgagee. In 2019, projects requiring mortgage consent represented 90% of closed projects.

Mortgagee consent can be a common bottleneck to PACE projects because of the nature of a PACE senior lien and the unfamiliarity with the new commercial PACE program in Texas. Yet despite initial objections, consent can often be obtained once the advantages to the mortgagee, the property and the property owner have been explained. Education and outreach to mortgage lenders continues to be a priority because achieving lender consent remains a hurdle to many PACE projects.

In 2019, the following lending institutions granted consent to PACE projects: Central State Bank, Commerce National Bank, Frontier State Bank, Happy State Bank, Iberia Bank, and People Fund.

LESSONS LEARNED

A successful commercial PACE marketplace requires an intricate network of educated capital providers, property owners, and contractors. Creating this educated network through outreach and providing successful examples are keys to alleviating property owners' and mortgage lenders' initial apprehensions.

Texas PACE Authority has learned several other valuable lessons.

- “If you build it, they will come” is not a viable aphorism for Texas PACE. In other words, a system and infrastructure must be built. 2019 demonstrated that the foundation building over the previous three years began to show significant results;
- A TX-PACE program provides local economic development offices with a significant, no-cost economic development tool for business expansion, retention and revitalization. These professionals know where property activity is occurring that can benefit from TX-PACE;
- PACE projects have long sales cycles, so persistence is key;

- Operating an open market program in which the administrator performs as a public servant leaving the property owners, capital providers, and contractors to operate in the free market provides the basis for programmatic trust from stakeholders, including local lenders;
- Transparency about fees, structure and cost is critical to building trust in PACE as a new financing tool; and
- Continued effort is required to ensure that capital is available for small projects and rural projects. This will require increased education and outreach for local lenders and other capital providers interested in serving small business, underserved communities, and rural areas.

2019 was a breakout year, demonstrating that the patience and persistence required to expand the program to new jurisdictions while providing significant education and outreach in both existing and prospective jurisdictions does eventually result in the successful closing of PACE projects in rural and urban communities throughout Texas. Commitment to best practices and educated channel partners ensures quality and resulting trust that builds upon itself over the long term.

Every program requires feedback and improvement to address market growth and change. As TX-PACE moves into a new decade, TPA recognizes areas requiring improvement:

- The market expansion has been swift and steep, requiring TPA to expand staff and institute practices required to move from a successful start-up organization into a strong, successful ongoing institution;
- The market expansion is not adequately addressing the capital needs for small PACE projects and TPA will continue to work with stakeholders to ensure the successful use of TX-PACE financing for small businesses and nonprofits, rural and underserved communities; and
- Texas' industrial sector has not yet tapped into the environmental and cost-reducing opportunities provided by TX-PACE that will make Texas industrials more competitive on a local and international scale.

SERVANT LEADERSHIP

Texas PACE Authority is committed to serve all of Texas businesses and communities while setting a nationwide example for administrative transparency and public service. Reaching out to underserved communities is a fundamental element of Texas PACE Authority's outreach, education, and training effort.

Building the foundation of the Texas PACE in a Box program - providing only the services required of the local government and leaving the competition to those in the marketplace requires commitment and patience. TPA is grateful to the local governments it serves for this patience for the time necessary to educate and train channel partners. 2019 was a breakout year, with a volume of PACE closings that exceeded the preceding first three program years combined.

Although an increased number of projects would please everyone, a race to close projects for its own

sake would have been short sighted and short-lived, resulting in short-shifting consumer protections and retarding the development of a larger competitive field of private sector participants. Texas PACE Authority will continue its education, outreach, and training efforts for projects of all sizes in all communities. Giving the private sector time to design the highest and best use of the TX-PACE program will continue to result in the greatest use of TX-PACE with lower risk than models from early adopter states. 2019 was a year that proved the PACE in a Box program and approach to a uniform, best practices PACE program for Texas.

RECOGNITION

TPA is deeply honored to have been selected as “Access to Capital Champion of the Year” by the US Dept. of Commerce’ Minority Business Development Center operated by the El Paso Hispanic Chamber of Commerce. The award was presented on March 7, 2019.



Standing from left to right: Fernando Liano, City of El Paso; Joe Gudenrath, Downtown Management District; Sam Trujillo, El Paso County. **Sitting from left to right:** Eugenia Posada, Texas Commission on Environmental Quality, Charlene Heydinger, TPA, Adriana Acosta, El Paso County

The Plaza Hotel PACE project in El Paso, was highlighted in the 19th DOE Good Neighbor Environmental Board report to Congress and the President titled “Energy Production, Transportation, and Demand in the Transborder Region: Opportunities and Impacts, December 2019 https://www.epa.gov/sites/production/files/2020-01/documents/19thgneb_report_published_final_508compliant.pdf, page 72.

GRANT AWARDS

In 2019, the Texas Commission on Environmental Quality (TCEQ) granted TPA a \$25,000 grant to promote TX-PACE along the Texas – Mexico border.

The Mitchell Foundation awarded TPA \$18,000 to support energy and water audits for two nonprofit campuses in Austin: Huston-Tillotson University and St. Stephen’s Episcopal School.

REMAINING OBJECTIVES

- To continue education and outreach with property owners, service providers, and local lenders to increase awareness of the TX-PACE program and to build a vibrant TX-PACE network locally and across Texas;
- To promote the TX-PACE program throughout the commercial, industrial, and multifamily sectors in rural and urban areas;
- To promote the TX-PACE program to commercial, industrial, and multifamily property owners of all sizes;
- to ensure the availability of capital, contracting, and engineering stakeholders in all regions for all types of projects;
- To continue to support the development and completion of TX-PACE projects; and
- To promote the core principles of PACE in a Box to provide best practices and ethical operations as the local government authorized representative committed to uniformity.

NEXT STEPS

TPA will continue to faithfully execute the PACE in a Box core principles and program in a public servant, ethical manner, including best practices in program administration, underwriting and technical standards. TPA will continue:

- Outreach efforts to underserved communities, including improving education materials and increasing availability of these materials in Spanish;
- Continued collaborative work to expand awareness;
- Training workshops for market stakeholders; and
- Expansion of the PACE in a Box uniform model program to additional local governments.

As projects close and continue to prove the PACE in a Box model, TPA will redouble its efforts to capture the attention of key stakeholders that have resisted engaging in PACE until program success was demonstrated.

Texas PACE Authority staff will reach out to elected officials, economic development staff, and other public servants for recommendations and collaborative opportunities for outreach throughout the PACE regions.

Texas PACE Authority will continue its mission with a responsive, quality staff as project revenues grow and TPA becomes self-sufficient based on project volume that showed significant increases in 2019 and indications of a strong upward trajectory in the upcoming decade. Growth will continue to enable efficiencies and scale that will result in lower costs envisioned in the PACE in a Box model program.



V. TEXAS PACE AUTHORITY LEADERSHIP

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VIII. CONCLUSION

The work completed in 2019 showed the fruits of the Herculean effort to lay the foundation for the creation of a holistic TX-PACE program beginning in 2020. The successful project closures in Texas in 2019 demonstrate a new level of PACE project activity that will continue to expand in the new decade. Education of contractors, local lenders, and capital providers remains key to achieving the goals of this unprecedented collaboration, and outreach will continue.

Texas PACE Authority's focus on uniformity, property owner autonomy, and open market financing has been uniquely adapted from other states' PACE programs to suit Texas' needs. As TX-PACE programs are established by more local governments, the network of providers and increase in project completions are resulting in measurable economic benefits for individual property owners and their communities.

Thank you for your continued support for the PACE in a Box model program and the Texas PACE Authority's efforts to administer it consistently throughout Texas as a nonprofit public service.

Respectfully submitted,

Charlene Heydinger
President

charlene@TexasPACEAuthority.org



APPENDIX A – OUTREACH AND EDUCATION EVENTS

OUTREACH PRESENTATIONS AND CONFERENCES – STATEWIDE

Austin

- Texas Clean Energy Coalition, Brattle Report findings stakeholder review – February 7, 2019
- Texas Conservatives for Energy Innovation, introduction – February 13, 2019
- Texas Regional Alliance for Campus Sustainability, Huston-Tillotson, booth – February 17 – 19, 2019
- UT Law School Attorney CLE Land Use Conference, presentation – April 26, 2019
- Texas State Agricultural Cooperative, presentation – May 9, 2019
- Texas Commission on Environmental Quality border Affairs Office (TCEQ), presentation – June 18, 2019
- US Green Building Council (USGBC), presentation – June 25, 2019
- PACE Engineering Workshop – November 7, 2019
- Texas Energy Summit at the Texas Capitol, Rural Economic Development panel facilitator – November 14, 2019

Bastrop

- South Central Partnership for Energy Efficiency as a Resource (SPEER) 2019 CEE Conference – April 8, 2019
- SPEER Annual Member meeting, PACE panel facilitator – September 19, 2019

Carrollton

- PACE Engineering Training Workshop – November 6, 2019

Dallas

- Metrocon Conference, booth – August 10-11, 2019

Fort Worth

- Texas Association of Cotton Ginners, Annual Meeting, presentation – March 19, 2019
- HUD PACE introduction – April 16, 2019

Houston

- USGBC Texas Energy Summit, booth – October 17, 2019

San Antonio

- Texas Community Development Corporations 2019 Annual Conference, Multifamily housing/PACE panel – March 3, 2019

Weslaco

- Lower Rio Grande Valley Development Council PACE Service Provider Training Workshop, January 24, 2019

REGIONAL AND LOCAL ENGAGEMENT – EVENTS

Addison

- Economic Development Department, presentation – January 14, 2019
- City of Addison staff, presentation – February 5, 2019

Allen

- City Council presentation – August 27, 2019

Amarillo

- Amarillo PACE Summit – May 31, 2019

Austin

- Earth Day Booth, Huston-Tillotson University – February 15, 2019
- Real Estate Council of Austin, introduction presentation – February 28, 2019
- Energy Foundation – Mitchell Foundation Clean Energy Group, presentation – February 28, 2019
- Mitchell Foundation Solar Workshop, participant – May 21, 2019
- Capital Area Council of Government Energy Efficiency Workshop, presentation – May 29, 2019
- Austin Association of Facilities and Managers Engineers, presentation – June 12, 2019
- Austin White Lime, presentation – September 30, 2019

Belton

- Bell County Judge and staff, presentation – June 11, 2019
- Bell County Judge and local bankers, presentation – June 27, 2019
- Bell County Commissioners Court, presentation – July 15, 2019
- Bell County Commissioners Court Resolution of intent, presentation – August 12, 2019

Bishop

- Bishop City Council, presentation – August 28, 2019

Brenham

- Brenham Washington County Economic Development, presentation – September 4, 2019
- Brenham Washington County Capital Provider Community, presentation – December 3, 2019

- Washington County Commissioners Court, presentation – December 12, 2019

Brownsville

- Cameron County PACE Summit – June 21, 2019
- Valley Environmental Summit, presentation – October 18, 2019

Bulverde/Spring Branch

- Bulverde Spring Branch Economic Development Foundation PACE Community Workshop – October 22, 2019

Cameron, City of

- Presentation to City Council – January 22, 2019
- Cameron Industrial Foundation PACE Lunch and Learn, presentation – May 6, 2019

Carrizo Springs

- Middle Rio Grande Development Council staff, presentation – August 29, 2019

Corsicana

- Navarro County Property Owner Summit – August 15, 2019
- Navarro County Lender Summit – August 15, 2019

Corpus Christi

- Corpus Christi Regional Economic Development Council Opportunity Zone and PACE Workshop – April 19, 2019
- Commissioners Court PACE document update, facilitate – April 28, 2019

Dallas

- 2019 North Texas Climate Change Symposium, PACE panel – February 4, 2019
- City of Dallas Diversity Feedback meeting, participant – February 26, 2018
- FSG, Blue Global Initiative PACE introductory presentation – March 12, 2019
- Social Impact Architects Opportunity Zone meeting – participation – March 28, 2019
- Dallas 2030 District, presentation – June 6, 2019
- McKinstry PACE training – June 28, 2019
- Dallas 2030 District, presentation – August 22, 2019
- Dallas City Planning and Affordable Housing staff, presentation – August 22, 2019
- Dallas Sustainability Office North: Dallas Comprehensive Environmental Climate Action Plan presentation, USGBC event, PACE update – October 29, 2019

Eagle Pass

- Maverick County PACE Summit – July 18, 2019

Elgin

- Elgin Brick, Elgin EDC, Bastrop County, presentation – January 15, 2019

El Paso

- US Department of Commerce Minority Development Business Agency, El Paso Office/El Paso Hispanic Chamber of Commerce reception, TPA recipient of Access to Capital Champion Award – March 7, 2019
- El Paso County PACE Summit – June 27, 2019
- El Paso County Economic Development Department, introductory presentation – December 18, 2019

Fort Worth

- Tarrant County Commissioners Court, presentation – December 10, 2019

Fredericksburg

- Economic Development Staff, presentation – August 1, 2019

Frisco

- City of Frisco staff, presentation – February 26, 2019

Galveston

- Galveston County Commissioners Court presentation – January 14, 2019

Hebbronville

- Jim Hogg County PACE Summit – July 16, 2019

Houston

- BBVA Training presentation – July 17, 2019
- City of Houston Green Building Resource Center PACE Outreach event – August 28, 2019
- Texas Society of Architects, introduction – September 16, 2019

Laredo

- Laredo PACE Summit – April 19, 2019
- Laredo City Council, presentation – June 17, 2019
- Laredo Economic Development Corporation, presentation – June 25, 2019

McAllen

- South Texas Manufacturers Association, presentation – March 26, 2019
- Hidalgo County PACE Summit, April 10, 2019

Mesquite

- Dallas County Community College Environmental Summit, presentation – November 11, 2019

Midland

- Midland Economic Development Corporation leadership, presentation – September 25, 2019
- Midland County Commissioners Court, presentation – December 9, 2019

Panhandle

- Panhandle Inn tour and community meeting, presentation – May 31, 2019

Princeton

- Princeton City Council, presentation – May 28, 2019

Raymondville

- Raymondville Economic Development Corporation, presentation – January 24, 2019
- Raymondville PACE Summit – March 27, 2019

Richmond

- Fort Bend Economic Development Corporation and Commissioner and county staff, presentation – June 12, 2019

Rio Grande City

- Starr County Workshop – July 16, 2019

Robstown

- Robstown PACE Summit – June 24, 2019

Roby

- Fisher County Commissioners Court, presentation – November 12, 2019
- Roby Chamber of Commerce PACE meeting, presentation – November 12, 2019

Rockport

- Aransas County Commissioners Court, presentation – December 9, 2019
- Aransas County Commissioners Court hearing, presentation – December 16, 2019

San Angelo

- San Angelo Economic Development Corporation, presentation – February 3, 2019
- San Angelo Economic Development Corporation, presentation – June 5, 2019
- Tom Green County PACE Presentation – June 26, 2019
- Tom Green County Commissioners Court, agenda presentation – July 30, 2019
- Tom Green County Commissioners Court, presentation – August 8, 2019
- San Angelo Small Business Development Center Lender Luncheon, presentation – September 26, 2019

- High Ground of Texas Annual Meeting, presentation – October 24, 2019
- Tom Green County PACE Workshop – October 25, 2019

San Antonio

- Alamo Area Regional Council of Governments board meeting presentation, January 23, 2019

Seguin

- Guadalupe County leadership and Alamo Area Council of Governments, presentation – December 17, 2019

Silsbee

- Hardin County Economic Development Corporation, presentation – March 28, 2019

Sugar Land

- Greater Fort Bend Economic Development Corporation, presentation – September 19, 2019

Taylor

- Taylor Economic Development Corporation & MRB Group, presentation – June 11, 2019

Westlake

- Rotary Club of Westlake, presentation – January 5, 2019

The Woodlands

- Montgomery County Rotary Club, presentation – March 5, 2019

Zapata

- South Texas Development Corporation, presentation – March 21, 2019

OUTREACH PRESENTATIONS AND CONFERENCES – NATIONAL

Department of Energy C-PACE Cohort Call Strategies for Local Government Engagement for Alaska and Alabama officials, presentation – September 24, 2019

Austin

- PACENation 2019 Summit, April 3 – 5, 2019
 - National summit co-chair: Charlene Heydinger, President of TPA
 - TPA president facilitated plenary session with Bill Magness, President and CEO of ERCOT and Dub Taylor, Director of SECO, facilitator – April 4, 2019
 - Organized Panels and speakers for:
 - PACE as a Texas-sized Economic Development tool
 - Rural PACE in Texas

- Transacting PACE in Texas, facilitated by TPA team member
- Texas Case Studies, facilitated by TPA team member
- Measuring the Impact of PACE in Texas

New York

- National Resources Defense Council, PACE Roundtable, participant – May 10, 2019

Pierre, South Dakota

- State House of Representatives, Committee hearing, testimony – February 11, 2019

WEBINARS

- Council of Development Finance Agencies (CDFA) New Construction C-PACE Projects Webinar, <https://www.cdfa.net/cdfa/cdfaweb.nsf/ordredirect.html?open&id=BrickerPACEWebinar4.html>, November 18, 2019
- Benchmarking, <https://www.texaspaceauthority.org/resources/education/benchmarking/>, Posted on TPA website - December 2019



APPENDIX B – FLYERS AND CASE STUDIES

With the support of the Texas Commission on Environmental Quality, the Texas PACE Authority flyers and case studies are available in Spanish.

FLYERS

Private Sector TX-PACE
Public Sector TX-PACE
Commercial TX-PACE
Industrial TX-PACE
Nonprofit TX-PACE
Tool for Disaster Recovery

CASE STUDIES

Industrial

- Liebe, Navarro County

Mixed Use

- Butler Brothers Building, City of Dallas

Office Building

- 1225 N. Loop, City of Houston

Nonprofit

- Congregation Beth Israel, Travis County

Solar

- Family Eldercare, Travis County

Retail/Small Business

- Dallas Paint and Body, City of Dallas

Rural

- Elgin General Store, Bastrop County (NEW)

Hospitality

- Barfield Building, Amarillo (NEW); Plaza Hotel, El Paso County (NEW)

All flyers and case studies can be found at www.texaspaceauthority.org.



APPENDIX C – PROJECT APPROVAL AND MANAGEMENT PROCESSES

APPLICATION AND APPROVAL PROCESS

The Texas Pace Authority application form is based on the PACE in a Box model application form. Upon invitation (after pre-application review) from Texas PACE Authority, property owners and capital providers can use the website to submit applications. This platform provides a confidential forum for the submission and review of required materials. Texas PACE Authority reviews the forms for completeness and notifies applicants of any missing information. When applications are complete, Texas PACE Authority makes a preliminary determination of eligibility explained in the process below and informs owners whether, subject to verification of all requirements at closing, the information submitted indicates that the proposed project meets all program requirements. TPA then performs closing verification reviews and schedules assessment transaction closings when all requirements are met.

TECHNICAL STANDARDS

Texas PACE Authority:

- Requires independent third-party reviewer verification (ITPR), according to the PACE in a Box Technical Standards Manual and the PACE statute;
 - Requires ITPR verification of the property’s baseline and expected energy or water savings resulting from a project, according to the PACE in a Box Technical Standards Manual; and
 - Requires ITPR verification that each project was properly completed and is operating as intended;
- Assumes an oversight role over the ITPR on each project. Texas PACE Authority is available to discuss the technical standards that apply and provide insight into how a project should be reviewed. TPA reviews the findings of each ITPR to verify that a project meets technical standards and that the ITPR has no financial or personal connection to the project under review; and
- Performs closing verification reviews and schedules assessment transaction closings when all requirements are met.

FINANCIAL UNDERWRITING STANDARDS

Texas PACE Authority certifies:

- A preliminary determination of eligibility when applications are complete and issues preliminary letters to owners and capital providers indicating whether, subject to verification of all requirements at closing, the information submitted indicates that the proposed project meets program requirements;
- The capital provider has determined, based on appropriate underwriting factors, that the owner has demonstrated the financial ability to repay financial obligations through PACE assessments; and
- The qualification of each approved project for PACE financing to the property owner and capital provider.

LEGAL STANDARDS

Texas PACE Authority:

- Reviews and finalizes the terms of every owner contract and lender contract prior to execution;
- Ensures the recording of a Notice of Contractual Assessment Lien for each approved project in the Official Public Records of the County;
- Requires the owner to notify the holder of any mortgage lien on the property of the owner's intention to participate in the program and obtain the mortgage lienholder's written consent prior to the imposition of the PACE assessment; and
- Coordinates and participates in assessment transaction closings. Closing documents are reviewed by counsel as part of the closing review process.

ADMINISTRATIVE FEES

To meet its commitment to lower rates as TPA becomes self-sufficient, the TPA board voted to lower rates in June 2017 and again in September 2019. Texas PACE Authority is a 501 (c)(3) organization that administers the TX-PACE program on behalf of local governments as a public service. The TX-PACE program administered through TPA is market-based and flexible, allowing property owners to do business with the parties of their choosing at the lowest possible administrative costs.

The servant leader business plan is based upon a model of low fee/high-volume of projects that will allow TPA to have a well-funded, efficient, and financially healthy organization, while keeping costs to a minimum and operating in a lean fashion.

The goal of TPA is to have a well-funded, efficient, and financially healthy organization, while keeping costs to a minimum and operating in a lean fashion. To that end, TPA charges two types of fees as part of administration, an application fee and an ongoing interest rate residual. These fees cover the basic administrative service to complete a PACE project as well as the ongoing oversight and program reporting to local governments that enact a PACE region.

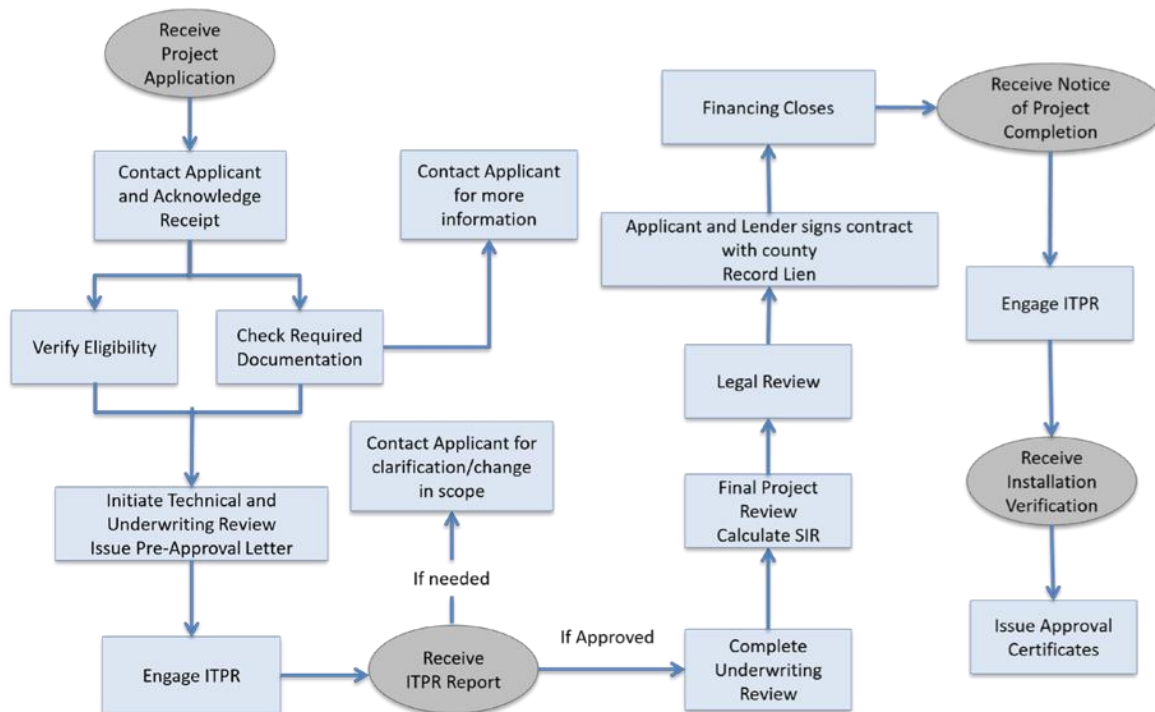
Application Fee is the greater of:

- \$2,000; or
- Amounting to
 - 1% of total project cost of first \$5 million;
 - .5% of marginal amount above \$5 million; and
 - .25% of marginal amount above \$20 million.

Initial \$500 to be paid with application. Balance to be paid at closing.

Ongoing Residual Fee amounting to 8 basis points annually on the loan, resulting in a declining payment based on the outstanding principal balance to be paid as part of annual assessment. Note: This fee can be capitalized and paid in full at closing.

APPLICATION PROCESS



The above diagram shows the typical flow of a project application. TPA's review is designed to ensure that all requirements from the PACE statute and the County PACE Report are being met. Broadly, the application review consists of a technical review and a financial/legal review. The following main issues are vetted for compliance with the PACE statute and the TX-PACE program requirements.

TECHNICAL REVIEW

- Project Scope – TPA first reviews the scope of the project to verify the eligibility of all Utility Cost Reduction Measures (UCRMs), and internally evaluates the project's cost/benefit analysis.
- Savings Analysis – TPA reviews the Savings to Investment Ratio (SIR) and corroborates the Cost/Benefit analysis as submitted by the contractor.
- SIR and Cost vs. Benefit Validation by ITPR – TPA ensures that the cost/benefit analysis has been appropriately vetted by a qualified Independent Third-Party Reviewer (ITPR). The ITPR must submit a signed and sealed "Project Verification Certificate" and a summary table of savings.

LEGAL/FINANCIAL REVIEW

- Required Documents Checklist - TPA confirms that all documents in the TPA required documents list have been submitted. That list can be found in the TPA Program User Guide – [https://www.texaspaceauthority.org/Documents/Program Guide.pdf?dl=0](https://www.texaspaceauthority.org/Documents/Program%20Guide.pdf?dl=0)
- Verify Property Ownership and Assessed Value – TPA verifies the property ownership, improvements, and value listed in the publicly available County Appraisal District database.
- TPA requires proof that the owner is a legal entity able to do business in Texas. Primarily this verification comes from certificates issued by the Texas Secretary of State and the Texas Comptroller.
- Signatory Authority – TPA confirms that the persons signing on behalf of the owner and capital provider have legal authority to do so. This is commonly known as a Certificate of Incumbency.
- Property Title Report – All properties must submit an updated title report, detailing all liens on the property and confirming the ownership structure of the property.
- Lender Consent Form – Any existing mortgage holder is required to submit a written form of consent to the PACE lien.
- No undeveloped lots – As PACE is not statutorily eligible for undeveloped lots or lots undergoing development at the time of the assessment, TPA requires at its discretion a Certificate of Occupancy.
- Confirm Underwriting – TPA confirms that proper financial underwriting has been performed by the capital provider.

- Prepare PACE Contracts – TPA prepares the form PACE contracts to be executed at closing. TPA acts as the closing agent and completes the PACE process by filing a Notice of Contractual Assessment Lien at the County Clerk’s Office to be recorded in the County land records.



MANAGEMENT AND REPORTING OF COMPLETED PACE PROJECTS

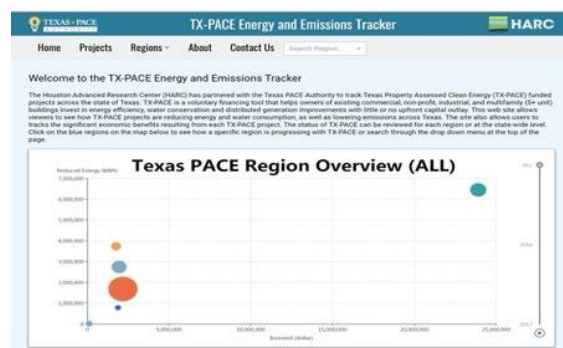
ANNUAL NOTICES OF ASSESSMENT LIEN

Each participating local government program has established a procedure for the sending of a notice of annual assessment for the coming year. TPA prepares and provides these notices for distribution to the property owners. At the request of the property owner, TPA provides the notice to the local government, which sends the notices for properties with PACE assessments according to the Owner Contract and financing documents.

ECONOMIC AND ENVIRONMENTAL RESULTS

Texas PACE Authority has agreed to certain management and reporting standards with local governments and will perform these tasks once PACE projects close in the PACE jurisdiction. Owners will be required to submit annual reports during the life of the assessment. Reports will be filed using EPA's ENERGY STAR ®Portfolio Manager Account to make reporting a user-friendly experience for property owners.

The Houston Advanced Research Center (HARC), with a grant from the Mitchell Foundation, is designing the process for collecting the project data from property owners in a user-friendly, uniform manner for input into a statewide database that will enable the data to be available on a county-wide and statewide basis in aggregated manner (not project specific). The tracking website, which will be further expanded in 2020 can be viewed at: <http://pace.harcresearch.org>.



TPA developed a webinar to show property owners and channel partners how to use ENERGY STAR ®Portfolio Manager to benchmark building energy and water use to identify the energy and water savings resulting from PACE projects.



APPENDIX D - MARKET IMPACT OF PACE IN A BOX MODEL PROGRAM PRINCIPLES



2019 was another year marked by hard work, continued foundation building, and growth. This long-term approach and investment is beginning to pay significant dividends in the PACE regions throughout the state as property owners continue to learn about and take advantage of the PACE in a Box program with its uniform best practices.

A model uniform program called “PACE in a Box” was created by over 130 volunteers divided into five working groups to design a model plug and play program for local governments. The process, overseen by Keeping PACE in Texas, took a year (from mid-2013 to mid-2014). The program includes best practices in underwriting, technical standards, and program administration. All policies, processes, applications, notices form contracts, and other documents are included in the PACE in a Box program. As Keeping PACE in Texas needs additional guidance, issues are shared with the Working Groups and additional guidance is documented and shared with all PACE regions. The PACE in a Box model program and additional guidance can be found in the Keeping PACE in Texas document library at: <https://www.keepingpaceintexas.org/library/document-library/>.

PACE IN A BOX VALUES

The PACE in a Box program goals continued to be valued and successful in 2019:

- **Uniform:** Since the creation of the PACE in a Box model, states across the country establishing commercial PACE programs have followed the single-administrator model in order to realize the benefits of program uniformity. Virginia and Oklahoma are moving toward state-wide single administrator programs. Here in Texas, this would not be possible without the long-term commitment of local governments to the building of the PACE in a Box infrastructure.

In contrast, California and Florida have multiple administrators operating in the same jurisdictions with differing programs, processes, and documents. PACE in a Box was intentionally designed to avoid this Byzantine system. Uniformity will in turn promote

investor confidence in project performance and returns, ultimately enabling local banks to become PACE capital providers and unlocking true scalability with PACE financing.

PACE in a Box authorized representatives serve as an extension of the local government and do not profit from the market they oversee. The authorized representative must act with the highest ethics and transparency, refraining directly or indirectly from self-dealing, conflicts of interest, favoritism, or other behaviors that bring into question the quality of program and project oversight.

However, two Texas counties selected a different path and now Texas has three sets of PACE documents, challenging the core principles of the PACE in a Box model and wrestling away the intended benefits of a uniform statewide program.

- **User-Friendly and Transparent:** The ability to work with uniform documents and one process reduces project transaction costs and administrative overhead. A single user-friendly program is a significant advantage to local governments and all participants. The program is designed to foster economic and environmental benefits with best practices, consumer protection, minimal impact to local governments, and complete transparency. This model enables authorized representatives to focus on underserved communities, affordable housing, border communities and other important sectors. The PACE in a Box model was designed to avoid the conflict of interest evidenced in early adopter programs where the government-selected, vertically integrated administrator-lenders cherry-pick the most exclusive projects, charge many hidden fees, have different documents and processes, and play favorites among lenders and other competitors in the marketplace.

Other states allow administrator-lenders to charge many additional types of fees besides administrative fees for services regardless of whether the property owners require those services or prefer to obtain those services in the marketplace. Some administrator-lenders require the property owners to use their preferred capital providers or pay additional fees to use their own capital providers in order to participate in that program.

- **Sustainable:** The PACE in a Box program administration reflects a small government role with best practices that afford the highest amount of free market flexibility for the property owners. The authorized representative provides only the services required of the local government. This leaves the property owner free to control its project scope, and to negotiate with the lenders, engineers, and others who provide the best value to the property owner. This model controls costs, allows flexibility, and ensures TX-PACE will be sustainable for years to come.
- **Scalable:** When the program, applications, technical manual, and documents used are standardized, TX-PACE can easily be scaled up to all 254 Texas counties and nearly 1,200 Texas cities. Each local government can implement the PACE in a Box template rather than spend resources on developing its own program from scratch. Standardization allows local

governments and their authorized representatives to control costs and keep administrative fees low. Once trained and educated about a PACE program in one jurisdiction, contractors, capital providers, architects, property managers, and other stakeholders can easily duplicate their success in another jurisdiction. Texas state-wide uniformity has significant value for businesses and other organizations with property and service providers with customers throughout the state of Texas and for all other Texas PACE stakeholders.

The collaborative effort to develop and promote the PACE in a Box model throughout Texas was generously supported by the Meadows Foundation, the Rockefeller Brothers Fund, and the Environmental Defense Fund. The State Energy Conservation Office (SECO) and the Meadows Foundation provided additional funding to other nonprofit organizations to provide TX-PAVE education and outreach to local governments. The Mitchell Foundation provided a \$50,000 grant to the Houston Advanced Research Center (HARC) to establish an on-line tool for recording the environmental benefits of TX-PAVE projects. This financial support enabled significant TX-PAVE work without requiring expenditures from the local governments establishing TX-PAVE programs. It also demonstrates significant support for and investment in the TX-PAVE model program from national and state philanthropic organizations seeking to foster sustainability, and energy and water conservation.

PACE IN A BOX UPDATES

One of the benefits of a large collaborative process of stakeholders is the ability to receive feedback and guidance on best practices. The large stakeholder group and continued commitment of many volunteers keep the PACE in a Box model program and documents updated so that people across Texas can benefit from every new refinement. The guidance can be found in the [Keeping PACE in Texas Document Library](#).

TEXAS PACE AUTHORITY FOLLOWS THE PACE IN A BOX MODEL PROGRAM

From its inception, TPA has adhered to the guidance provided by Keeping PACE in Texas' PACE in a Box Working Groups.

TPA Promotes Uniformity: All local governments establishing TX-PAVE and selecting TPA as their authorized representative have uniform programs. The result has benefited property owners in these areas. For example, Simon Property Group completed 6 PACE projects on malls in Austin, Cedar Park, El Paso, Houston, Round Rock, and San Marcos using uniform documents with one lender.

TPA is User Friendly and Transparent: Texas PACE Authority provides uncompromised oversight and does not compete with or in the marketplace it is designed to oversee. Instead, TPA

serves the local government, provides education, outreach, and training and is committed to ensuring that TX-PACE is available to all local businesses and organizations regardless of size.

TPA is fully committed to ethics and transparency; it believes there must be a firewall between the authorized representative and the free market competition in project development. TPA acts as “Switzerland” in its interactions with market competitors – treating market stakeholders fairly and objectively.

TPA is Sustainable: Texas PACE Authority has among the lowest administrative rates in the nation and does not charge additional undisclosed, non-administration fees. TPA’s fiscal sustainability plan is based on high project volume at low cost and has committed to lower its rates once the program is self-sufficient based on volume.

TPA is Scalable: The ability of Texas PACE Authority to use one overhead to serve 36 local governments (and counting!) significantly reduces costs by avoiding unnecessary duplication of services. This scalability enables TPA to control costs and to eventually lower fees. The use of uniform process and documents furthers TPA’s efficiency and effectiveness throughout the state. TPA offers training programs throughout the state on a regular basis. Once contractors, capital providers, architects, property managers and other stakeholders understand their local program, that knowledge base can be applied to all other TX-PACE programs.