Property Assessed Clean Energy (PACE)

An Opportunity for Creating New Economic Activity

Advancing Facility Improvements and Conservation Related Retrofits into Commercial and Industrial Properties
Created in Texas for Texans

Legislation
- June 19, 2013 Gov. Rick Perry signed legislation allowing PACE Programs

Design Phase
- May 2014, Stakeholder input & collaboration completes “PACE in a Box” toolkit for local adoption

Implementation
- 2014 -15 First nonprofit administration programs planned based on “PACE in a Box” model
Support & History


• The coalition:
  • County Judges and Commissioners Association of Texas
  • Independent Bankers Association of Texas
  • Texas Association of Business
  • Texas Association of Counties
  • Texas Bankers Association
  • Texas Building Owners and Managers Association
  • Texas Combined Heat and Power Initiative
  • Texas Conference of Urban Counties
  • Texas Manufactures Association
  • Texas Municipal League
  • Texas Renewable Energy Industry Association
  • US Business Council for Sustainable Development
  • US Green Building Council
  • Dozens of other organizations and companies
February 24th – Travis County commission passes resolution of intent to adopt pilot PACE program using the “PACE in a Box” model

March 24th – Public hearing and vote on resolution

Leadership of Keeping PACE in Texas is now forming a new nonprofit to administer PACE programs on behalf of counties
PACE is a Win-Win-Win

- **Property Owners** – lower utility bills, energy independence (CHP), energy & water 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, 1st lien position, improved asset value

- **Communities** – increased competitiveness, economic development and jobs, improved building infrastructure, more appealing building stock

- **State of Texas** – over the long term, reduced peak demand, improved grid loading, renewables as source, improved air quality, better water conservation
PACE  How it Works

A Building Owner:
- finds a contractor
- selects a project
- identifies a lender
- applies to PACE program

If the owner, building and project all meet PACE requirements:
- the owner signs a contract with the PACE program, which places a senior lien on the property
- the lender provides funding
- the contractor completes the project
- the PACE program bills assessments to the owner and forwards the payments to the lender
Texas leads the nation in energy consumption, accounting for 12% of the nation’s energy use and is the fifth largest energy consumer in the world.

Demand for electricity has increased 20% since 2000.

Population and Industry growth in Texas is skyrocketing!
"More than 1,000 people...move to Texas every day." Gov. Rick Perry, 12/29/2012.
U.S. v. Texas Energy Consumption

U.S.
- Residential: 22%
- Transportation: 28%
- Commercial: 18%
- Industrial: 32%

Texas
- Residential: 13%
- Transportation: 23%
- Commercial: 13%
- Industrial: 51%

Source: Energy Information Administration, State Energy Data System
Texas’ industrial sector is a huge, untapped market for energy saving retrofits. They understand the value of making these improvements, but have roadblocks to getting these projects done.
Texas Drought Impact

Drought Impact on Texas Surface Water
November 18, 2014

Drought Severity Index
- Nothing
- D0 - Abnormally Dry
- D1 - Drought - Moderate
- D2 - Drought - Severe
- D3 - Drought - Extreme
- D4 - Drought - Exceptional

Sources
- NDMC
- USDA
- NOAA
- TCEQ Office of Water

Drought Monitor Dataset developed by the National Drought Mitigation Center (NDMC), U.S. Department of Agriculture (USDA), and National Oceanic & Atmospheric Administration (NOAA).
Texas Leadership is investing in water and power infrastructure – Water, Energy, Roads

Private Investment in Building Infrastructure – part IV of the solution

By far the cheapest and most affordable supply we find will be the existing supply we can reallocate because of conservation

Old approaches called for mandates or tax and incentive policies that distorted the market and reduced revenues to local governments

New approach…
PACE uses Investor Confidence Project protocols

Integrity of the economics and technologies

Quality Assurance of development and deliverables

Development tools follow ICP performance protocols

Protocols developed by Environmental Defense Fund:
http://www.eeperformance.org/
## Example: Retrofit Bid for 5-Star Hotel

<table>
<thead>
<tr>
<th>ECM Description</th>
<th>Annual Dollar Savings</th>
<th>Project Cost</th>
<th>Pay-back</th>
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<tbody>
<tr>
<td></td>
<td>Electric</td>
<td>Gas</td>
<td>Water</td>
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<tr>
<td>Replace two 350 ton Chillers</td>
<td>$5,000</td>
<td>$5,000</td>
<td>$10,000</td>
</tr>
<tr>
<td>Add Cooling Tower Isolation Valves</td>
<td>$5,000</td>
<td></td>
<td></td>
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<tr>
<td>BAS for Central Plant</td>
<td>$1,000</td>
<td>$4,000</td>
<td>$5,000</td>
</tr>
<tr>
<td>Convert penthouse DX systems to CHW</td>
<td>$15,500</td>
<td>$4,000</td>
<td>$19,500</td>
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<tr>
<td>VFDs on 4 AHUs Economizer</td>
<td>$750</td>
<td>$3,000</td>
<td>$3,750</td>
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<tr>
<td>Water Conservation Retrofits</td>
<td>$1,000</td>
<td>$5,000</td>
<td>$25,000</td>
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<tr>
<td>Convert PIB/VAV boxes to EMCS Control</td>
<td>$20,000</td>
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<tr>
<td>Add DC Controls to AHUs in Penthouse</td>
<td>$3,000</td>
<td>$1,500</td>
<td>$4,500</td>
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<td>Lighting Retrofits</td>
<td>$92,000</td>
<td>$1,500</td>
<td>$93,500</td>
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<tr>
<td>BAS Night Setback for Meeting Rooms</td>
<td>$4,000</td>
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<td>$4,000</td>
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<tr>
<td>Totals</td>
<td><strong>$230,250</strong></td>
<td>$5,000</td>
<td>$25,000</td>
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</table>
Economic Impact of 5 Star Hotel

- With PACE adoption, positive economic impact for:
  - general contractors
  - water conservation companies
  - lighting specialists
  - HVAC designers/developers
  - energy managers
  - commissioning agents
  - architects, PE’s, energy engineers, auditors, estimators,
  - mechanics, plumbers, electricians

- Revenue and business growth for lighting, controls, automation, HVAC, financial companies

- $1.8M’s overall economic impact = $4.5M
**PACE Tearing Down Barriers**

### Barriers

- **Scarce internal capital budget**
- No access to, aversion to **financing**
  - No investment-grade **credit rating**
  - Lack of **collateral** assets that don’t fall under first mortgage
- Uncertain **holding period**
- Owner / tenant **split incentives**
- **Skepticism** savings/ROI will be realized

### PACE Solutions

- No down payment and costs spread over time w/ savings
- Repayment security through senior lien position
  - Backed by property, not by owner or equipment collateral
- PACE obligation transfers to the new owner upon sale
- Qualifies as NNN **pass-thru** cost
- ESCO/contractor **guarantees** or third party insures performance
- New Investment spurs local business retention and expansion
- Conservation achieved through efficiency gains
- Property owners enhance their building stock
- Businesses discover a new way to lower operating costs and increase competitive advantage
- Local government takes action to address the areas of competitiveness, conservation and sustainability
# Gross Lease Scenario

<table>
<thead>
<tr>
<th>Assumptions</th>
<th>600,000 sq. ft.</th>
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<tbody>
<tr>
<td>Property GLA</td>
<td></td>
</tr>
<tr>
<td>Energy Efficiency Project Type</td>
<td>LED Lighting in Common Area</td>
</tr>
<tr>
<td>Project Size</td>
<td>$200,000</td>
</tr>
<tr>
<td>Annual Energy Savings</td>
<td>$26,000</td>
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<tr>
<td>Application Fee</td>
<td>$5,000</td>
</tr>
<tr>
<td>Administration Fee</td>
<td>0.25%</td>
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<tr>
<td>PACE Term - Years</td>
<td>20</td>
</tr>
<tr>
<td>PACE Interest Rate</td>
<td>6%</td>
</tr>
<tr>
<td>Discount Rate for PV Analysis</td>
<td>8%</td>
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<tr>
<td><strong>Assumptions</strong></td>
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<tr>
<th>Invest by Property Owner</th>
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<tr>
<td>Decrease in energy costs for Property Owner</td>
<td>$26,000, $26,000</td>
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<tr>
<td>PACE Assessment Amount</td>
<td>$0, -$16,913</td>
</tr>
<tr>
<td>Cash Flow Impact Year 1</td>
<td>-$174,000, $9,087</td>
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<tr>
<td>Net Project Cash Flow Year 2</td>
<td>-$148,000, $18,173</td>
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<td>Years to Positive Project Cashflow</td>
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<tr>
<td>10-Year Project Net Costs/Benefit (NPV)</td>
<td>-$11,581, $60,973</td>
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<td>Property Value Increase (20-Year NPV)</td>
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<tr>
<td></td>
<td>$123,491</td>
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</table>
Cumulative Cash Flow Comparison

Self Funded vs PACE Financing

Cumulative Net Project Cashflow

$400,000

$300,000

$200,000

$100,000

$0

YEARS

- $100,000

- $200,000

- $300,000

0 5 10 15 20 25

Self Funded

PACE
## Triple Net Lease Scenario

<table>
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<th>Self-Funded</th>
<th>Landlord</th>
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<td>Decrease in energy costs for Lessee</td>
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<td>PACE Assessment Amount</td>
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<tr>
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<td>$18,173</td>
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<td>Years to Positive Project Cashflow</td>
<td>N/A</td>
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PACE Assessments Can Include:

- The cost of materials and labor necessary for the installation of a qualified improvement;
- Permit fees;
- Inspection fees;
- Lender’s fees;
- Program application and administrative fees;
- Project development and engineering fees;
- ITPR fees, including verification fees; and
- Any other fees or costs that may be incurred by the property owner incidental to the installation, modification, or improvement: Legal, consulting and other fees on an actual cost basis; and
- Changes to the existing property that are incidental to the installation.
Travis County will soon establish Texas’ first PACE program. We then plan to expand across the state. Help us speed up the process by:

- Join our members: http://www.KeepingPACEinTexas.org/join-pace

Questions?

Jonathon Blackburn Jonathon.d.Blackburn@gmail.com
Charlene Heydinger Charlene.Heydinger@KeepPACE.org
<table>
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<th>Platinum</th>
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