

# PACE Financing

**J. Caleb Bell, Partner**  
Bricker & Eckler LLP  
614.227.2384  
jbell@bricker.com



# PACE Financing

- PACE = “Property Assessed Clean Energy”



# Ohio's PACE Law

- Energy SID – A special type of financing district created under ORC Ch. 1710 for the purpose of financing:
  - Solar photovoltaic (i.e., roof-top and ground-mounted solar arrays)
  - Solar thermal systems (i.e., solar water heating systems)
  - Geothermal
  - Wind
  - Biomass
  - Gasification
  - Energy efficiency improvements



# Ohio's PACE Law

“**Energy Efficiency Improvement**” is given a special statutory definition:

- “...energy efficiency technologies, products, and activities that reduce or support the reduction of energy consumption, allow for the reduction in demand, or support the production of clean, renewable energy and that are or will be permanently fixed to real property.”

“**Reduction In Demand**” means:

- “...a change in customer behavior or a change in customer-owned or operated assets that reduces or has the capability to reduce the demand for electricity as a result of price signals or other incentives.”

# Special Assessment Authorization

- Like taxes and other forms of governmental exaction, special assessments must be perfected in order to be enforceable against real property.
- Perfection occurs through a variety of procedures:
  - Adoption of special assessment legislation
  - Notice of special assessment legislation to public
  - Notice of special assessment legislation to auditor, assessor, or tax collector
  - Recorded instrument establishing assessment lien
  - All of the above

# PACE Financing



# PACE Financing: Flexibilities

- PACE bonds/loans are secured by special assessment revenue constituting payments from property owners in installments for a defined period of years.
- PACE can be a tool added to other tools used in a project financing, such as TIF, HTC and Bonds
- PACE could be a project financing tool for any large user of power with deferred maintenance such as:
  - Commercial properties
  - Manufacturers
  - Colleges and universities
  - Hospitals
  - Municipal, county or township properties

# PACE and Private Lenders

- A PACE assessment is afforded great respect in the private credit markets.
- Lender views on PACE assessments vary.
  - Delinquent PACE assessments senior to delinquent mortgages
  - Possibility to re-originate a loan at a senior position
  - Higher rents
  - Stability in property value
  - Improvements enhance borrower cash flow or EBITDA
  - Balance sheet improves



# PACE and Private Lenders

- Mortgages do not permit creation of senior liens.
- A PACE assessment delinquency would establish a senior lien.
- The mere process of requesting a PACE assessment is probably not a mortgage default.

# PACE Financing for Commercial Buildings



# Case Study: Great Lakes Mall

- \$3,375,000
- Port Authority + ESID + City
- Owner of Great Lakes Mall special assessments parcel
- Energy efficient roofing and HVAC systems
- Mall tenants with triple-net leases obligated to pay proportionate share of tax bill and operating expenses
- Transaction was win-win:
  - Mall owner gets cost recovery for capital improvements
  - Mall tenants have lower costs (energy savings vs. tax bill)



# Case Study: PNC Tower



- Port Authority + ESID  
+ City + County +  
State
  - \$2,785,000 Bonds
  - \$400,000 Loan
  - \$920,000 Loan Loss  
Reserve Grant

# Case Study: PNC Tower



- Owner of PNC Tower desired energy upgrades to enhance building
- Energy efficient roofing
- Air controls
- Lighting controls
- Existing tenants with triple-net leases obligated to pay proportionate share of tax bill and operating expenses

# Questions?

**J. Caleb Bell**

Bricker & Eckler LLP  
100 South Third Street  
Columbus, Ohio 43215

614.227.2384  
jbell@bricker.com





# Property Assessed Clean Energy (PACE) Financing

A Project Development Primer for Commercial Real Estate Companies

Dave Zehala

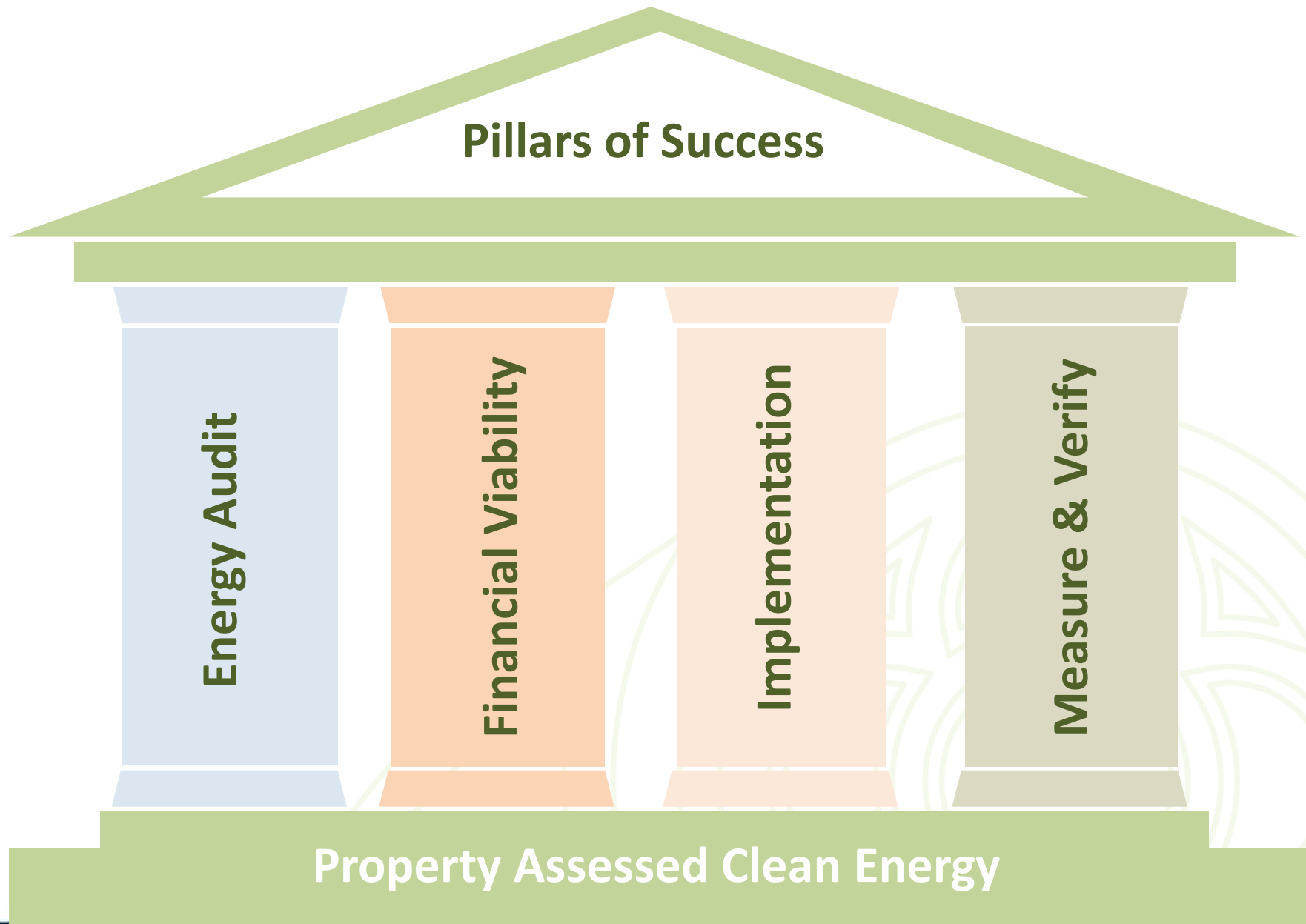
Partner & President

dave.zehala@plugsmart.com

614-935-7487

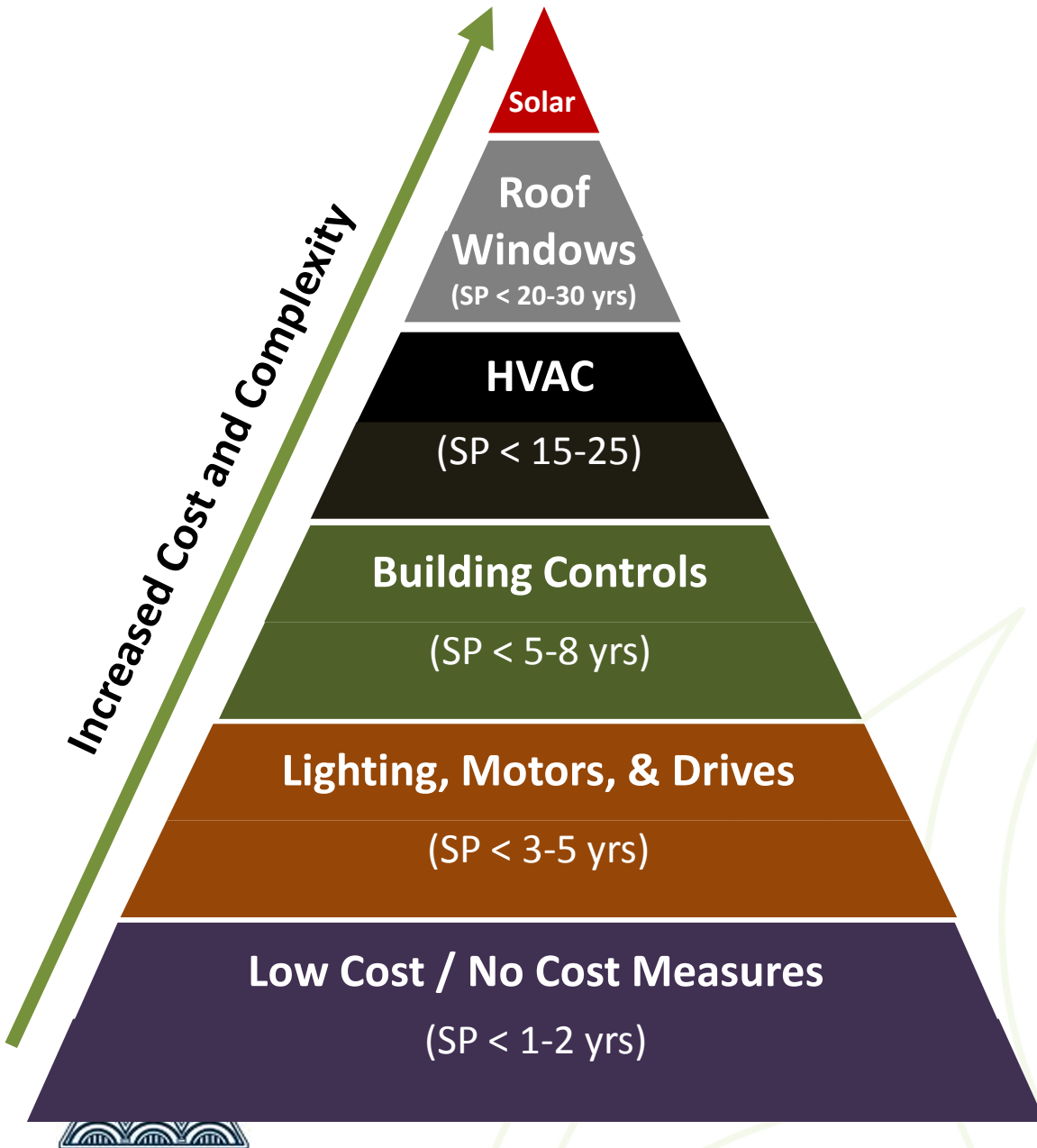


# PACE Project Development – 4 Pillars





# Energy Audit – PACE Eligible Projects



- ❑ Objective is identify portfolio energy projects that are eligible for PACE program
- ❑ Example PACE projects can be represented by a pyramid of increasing cost & complexity
- ❑ The financial power of energy efficiency comes through pairing of energy conservation measures
- ❑ PACE assessments include
  - *Utility Benchmarking Analysis*
  - *Electrical & Mechanical System Inventory & Baseline*
  - *Energy Conservation Measure Identification & Analysis*
  - *Master Menu of PACE Compliant Projects*

# Energy Audit – PACE Project Menu

## PROPERTY ASSESSED CLEAN ENERGY (PACE) PROJECT MENU

PACE Eligible Projects	Project Investment (w/incentive)	Project Investment (w/o/incentive)	Annual Utility Savings	Annual O&M Savings	Annual Project Savings	Available Utility Incentives	Simple Payback Period
Lighting Retrofit	\$ 2,347,837	\$2,689,994	\$ 313,072	\$ 108,507	\$ 421,578	\$ 3,620,552	5.6
AHU Upgrades	\$ 91,605	\$ 92,805	\$ 4,957	\$ 1,487	\$ 6,445	\$ 1,878	14.2
Chiller Upgrades	\$ 133,271	\$ 136,271	\$ 4,571	\$ 1,371	\$ 5,942	\$ (51,748)	22.4
Boiler Upgrades	\$ 657,064	\$ 763,136	\$ 21,096	\$ 3,679	\$ 24,775	\$ (298,092)	26.5
Dashboard	\$ 122,500	\$ 177,000	\$ 36,123	\$ -	\$ 36,123	\$ 496,964	3.4
Plug Smart Connect	\$ (54,500)						
Building Controls	\$ 2,552,276	\$2,664,476	\$ 149,261	\$ 188,368	\$ 337,629		7.6
Motors & VFD's	\$ 20,805	\$ 21,255	\$ 4,022	\$ 603	\$ 4,626	\$ 57,156	4.5
DHW Fuel Switch	\$ 80,110	\$ 80,110	\$ 5,225	\$ 784	\$ 6,009	\$ 16,072	13.3
Kitchen Controls	\$ 11,630	\$ 15,790	\$ 2,468	\$ 370	\$ 2,838	\$ -	4.1
Valve Retrofit	\$ 114,027	\$ 124,421	\$ 17,804	\$ 2,671	\$ 20,475	\$ -	5.6
Refurbish Pumps	\$ 13,715	\$ 13,715	\$ 1,467	\$ 220	\$ 1,687	\$ -	8.1
<b>Total</b>	<b>\$ 6,090,338</b>	<b>\$6,778,972</b>	<b>\$ 560,068</b>	<b>\$ 308,060</b>	<b>\$ 868,127</b>	<b>\$ 3,842,781</b>	<b>7.0</b>

Reduces electric utility bills by 21%



Reduces natural gas utility bills by 23%

Reduces costs (energy \$/SF) from \$1.58 to \$1.37

Reduces EUI (kBtu/SF) from 96 to 74.5

# Financial Viability – Triple Net Lease

Project Metric	Self Funded	PACE 20 Yr
Owner Investment	(\$1,000,000)	\$0
Decrease in Utility Costs	\$100,000	\$100,000
Energy Savings Shared	(\$100,000)	(\$100,000)
Increase in Property Tax	\$0	(\$85,423)
RET Recovery	\$0	\$85,423
<b>EBITA Impact</b>	<b>\$0</b>	<b>\$0</b>
Year 1 Cash Flow	(\$1,000,000)	\$0
Year 2-10 Cash Flow	\$0	\$0
NPV of Cash Flow (8% DR)	(\$1,000,000)	\$0
<b>Annual Tenant Savings</b>	<b>\$100,000</b>	<b>\$14,577</b>

- CAM Expense Recovery Rate: 100%
- Real Estate Tax Recovery Rate: 100%
- NPV and IRR Time Horizon: 10 yr
- PACE Compliant Project: \$1M
- Simple Project Payback (yrs) 10

- Annual Energy Cost Increase: 0%
- Annual Maint. Cost Increase : 0%
- PACE Financing Interest Rate: 5.75%
- Annual Energy Savings: \$100K
- PACE Assessment Term (yrs) 20

- ❑ Objective is to evaluate if energy savings can offset increase in tax payments
- ❑ Triple net lease passes through taxes, utility costs, insurance and CAM expenses on pro-rata basis based on square footage
- ❑ Real estate tax increases and energy savings passed through directly to tenant
- ❑ Benefits to the Owner
  - Requires no upfront cash outlays
  - Improves value of the property
  - Off-book financial transaction
  - Helps with tenant retention



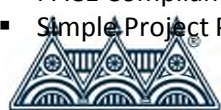
# Financial Viability – Gross Lease

Project Metric	Self Funded	PACE 20 Yr
Owner Investment	(\$1,000,000)	\$0
Decrease in Utility Costs	\$100,000	\$100,000
Energy Savings Shared	\$0	\$0
Increase in Property Tax	\$0	(\$85,423)
RET Recovery	\$0	\$0
<b>EBITA Impact</b>	<b>\$100,000</b>	<b>\$14,577</b>
Year 1 Cash Flow	(\$900,000)	\$14,577
Year 2-10 Cash Flow	\$100,000	\$14,577
NPV of Cash Flow (8% DR)	(\$254,918)	\$97,813
<b>Cash on Cash Rate (COCR)</b>	<b>10%</b>	<b>NA</b>

- CAM Expense Recovery Rate: NA
- Real Estate Tax Recovery Rate: NA
- NPV and IRR Time Horizon: 10 yr
- PACE Compliant Project: \$1M
- Simple Project Payback (yrs) 10

- Annual Energy Cost Increase: 0%
- Annual Maint. Cost Increase: 0%
- PACE Financing Interest Rate: 5.75%
- Annual Energy Savings: \$100K
- PACE Assessment Term (yrs) 20

- ❑ Owner responsible for payment of taxes, utility costs, insurance, and common area repair and maintenance expenses
- ❑ Recovery of these costs covered through tenant base rent
- ❑ Energy savings reductions will flow to owner bottom line
- ❑ Real estate tax increases paid directly by building owner
- ❑ Benefits to the Owner
  - Requires no upfront cash outlays
  - Improves value of the property
  - Delivers superior COCR return
  - Off-book financial transaction



# Implementation – Arthur Goldner Building

## THE PROJECT



### Building Details:

- Arthur Goldner Building (PNC)
- 155 E. Broad St, Columbus, OH
- 388K sf, 23 stories, Built 1976

### Energy Efficiency Measures

- Building Automation System Retro-Commissioning
- Air Handling Upgrades
- High Efficiency Pumps
- High Efficiency LED Lighting
- Efficient Roof Replacement

## FINANCING



### Project Financing:

- Project Cost - \$2,844,697
- Incentives - \$107,667
- Security - 15 Year PACE Bond
- Interest Rate - 4.97%
- Equity Contribution - 5%
- Financed Amount - 95%
- Cost Financing - \$292,366/yr
- Triple Net Lease Structure
- Completion – Est. August 2016

## IMPLEMENTATION



### Project Development:

- Mechanical Engineering
- Electrical Engineering
- Equipment Procurement
- Project Management
- Final Commissioning
- Measurement & Verification

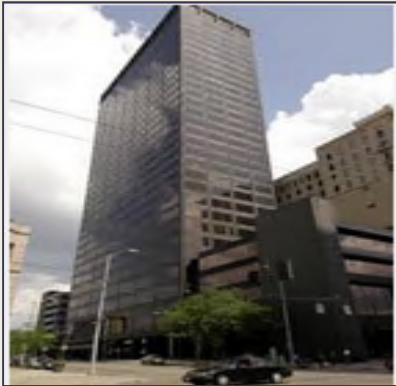
### Project Administration:

- Subcontractor Choice
- Vendor Neutrality



# Implementation – Kettering Tower Dayton

## THE PROJECT



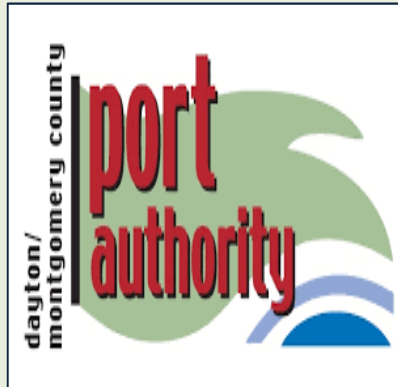
### Building Details:

- Tower Partners LLC
- 40 N. Main St, Dayton, OH
- 500K sf, 30 stories, Built 1970

### Energy Efficiency Measures

- Building Automation System
- High Efficiency LED Lighting
- Air Handling VFD Upgrades & Occupancy Control
- DHW Motors & VFD's
- Cooling Tower Upgrades

## FINANCING



### Project Financing:

- Project Cost - \$1,938,722
- Incentives - \$297,679
- Security - 10 Year PACE Bond
- Interest Rate – 5.1%
- Equity Contribution - 0%
- Financed Amount - 100%
- Cost Financing - \$282,000/yr
- Project Savings - \$404,502/yr
- Cash Flow - \$122,502/Yr
- Completion – Est. August 2016

## IMPLEMENTATION



### Project Development:

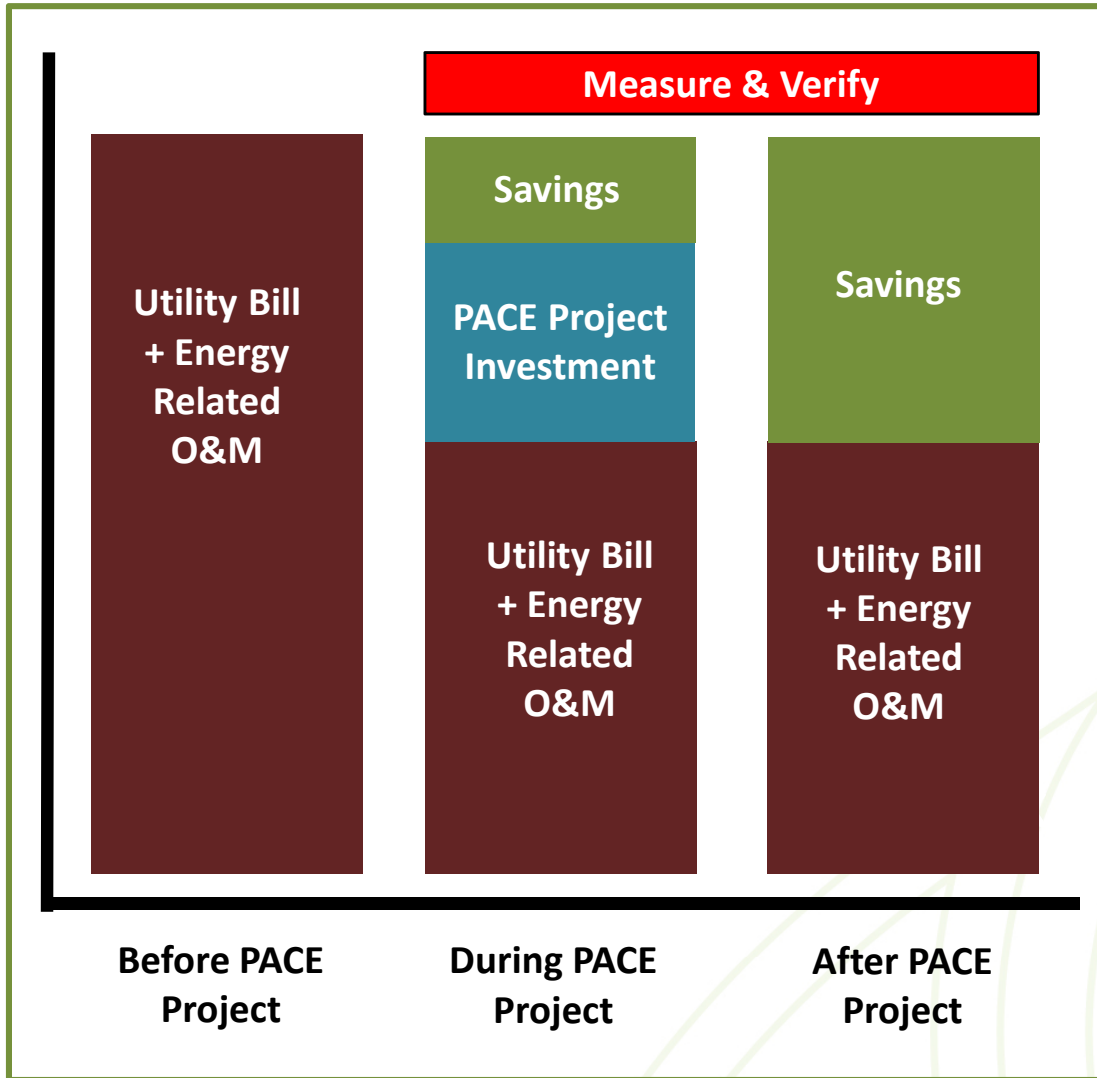
- Mechanical Engineering
- Electrical Engineering
- Equipment Procurement
- Project Management
- Final Commissioning
- Measurement & Verification

### Project Administration:

- Subcontractor Choice
- Vendor Neutrality



# Measurement & Verification



- ❑ Objective is to monitor and verify that the energy savings persist for 2 consecutive years
- ❑ *Energy Management* – Collect utility bills and monitor cost, consumption and carbon offset data on monthly basis
- ❑ *Remote Monitoring* – Remote monitor space temps, schedules, and set points in key building spaces
- ❑ *On-Going Commission* – Identify ongoing maintenance issues with pressure, temperature, humidity, and other sensors





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Finance Authority



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# Columbus Region Energy Fund

## Columbus-Franklin County Finance Authority

**Jean Carter Ryan**  
**President**

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*Columbus-Franklin County Finance Authority*







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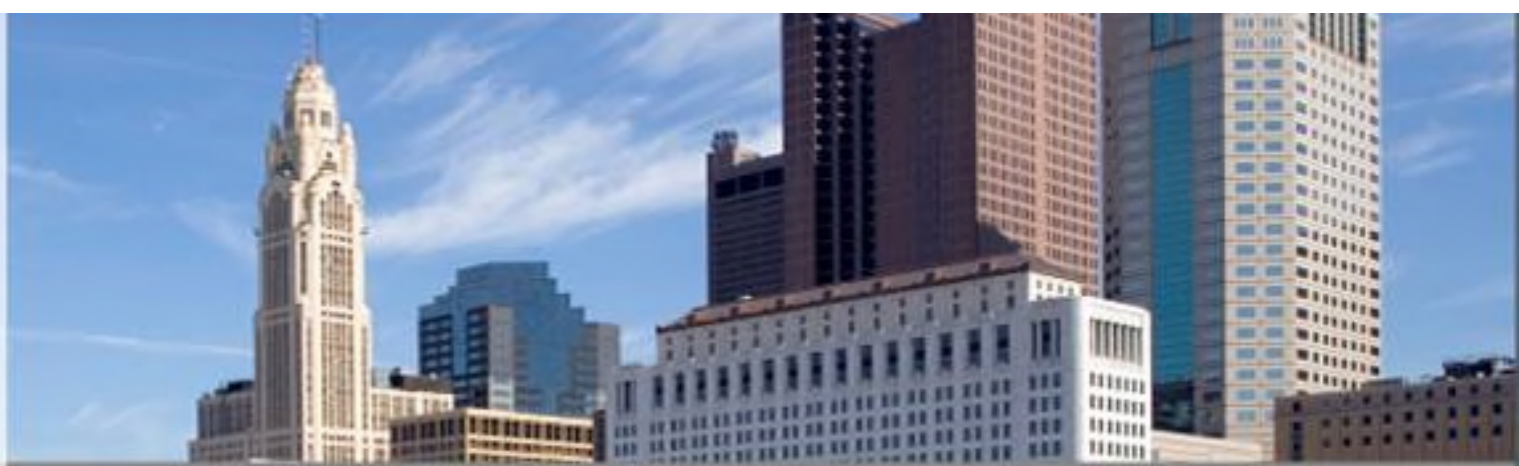
## **Financing Features:**

- Transaction size \$200,000 to \$5,000,000**
- Up to 100% financing of project costs**
- Fixed rates up to 15 years**
- Energy usage reduction should range from 15%/20% (need energy audit)**
- Energy savings pay for the investment**





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## **Eligible Projects:**

- Office Buildings**
- Retail**
- Manufacturing**
- Healthcare**
- K-12, University**
- Government**
- Non-profits**



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## **Eligible Improvements:**

**☐ Energy efficiency retrofits to existing buildings including:**

- Lighting**
- Energy management systems and controls**
- High efficiency HVAC**





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## **Eligible Improvements:**

- Water conservation or reduced flow**
- Energy projects and distribution technologies including:**
  - **Waste energy recovery, power generation, absorption chillers, process reviews**
  - **Fuel cells**
- Renewable power generation**





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# **Territory includes 11 Counties in Central Ohio**

- Franklin, Union, Logan, Delaware, Marion, Monroe, Knox, Madison, Pickaway, Licking, Fairfield**
- Can go statewide**





## **Energy Loan Process**

- Submit application with 3 years of business financials, current year budget, ASHRAE II audit.**
- Arrange site visit & facility walkthrough.**
- Determine needed improvements, cost estimates & energy savings.**





# Energy Loan Process

- ❑ Finance Authority prepares term sheet w/terms & conditions of proposed financing
- ❑ Once term sheet is executed
  - document prep begins;
  - Finance Authority approvals
  - special assessment - work w/city to get necessary approvals
- ❑ Closing





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# **Jean Carter Ryan**

## **President**

**(614) 429-0177**

**(614) 551-9268 (cell)**

**[Jryan@columbusfinance.org](mailto:Jryan@columbusfinance.org)**

**<http://www.columbusfinance.org>**

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# Questions?

# Thank you!

Presenters will remain for additional questions and conversation.