ENGAGING IN PACE
ENGINEERS NEEDED!

TEXAS ★ PACE AUTHORITY

IMPROVING PROPERTIES. INCREASING CAPITAL.

AEE Austin-San Antonio Chapter Meeting
July 28, 2020

PRESENTER

DUB TAYLOR – COO, TEXAS PACE AUTHORITY

Joined the Texas PACE Authority in February 2020, after 21 years as the director of the Texas State Energy Conservation Office (SECO)

Prior to public service, private sector experience was focused in commercial real estate, property appraisal and property tax consulting

AEE Austin-San Antonio Chapter member



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AGENDA

- PACE Overview / PACE in Texas / How PACE works
- Technical Report (PE optional)
- Independent Third-Party Review (PE required)
- Case Studies
- Resources

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WHAT IS TX-PACE?

TEXAS **P**ROPERTY **A**SSESSED **C**LEAN **E**NERGY (FINANCING)

A simple way of paying for capital projects with no money out of pocket

What: **Long term, low cost 100% financing** for **energy efficiency**, **water conservation** and **distributed generation** projects

Where: **Commercial** (including non-profit), **industrial** (manufacturing/agricultural) and **multi-family** (5+units) **properties**

How: Repaid via special property assessment over the useful life of the improvements

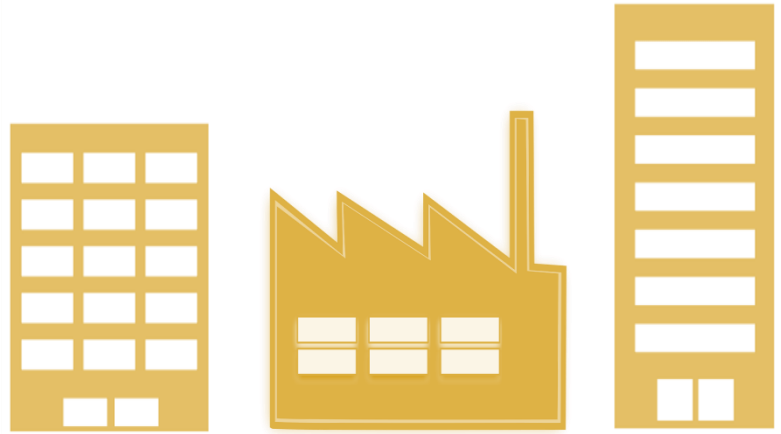
- State Authorized
- Voluntary & Open Market
- Local Government Enabled & Nonprofit Administered

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Local Governments



Property Owners



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Capital Providers



Service Providers

ELIGIBLE IMPROVEMENTS

Projects that reduce energy or water usage or generate energy onsite

Energy

- High efficiency chillers, boilers, and furnaces
- Mechanical system modernization
- Air cooled systems to water or geothermal cooled systems
- Energy management systems and controls
- High efficiency lighting upgrades
- Building envelope improvements
- Combustion and burner upgrades
- Fuel switching
- Heat recovery and steam traps
- Renewable/DG energy systems

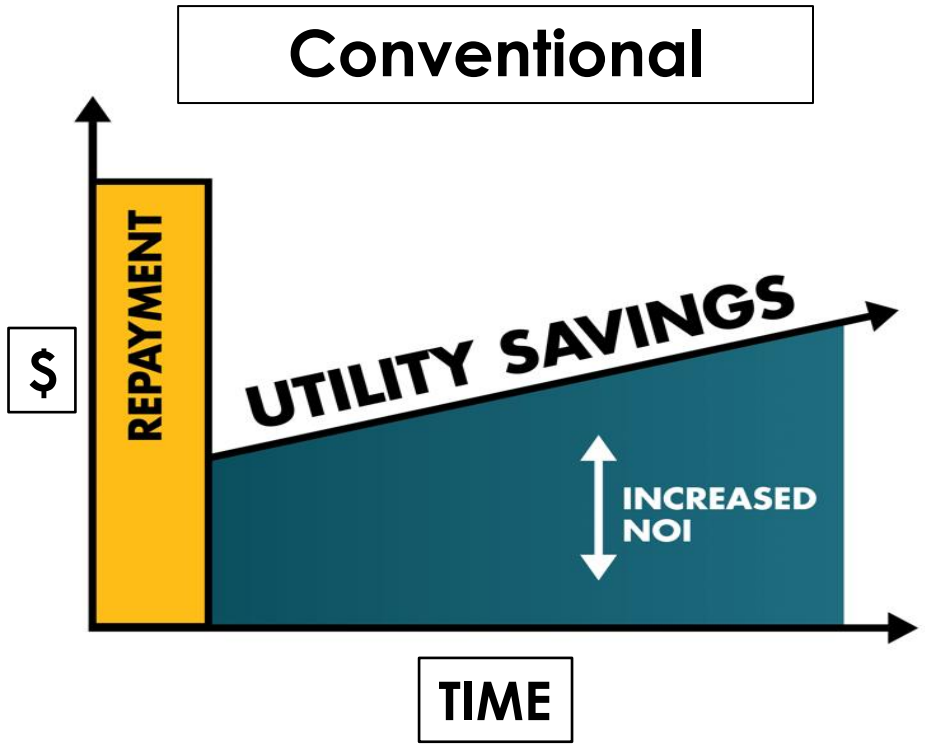
Water

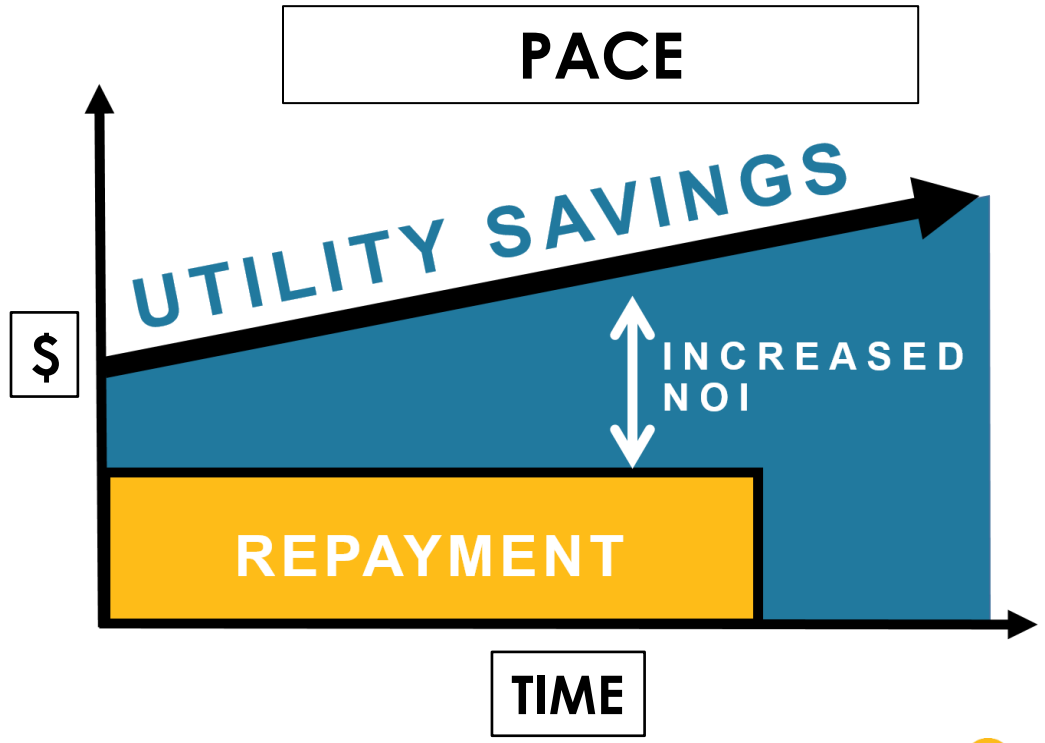
- High efficiency water heating systems
- Water conservation systems
- Wastewater recovery and reuse systems
- Alternate, on-site sources of water (A/C condensate, rainwater, RO reject water, foundation drain water, etc.)
- On-site improvements to accommodate reclaimed water use
- Water management systems and controls (indoor and outdoor)
- High efficiency irrigation equipment

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WHY TX-PACE?

- Improves assets – budget neutral/cashflow positive
- Lowers utility usage/costs
- Increases net operating income





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FINANCIAL IMPACT OF PACE

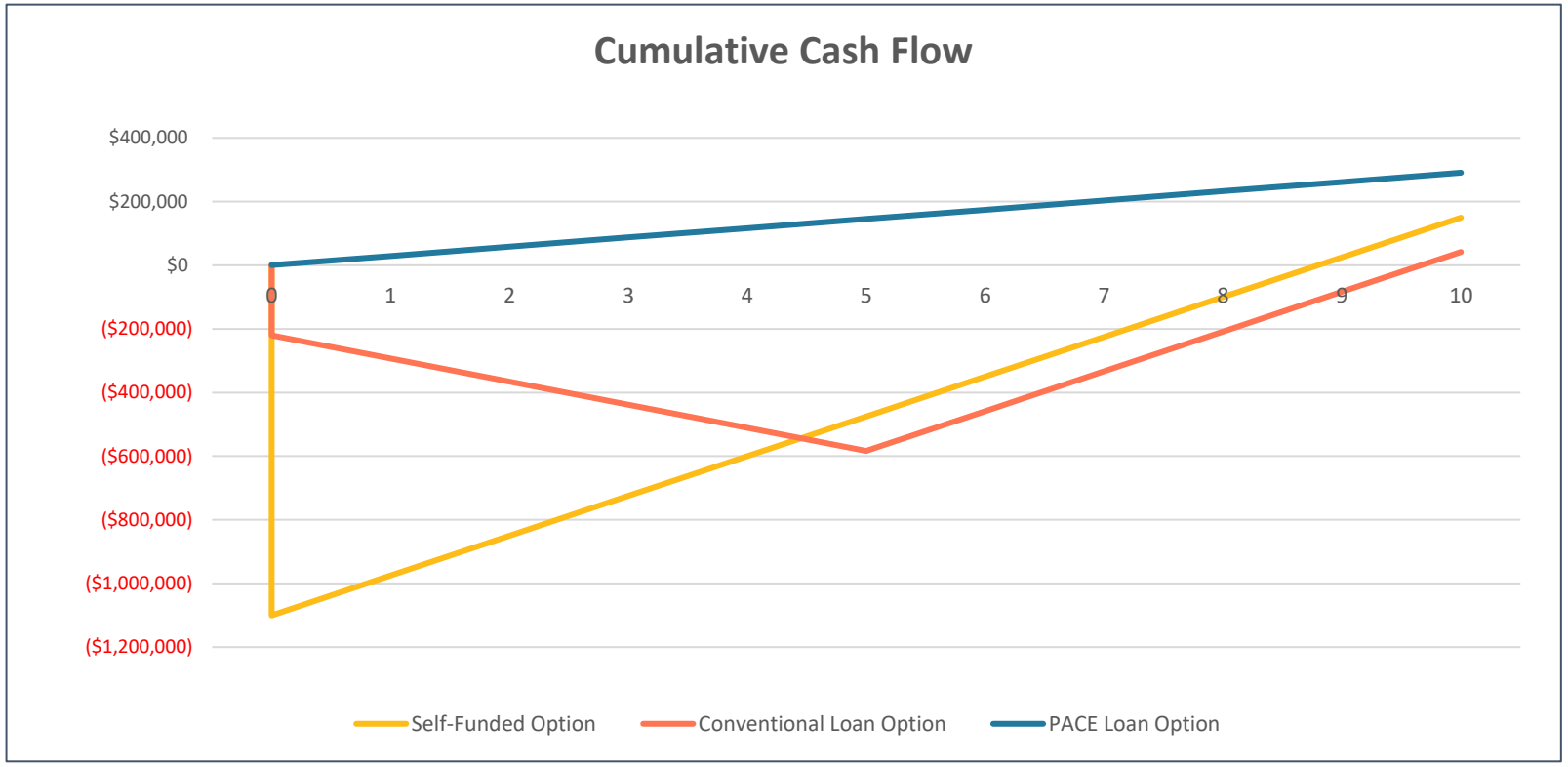
- Increases property value with no capital investment by building owner
- Generates positive cash flow immediately

Example

Efficiency Upgrade: $1.1M

Savings: $125K/yr

Project Cost	$1,100,000
Term	20 Yrs @6%
Annual Pmt	($95,903)
Avg Annual Savings	$125,000
NOI Impact	**$29,097**
Value Impact (@7.5%)	**$296,629**



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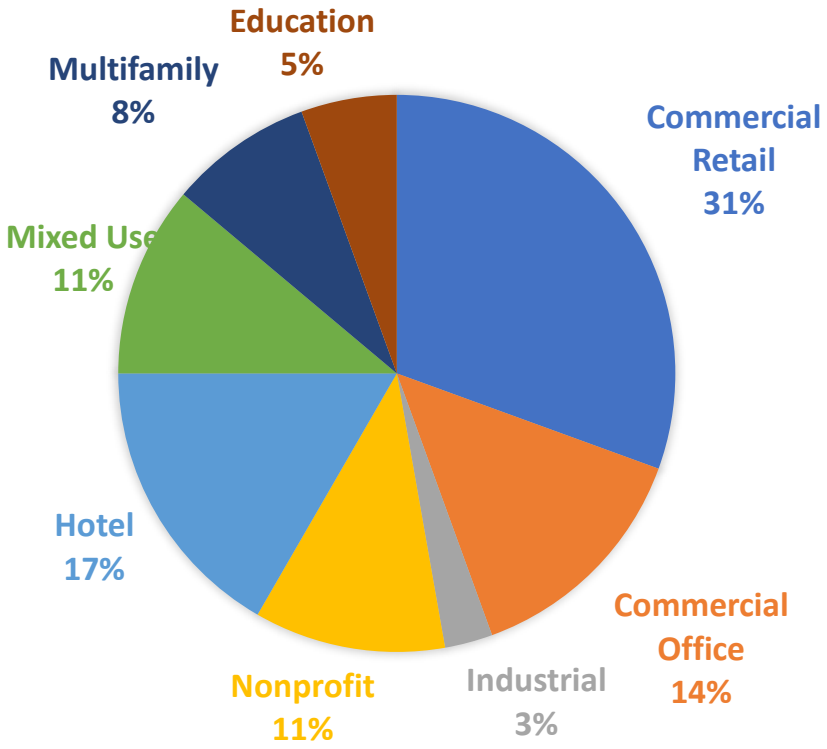
PACE is a WIN-WIN-WIN (WIN-WIN)

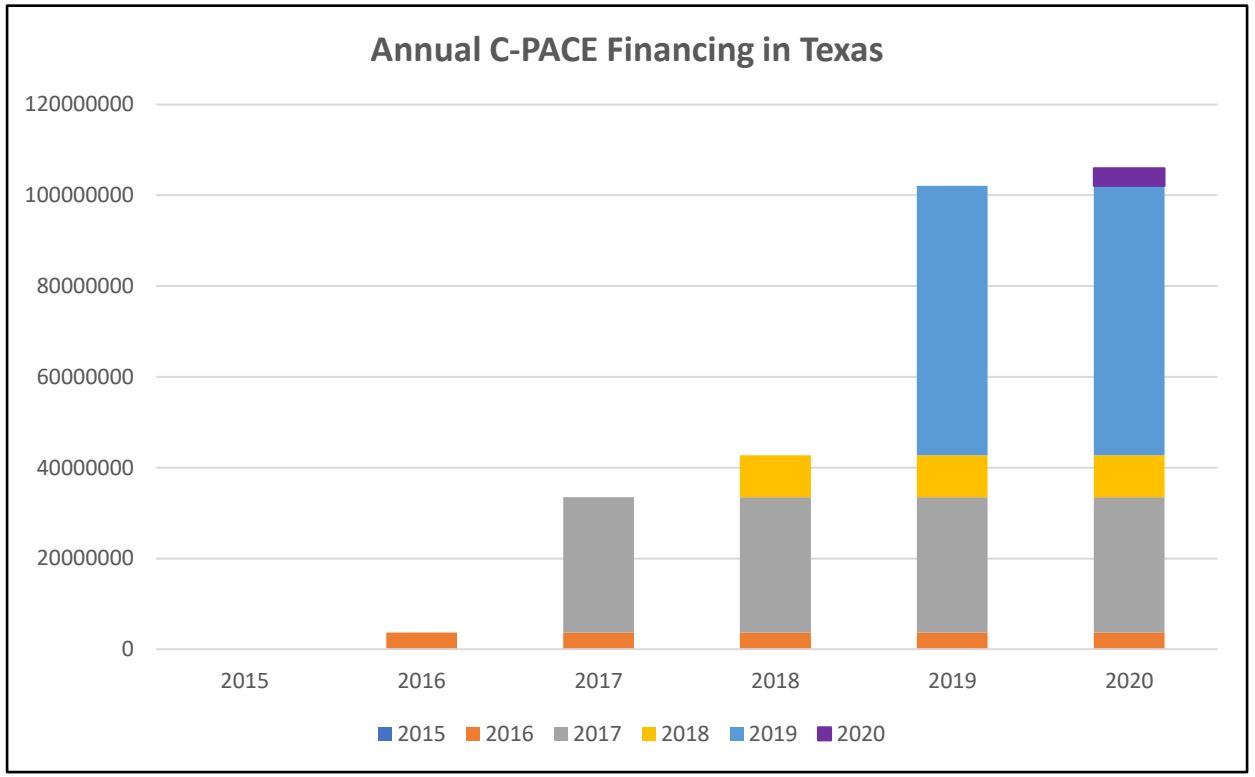
- ✓ **Property Owners** – lower utility bills, energy independence, energy efficiency, property value increase
- ✓ **Contractors** – source of increase in business, more local hiring, best practices, keeping up with technology advancements
- ✓ **Lenders** – new loans, steady & stable process, fully collateralized, Tax Assessment lien position, improved asset value
- ✓ **State of Texas** – reduced peak demand, enhanced grid reliability, distributed generation as resilient power source, improved air quality, water resource conservation
- ✓ **Communities** – increased economic development and jobs, improved building infrastructure, more appealing building stock and plants

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TX-PACE BY THE NUMBERS

- $110 million of investment to date



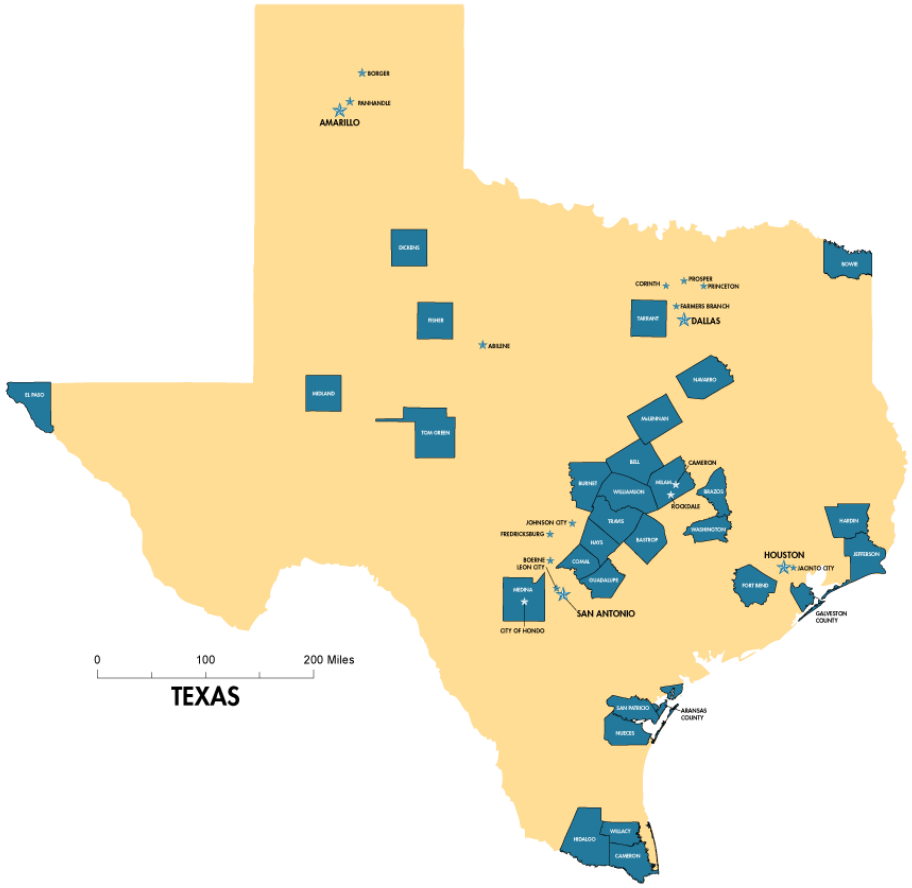


MEASURE TYPE

Energy Efficiency: 55% / Water Conservation: 33% / Distributed Gen: 12%

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THE GROWING TX-PACE MARKET



- 60 % of state population covered

COUNTIES

Aransas County
Bastrop County
Bell County
Bowie County
Brazos County
Burnet County
Cameron County
Comal County
Dickens County
El Paso County
Fisher County
Fort Bend County
Galveston County
Guadalupe County
Hardin County
Hays County
Hidalgo County
Jefferson County
Medina County
McLennan County
Midland County
Milam County
Navarro County
Nueces County
San Patricio County
Tarrant County
Tom Green County
Travis County
Washington County
Willacy County
Williamson County

CITIES

City of Abilene
City of Amarillo
City of Boerne
City of Borger
City of Cameron
City of Corinth
City of Dallas
City of Farmers Branch
City of Fredericksburg
City of Hondo
City of Houston
Jacinto City
Johnson City
City of Leon Valley
City of Panhandle
City of Princeton
Town of Prosper
City of Rockdale
City of San Antonio

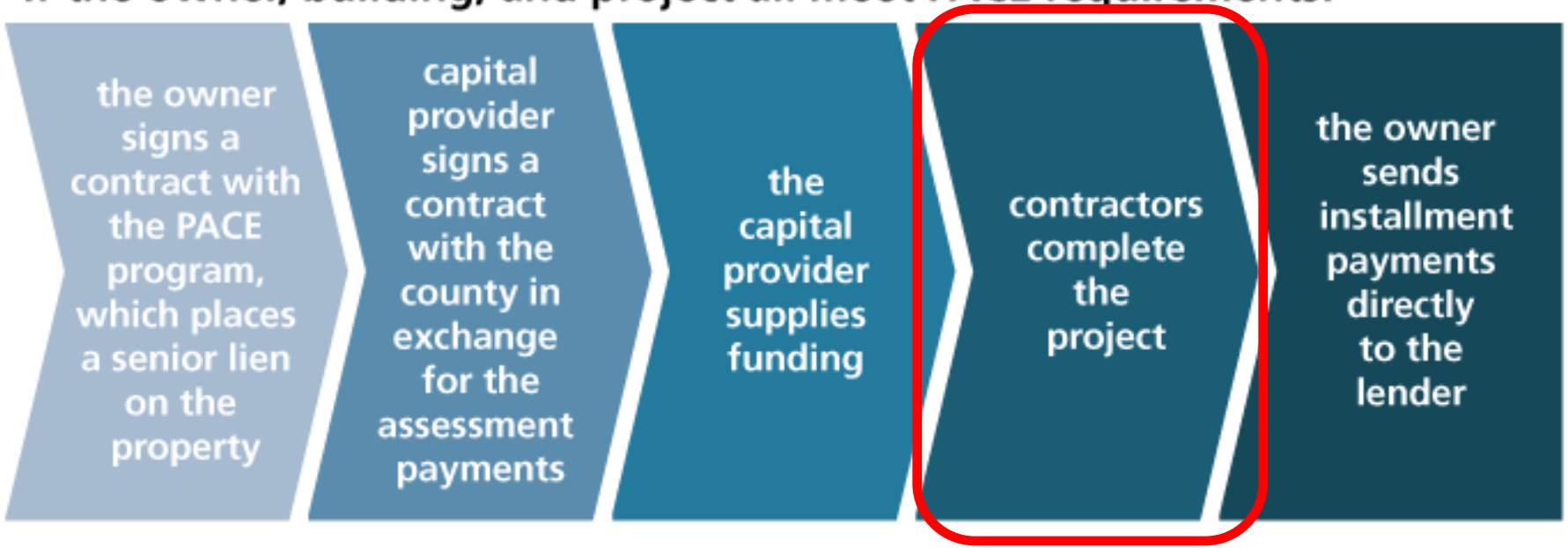
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How It Works

A Building Owner:



If the owner, building, and project all meet PACE requirements:



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AGENDA

- PACE Overview / PACE in Texas / How PACE works
- Technical Report (PE optional)
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HOW DID WE GET HERE?

KEEPING PACE INTEXAS

7 Years of Transparent Service



KEEPING PACE INTEXAS

PACE in a BOX

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PACE PROGRAM GUIDELINES

PROPERTY ASSESSED CLEAN ENERGY ACT

Texas Local Gov't Code Sec. 399.002. DEFINITIONS

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.

Qualified Project: the installation or modification of a qualified improvement.

Real Property: privately owned commercial or industrial real property or residential real property with five or more dwelling units.

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PROPERTY ASSESSED CLEAN ENERGY ACT

Texas Local Gov't Code Sec. 399.011. REVIEW REQUIRED.

(a) A program established under this chapter must require for each proposed qualified project:

(1) a review of water or energy baseline conditions and the projected water or energy savings to establish the projected water or energy savings; and

(2) a verification that a proposed qualified improvement meets the requirements of a qualified project.

(a-1) A verification provided as required under Subsection (a)(2) conclusively establishes that the improvement is a qualified improvement and the project is a qualified project.

(b) After a qualified project is completed, the local government shall require written verification that the qualified project was properly completed and is operating as intended.

(c) A baseline water or energy review or verification review under this section must be conducted by an independent third party.

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PACE in a BOX TOOLKIT

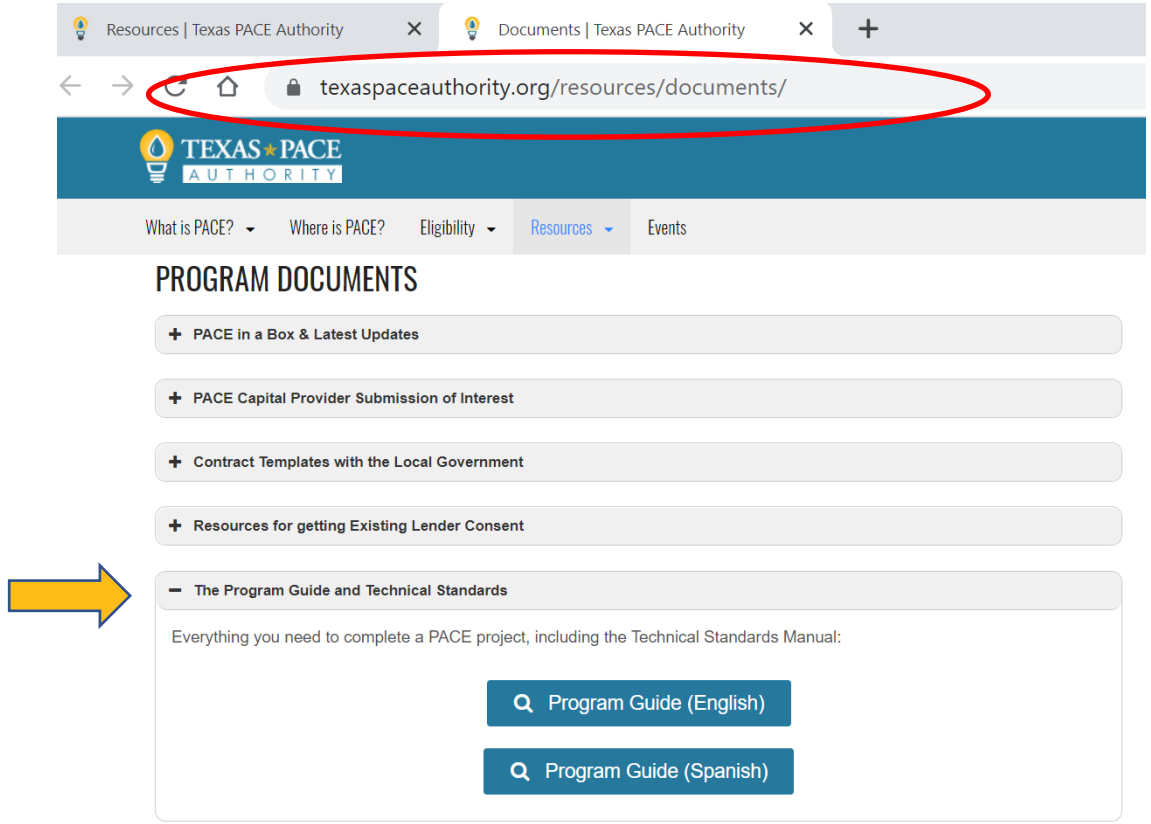
Working Groups

1) Program Design
2) Program Underwriting Standards*
3) Funding Platform
4) Education, Marketing and Training
5) Technical Standards*

https://www.keepingpaceintexas.org/pace-in-a-box/

*Under review/update now

TECHNICAL STANDARDS

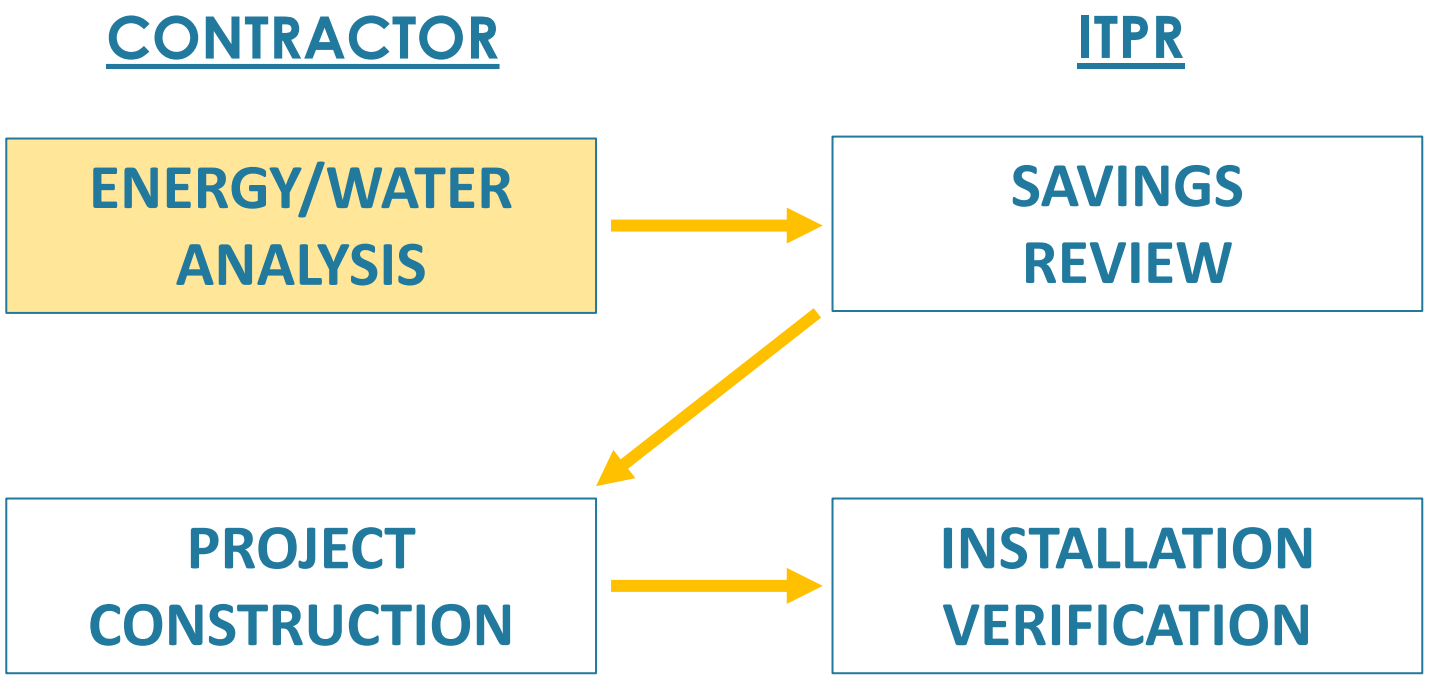


Models/References

- SECO LoanSTAR Guidelines
- Investor Confidence Project (Protocols)
- IPMVP, ASHRAE and ASTM guidelines

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PACE TECHNICAL PROCESS



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ENERGY/WATER ANALYSIS

Each project is required to have an energy and/or water analysis conforming to TPA's Technical Standards

- Performed by Contractor or Engineer
- 2 Key Components:
  - Baseline Analysis
  - Projected Savings Analysis
- Energy/Water Assessment Report
- Cost can be rolled into project

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SAVINGS TO INVESTMENT RATIO (SIR)

Savings – Total energy/water $ savings over the life of the project

Investment – Total amount of assessment (financing amount)

***Utility incentives can reduce/create headroom for additional measures**

SIR = Savings / Investment **(1 or greater to qualify for PACE)**

Example: HVAC and Lighting improvements

Project Cost - $1,000,000 (including financing costs)

Project Savings - $1,500,000 over 20-year period

$$\frac{\text{Savings}}{\text{Investment}} \quad \frac{\$1{,}500{,}000}{\$1{,}000{,}000} = \text{SIR } 1.5$$

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REPORT TEMPLATE



TX-PACE
Energy/Water Assessment Report (template)

(Project Image - optional)

(Project Name)
(Street Address)
(City), Texas (Zip Code)

(Month/Date/Year)

Prepared For

(Client name)

Prepared & Approved By

(Engineer/Contractor/Technical Consultant - individual's name)

(Engineer/Contractor/Technical Consultant company/firm name)

1

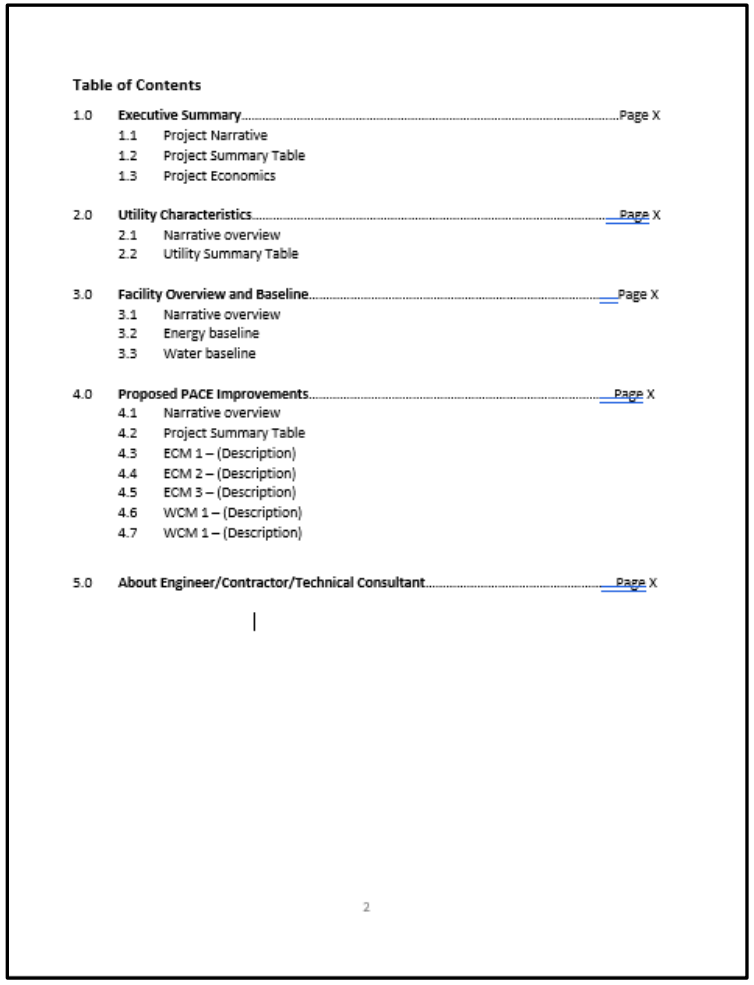


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- 4.4 ECM 2 – (Description)
- 4.5 ECM 3 – (Description)
- 4.6 WCM 1 – (Description)
- 4.7 WCM 1 – (Description)

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ITPR QUALIFICATIONS

- Texas PE with Energy or Water Experience

and

- ONE of the following:

ASHRAE
-Building Energy Assessment Professional (BEAP)
-Building Energy Modeling Professional

AEE
-Certified Energy Manager (CEM),
-Certified Measurement and Verification Professional (CMVP)
-Certified Energy Auditor (CEA)

Building Commissioning Association
-Certified Commissioning Professional

Investor Confidence Project
-Credentialed Quality Assurance Provider

AABC Commissioning Group
-Certified Commissioning Authority

5 Years relevant project experience in energy/water efficiency

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ITPR REVIEW

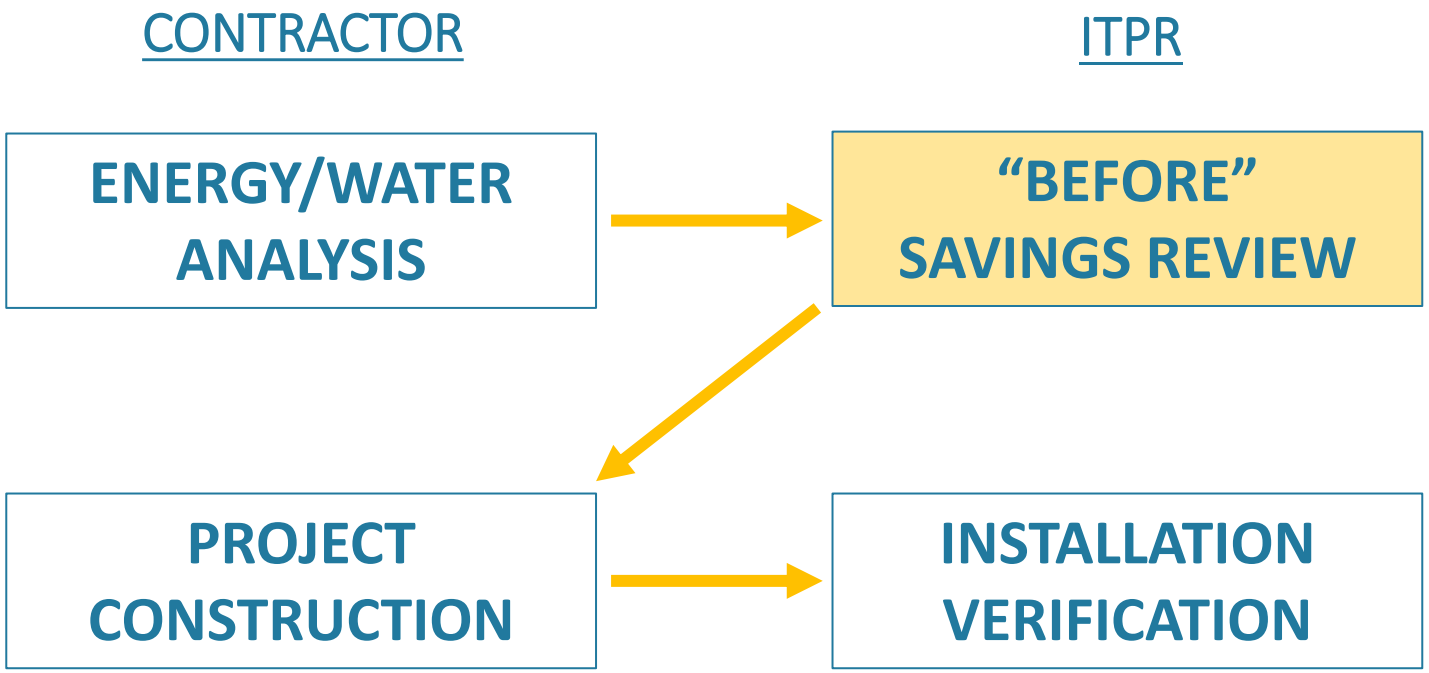
All projects are required by law to be reviewed by an Independent Third-Party Reviewer (ITPR)

That review has 2 parts:

1. "BEFORE" – review of baseline, savings projections + site visit (photos)
2. "AFTER" – verification that project is installed and operating as intended (site visit photos)

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PACE TECHNICAL PROCESS



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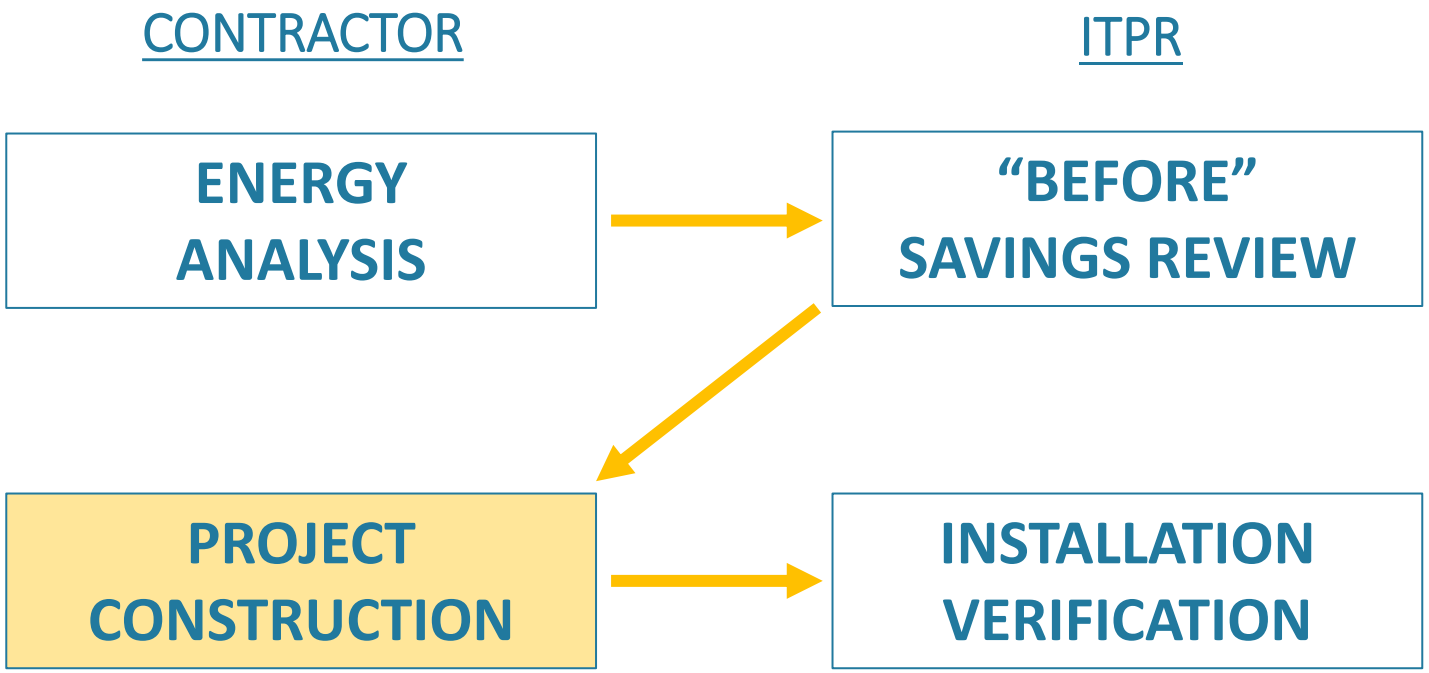
SITE VISIT 1
"Project Verification Certificate"

The Reviewer will certify:

1. Meets ITPR Qualifications
2. Does not have Conflict of Interest
3. Reviewed Savings and Baseline
4. Reviewed Useful Life Review
5. Project is a "Qualified Project"

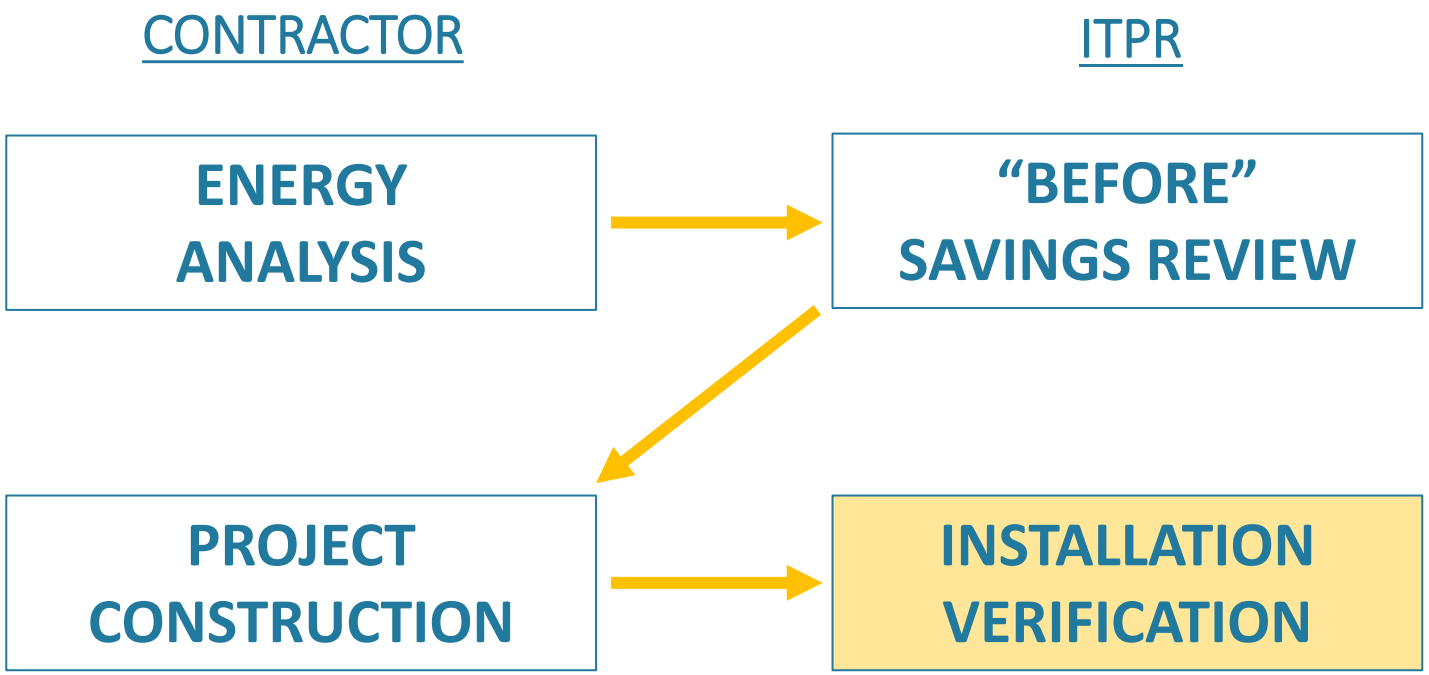
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PACE TECHNICAL PROCESS



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PACE TECHNICAL PROCESS



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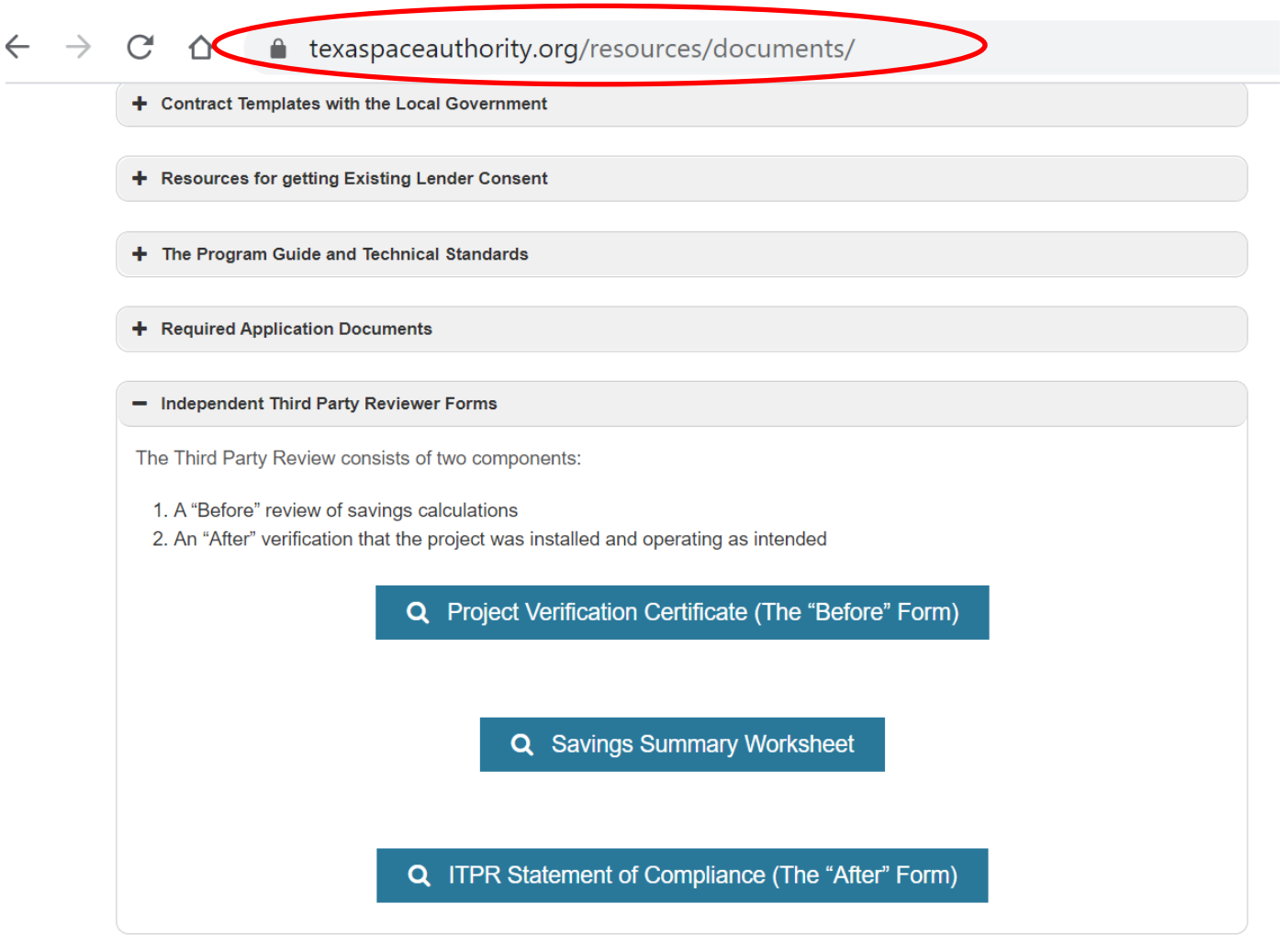
SITE VISIT 2
"Statement of Compliance"

The Reviewer will certify:

1. Meet ITPR Qualifications
2. Does not have Conflict of Interest
3. Performed a Site Visit (photos)
4. Improvements from the Project have been completed and are operating as intended

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ITPR FORMS



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CONGREGATION BETH ISRAEL

Austin / Travis County

Measures:

- HVAC
- BAS controls
- Window film

Utility Incentives:
$11,000 (Austin Energy)

Assessment Total:
$452,105

Utility Savings:
20%Annually



ELGIN GENERAL STORE

Elgin / Bastrop County

Measures:

- Solar PV

Incentives:

USDA: $31,000
Utility: $38,000 (Oncor)

Assessment Total:

$120,000

Utility Savings:

Electric: 26% Annually



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PLAZA HOTEL PIONEER PARK

El Paso / El Paso County



Measures:

- HVAC & Lighting
- Elevators
- Envelope – windows
- Plumbing fixtures

Incentives:

Historic Tax Credits

Assessment Total:

$9.2 million

Annual Utility Savings:

Electric: 1.5 million kWh

Water: 7.7 million gallons

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BUTLER BROTHERS BUILDING - DALLAS

City of Dallas

Measures:

- HVAC
- Lighting
- Insulation, roof
- Windows
- Plumbing fixtures



Incentives:

$21 million
Historic Tax Credits

Assessment Total:

$23.9 million

Annual Utility Savings: 40%

Electric: 6.6 million kWh
Water: 700K gallons

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CAPITAL STACK APPROACH: DEVELOPER

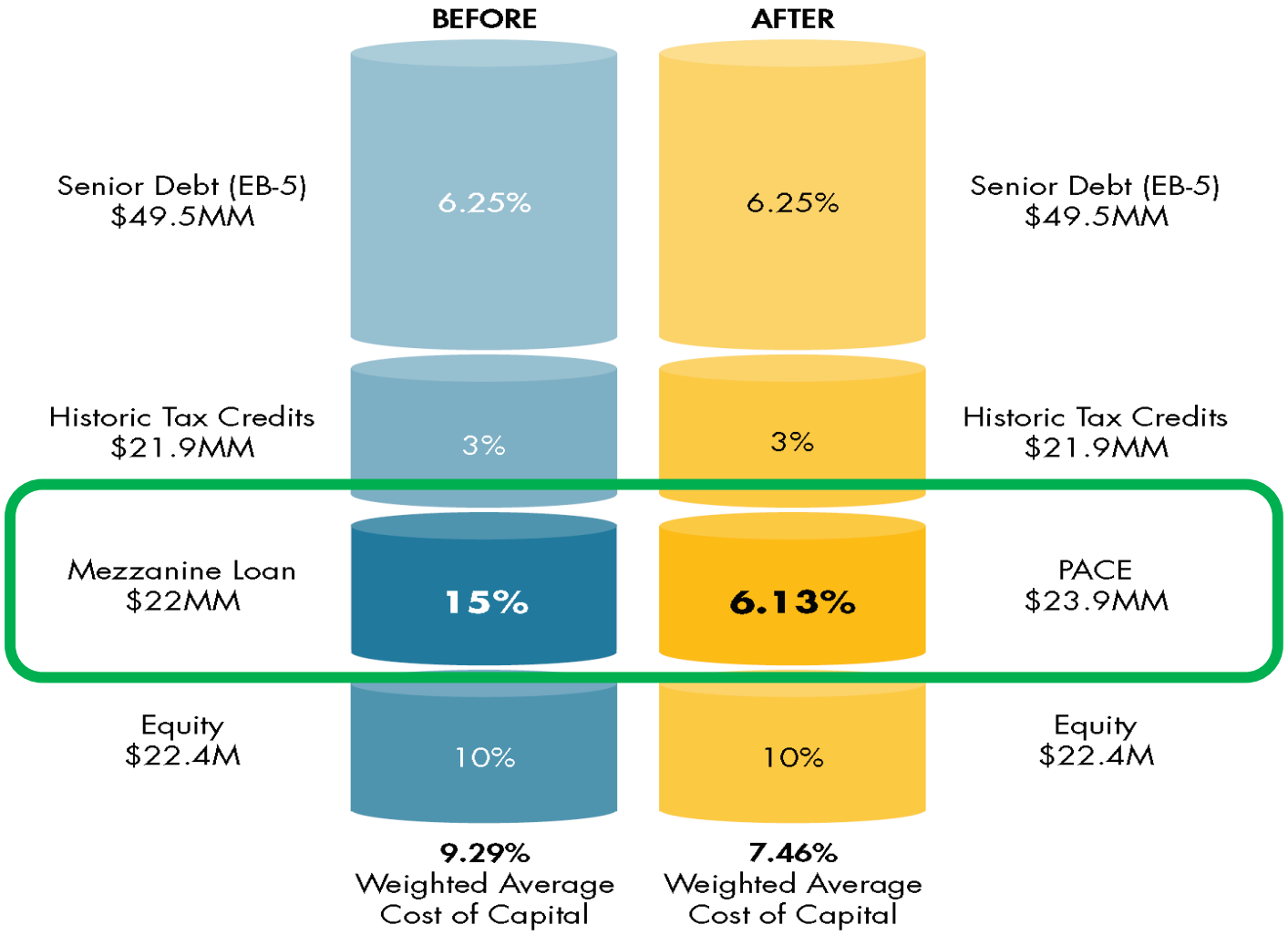
Redevelopment Example

Before

- $116M
- 9.29% cost of capital

After

- w/$24M PACE loan
- $118M
- 7.46% cost of capital (-20%)



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PEARL POINT APARTMENT HOMES

Rockport / Aransas County

PEARL POINT
ROCKPORT, TEXAS

Measures:

Above-code

- Lighting
- Plumbing fixtures
- Building envelope
  - Windows
  - Wall insulation
  - Roof insulation



Assessment Total:

$2.75 million

Annual Utility Savings:

Electric: 926,000 kWh

Water: 3.2 million gallons

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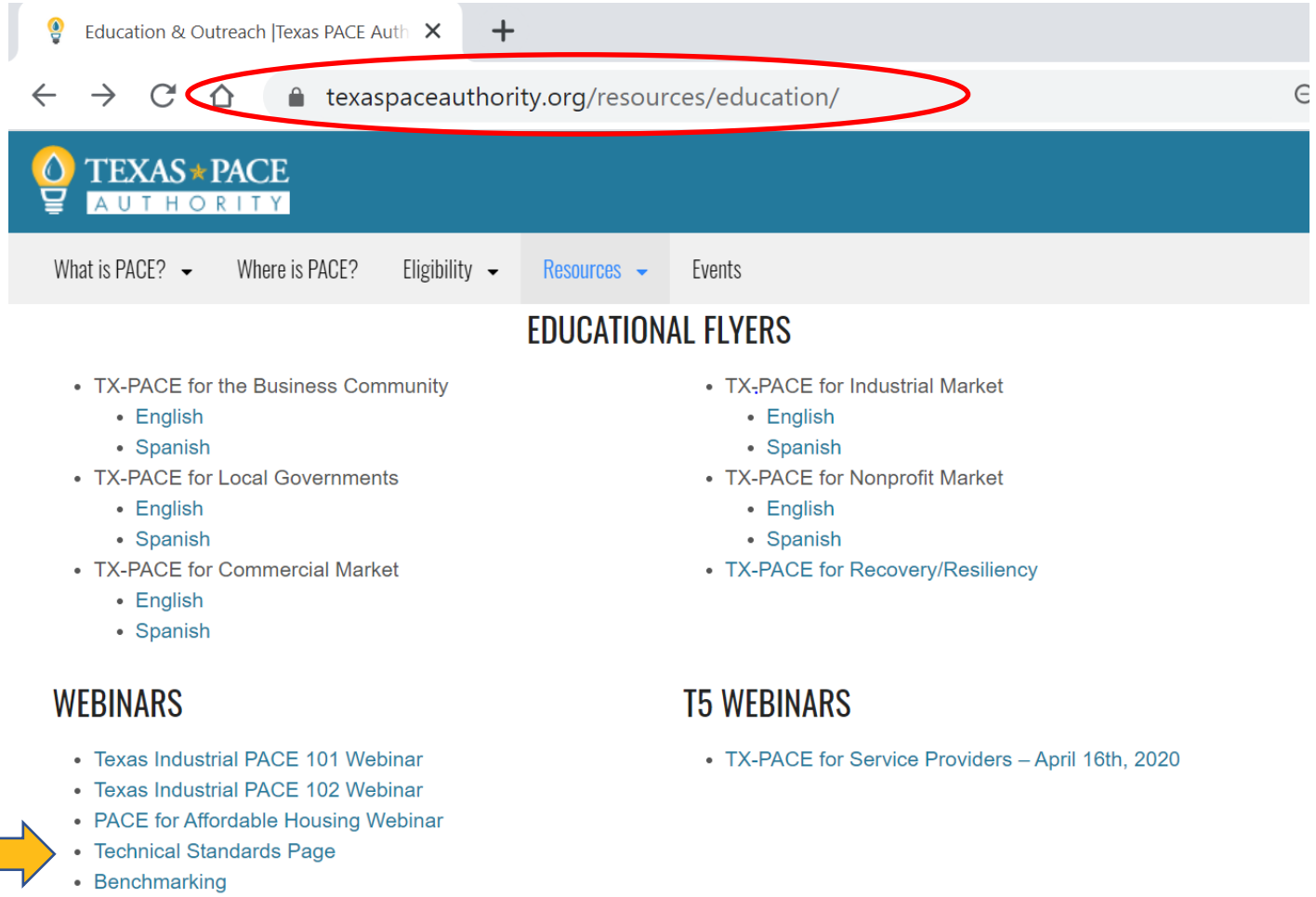
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RESOURCES

- **Texas PACE Authority:** www.texaspaceauthority.com
  - **TX-PACE Program Guide and Technical Standards**
    www.texaspaceauthority.org/Documents/Program%20Guide.pdf?dl=0
  - **Events and Training – (Online Contractor Training Soon!)**
    www.texaspaceauthority.org/event-directory
  - **Case Studies**
    www.texaspaceauthority.org/resources/case-studies-marketing/
- **Texas State Energy Conservation Office (SECO)**
  https://comptroller.texas.gov/programs/seco/funding/pace.php

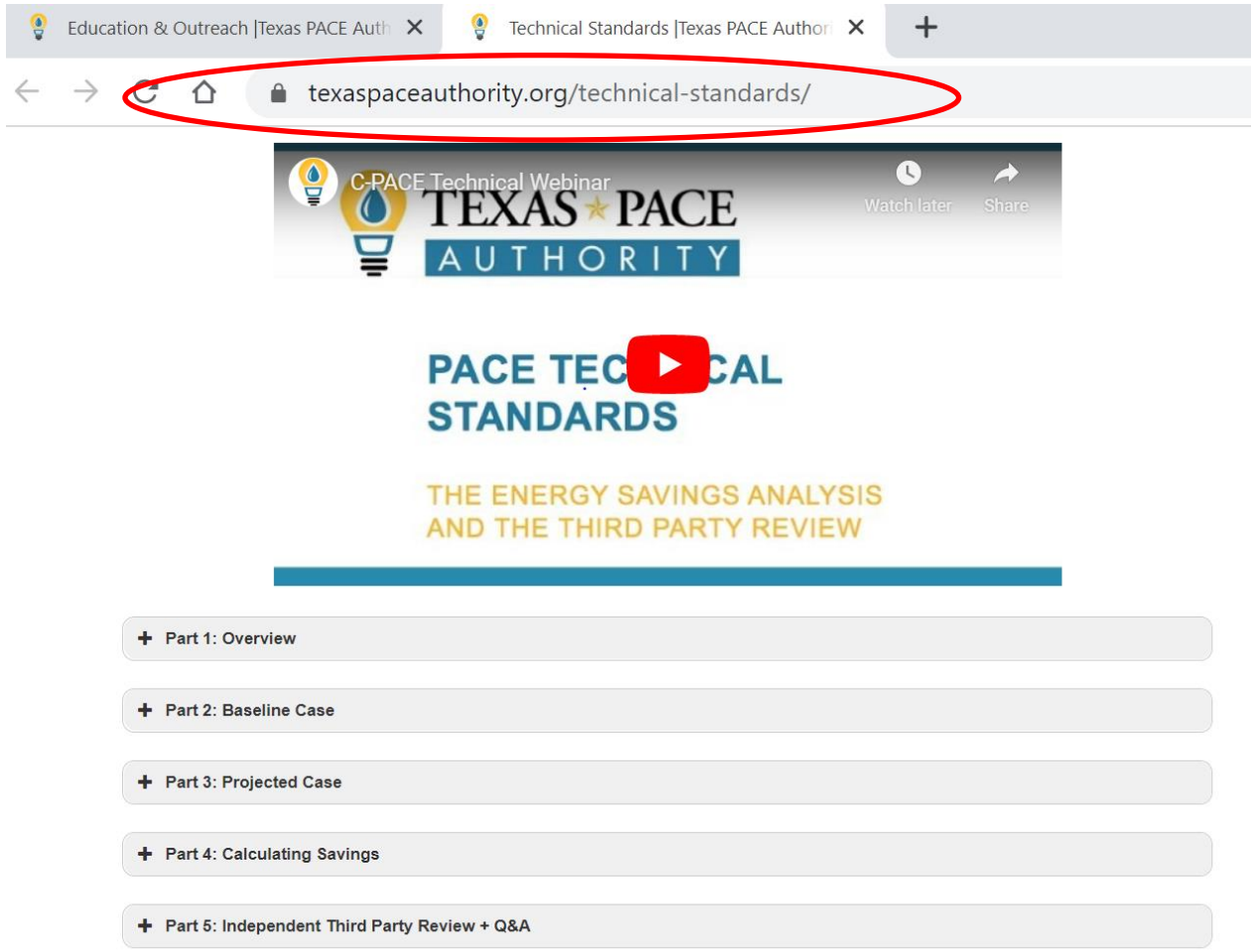
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TECHNICAL STANDARDS WEBINAR



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TECHNICAL STANDARDS WEBINAR



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T5 SERIES
(TPA's Third Thursday at Two Training)

April 16, 2020

T5: TX PACE for Service Providers

https://www.youtube.com/watch?v=OVRZ805lCFQ

May 21, 2020

T5: TX PACE for Service Providers – Part 2

https://www.youtube.com/watch?v=_pvpBotfhhM

June 18, 2020

T5: TX PACE for Capital Providers

https://www.youtube.com/watch?v=S_re3l0cdCc&t=8s

July 16, 2020

T5: Maximizing Utility Incentives – Part 1

https://www.youtube.com/watch?v=JCbyhsI5apU&t=1s

August – No T5 webinar

September 17, 2020

T5: Maximizing Utility Incentives – Part 2

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QUESTIONS?

dub@texaspaceauthority.org



TEXAS' OPEN-MARKET PACE
PROGRAM ADMINISTRATOR

www.TexasPACEAuthority.org

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