

# Energy Efficiency Opportunities in VA

## VA Environmental Excellence Program

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# Outline

- I. Introduction/background
- II. Challenges
- III. Opportunities
- IV. PACE and Case Studies



# DMME - Scope

DMME's Division of Energy is the State Energy Office in Virginia

- Energy efficiency programs and renewable energy development
- Alternative vehicle fuels (with VA Clean Cities)

DMME also regulates:

- Coal mining
- Gas and oil exploration/extraction
- Mineral Mining
- Mined Land Reclamation

DMME's Division of Geology and Mineral Services is VA State Geological Survey



# EE = P<sup>2</sup> = Good for business, consumers, environment

- VA's 10 percent electricity savings goal would:
  - "...defer or postpone need for 3,900 MWh of new generating capacity by 2022."
  - "save [VA consumers] in the range of \$200 to \$700 million (net savings after costs) through 2022 (average \$15 to \$50 million per year)." (*2007 VA Energy Plan*)
- 75,000 jobs and \$1.5 Billion in revenue generated in VA energy efficiency sector (*VA Energy Efficiency Council, 2017*)

# DE's EE Program Portfolio

- VA Energy Management Program (VEMP) – Energy performance contracting for state facilities
- VA Saves Green Communities Program – Using VA's QECB allocation to support low-interest loans for performance contracts
- Commonwealth Energy Fund – Convertible investment in businesses commercializing energy/water-saving technologies
- Home Energy Retrofit Market Project – Loan loss reserve fund supporting home performance industry in key markets

# Energy Efficiency Challenges

- Upfront Cost
- Lack of Motivators (if energy is inexpensive and not a large part of operating budget, where is the ROI? Few regulatory requirements to use less energy)
- Government and utility incentive/market transformation programs have not (and likely will not) meet every need in every market
- Getting more private capital into the EE market
- Tremendous interest/support for Renewable Energy (combining EE/RE into “Clean Energy”)

# What is Commercial PACE?

Commercial Property Assessed Clean Energy (C-PACE) is a tax-assessment based financing mechanism for commercial property owners to fund energy efficiency, renewable energy, and water conservation projects with no upfront costs.



100% financing.  
Funds hard and soft costs.



Improves building stock + decreases operating costs.



Market-based.  
Uses private financing.



Spurs economic development + creates local jobs.



**The Mid-Atlantic PACE Alliance is a regional partnership supported by the U.S. Department of Energy to advance Commercial Property Assessed Clean Energy (C-PACE) financing solutions in Virginia, Maryland, and the District of Columbia.**

[PACEALLIANCE.org](https://PACEALLIANCE.org)

# Mid-Atlantic PACE Alliance Team & Partners



# Who can use C-PACE in VA?



Commercial



Industrial



Multifamily  
(5+ units)



Agricultural



Nonprofit

# What can be financed with C-PACE?



Heat pumps (air-  
and ground-source)



High-efficiency  
lighting



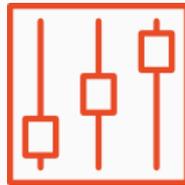
Solar energy  
equipment



Water conservation  
& hot water systems



Boilers, chillers,  
HVAC system  
upgrades



Building energy  
management and  
controls



Building envelope  
improvements



Cogeneration,  
energy storage  
and more!

# Benefits of C-PACE for Property Owners

- ✓ **No Money Out of Pocket:** 100% financing including soft costs
- ✓ **Immediate Savings:** Cash-flow positive from install date
- ✓ **Extends capital budget:** Paid for from operating savings
- ✓ **Long-term financing (20-25yr):** Reduces annual payment
- ✓ **Comprehensive:** Covers broader capital needs and facilitates investment in deeper energy savings measures
- ✓ **Transferrable:** Assessments transfer to new owner upon sale



# Where is PACE?

- Commercial PACE available in 32 states + DC (19 active programs)
- \$400 Million funded for 1,030 C-PACE projects



Source: PACENation.org

# Who is the Mid-Atlantic PACE Alliance?

We are a partnership between stakeholders in Virginia, Maryland and the District of Columbia, created to accelerate Commercial PACE programs and project closings in the region.



Our team is a collaboration between the Virginia Department of Mines, Minerals and Energy (DMME), the District Department of Energy and Environment (DOEE), and the Maryland Clean Energy Center (MCEC) and other industry and not-for-profit partners. The Mid-Atlantic PACE Alliance is supported with funding from the U.S. Department of Energy.

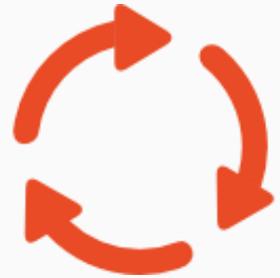
# Goals of the Mid-Atlantic PACE Alliance



- ✓ **Increase market awareness** through coordinated outreach and education.
- ✓ **Promote harmonized program design** throughout the region.
- ✓ **Drive demand** and increase volume of C-PACE projects in the region (\$80 million in loan closings by 2019)

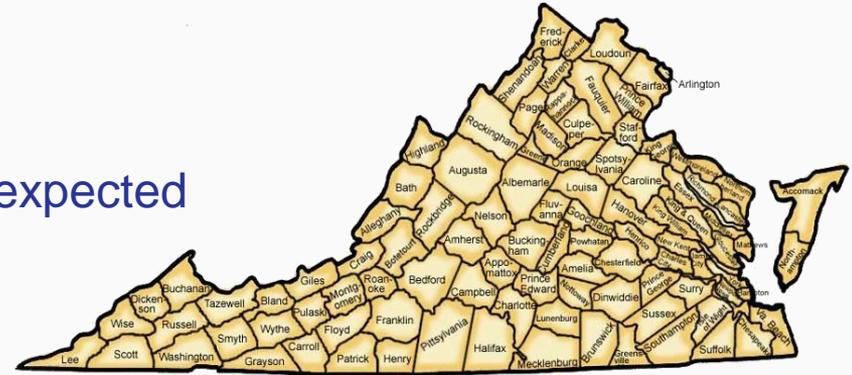
# Benefits of a Harmonized Approach to C-PACE

- ✓ **Create streamlined and consistent processes** for property owners and contractors working with C-PACE programs in the region
- ✓ **Maximize consistency** to foster economic development & encourage private capital investment
- ✓ **Coordinate marketing** approaches and develop consistent messaging about C-PACE



# Status of C-PACE in Virginia

- Arlington County: Selected program administrator (SRS)
  - Next steps: pass County Ordinance, expected Q3/Q4 2017 program launch
- Outreach to local governments
  - Richmond: PACE Working Group
  - Norfolk: Norfolk PACE Study
  - Charlottesville, Fredericksburg, Hampton Roads localities, and Roanoke exploring program implementation



# PACE Case Study: Hotel & Office Building (MD)

**Project Need & Solution:** Commercial office building and hotel implementing cost-saving energy efficiency upgrades.

Measures: Building envelope, HVAC replacement, LED Lighting

Total Project Cost: ~ \$1,400,000

Money Down: \$0.00

C-PACE Financing: ~ \$1,400,000 **Term:** 20 years

Annual PACE Assessment: ~\$125,000

**Annual Cost Savings:** ~\$155,000

**Net Annual Cash Flow:** ~\$30,000

**Lifetime Cost Savings:** ~\$3,000,000

PACE to Value <10%

LTV < 80%



Case study provided by MD-PACE



# PACE Case Study: Manufacturing / Industrial – SOLAR (CT)

- **Challenge:** Ice manufacturer in central Connecticut wanted to lower the energy costs at its new 12,324-square-foot plant.
- **Solution:** CT C-PACE program, funded 100% of the \$306,641 project which included a 100-kW solar PV system. Credit for energy generated reduces energy bills and owner qualifies for \$268,813 in incentives and \$89,638 federal investment tax credit, and a \$179,175 renewable energy credit.
- **Result:** **A cash-flow-positive project**
  - **Increased cash flow by \$170,654** over the 20-year finance term.
  - The **building's value increased an estimated \$328,425**, and the manufacturer now touts the high-tech, green facility as part of its marketing strategy.



Case study provided by SRS



# Case Study: Manufacturing / Industrial – EE (CT)

- **Challenge:** Owners of a biotech laboratory wanted their facility to be more energy efficient and lower utility bills.
- **Solution:** The owners used C-PACE to finance 100% of purchase of \$749,256 new, high-efficiency HVAC system.
- **Result: A cash-flow-positive project**
  - *Increased cash flow by **\$792,380** over the 17-year finance term. Installed equipment also qualified for one-time, \$67,258 utility incentive*
  - *After completion, value of the facility increased by an estimated **\$1,122,300***



Case study provided by SRS



# CONTACT MAPA

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